# 12021 Woodruff Avenue Industrial Project

## IS/MND Appendices

# Appendix A

## Historic and Cultural Resources Report

# CULTURAL RESOURCES TECHNICAL REPORT FOR THE 12021 WOODRUFF AVENUE PROJECT DOWNEY, CALIFORNIA

*Prepared for:*


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Community Development Department

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# Executive Summary

Dudek was retained by the City of Downey Community Planning Department (City) to complete a cultural resources technical report (report) for the 12021 Woodruff Avenue Project (Project) in the City of Downey, California. This report includes the results of a California Historical Resources Information System (CHRIS) records search; coordination with the Native American Heritage Commission (NAHC); a pedestrian survey of the Project site by a qualified architectural historian; building development and archival research; development of an appropriate historic context for the Project site; and recordation and evaluation of one (1) industrial property over 45 years old for historical significance and integrity in consideration of National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) designation criteria and integrity requirements. This report was prepared in conformance with California Environmental Quality Act (CEQA) Guidelines Section 15064.5 for historical resources and all applicable local guidelines and regulations.

Dudek reviewed the CHRIS records search results provided by the South Central Coastal Information Center (SCCIC) on August 11, 2020. No cultural resources were identified within the Project site as a result. The records search identified seven previously conducted cultural resources technical investigations within the 0.5-mile records search area. None of these studies overlap or are adjacent to the Project site. None of these studies identified impacts to cultural resources within the vicinity of the Project site. Additionally, the SCCIC records indicate that three previously recorded cultural resources exist within the surrounding 0.5-mile search radius. All three resources identified consist of built environment resources, none of which intersect or are adjacent to the Project site. No previously recorded prehistoric or historic-era archaeological resources were identified within 0.5-mile of the Project site as a result of the records search.

Dudek contacted the California Native American Heritage Commission (NAHC) on August 14, 2020 to request a search of the Sacred Lands File (SLF). Results of the SLF records search (received September 17, 2020) were negative. The NAHC suggested contacting eight Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the Project site. No informal or formal outreach to these contacts has been initiated by Dudek.

The Kirkhill Manufacturing Inc. facility (12021-12023 Woodruff Avenue) within the Project site does not appear eligible under any NRHP or CRHR designation criteria due to a lack of significant historical associations and architectural merit. Therefore, this property is not an historical resource for the purposes of CEQA.

As a result of Dudek's extensive archival research, field survey, NAHC coordination, and property significance evaluation, no cultural resources were identified within the Project site. Nor were any adjacent resources identified that could be indirectly impacted by proposed Project activities. Therefore, the Project would result in a less than significant impact to cultural resources under CEQA.

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# 1 Introduction

Dudek was retained by the City of Downey to complete a cultural resources technical report for the 12021 Woodruff Avenue Project (Project) in the City of Downey (City), California. This report includes the results of a California Historical Resources Information System (CHRIS) records search; coordination with the California Native American Heritage Commission (NAHC); building development and archival research; a pedestrian survey of the Project site by a qualified architectural historian; development of an appropriate historic context for the Project site; and recordation and evaluation of one (1) industrial property over 45 years old for historical significance and integrity in consideration of National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), and City of Downey designation criteria and integrity requirements. This report was prepared in conformance with California Environmental Quality Act (CEQA) Guidelines Section 15064.5 for historical resources.

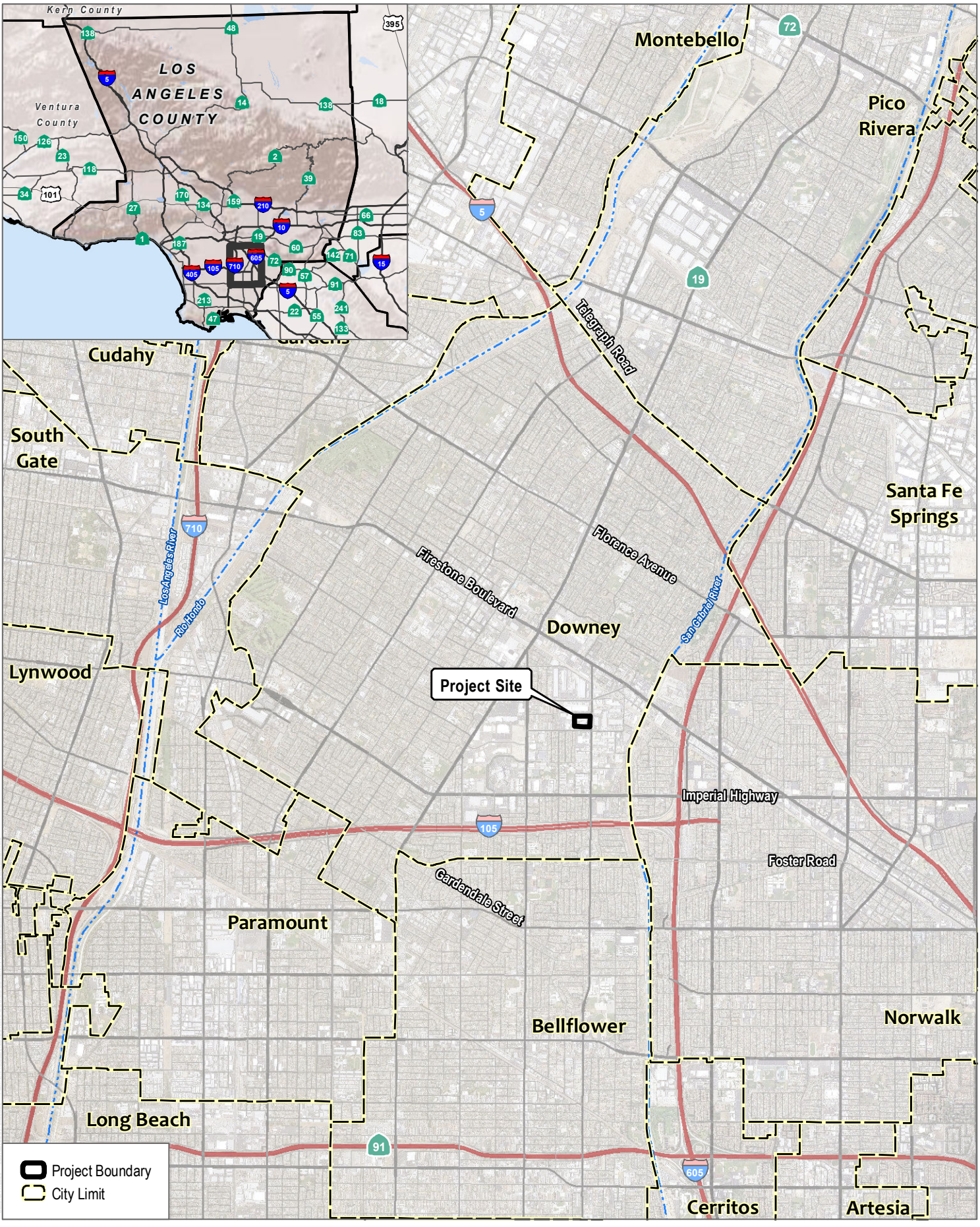
## 1.1 Project Location and Setting

The Project site is located in the southern portion of the City of Downey, which is located in the County of Los Angeles (County). Regionally, the City is bordered by the cities of Pico Rivera, Santa Fe Springs, Norwalk, Bellflower, Paramount, South Gate, and Commerce (Figure 1, Property Location). The Project site consists of a single parcel (Assessor's Identification Number (AIN) 6284-025-018). The addresses associated with the Project site are 12021-12023 Woodruff Avenue, Downey, California 90241. Locally, the Project site is immediately bounded by Woodruff Avenue to the east, and existing industrial/manufacturing uses to the north, west, and south (Figure 2, Detailed Property Location).

The City is approximately 12.8 square-miles in area and is located in the southeastern part of the County, approximately 14 miles and 12 miles northeast of the Ports of Los Angeles and Long Beach, respectively. There are four freeways that provide direct access to Downey: I-605 (San Gabriel River Freeway), which crosses the eastern portion of the City; I-5 (Santa Ana Freeway), which crosses the northern portion of the City; the I-105 intersection, which crosses the southern part of the City; and I-710 (Long Beach Freeway), which, although does not cross the City, is located west of the City and accessible via three major streets: Florence Avenue, Firestone Boulevard, and Imperial Highway (City of Downey 2005).

The City is bound by the Rio Hondo River channel to the west, Telegraph Road to the north; the San Gabriel River channel to the east; and Gardendale Street and Foster Road to the south. Most of the City was developed during the housing boom in the 1950s and 1960s. The City is a fully developed community with older buildings and very few vacant properties. Since residential uses occupy more than half of the City's land area, Downey is known mainly as a bedroom community. However, the City also provides a mix of other land uses such as open space, commercial, and manufacturing. Residential uses are located throughout the City; however, are predominantly located to the north, east, and west. Commercial uses are scattered throughout the north, east, south, and west. Manufacturing uses are primarily concentrated in the southeastern portion of the City.

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SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

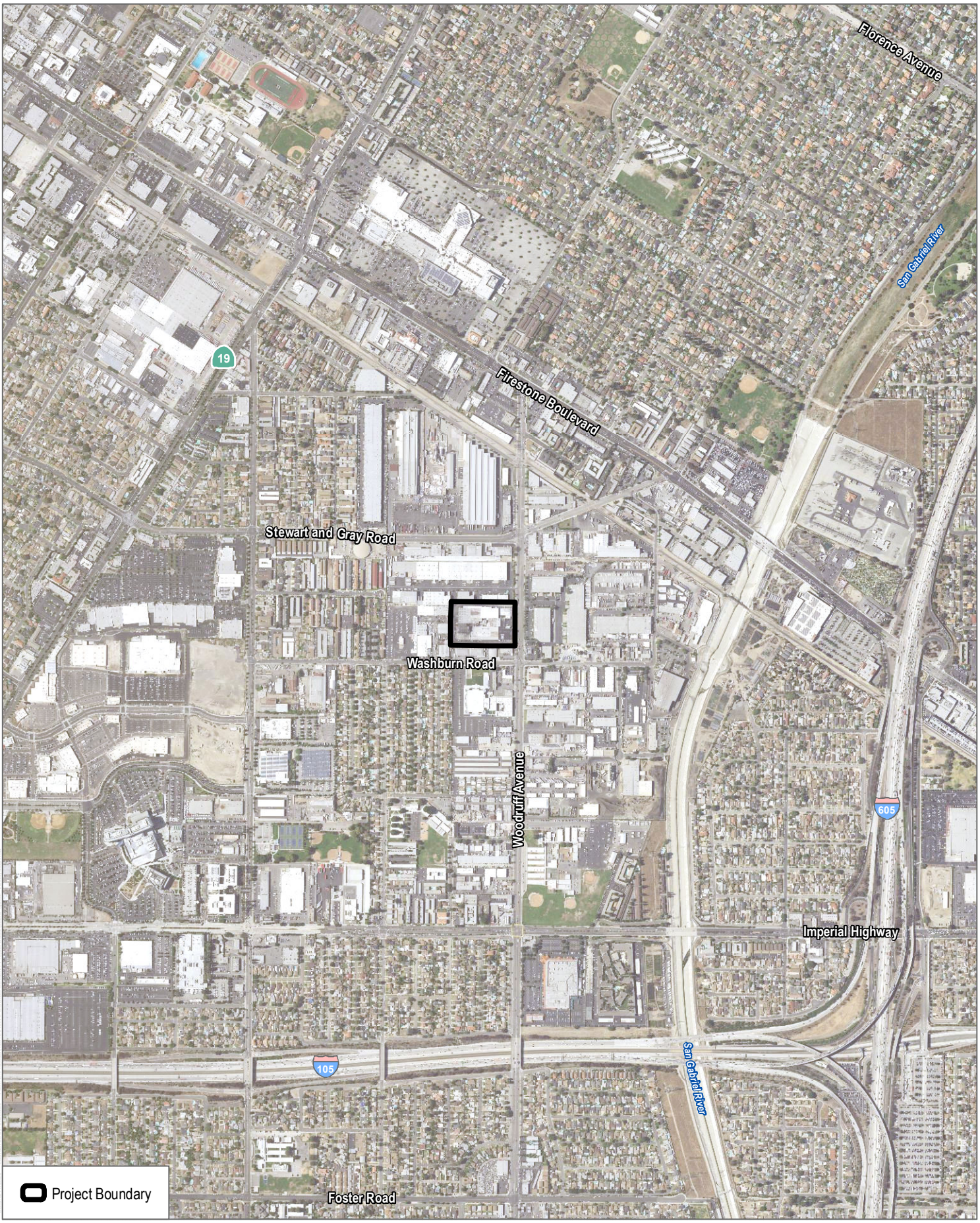
**FIGURE 1**

Project Location

12021 Woodruff Avenue Industrial Building Project

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SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

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0 625 1,250 Feet

**FIGURE 2**

Vicinity Map

12021 Woodruff Avenue Industrial Building Project

# 1.2 Proposed Project

The Project includes the demolition of an existing, 74,662-square-foot industrial building and construction of an approximately 44,162-square-foot tilt-up industrial building for truck terminal use. The proposed industrial building would include approximately 36,142 square-feet of warehouse space and 8,020 square-feet of office space. The new industrial building is intended to be used as a trucking terminal for distribution and logistics purposes. On-site activities will include storage of and/or consolidation of manufactured goods before the distribution to retail locations or other warehouses. Other than truck parking and storage, all activities will occur within the industrial building. The office space is intended to be used for office uses ancillary to the warehouse operation.

# 1.3 Project Personnel

This report and associated property significance evaluations was prepared by Dudek Architectural Historian Fallin Steffen, MPS. Fieldwork and research was conducted by Dudek Architectural Historian Sarah Corder, MFA. Dudek Archaeologist Adriane Gusick, BA, summarized the CHRIS records search results and contributed to this report. Dudek Archaeologist, Jennifer De Alba, BA, conducted Native American coordination. Dudek Lead Archaeologist Linda Kry, BA, acted as archaeological and ethnographic investigator, and contributed to this report. This report was reviewed for quality assurance/quality control by Dudek Principal Architectural Historian Samantha Murray, MA. Resumes for all key personnel are provided in Appendix A.

# 1.4 Regulatory Setting

### Federal

#### *National Register of Historic Places*

While there is no federal nexus for this Project, the subject property was evaluated in consideration of NRHP designation criteria. The NRHP is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service, under the U.S. Department of the Interior, the NRHP was authorized under the National Historic Preservation Act, as amended. Its listings encompass all National Historic Landmarks, as well as historic areas administered by the National Park Service.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded, or may be likely to yield, information important in prehistory or history.

Integrity is defined in NRHP guidance, "How to Apply the National Register Criteria," as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity" (NPS 1990). NRHP guidance further asserts that properties be completed at least 50 years ago to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (criteria consideration to be considered for listing.

### State

#### *California Register of Historical Resources*

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code Section 5020.1(j)). In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (California Public Resources Code Section 5024.1(a)). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, enumerated below. According to California Public Resources Code Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and

points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

### California Environmental Quality Act

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- California Public Resources Code Section 21083.2(g) defines "unique archaeological resource."
- California Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5(a) define "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource." It also defines the circumstances when a project would materially impair the significance of an historical resource.
- California Public Resources Code Section 21074(a) defines "tribal cultural resources."
- California Public Resources Code Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- California Public Resources Code Sections 21083.2(b)-(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(b).) If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code Section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1); California Public Resources Code Section 5020.1(q)). In turn, CEQA Guidelines section 15064.5(b)(2) states the significance of an historical resource is materially impaired when a project:

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (California Public Resources Code Section 21083.2[a], [b], and [c]).

California Public Resources Code Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.

3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts to non-unique archaeological resources are generally not considered a significant environmental impact (California Public Resources Code section 21083.2(a); CEQA Guidelines Section 15064.5(c)(4)). However, if a non-unique archaeological resource qualifies as tribal cultural resource (California Public Resources Code Section 21074(c), 21083.2(h)), further consideration of significant impacts is required. CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in California Public Resources Code Section 5097.98.

### California State Assembly Bill 52

Assembly Bill (AB) 52 of 2014 amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 established that TCRs must be considered under CEQA and also provided for additional Native American consultation requirements for the lead agency. Section 21074 describes a TCR as a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American Tribe and that is either:

On or determined to be eligible for the California Register of Historical Resources or a local historic register; or

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 Section 5024.1.

AB 52 formalizes the lead agency–tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with the project site, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

Section 1 (a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on TCRs should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to tribal cultural resources, the consultation shall include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]).

### Senate Bill 18

The Local and Tribal Intergovernmental Consultation process, commonly known as Senate Bill (SB) 18 was signed into law September of 2004 and took effect March 1, 2005. SB 18 refers to PRC Section 5097.9 and 5097.995, which defines cultural places as:

- Native American sanctified cemetery place of worship, religious or ceremonial site, or sacred shrine (PRC Section 5097.9).
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historic Resources pursuant to Section 5024.1, including any historic or prehistoric ruins, any burial ground, any archaeological or historic site (PRC Section 5097.993).

SB 18 established responsibilities for local governments to contact, provide notice to, refer plans to, and consult with California Native American tribes that have been identified by the NAHC and if that tribe requests consultation after local government outreach as stipulated in Government Code Section 65352.3. The purpose of this consultation process is to protect the identity of the cultural place and to develop appropriate and dignified treatment of the cultural place in any subsequent project. The consultation is required whenever a general plan, specific plan, or open space designation is proposed for adoption or to be amended. Once local governments have sent notification, tribes are responsible for requesting consultation. Pursuant to Government Code Section 65352.3(a)(2), each tribe has 90 days from the date on which they receive notification to respond and request consultation.

In addition to the requirements stipulated previously, SB 18 amended Government Code Section 65560 to "allow the protection of cultural places in open space element of the general plan" and amended Civil Code Section 815.3 to add "California Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places."

### California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (Health and Safety Code Section 7050.5(b)). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the county coroner determines or has reason to believe the remains are those of a Native American, the county coroner must contact the NAHC within 24 hours (Health and Safety Code Section 7050.5(c)). The NAHC will notify the most likely descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

### Local

#### *City of Downey Municipal Code*

The City of Downey does not maintain local designation criteria and appears to defer to the NRHP and the CRHR.

Article VIII, Chapter 8 of the Municipal code (Section 8700.03) defines "Historic Structures" as any structure that is:

(1) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

(2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

(3) Individually listed on a State inventory of historic places in States with historic preservation programs which have been approved by the Secretary of the Interior, or;

(4) Individually listed on a local inventory of historic preservation in communities with historic preservation programs that have been certified by the State.

# 2 Background Research

## 2.1 CHRIS Records Search

On August 11, 2020, SCCIC Staff provided the results of a CHRIS records search for the Project and a half (0.5)-mile records search buffer. This search included their collections of mapped prehistoric, historic, and built environment resources, Department of Parks and Recreation Site Records, technical reports, and ethnographic references. Additional consulted sources included historical maps of the Project site, the NRHP, the CRHR, the Built Environment Resources Directory, the lists of California State Historical Landmarks, California Points of Historical Interest, and the Archaeological Determinations of Eligibility. Dudek reviewed the SCCIC records to determine whether implementation of the Project would have the potential to impact known and unknown cultural resources. The confidential records search results are provided in Appendix B.

### Previously Conducted Cultural Resources Studies

Results of the cultural resources records search indicated that seven previous cultural resource studies (Table 1) have been conducted within a 0.5-mile radius of the Project site between 1999 and 2010. None of these studies overlap or are adjacent to the Project site. Table 1, below, summarizes the previous cultural resources studies within the records search radius.

**Table 1. Previously Conducted Cultural Resources Studies within 0.5-Mile of the Project Site**

| SCCIC Report Number | Authors | Year | Title | Proximity to Project Site |
|---|---|---|---|---|
| LA-04834 | Ashkar, Shahira | 1999 | Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Anaheim, Los Angeles and Orange Counties | Outside |
| LA-06227 | Kaplan, Mark, Audry Rutkove, and Chris Johnson | 2002 | NASA Industrial Plant Historic American Engineering Record (HAER) CA-310, Buildings CA-310-A Through CA-310-H Through Q | Outside |
| LA-08255 | Arrington, Cindy and Nancy Sikes | 2006 | Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project State of California: Volumes I and II | Outside |
| LA-10188 | Horne, Melinda C. | 2002 | Construction of a Pipeline Located Adjacent to the Frontage Road Between Garfield Avenue and Paramount Avenue, and the City's Water Plant Yard Located on Stewart and Gray Road Between Bellflower Boulevard and Woodruff Avenue in the City of Downey | Outside |
| LA-10285 | Bonner, Wayne H. | 2009 | Cultural Resources Records Search and Site Visit Results for Verizon Wireless Candidate Downey Relo, Downey Norwalk Road, Norwalk, Los Angeles County, California | Outside |

Table 1. Previously Conducted Cultural Resources Studies within 0.5-Mile of the Project Site

| SCCIC Report Number | Authors | Year | Title | Proximity to Project Site |
|---|---|---|---|---|
| LA-10382 | Bonner, Wayne H. and Kathleen A. Crawford. | 2009 | Direct APE Historic Architectural Assessment for T-Mobile USA Candidate LA 33719D (M&M Cut-O-Matic), 9316 Washburn Rd., Downey, Los Angeles County, California | Overlaps |
| LA-10633 | McKenna, Jeanette A. | 2010 | A Class III Archaeological Survey Report for the Industrial Property Located at 12214 Lakewood Blvd. in the City of Downey, Los Angeles County, California | Outside |

### Previously Recorded Cultural Resources

The SCCIC records indicate that three cultural resources have been previously recorded within 0.5-mile of the Project site (Table 2), none of which intersect or are adjacent to the Project site. All of the previously recorded cultural resources within the records search area consist of built environment resources.

Table 2. Previously Recorded Cultural Resources Within a 0.5-Mile Radius of the Project Site

| Primary (P-19-) | Trinomial (CA-LAN-) | Resource Age and Type | Resource Description | NRHP Eligibility | Recording Events | Proximity to Project Site |
|---|---|---|---|---|---|---|
| 186110 | — | Historic: Railroad | Union Pacific Railroad was constructed circa 1869-present. This rail system was significant for the development of Los Angeles. | 2S2: Individual property determined eligible for NR by a consensus through Section 106 process<br><br>Eligible under Criterion A and B. | 1999 (S. Ashkar, Jones & Stokes); 2002 (D. Livingstone and C. Hamilton, Applied Earthworks); 2007 (Francesca G. Smith and Caprice D. Harper, Parsons); 2018 (Jessica B. Feldman, ICF); 2019 (Jenna Kachour, GPA) | Outside |

**Table 2. Previously Recorded Cultural Resources Within a 0.5-Mile Radius of the Project Site**

| Primary (P-19-) | Trinomial (CA-LAN-) | Resource Age and Type | Resource Description | NRHP Eligibility | Recording Events | Proximity to Project Site |
|---|---|---|---|---|---|---|
| 188509 | — | Historic: Building | 9316 Washburn Road: This building is a two-story, Modern commercial building constructed in 1957 and designed by Jack Spencer. | 6Y: Determined ineligible for NR by consensus through Section 106 process – Not evaluated for CR or Local Listing. | 2009 (K. A. Crawford, Michael Brandman Associates) | Outside |
| 188775 | — | Historic: District | Consolidated Vultee Aircraft Corporation/NASA Industrial Facility located at 12214 Lakewood Boulevard. This Industrial style aeronautical facility was designed by Gordon B. Kaufmann and constructed ca. 1929-1996 | 2S2: Individual property determined eligible for NR by a consensus through Section 106 process<br><br>Eligible under Criterion A, B, and C. Period of significance 1929-1964 | 2010 (J. A. McKenna) | Outside |

# 2.2 Native American Coordination

**NAHC Sacred Lands File Search**

Dudek contacted the NAHC on August 14, 2020 and requested a review of the SLF. The NAHC replied via email on September 17, 2020, stating that the results of the SLF search were negative. The NAHC also suggested contacting eight Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the Project site.

- Andrew Salas, Chairperson, *Gabrieleno Band of Mission Indians, Kizh Nation*
- Anthony Morales, Chairperson, *Gabrieleno/Tongva San Gabriel Band of Mission Indians*
- Sandonne Goad, Chairperson, *Gabrielino/Tongva Nation*
- Robert Dorame, Chairperson, *Gabrielino Tongva Indians of California Tribal Council*
- Charles Alvarez, *Gabrielino-Tongva Tribe*
- Lovina Redner, Tribal Chair, *Santa Rosa Band of Cahuilla Indians*
- Joseph Ontiveros, Cultural Resource Department, *Soboba Band of Luiseno Indians*
- Scott Cozart, Chairperson, *Soboba Band of Luiseno Indians*

Dudek initiated no informal tribal consultation to these individuals for the proposed Project at this time. Documentation of Dudek's coordination with the NAHC is provided in Appendix C.

### Assembly Bill 52 Consultation

The Project is subject to compliance with AB 52 (PRC 21074), which requires consideration of impacts to TCRs as part of the CEQA process, and that the lead agency notify California Native American Tribal representatives (that have requested notification) who are traditionally or culturally affiliated with the geographic area of the proposed Project. All NAHC-listed California Native American Tribal representatives that have requested project notification pursuant to AB 52 were sent letters by the City on [INSERT DATE WHEN AVAILABLE]. The letters contained a project description, outline of AB 52 timing, request for consultation, and contact information for the appropriate lead agency representative. Documents related to AB 52 consultation are on file with the City.

### Senate Bill 18 Consultation

The Project is subject to compliance with SB 18 (Government Code Section 65352.3), which requires local governments to invite California Native American Tribal representatives to participate in consultation about proposed General Plan and Specific Plan adoptions or amendments. The City is proposing an amendment to the General Plan for the Project and as such, initiated SB 18 consultation. All NAHC-listed California Native American Tribal representatives were sent notification letters by the City on [INSERT DATE WHEN AVAILABLE]. The letters contained a project description, request for consultation, and contact information for the appropriate lead agency representative. Documents related to SB 18 consultation are on file with the City.

## 2.3 Building Development and Archival Research

Building development and archival research were conducted for the Project site in an effort to establish a thorough and accurate historic context for the property significance evaluation, and to confirm the building development history of the Project site.

### City of Downey Building and Safety Division

On August 12, 2020, Dudek visited the City of Downey Permit Counter and obtained building permits and records for the subject property.

### Los Angeles County Office of the Assessor

On September 09, 2020, Dudek researched property characteristic records for the Project site in order to establish dates of construction.

### Historical Newspaper Search

Dudek reviewed historical newspapers covering the City of Downey and of the Greater Los Angeles area in an effort to understand the development of the Project site. All information obtained from the historical newspaper search was incorporated into the historic context.

### Historical Aerial Photographs

Historic aerial photographs of the Project site were available from Nationwide Environmental Title Research LLC (NETR) maps for the years 1952, 1953, 1963, 1972, 1994, 2003, 2004, 2005, 2009, 2010, 2012, 2014, and 2016 and from the University of California, Santa Barbara (UCSB), FrameFinder Maps for the years 1928, 1938, 1947, 1952, 1956, 1957, 1960, 1968, 1976, 1977, 980, 1981, 1983, 1988, 1994, and 1998.

The earliest aerial photograph dates from 1928 and indicates that the Project area was rural farmland in 1928. A few single-family residences line the east side of Woodruff Avenue between Stewart and Gray Road and Washburn Road. The region appears rural, with patches of moderately dense single-family residences and neighborhoods in the surrounding area, as well as an airport appearing west of Bellflower Boulevard by 1947. The San Gabriel River Channel appears by 1947 as well (NETR 2020; UCSB 2020).

The subject property at 12021-12023 Woodruff Avenue does not appear in aerial photographs until 1952. In this aerial the property appears with a semi-circular driveway in the portion of the property fronting Woodruff Avenue. Setback on the parcel, three distinctive buildings appears, two with double gabled roofs and one longer warehouse building with a single gable, all loosely arranged in a U-shaped plan. The front portion of the property appears landscaped with grass, but the rear portion of the property appears as gravel or pavement. Surrounding the property to the north and west is the same agricultural field visible in the 1928 aerial photograph. A large industrial property and large parking lot appear across the street from the subject property, on the east side of Woodruff Avenue (NETR 2020; UCSB 2020).

After 1952, the property appears to incrementally change. In the 1956 aerial photograph a small square gable-roofed building appears in the center of the property, and a long rectangular plan building appears at the rear of the property. By the 1960 aerial, an addition is made to the south-most building and north-most building, creating a clearer, symmetrical U-shaped plan. The front most building appears to have its roof altered to a side-gabled building. The front semi-circular drive appears to have been widened to accommodate a second lane, making the lawn smaller. In the 1968 aerial photograph, the middle building has an addition on the west side, filling a portion of the interior of the U-plan. By the 1976 aerial photograph, the interior area of the original U-shaped plan is completely filled by additions. Several more additions also extend from the west and Woodruff Avenue-facing elevations, creating a rough, rectangular plan building. The semi-circular drive is still present but the lawn portion has been reduced again to accommodate the building's expansion. Between 1977 and 1981 the last agricultural field adjacent to the subject property is replaced with an industrial property. The subject property is, by 1981, completely surrounded by industrial and commercial properties. Both Woodruff Avenue and Stewart and Gray Road near the subject property appear to host the majority of industrial properties in the area. Between 1983 and 1988 aerial photographs show a courtyard opened up the in the center of the building, creating a hollow rectangular-plan. Between 1988 and 1994 aerial photographs indicate that the additions along the Woodruff Avenue elevations appear to have been re-roofed, and the open area at the center of the rectangular plan was infilled again. According to aerial photographs, there are no notable changes to the property after 1994 (NETR 2020; UCSB 2020).

### Sanborn Fire Insurance Maps

City of Downey Sanborn Fire Insurance Maps for the years 1887, 1891, 1895, 1898, 1907, 1925, and 1925-1932 (revised) were reviewed for this Project, however, the Project site was not visible on any of the maps.

# 3 Cultural Setting

## 3.1 Prehistoric Overview

Evidence for continuous human occupation in Southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad period have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. To be more inclusive, this research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1769), and Ethnohistoric (post-AD 1769). Terminology used to outline the cultural chronology is standard chronology made popular by Byrd and Reddy (2002) and is broadly consistent with the use of geologic time units (early, middle, and late Holocene) used by Byrd and Raab (2007).

**Paleoindian Period (pre-5500 BC)**

Evidence for Paleoindian occupation in the region is tenuous. Our knowledge of associated cultural pattern(s) is informed by a relatively sparse body of data that has been collected from within an area extending from coastal San Diego, through the Mojave Desert, and beyond. One of the earliest dated archaeological assemblages in the region is located in coastal Southern California (though contemporaneous sites are present in the Channel Islands) derives from SDI-4669/W-12 in La Jolla. A human burial from SDI-4669 was radiocarbon dated to 9,590–9,920 years before present (95.4% probability) (Hector 2006). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of ground stone, battered cobbles, and expedient flake tools). In contrast, typical Paleoindian assemblages include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of ground stone tools. Prime examples of this pattern are sites that were studied by Emma Lou Davis (1978) on Naval Air Weapons Station China Lake near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (MNO-679)—a multi-component fluted point site, and MNO-680—a single component Great Basined Stemmed point site (see Basgall et al. 2002). At MNO-679 and -680, ground stone tools were rare while finely made projectile points were common.

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (SDI-149) is representative of typical Paleoindian occupation in the region that possibly dates between 10,365 and 8,200 BC (Warren et al. 2004). Termed San Dieguito (see also Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in region because the site has large numbers of finely made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (see also Warren 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is hotly debated. Gallegos (1987) suggested that the San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos's interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

The large number of finished bifaces (i.e., projectile points and non-projectile blades), along with large numbers of formal flake tools at the Harris site complex, is very different than nearly all other assemblages throughout the region, regardless of age. Warren et al. (2004) made this point, tabulating basic assemblage constituents for key early Holocene sites. Producing finely made bifaces and formal flake tools implies that relatively large amounts of time were spent for tool manufacture. Such a strategy contrasts with the expedient flake-based tools and cobble-core reduction strategy that typifies non-San Dieguito Archaic sites. It can be inferred from the uniquely high degree of San Dieguito assemblage formality that the Harris site complex represents a distinct economic strategy from non-San Dieguito assemblages.

San Dieguito sites are rare in the inland valleys, with one possible candidate, RIV-2798/H, located on the shore of Lake Elsinore. Excavations at Locus B at RIV-2798/H produced a toolkit consisting predominately of flaked stone tools, including crescents, points, and bifaces, and lesser amounts of groundstone tools, among other items (Grenda 1997). A calibrated and reservoir-corrected radiocarbon date from a shell produced a date of 6630 BC. Grenda (1997) suggested this site represents seasonal exploitation of lacustrine resources and small game and resembles coastal San Dieguito assemblages and spatial patterning.

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but that it was not as economically successful as the Archaic strategy. Such a conclusion would fit with other trends in Southern California deserts, where hunting-related tools were replaced by processing tools during the early Holocene (see Basgall and Hall 1990).

### Archaic Period (8000 BC – AD 500)

The more than 2,500-year overlap between the presumed age of Paleoindian occupations and the Archaic period highlights the difficulty in defining a cultural chronology in Southern California. If San Dieguito is the only recognized Paleoindian component in the coastal Southern California, then the dominance of hunting tools implies that it derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004) admitted as much, citing strong desert connections with San Dieguito. Thus, the Archaic pattern is the earliest local socioeconomic adaptation in the region (see Hale 2001, 2009).

The Archaic pattern, which has also been termed the Millingstone Horizon (among others), is relatively easy to define with assemblages that consist primarily of processing tools, such as millingstones, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the region with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (see Basgall and Hall 1990; Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurred until the bow and arrow was adopted around AD 500, as well as ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remained low. After the bow was adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped millingstones and handstones decreased in proportion relative to expedient, unshaped ground stone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complemented only by the addition of the bow and ceramics.

### Late Prehistoric Period (AD 500-1769)

The period of time following the Archaic and before Ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (Rogers 1945; Wallace 1955; Warren et al. 2004); however, several other subdivisions continue to be used to describe various shifts in assemblage composition. In general, this period is defined by the addition of arrow points and ceramics, as well as the widespread use of bedrock mortars. The fundamental Late Prehistoric assemblage is very similar to the Archaic pattern, but includes arrow points and large quantities of fine debitage from producing arrow points, ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces. Some argue that the Ethnohistoric intensive acorn economy extends as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred before AD 1400. Millingstones and handstones persisted in higher frequencies than mortars and pestles until the last 500 years (Basgall and Hall 1990); even then, weighing the economic significance of millingstone-handstone versus mortar-pestle technology is tenuous due to incomplete information on archaeological assemblages.

## 3.2 Ethnographic Overview

The history of the Native American communities prior to the mid-1700s has largely been reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the region come predominantly from European merchants, missionaries, military personnel, and explorers. These brief, and generally peripheral, accounts were prepared with the intent of furthering respective colonial and economic aims and were combined with observations of the landscape. They were not intended to be unbiased accounts regarding the cultural structures and community practices of the newly encountered cultural groups. The establishment of the missions in the region brought more extensive documentation of Native American communities, though these groups did not become the focus of formal and in-depth ethnographic study until the early twentieth century (Bean and Shipek 1978; Boscana 1846; Geiger and Meighan 1976; Harrington 1934; Laylander 2000; Sparkman 1908; White 1963). The principal intent of these researchers was to record the precontact, culturally specific practices, ideologies, and languages that had survived the destabilizing effects of missionization and colonialism. This research, often understood as "salvage ethnography," was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his "memory culture" approach (Lightfoot 2005: 32) by recording languages and oral histories within the region. Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early twentieth century seemed to indicate that traditional cultural practices and beliefs survived among local Native American communities.

It is important to note that even though there were many informants for these early ethnographies who were able to provide information from personal experiences about native life before the Europeans, a significantly large proportion of these informants were born after 1850 (Heizer and Nissen 1973); therefore, the documentation of pre-contact, aboriginal culture was being increasingly supplied by individuals born in California after considerable contact with Europeans. As Robert F. Heizer (1978) stated, this is an important issue to note when examining these ethnographies, since considerable culture change had undoubtedly occurred by 1850 among the Native American survivors of California.

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja California Sur to the southern Oregon state border at the time of Spanish contact (Johnson and Lorenz 2006, p.

34). The distribution of recorded Native American languages has been dispersed as a geographic mosaic across California through six primary language families (Golla 2007).

Victor Golla has contended that one can interpret the amount of variability within specific language groups as being associated with the relative "time depth" of the speaking populations (Golla 2007: 80) A large amount of variation within the language of a group represents a greater time depth then a group's language with less internal diversity. One method that he has employed is by drawing comparisons with historically documented changes in Germanic and Romantic language groups. Golla has observed that the "absolute chronology of the internal diversification within a language family" can be correlated with archaeological dates (2007:71). This type of interpretation is modeled on concepts of genetic drift and gene flows that are associated with migration and population isolation in the biological sciences.

The tribes of this area have traditionally spoken Takic languages that may be assigned to the larger Uto–Aztecan family (Golla 2007, p. 74). These groups include the Gabrielino (alternately Gabrieleño), Cahuilla, and Serrano. Golla has interpreted the amount of internal diversity within these language-speaking communities to reflect a time depth of approximately 2,000 years. Other researchers have contended that Takic may have diverged from Uto–Aztecan ca. 2600 BC–AD 1, which was later followed by the diversification within the Takic speaking tribes, occurring approximately 1500 BC–AD 1000 (Laylander 2000).

### Gabrielino (Gabrieleño)

Based on evidence presented through past archaeological investigations, the Gabrielino appear to have arrived in the Los Angeles Basin around 500 B.C. Surrounding native groups included the Chumash and Tataviam to the northwest, the Serrano and Cahuilla to the northeast, and the Juaneño and Luiseño to the southeast.

The names by which Native Americans identified themselves have, for the most part, been lost and replaced by those derived by the Spanish people administering the local Missions. These names were not necessarily representative of a specific ethnic or tribal group, and traditional tribal names are unknown in the post-Contact period. The name "Gabrielino" or "Gabrieleno" was first established by the Spanish from the San Gabriel Mission and included people from the established Gabrielino area as well as other social groups (Bean and Smith 1978; Kroeber 1925). Many modern Native Americans commonly referred to as Gabrielino/Gabrieleno identify themselves as descendants of the indigenous people living across the plains of the Los Angeles Basin. While distinct bands of the indigenous people of Los Angeles Basin have adopted their own unique name, the term Gabrielino is applied here.

The Gabrielino established large, permanent villages along rivers and streams, and lived in sheltered areas along the coast. Gabrielino lands included the greater Los Angeles Basin and three Channel Islands, San Clemente, San Nicolas, and Santa Catalina and stretched from the foothills of the San Gabriel Mountains to the Pacific Ocean. Tribal population has been estimated to be at least 5,000 (Bean and Smith 1978), but recent ethnohistoric work suggests a much larger population, approaching 10,000 (O'Neil 2002). Archaeological sites composed of villages with various sized structures have been identified through the Los Angeles Basin. Within the permanent village sites, the Gabrielino constructed large, circular, domed houses made of willow poles thatched with tule, each of which could hold upwards of 50 people (Bean and Smith 1978). Other structures constructed throughout the villages probably served as sweathouses, menstrual huts, ceremonial enclosures, and communal granaries.

Cleared fields for races and games, such as lacrosse and pole throwing, were created adjacent to Gabrielino villages (McCawley 1996).

The largest, and best documented, ethnographic Gabrielino village in the vicinity was that of Yanga (also known as Yaangna, Janga, and Yabit), which was in the vicinity of the downtown Los Angeles (McCawley 1996:56-57; NEA and King 2004). This village was reportedly first encountered by the Portola expedition in 1769. In 1771, Mission San Gabriel was established. Yanga provided a large number of the recruitments to this mission; however, following the founding of the Pueblo of Los Angeles in 1781, opportunities for local paid work became increasingly common, which had the result of reducing the number of Native American neophytes from the immediately surrounding area (NEA and King 2004). Mission records indicate that 179 Gabrielino inhabitants of Yanga were recruited to San Gabriel Mission (King 2000:65; NEA and King 2004: 104). Based on this information, Yanga may have been the most populated village in the Western Gabrielino territory. Second in size, and less thoroughly documented, the village of Cahuenga was located slightly closer, just north of the Cahuenga Pass.

The environment surrounding the Gabrielino included mountains, foothills, valleys, deserts, riparian, estuarine, and open and rocky coastal eco-niches. Like most native Californians, acorns (the processing of which was established by the early Intermediate Period) were the staple food source. Acorns were supplemented by the roots, leaves, seeds, and fruits of a wide variety of flora (e.g., islay, cactus, yucca, sages, and agave). Fresh water and saltwater fish, shellfish, birds, reptiles, and insects, as well as large and small mammals, were also consumed (Bean and Smith 1978:546; Kroeber 1925; McCawley 1996).

Tools and implements used by the Gabrielino to gather and collect food resources included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Trade between the mainland and the Channel Islands Groups was conducted using plank canoes as well as tule balsa canoes. These canoes were also used for general fishing and travel (McCawley 1996).

The collected food resources were processed with hammerstones and anvils, mortars and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Catalina Island steatite was used to make ollas and cooking vessels (Blackburn 1963; Kroeber 1925; McCawley 1996).

The Chinigchinich cult, centered on the last of a series of heroic mythological figures, was the basis of religious life at the time of Spanish contact. The Chinigchinich cult not only provided laws and institutions, but it also taught people how to dance, which was the primary religious act for this society. The Chinigchinich religion seems to have been relatively new when the Spanish arrived. It was spreading south into the Southern Takic groups even as Christian missions were being built. This cult may be the result of a mixture of native and Christian belief systems and practices (McCawley 1996).

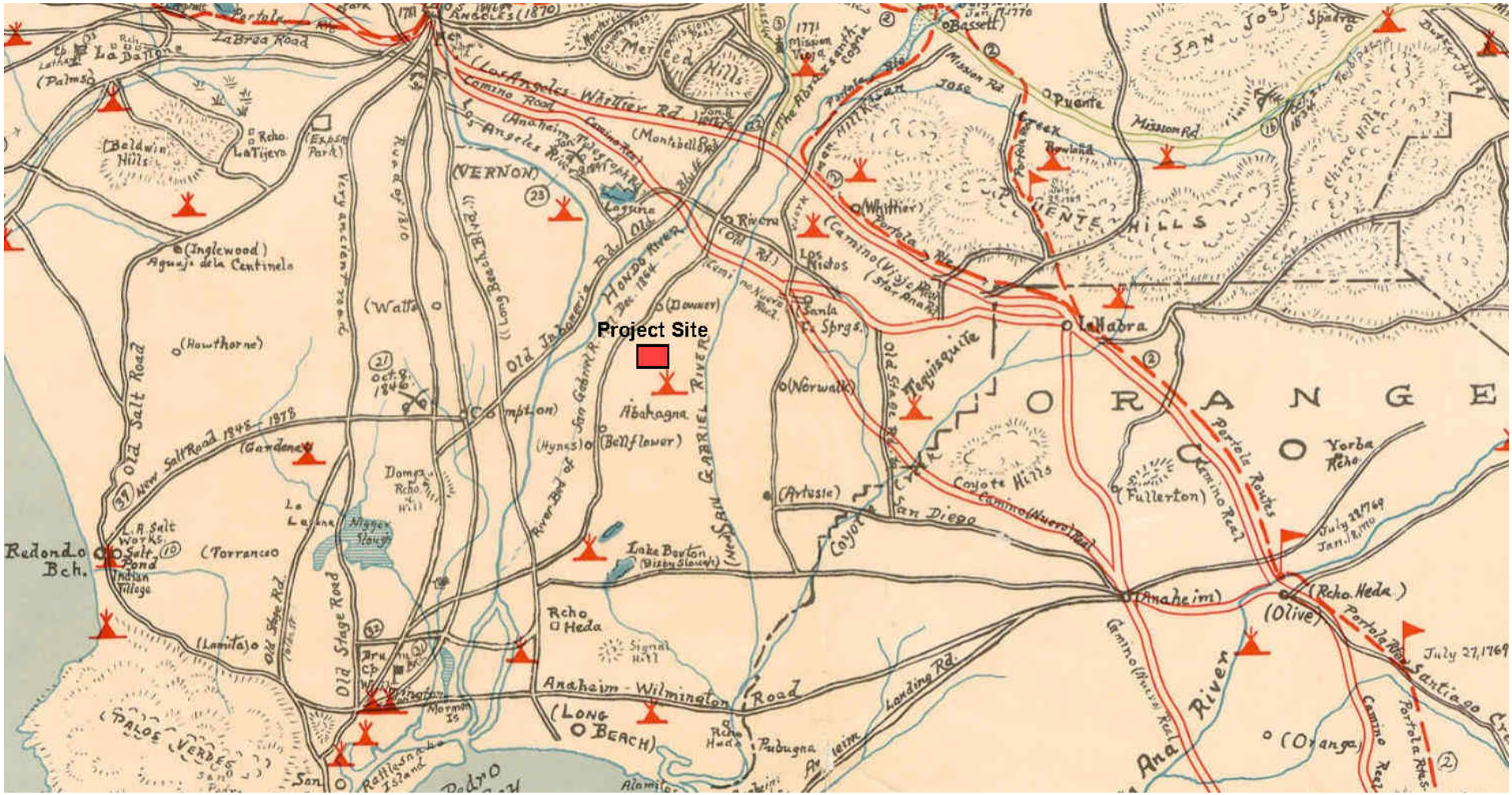
Inhumation of deceased Gabrielino was the more common method of burial on the Channel Islands while neighboring mainland coast people performed cremation (Harrington 1942; McCawley 1996). Cremation ashes have been found buried within stone bowls and in shell dishes (Ashby and Winterbourne 1966), as well as scattered among broken ground stone implements (Cleland et al. 2007). Supporting this finding in the archaeological record, ethnographic descriptions have provided an elaborate mourning ceremony. Offerings varied with the sex and status of the deceased (Johnston 1962; McCawley 1996; Reid 1926). At the behest of the Spanish missionaries, cremation essentially ceased during the post-Contact period (McCawley 1996).

# 3.3 Ethnographic Research and Review of Academic Literature

Dudek cultural resources specialists reviewed pertinent academic and ethnographic literature for information pertaining to past Native American use of the Project site and vicinity. This review included consideration of sources commonly identified though consultation, notably the 1937 Kirkman-Harriman Historical Map (Figure 3). Based on this map, the Project site is immediately east of an unnamed road, in between the "Riverbed of San Gabriel" to the west and the "New San Gabriel River" to the east. The Project site is approximately 6.7 miles east of a historic battle site likely related to the October 8, 1846 Dominguez Rancho Mexican-American War location, approximately 2.5 miles southeast of the Old Jaboneria Road, and approximately 0.5 miles north of a Native American village referenced in the map as "Abahagna". It should be noted that this map is highly generalized due to scale and age and may be somewhat inaccurate with regard to distance and location of mapped features. Additionally, this map was prepared based on review of historic documents and notes more than 100 years following secularization of the missions (in 1833). Although the map contains no specific primary references, it matches with the details documented by the Portola expedition (circa 1769-1770). While the map is a valuable representation of post-mission history, substantiation of the specific location and uses of the represented individual features would require review of archaeological or other primary documentation on a case-by-case basis. No information relating to the village site mapped nearest to the Project was provided within the technical reports reviewed as part of the records search for this study.

Use of Gabrielino as a language has not been documented since the 1930s (Golla 2011). One study made an effort to map the traditional Gabrielino cultural use area through documented family kinships included in mission records (NEA and King 2004). This process allowed for the identification of clusters of tribal villages (settlements) with greater relative frequencies of related or married individuals than surrounding areas. Traditional cultural use area boundaries, as informed by other ethnographic and archaeological evidence, were then drawn around these clusters. The relative sizes of these villages were also inferred from their relative number of mission-period recruits. The largest village in the vicinity was likely Yabit (or Yanga), located approximately 12 miles to the northwest in the downtown Los Angeles area and may have been the most populated village in the Western Gabrielino territory (NEA and King 2004: 104). In general, the mapped position of Yanga has been substantiated through archaeological evidence, although the archaeological record has been substantially compromised by rapid and early urbanization throughout much of the region. No archaeological evidence of the nearest village on the 1938 Kirkman-Harriman map was provided in the SCCIC records search results or review of other archaeological information.

Based on review of pertinent academic and ethnographic information, the Project falls within the boundaries of the Gabrielino traditional territory, however, no Native American cultural resources have been previously documented in areas that may be impacted by the Project.


Project Site
LaBrea Road
Old Salt Road
New Salt Road 1848 - 1978
Old Stage Road
Anaheim - Wilmington Road
Old State Road
Camino Real
Portola Route
Portola Rte.
Old Spanish Trail
Old Indian Trail
Old Mormon Trail
Los Angeles - Whittier Rd.
Los Angeles River
Rio Hondo
San Gabriel River
Coyote Hills
Landing Rd.
Santa Ana River
Aliso Creek
Laguna Rd.
Redondo Bch.
Torrance
Compton
Norwalk
Downey
Whittier
La Habra
Fullerton
Anaheim
Orange
Olive
Lakewood
Long Beach
Palos Verdes
Inglewood
Hawthorne
Gardena
Bellflower
Artesia
Lake Baldwin Hills
Rancho La Tijera
Rancho Los Nietos
Rancho Santa Gertrudes
Rancho Heda
Rancho Yorba
Rancho Las Bolsas
Rancho Las Cienegas
Rancho Aguaje de la Centinela
Rancho Sausal Redondo
Rancho Palos Verdes
Rancho Los Alamitos
Rancho Los Cerritos
Rancho Santa Ana
Rancho Cañada de los Nogales
Rancho Cañada de los Negros
Rancho Cañada de los Pinos
Rancho Cañada de los Vaqueros
Rancho Cañada de los Alisos
Rancho Cañada de los Sauces
Rancho Cañada de los Robles
Rancho Cañada de los Encinos
Rancho Cañada de los Cipreses
Rancho Cañada de los Palmas
Rancho Cañada de los Olivos
Rancho Cañada de los Naranjos
Rancho Cañada de los Limones
Rancho Cañada de los Duraznos
Rancho Cañada de los Manzanos
Rancho Cañada de los Perales
Rancho Cañada de los Ciruelos
Rancho Cañada de los Membrillos
Rancho Cañada de los Higos
Rancho Cañada de los Granados
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# 3.4 Historical Overview

Post-Contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1821), Mexican Period (1821–1848), and American Period (1846–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War, signals the beginning of the American Period when California became a territory of the United States.

### Spanish Period (1769-1821)

Spanish explorers made sailing expeditions along the coast of southern California between the mid-1500s and mid-1700s. In search of the legendary Northwest Passage, Juan Rodríquez Cabrílllo stopped in 1542 at present-day San Diego Bay. With his crew, Cabrílllo explored the shorelines of present Catalina Island as well as San Pedro and Santa Monica Bays. Much of the present California and Oregon coastline was mapped and recorded in the next half-century by Spanish naval officer Sebastián Vizcaíno. Vizcaíno's crew also landed on Santa Catalina Island and at San Pedro and Santa Monica Bays, giving each location its long-standing name. The Spanish crown laid claim to California based on the surveys conducted by Cabrílllo and Vizcaíno (Bancroft 1885; Gumprecht 2001).

More than 200 years passed before Spain began the colonization and inland exploration of Alta California. The 1769 overland expedition by Captain Gaspar de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja (lower) California Native Americans, and Mexican civilians, Portolá established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement in Alta California. In July of 1769, while Portolá was exploring southern California, Franciscan Fr. Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823 (Bancroft 1885; Gumprecht 2001).

The Portolá expedition was the first known party of Europeans to set foot in the present-day boundaries of Los Angeles County in August 1769. Father Crespi called the campsite beside the river in the new territory, "Nuestra Señora la Reina de los Angeles de la Porciúncula" which translated to "Our Lady the Queen of the Angels of the Porziuncola." The Porziuncola is the name of the small chapel within the Papal basilica of Saint Mary of the Angels in Assisi, Italy where the Franciscan order was said to have started in the thirteenth century. Two years later, Friar Junípero Serra returned to the valley to establish the Mission San Gabriel Arcángel, on September 8, 1771. In 1776, following a series of floods, the mission was moved to a second, temporary site before being moved again to the present site in 1791 (Bancroft 1885; Hoover et al. 2002).

Four years after the founding the secular Spanish settlement in 1781, El Pueblo de Nuestra Señora de Los Angeles, Manuel Nieto received a provisional grant for Rancho Los Nietos in 1784. The immense grant encompassed all the land between the Santa Ana and the Rio Hondo (then-called the San Gabriel) Rivers, and between the ocean and the now-called Coyote Hills. The Rancho was later partitioned into smaller Ranchos by Nieto's heirs during the Mexican period (Hoover et al. 2002).

### Mexican Period (1821-1846)

A major emphasis during the Spanish Period in California was the construction of missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns, but just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles). Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants (Dallas 1955).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. The children of Manuel Nieto petitioned for the Mexican Governor to divide Rancho Los Nieto into six smaller Ranchos. The new ranchos included Rancho Loa Alamitos, Rancho Cerritos, Rancho Los Coyotes, Rancho Los Bolsas, Rancho Palo Altos, and Rancho Santa Gertrudes. Rancho Santa Gertrudes, where the proposed Project is located, was granted in 1834 to the widow of Antonio María Nieto, Josefa Cota de Nieto. The 21,713-acre Rancho encompasses present day Downey and Santa Fe Springs. The secularization of the missions (enacted 1833) following Mexico's independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos (Hoover et al. 2002).

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities.

### American Period (1846-Present)

The Mexican–American War ended with the Treaty of Guadalupe Hidalgo in 1848, ushering California into its American Period. Los Angeles was designated as one of the 27 original counties of California on February 18, 1850, shortly before California officially became a state with the Compromise of 1850. Beginning with the California Land Act of 1851, the new State of California recognized the ownership of lands distributed under Spanish and Mexican land grants if they were formally claimed to the United States Land Claim Commission within two years. The owner was required to furnish proof of ownership and the size of their property which led to lengthy court cases throughout the state and rulings that were delayed for extended periods (U.S. Congress 1851).

An American man from Kentucky named Lemuel Carpenter arrived in the vicinity of Rancho Santa Gertrudes during the 1830s. Following his marriage to the granddaughter of Manuel Nieto and niece of Josefa Cota de Nieto, María de Los Angeles Domínquez, Carpenter purchased Rancho Santa Gertrudes from Doña Cota de Nieto in 1843. Carpenter often disputed with the owners of the Rancho to the north, Rancho Paso de Bortolo, concerning the overlap of the two Ranchos at the northern boundary of his Rancho (Figure 4). Carpenter applied for legal claim to Rancho San Gertrudes under the California Land Act of 1851, however, the appeal process took over 12 years, in which time Carpenter began to default on the sizable loan he took out to purchase the Rancho. Rancho Santa

Gertrudes was seized from Carpenter in 1859 and sold at auction by the sheriff to John G. Downey and Dr. James P. McFarland. Downey and McFarland purchased 17,602-acres of Rancho Santa Gertrudes at a bargain rate of $3.40 per acre. The court process concluded after Carpenter's death, and resulted in the preparation of the 1862 Plat Map of the Rancho Santa Gertrudes by the U.S. Surveyor General (Figure 4) attributing ownership of Rancho Santa Gertrudes and the small disputed triangular section containing the subject property as Carpenter's property. Although Downey and McFarland formally owned the property by this point, their ownership of this section was not formally accepted until 1866 (Hoover et al. 2002; Jensen 1991; Da Rold 1979).

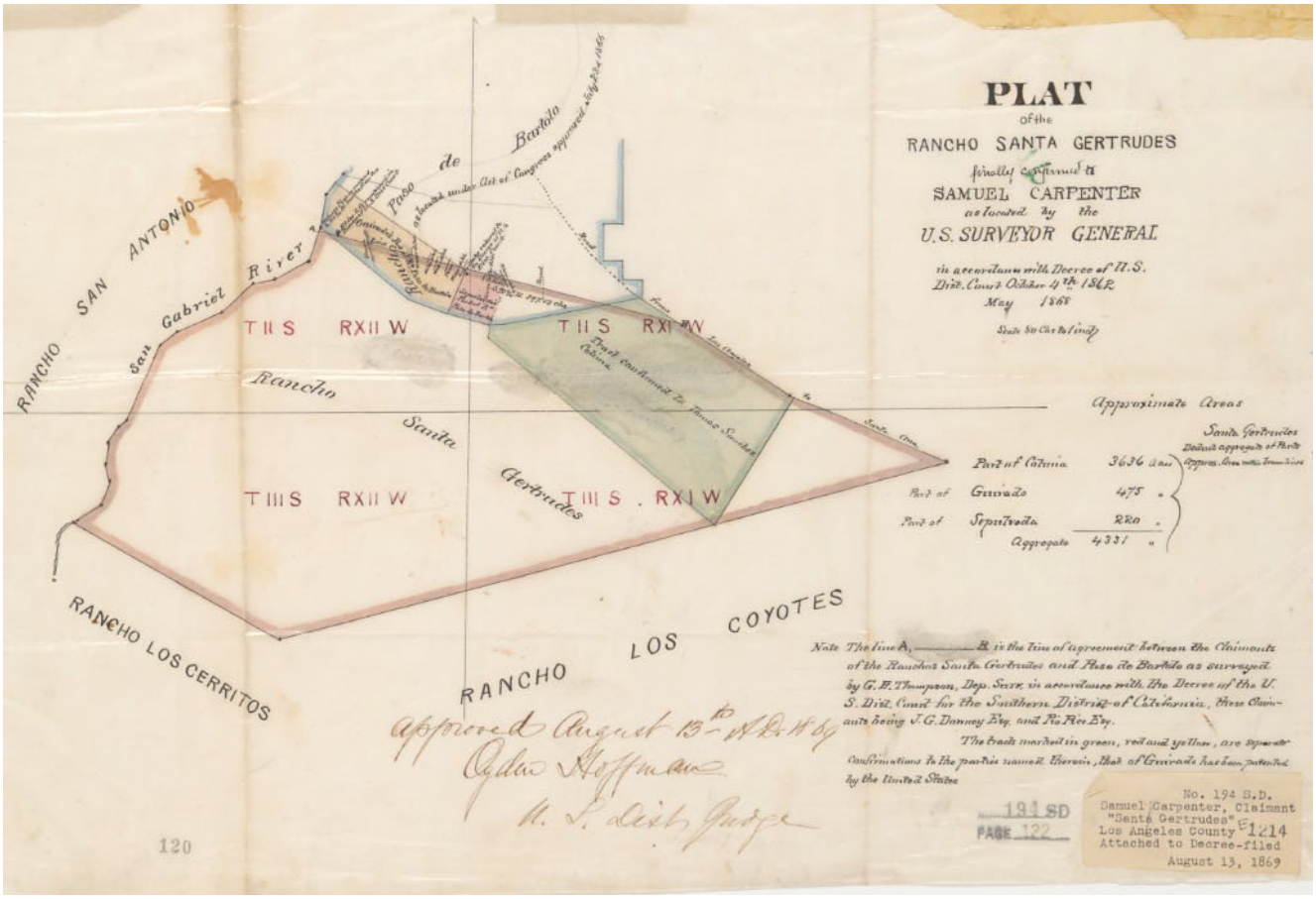



Figure 4. Plat of the Rancho Santa Gertrudes showing disputed northern territory overlap, 1866 (Bancroft Library, UC Berkley)

### Historical Overview of Downey

John Downey (b. 1827) emigrated from Ireland to the Washington D.C. where he trained as a druggist for several years before traveling in California in 1849 at the height of the Gold Rush. Downey partnered with McFarland and together they opened the second drug store in Los Angeles in 1850. Downey continued his assent through local politics after becoming a naturalized American in 1851 and joining the Los Angeles City Council thereafter. In 1860, shortly after he purchased Rancho Santa Gertrudes, Downey became the seventh Governor of the State of California. He returned to the Rancho in 1862 at the conclusion of his two-year term and began the process, alongside McFarland, of dividing 96-acres of the Rancho into small farms. This subdivision facilitated the transition of the Rancho from a cattle range into fertile, agricultural properties that would attract new settlers to Los Angeles

County. Governor Downey promoted the cultivation of oranges on the properties he sold, as he believed that the oranges would prove to be an extremely lucrative crop (Hoover et al. 2002; Latimer et al. 2010).

As Downey and McFarland subdivided and sold off portions of the Rancho during the 1860s and 1870s, the small communities of Gallatin and College Settlement organically developed, and then gradually grew together. When the Southern Pacific Railroad announced that they would route the railroad near, but not through either of the existing settlements, plans for a new, combined town surrounding the new depot developed. The settlement of Downey was officially established when Los Angeles County surveyor, Frank Lecouvreur, filed a map for the "Tract of the Downey Land Association" in October 1873. The map included two blocks devoted to the new Southern Pacific Railroad depot, which opened in April 1874. By the end of 1874, the fledgling town of Downey featured a hotel, three schools, two churches and a newspaper office (Downey Historical Society N.D.; Latimer et al. 2010).

As Governor Downey speculated when he advertised the Rancho Santa Gertrudes farms for sale, citrus fruit became an extremely successful crop. Valencia oranges were first grown on the farms surrounding the town of Downey in the 1870s, with Navel oranges following soon after. Other crops that thrived on the surrounding Downey farms included barley, castor beans, corn, English walnuts, sugar beets and potatoes. The arrival of the Southern Pacific Railroad in 1874 provided an efficient means to distribute the abundant agricultural products to a wider market, and in 1879 alone, 7,941,825-pounds of produce was transported from the Downey depot. By the 1890s, the northern portion of Downey was predominately populated by citrus orchards and was well-known as a citrus powerhouse. While Downey continued to prosper as a citrus-producing region well into the 20th century, it remained a predominately rural community during this period (Latimer et al. 2010).

During the late 1920s and the 1930s, aviation arose as a profitable industry in Downey. In March 1929, E.M Smith purchased a 73-acre ranch in southeast Downey that had been used to grow oranges and castor beans and established EMSCO Aircraft. Smith began building aircrafts onsite, constructed a 2,400-foot runway and various hangar buildings before the stock market crash later in 1929 caused EMSCO Aircraft to fold. In 1932, Smith rented the aviation-oriented property to an established aviation company owned by Bert Kinner, called the Security National Aircraft Company. Kinner gained early notoriety in the aviation field with his innovative "folding wing" design and he was also responsible for the design of the popular Kinner Airster plane, which was the first plane purchased by Amelia Earhart (Latimer et al. 2010).

In 1936, a seasoned aviation engineer named Gerard Vultee moved his company, Vultee Aircraft, from Glendale to the same facility that formerly housed both EMSCO Aircraft and the Security National Aircraft Company. Vultee saw significant success from the Downey plant, which employed over 500 people by 1938. After Vultee's death, the company was renamed the Consolidated Vultee Aircraft Corporation, or 'Convair' for short. By 1941, the Downey plant was responsible for the production of 15-percent of all military aircraft in the United States, including the B-13A, the Vultee BT-13 trainer, and B-24 Liberator bombers. Despite this, when the war effort came to a close, so too did the majority of production of military craft at the Downey plant. Limited projects carried the plant through the late 1940s including the Lark short range missile and the MX-774 ballistic missile before Convair moved operations from the Downey plant to San Diego in 1948 (Latimer et al. 2010; Blackburn 2009).

Another prominent aviation company that held military contracts through World War II, North American Aviation (NAA), did not experience the same economic downturn in the immediate post-war period. Instead, the El Segundo-based NAA saw a quick recovery that was fueled by federal contracts to produce the AJ Savage bomber, the T-6G, and the T-28 trainer aircrafts. NAA was also racing to produce jet-powered aircraft and began making use of the V-2 jet technology that was apprehended from Nazi Germany. In 1949, NAA established an additional production site

at the former Convair facility in Downey that would also serve as the headquarters for the NAA's new, Aerophysics Design Group. NAA's refocus towards the establishment the Aerophysics Design Group laid the foundation for the NAA Missiles Division, which produced the X-10 Navaho missile and the Hound Dog. The missile program also formed the basis for the NAA's transition into spacecraft engineering. The NAA Missiles Division secured the National Aeronautics and Space Administration (NASA) contract to design and build the test booster for the Mercury, Gemini, and Apollo space crafts, known as the Little Joe booster. Alongside the work of the NAA in Downey during the 1950s, the City also saw a rise in the number of new industries related to aeronautical and spacecraft design overall during this period (Blackburn 2009).

Following World War II, a surge of residential and industrial development throughout Los Angeles County caused the population of Downey to balloon from 12,000 people in 1940 to 86,000 people by 1960. The residents of Downey voted to officially incorporate the City in 1956. The County experienced dramatic industrial growth during this period, with a gain of 70 percent in the number of factories and 300 percent increase in manufacturing county-wide between 1939 and 1947. With the express support of the aeronautical engineering companies in Downey, by 1952, Los Angeles County was leading nationally in six areas of industry including; aircraft and aircraft parts; pumps and compressors; canned seafood; the motion picture industry; refrigeration and associated equipment; and heating a plumbing equipment (Latimer et al. 2010; LAT 1952).

Downey remained a dominant force in the aerospace engineering industry throughout the 1960s and the 1970s and is known colloquially as the "Cradle of the Cosmic Age" due to the development there of so many technologies considered instrumental to the advent of manned spacecraft. Today, Downey maintains a population of approximately 113,350 people, and although a majority of the City's workforce is now employed by the healthcare and social assistance industries, manufacturing is still considered the second largest driver of employment in the City (Blackburn 2009; Data USA 2020).

# 3.5 Kirkhill Manufacturing Inc. (1941-Present)

Thomas Kirk Hill founded The Mechanical Rubber Co. in the City of Los Angeles in 1919 to produce rubber seals and flexible connectors for plumbing and industrial use. In 1926, the company was renamed the Kirkhill Rubber Co. As the demand for rubber products grew, the company enlarged the original plant during the 1930s (Figure 5) (Kirkhill Inc. 2019).




Figure 5. The original Kirkhill Rubber Company building in 1938 (Kirkhill Inc. 2019)

Prompted by the escalation of the aeronautical industry in Los Angeles County in response to World War II, the Kirkhill Rubber Co. divided into two separate companies in 1941: Kirkhill Rubber Co. remained focused on the manufacturing of rubber products related to plumbing and industrial goods, while the new branch of the company, Kirkhill Manufacturing Inc., focused on the production of seals related to aerospace products (Kirkhill Inc. 2019).

In 1949, the Kirkhill Rubber Co. completed a new, 360,000-square foot facility in Brea, California, that was capable of employing over 1,000 people. The Brea facility was expanded by 50,000-square feet in 1950 allowing it to become the center of operations and production for both Kirkhill companies. In 1951, as the NAA developed new, jet propelled aircraft, Kirkhill Manufacturing Inc. established a comparatively smaller plant in Downey to maintain close proximity to the rapid-paced-development in the Downey aerospace industry. A permit for an expansion of the Downey plant in 1955 suggests that the plant employed only 60 people, which was a nominal fraction of the overall company employment during this period (LAT 1950; Kirkhill Inc. 2019; Permit #3611).

Both Kirkhill entities continued to expand during the 1960s, as Kirkhill products were utilized in the first manned trip to the Moon and also in the development of the F104 and DC-9 aircrafts. During the 1970s, Kirkhill Inc. maintained growth with the assistance of the space shuttle programs, the Titan intercontinental ballistic missile, and the Minutemen missiles (Kirkhill Inc. 2019).

During the 1990s, the two companies under the Kirkhill name were sold and renamed. In 1996, the former employees of Kirkhill Inc. purchased the company and manufacturing equipment and formed the Kirkhill Manufacturing Company. In 1998, Kirkhill Manufacturing Company was acquired by Esterline, which then merged in 1999 with TA Manufacturing and the company name became the Kirkhill-TA Company. This company found success in the manufacture of parts used in the reusable rockets for the Space Shuttle program, as well as components of the Boeing 777 aircraft. Despite the multiple changes in company ownership and structure since the 1990s, the Kirkhill name was retained as part of the new businesses. In 2019, Kirkhill Manufacturing Company celebrated its 100th anniversary as a company (Hexpol 2020; Kirkhill Inc. 2019).

## 3.6 Project Site History

Based on a review of historical aerial photographs (see Section 2.3 for a full aerial photograph review), the region of Downey that comprises the Project site remained undeveloped farmland until the late-1940s. Despite the busy Convair facility being located approximately 0.75-miles west of the Project site, the first industrial development along this stretch of Woodruff Avenue between Stewart and Gray Road and Washburn Road did not take place until the period between 1947 and 1951. The subject property, the Kirkhill Manufacturing Inc. building located at 12021-12023 Woodruff Avenue, first appears in the 1952 historical aerial photograph and Los Angeles County Assessor data indicates that it was constructed in 1951. The original architect for the facility as well as the architect(s) who designed the subsequent additions were not discovered during the course of research for this project. A 1958 photograph of the plant and a review of historical aerial photographs suggest that the plant has undergone numerous, major expansions that have effectually tripled the square-footage of the original Mid-Century Modern building (Figure 6). See Section 5.2, Identified Alterations, for an in-depth review of identified additions and alterations to the building over time (UCSB 2020; NETR 2020; Los Angeles Co. Assessor 2020).




Figure 6. Kirkhill Manufacturing Inc. building in Downey, c.1958 (Blackburn 2009)

# 3.7 Mid-Century Modern Architecture (1933-1965)

The Mid-Century Modern design movement includes architecture that is reflective of International and Bauhaus styles popular in Europe in the early 20th century. This architecture and its living designers (e.g., Mies Van der Rohe and Gropius) were disrupted by World War II and moved to the United States. During World War II, the United States established itself as a burgeoning manufacturing and industrial leader, with incredible demand for modern buildings to reflect modern products in the mid-20th century. As a result, many industrial buildings are often "decorated boxes"—plain buildings with applied ornament to suit the era and appear more modern without detracting from the importance of the activity inside the building. Following World War II, the United States had a focus on forward thinking, which sparked architectural movements like Mid-Century Modern. Practitioners of the style were focused on the most cutting-edge materials and techniques. Architects throughout Southern California implemented the design aesthetics made famous by early Modernists like Richard Neutra and Frank Lloyd Wright, who created a variety of modern architectural forms. Like other buildings of this era, Mid-Century Modern buildings had to be quickly assembled, and use modern materials that could be mass-produced. Both residences and offices designed in this style expressed its structure and materials, displayed large expanses of glass, and had an open interior plan (McAlester 2013; Morgan 2004).

Characteristics of the Mid-Century Modern style include:

- One- to two-stories in height
- Low, boxy, horizontal proportions
- Simple geometric forms with a lack of exterior decoration
- Commonly asymmetrical
- Flat roofed without coping at roof line; flat roofs hidden behind parapets or cantilevered canopies
- Expressed post-and-beam construction in wood or steel
- Exterior walls are flat with smooth sheathing and typically display whites, buffs, and pale pastel colors
- Mass-produced materials
- Simple windows (metal or wood) flush-mounted and clerestory
- Industrially plain doors
- Large window groupings

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# 4 Field Survey

## 4.1 Methods

Dudek Senior Architectural Historian Sarah Corder, MFA, conducted a pedestrian survey of the Project site for historic built environment resources on August 12, 2020. The survey entailed walking around the exteriors of the Kirkhill Manufacturing Inc. property, documenting each wing with notes and photographs, specifically noting character-defining features, spatial relationships, observed alterations, and examining any historic landscape features on the property. The property is entirely developed and contains no exposed sediment; therefore, an archaeological survey was not completed. Dudek documented the fieldwork using field notes, digital photography, close-scale field maps, and aerial photographs. Photographs of the subject property were taken with a digital camera. All field notes, photographs, and records related to the current study are on file at Dudek's Pasadena, California, office.

## 4.2 Results

During the course of the pedestrian survey, Dudek identified a series of interconnected buildings that all function together as the Kirkhill Manufacturing, Inc. facility. The survey also indicated that the subject property grew and developed over time, with multiple sections of the now-interconnected buildings and wings being more than 45 years old, thus requiring recordation and evaluation for historical significance. Section 5 (Significance Evaluation) provides a detailed physical description of the subject property, as well as, the associated significance evaluation for the subject property under all applicable national, state, and local designation criteria and integrity requirements.

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# 5 Significance Evaluation

In order to determine if the proposed Project will impact historical resources under CEQA, the Kirkhill Manufacturing Inc. property located at 12021-12023 Woodruff Avenue (AIN 6284-025-018) within the Project site was evaluated for historical significance and integrity in consideration of NRHP and CRHR designation criteria and integrity requirements. The City of Downey does not maintain cultural resource designation criteria and instead defers to the NRHP and the CRHR.

A detailed physical description of the property is provided below. The subject property presents as a one building with multiple wings and large-scale additions including the main office, the north warehouse, and the south warehouse. For the purposes of clarity, these three wings will be described separately below.

## 5.1 Kirkhill Manufacturing Inc. (12021-12023 Woodruff Avenue)

**Physical Description**

The subject property faces east onto Woodruff Avenue (Figure 7) and features three geographically distinct, yet interconnected building wings: the main office, the north warehouse, and the south warehouse. These individual areas of the building are comprised of multiple additions and expansions that have caused them to display a range in style, scale, and materials. The three main sections are connected by interior hallways, as well as, a paved, U-shaped access driveway and parking area that extends around the perimeter of the building on the north, west and south sides. A smaller U-shaped parking lot is located in front of the east (main) elevation of the main office wing, offers limited surface parking. This parking area is surrounded by modest landscaped areas and the remaining section of the original flat-brick company sign at the center of the drive.




Figure 7. Overview of Kirkhill Manufacturing Inc. property, view looking northwest across Woodruff Avenue (IMG_0352)

*Main Office (1951, multiple expansions)*

The main office wing is a one-story, Mid-Century Modern-style building featuring a flat roof and decorative breezeway block screens (Figure 8). The building is clad in a combination of flat brick and scored stucco in broad sections (Figure 9). The flat roof extends out to form a covered walkway along the front of the building. The primary entrance features a single, replaced full-lite door located at the center of the east (main) elevation that is surrounded by two fixed windows and a fixed transom (Figure 10). Each of the remaining tall, fixed rectangular windows on the building correspond to a breezeway block screen that diffuses the light entering the building. The north and south sections of the building shows evidence of multiple modifications and expansion over time displayed by incompatible rooflines and blunt transitions between exterior cladding materials (Figure 11).




Figure 8. Main office volume east (main) and south elevations, view looking northwest (IMG_0378)




Figure 9. Main office east (main) elevation showing decorative breezeway block screens situated in front of windows, view looking southwest (IMG_0414)




Figure 10. Primary entrance door on main office, view looking northwest (IMG_0423)



Figure 11. Main office volume north elevation shows the convergence of the various rooflines resulting from multiple additions, view looking south (IMG_0408)

*North Warehouse (1951, multiple expansions)*

The north warehouse portion of the building is located northwest of the main office and consists of two different utilitarian-style sections: a two-story section clad in ribbed metal siding atop a concrete masonry unit (CMU) substructure; and a tri-gable, one-story section which faces the western property line (Figure 12).



Figure 12. North warehouse showing the one-story, tri-gabled section in the foreground with the two-story section in the rear, view looking southeast (IMG_0495)

The two-story section of the north warehouse sits immediately behind the main office volume and features a shallow, front-facing gable roof supported by heavy steel framing (Figure 13). The roof is clad in ribbed metal material and contains multiple skylights as well as clerestory windows on the south elevation. A metal shed roof extends from the north elevation of the building to shelter a wide walkway full of equipment and machinery. The main entry point for this section of the building is a large roll-up metal door. Additional doors are found throughout the elevation, but they appear to function as emergency doors and not as primary points of entry.



Figure 13. Main office volume north elevation shows the convergence of the various rooflines resulting from multiple additions, view looking south (IMG_0467)

The one-story, tri-gabled section of the north warehouse is located to the west of the two-story section (Figure 14). This segment of the building is clad in a ribbed metal siding in both a metallic and white color. Each of the three, equally-sized bays contains a single or a double metal roll up door which provides access to the interior areas. The northern wall on this section is faced with CMU to correspond with the two-story section.



Figure 14. View of the one-story, gabled section of the north warehouse, view looking southeast (IMG_0493)

*South Warehouse (1951, multiple expansions)*

The south warehouse is located to the southwest of the main office wing and south of the north warehouse. This building section features a front gable roof and a west elevation clad in a ribbed metal material (Figure 15). The south elevation consists of a broad wall of built from CMU which runs the length of this elevation (Figure 16). The entire stretch of this elevation is punctuated only by two full-leaf doors, a metal roll-up door, a sliding glass door with a small metal awning, and two decorative breezeway block screens shading a window on the east side of the elevation.



Figure 15. South warehouse west elevation (left) and partial south (right) elevations, view looking northeast (IMG_0519)



Figure 16. South warehouse partial south elevation, view looking east (IMG_0534)

### Identified Alterations

Dudek staff visited the City of Downey Permit Counter on August 12, 2020 and reviewed all available permits pertaining to the subject property (AIN 6284-025-018). Observed alterations are also included in this section with dates stated where known:

- 1950. Electrical permit to install six new motors (#62280)
- 1954. 9,000-square foot, one-story addition (#70040)
- 1954. Electrical permit to install three new transformers (#23605)
- 1954. Electrical permit to install several new motors (#1721)
- 1955. 50-foot by 80-foot, one-story addition (#3611)
- 1955. Electrical permit to install four motors (#8114)
- 1956. Electrical permit to update electrical receptacles and fixtures (#8429, #6922, and #5007)
- 1956. Install wet standpipe (#6194 and #3510)
- 1959. Demolish and replace former fire-damaged office building (#28490)
- 1959. Install fire sprinkler system in new office building (#29671)
- 1968. Existing shipping office remodeled (#91845)
- 1971. 18,000-square foot warehouse addition and 13,000-square foot packaging area addition (# 31754)
- 1971. Install three-ton combined gas heating and air conditioning system (#65775)

- 1971. Pave approximately 50,000-square feet surrounding building (#61033)
- 1972. 8-foot tall, 120-foot long block fence (no permit #)
- 1973. 21,536-square foot warehouse addition (#80040)
- 1973. 14,268-square foot warehouse/office and lunch room addition (#80039)
- 1973. Install automatic fire sprinklers in new warehouses and office buildings (#84255)
- 1973. Added public sewer connection (#90479)
- 1974. 12-foot, 6-inches by 18-foot patio cover installed as lunch area (#15447)
- 1974. Install personnel sign (#04143)
- 1976. Add underground fuel storage tank (#46978)
- 1976. 3,024-square foot floor slab, building and canopy (#54228)
- 1976. Install fire sprinkler system (#56621),
- 1976. Install three water closets, two lavatories, and 1 drinking fountain (#45434)
- 2010. Install fire sprinkler system heads (#177-10)
- 2012. Install an approximately 33-square foot, non-illuminated sign (#BLD-12-00847)




SOURCE: Bing Maps 2020; Open Street Map 2019; Data for this graphic was taken from historical aerial photographs of the Project site in 1952, 1963, 1972 and 1994 (NETR 2020; UCSB 2020)

DUDEK

0 50 100 Feet

**FIGURE 17**

Expansion of the Kirkhill Manufacturing Inc.

12021 Woodruff Avenue Industrial Building Project

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## 5.2 NRHP/CRHR Statement of Significance

The subject property (12021-12023 Woodruff Avenue; AIN: 6284-025-018) does not meet any of the criteria for listing in the NRHP or CRHR, either individually or as part of an existing historic district, based on the following significance evaluation.

**Criterion A/1: That are associated with events that have made a significant contribution to the broad patterns of our history.**

Archival research indicates that by the time the Downey branch facility of Kirkhill Manufacturing Inc. was completed in 1951, parent company Kirkhill Rubber Co. had already been manufacturing rubber products for aerospace projects for 10 years. Kirkhill Manufacturing Inc. produced products specifically for airplanes and was established in order to distinguish between the parent company, Kirkhill Rubber Co., which was founded in 1919 to make household and industrial plumbing components. As Downey earned a reputation as an epicenter of aerospace engineering, Kirkhill Manufacturing Inc. had the opportunity to produce parts for multiple aircrafts and space crafts produced in the area during the 1950s through the 1980s. Despite the facility's location in Downey and its proximity to the bustling NAA plant, the facility in Downey appears to have remained secondary in both production and staffing to the Kirkhill Manufacturing Inc. facility in Brea that was completed several years earlier in 1949. Archival research indicates the Brea plant served as the center of operations during this period, and the Downey location is not referenced in connection with any specific achievement credited to the Kirkhill Manufacturing Inc. Ultimately, the success of the company continues to be associated with the Brea facility, not the Downey location. The plant in Downey does not appear to have made a significant contribution to the local, state, or national history. While the current tenants of the building, Kirkhill Manufacturing Company Inc., continues to use the Kirkhill company name, the original Kirkhill Manufacturing Inc. was sold and restructured multiple times during the 1990s. Therefore, the current Kirkhill Manufacturing Company Inc. does not maintain continued association to the company started by Thomas Kirk Hill in 1919 that went on to assist in the engineering of aerospace industries in Downey. Consequently, the building does not retain integrity of association with the firm that established the branch of the Kirkhill Manufacturing Inc., in Downey in 1951. Moreover, with subsequent additions and alterations, the building no longer represents the time period in which the events for which the company gained notoriety within the field of aerospace design took place. For this reason, the property does not appear eligible under Criterion A of the NRHP or Criterion 1 of the CRHR.

**Criterion B/2: That are associated with the lives of persons significant in our past.**

Archival research did not indicate that any previous property owners or employees are known to be historically significant figures at the national, state, or local level. As such, this property is not known to have any historical associations with people important to the nation's or state's past. Therefore, the property does not appear eligible for the NRHP under Criterion B or CRHR under Criterion 2.

**Criterion C/3: That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.**

Construction of the subject property began in 1951 and the original building design would go on to receive five major additions in the years 1954, 1955, 1971, 1973, and 1976. The original 1951 footprint as displayed in the

1952 historical aerial photograph (see Figure 17) was an example of the modest Mid-Century Modern-style buildings designed for industrial and commercial uses following the end of World War II. Furthermore, the popularity of the architectural style in Southern California and its widespread use resulted in the creation of hundreds of buildings in this style that have a higher level of integrity, association with notable architects, and a higher level of architectural merit that that shown at the subject property. Therefore, the subject property cannot be considered a distinctive example of a Mid-Century Modern industrial building, nor can it be considered representative of a significant and distinguishable entity whose components lack individual distinction. Furthermore, as the original architect was not discovered during the course of research for this project, the building is not known to be the work of a master architect.

Following the multiple expansions and additions, the character-defining features including the low, boxy massing, articulated profile, grand semi-circular driveway, and original exterior cladding have been substantially altered. Although the building appears to retain the majority of the original breezeway block screens, later additions to the main office's east (main) elevation that are different in scale from the original building, also feature the same wide swaths of decorative block in the same pattern. This has resulted in a blurred distinction between the original design and features that were added at a later period. The property as a whole has been altered beyond recognition, diminishing the already modest architectural value of the property. These alterations and major additions have caused the building to lose integrity in the areas of design, materials and workmanship. For these reasons, the subject property does not appear eligible for listing in the NRHP under Criterion C or CRHR under Criterion 3.

**Criterion D/4: That have yielded, or may be likely to yield, information important in prehistory or history.**

The property is not significant under Criterion D of the NRHP or Criterion 4 of the CRHR as a source, or likely source, of important historical information nor does it appear likely to yield important information about historic construction methods, materials or technologies.

## 5.3 Integrity Discussion

The subject property retains integrity of location, as it remains in its original location. The Kirkhill Manufacturing Inc. property, including all three wings, have undergone major exterior alterations and large–scale additions beginning in the 1950s. The building sections do not retain their original plan and massing, and later additions are not consistent with the original Mid-Century Modern-style building. Therefore, the subject property does not retain integrity of design. The property does not retain integrity of setting, as the setting in all directions has been altered from a rural farmland with periodic industrial development when it was initially constructed, to dense residential development, parking lots, strip malls with anchoring grocery and retail stores. The size, scale, and density of this modern setting differs dramatically from the 1950s and 1960s. Although the original distinctive breezeway block screens on the east elevation remain intact, the subject property does not retain integrity of materials and workmanship, due to the introduction of modern materials on the main and side elevations. For instance, key design elements such as the scale, massing, cladding, signage, original semi-circular driveway, and doors have all been replaced or heavily altered. The subject property also does not retain integrity of feeling, as the property as a whole no longer presents as a Mid-Century Modern-style industrial building. While the current tenants of the building, Kirkhill Manufacturing Company Inc., continue to employ the Kirkhill company name, the original Kirkhill Manufacturing Inc. was sold and restructured multiple times during the 1990s and no longer maintains any association to the company started by Thomas Kirk Hill in 1919. Consequently, the building no longer retains integrity of association with the original firm that established the branch of the Kirkhill Manufacturing Inc., in

Downey. In summary, the subject property does not retain the requisite integrity and does not rise to the level of significance required for designation at the national, state or local levels.

# 6 Findings and Conclusions

## 6.1 Summary of Findings

No cultural resources were identified within the Project site as a result of the CHRIS records search, NAHC SLF search, extensive archival research, field survey, and property significance evaluation. The Kirkhill Manufacturing Inc. property located at 12021-12023 Woodruff Avenue (AIN: 6284-025-018) does not appear eligible for NRHP or CRHR due to a lack of significant historical associations, architectural merit, and physical integrity. Therefore, this property is not considered an historical resource for the purposes of CEQA. Further, no potential indirect impacts to historical resources were identified.

Due to previous ground-disturbing activities within the Project site, the probability of encountering any intact archaeological resources during construction activities is low. However, in the event that intact archaeological deposits are encountered/impacted by ground-disturbing activities associated with the Project, management recommendations to reduce potential impacts to unanticipated archaeological resources and human remains during construction activities are provided below.

## 6.2 Recommendations

The proposed Project would result in a less than significant impact to cultural resources, including historical and archaeological resources. No previously identified or new cultural resources were identified within the Project site as a result of the current study; therefore, no further management recommendations are necessary beyond standard protection measures to address unanticipated discoveries of archaeological resources and human remains (listed below).

### Unanticipated Discovery of Archaeological Resources

All construction crews should be alerted to the potential to encounter archaeological resources. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find, the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA or Section 106 of the NHPA, additional work such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.

### Unanticipated Discovery of Human Remains

In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the remains are determined to be Native American, the Coroner shall notify the NAHC in

Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the MLD from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The MLD would then determine, in consultation with the property owner, the disposition of the human remains.

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# Appendix A

## Preparer's Qualifications

# Sarah Corder, MFA

## Senior Architectural Historian

Sarah Corder is an architectural historian with more than 13 years of professional experience throughout the United States in all elements of cultural resources management, including project management, intensive-level field investigations, architectural history studies, and historical significance evaluations in consideration of the California Register of Historical Resources (CRHR) Register, and the National Register of Historic Places (NRHP), and local-level evaluation criteria. Ms. Corder has conducted numerous historical resource evaluations and developed detailed historic context statements for a multitude of property types and architectural styles, including private residential, commercial, industrial, educational, and agricultural properties. She has also provided expertise on numerous projects requiring conformance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

***Education***

*Savannah College of Art and Design*
*MFA, Historic Preservation, 2004*

*Bridgewater College*
*BA, History, 2002*

***Professional Affiliations***

*National Trust for Historic Preservation*

*Los Angeles Conservancy*

*California Preservation Foundation*

*Society for Architectural Historians*

Ms. Corder meets the Secretary of the Interior's Professional Qualification Standards for both Architectural History and History. She has experience preparing environmental compliance documentation in support of projects that fall under the California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA), and Sections 106 and 110 of the National Historic Preservation Act (NHPA).

## Dudek Project Experience (2017-Present)

### Municipal

**Gilroy Citywide Historic Resources Inventory and Historic Context Statement, City of Gilroy, Gilroy, California (May 2018 – present, estimated completion date October 2019).** Dudek is currently working with the City of Gilroy to prepare a citywide historic context statement and update its 1986 historic resource inventory. As survey lead, Ms. Corder has already successfully completed reconnaissance-level survey of over 3,400 properties on time and within budget, submitted a draft historic context statement to the city, and has hosted a public kick-off meeting/outreach session that was well received by the community. Dudek has developed highly detailed and efficient iPad field forms that allow surveyors to record a property in less than 5 minutes and provide the City with real-time survey data.

**San Diego Dam and Reservoir Citywide Inventory, City of San Diego Public Utilities Department, San Diego, California (January 2017 – present, estimated completion date March 2019).** Dudek is currently in the process of preparing a historic context statement and significance evaluation of all dam infrastructure owned by the City's Public Utilities Department. The project involves evaluation of at least 10 dam complexes for historical significance in consideration of NRHP, CRHR, and City designation criteria and integrity requirements. While the project is still in progress, Ms. Corder has contributed extensively to archival research and has authored individual historic resource reports for Lower Otay Dam and El Capitan Dam.

**The Santa Monica City Yards Master Plan Project, City of Santa Monica, Los Angeles County, California (2017).** The City of Santa Monica retained Dudek to complete a cultural resources study for the proposed City Yards

Master Plan project site located at 2500 Michigan Avenue in the City of Santa Monica. The study involved evaluation of the entire City Yards site, including two murals and a set of concrete carvings for historical significance and integrity. As a result, the City Yards and its associated public art work was found ineligible under all designation criteria. Ms. Corder conducted building permit research and co-authored the technical report.

**LADWP West Los Angeles District Yard Project, City of Los Angeles, Los Angeles County, California (2017).** Dudek was retained by Los Angeles Department of Water and Power (LADWP) to complete a cultural resources study for a project that proposes demolition of five LADWP-owned administrative buildings and warehouses at the West Los Angeles District Headquarters located at 12300 West Nebraska Avenue. Dudek evaluated the yard for historical significance in consideration of NRHP, CRHR, and City of Los Angeles HCM criteria and integrity requirements. Ms. Corder's responsibilities for the project included the following: architectural history field survey and background research.

## Development

**Carol Kimmelman Sports and Academic Center Project, City of Carson, Los Angeles County, California (2018).** Dudek was retained to conduct a cultural resources study on the Victoria County Golf Course and associated recreation buildings for the proposed Kimmelman Sports and Academic Center. For the project, Ms. Corder conducted a record search, a pedestrian survey, archival and building development research, NRHP and CRHR evaluations, and impacts analysis. As a result of the historic significance evaluation, all golf course components associated with the Victoria County Golf Course were found not eligible under designation requirements. The project proposed to redevelop 87 acres of the northeastern portion Victoria Golf Course site for public recreation purposes, including 75,000 sq. ft. recreational buildings, and 22,000 sq. ft. of support buildings.

**Victoria Greens Project, City of Carson, Los Angeles County, California (2018).** Dudek was retained by the City of Carson Planning Division for a cultural resource inventory of three parcels at the intersection of Central Avenue and Victoria Street. Ms. Corder's responsibilities for the project included the following: architectural history field survey, building permit research, background research, preparation of DPR forms and authoring the cultural resources report. The project proposed to develop 176 new three-story townhomes on currently unused land on the northeast corner of Central Avenue and Victoria Street in the City of Carson.

**Birch Specific Plan 32-Unit Condo Project, City of Carson, Los Angeles County, California (2017).** Dudek was retained by the City of Carson to prepare a cultural resources report for a project that proposes to demolish approximately 6,200 square feet of existing residential buildings and roughly 5,850 square feet of pavement on the project site, and construct a 32-unit residential condominium community with on-grade parking, landscaping, and other associated improvements. The historical significance evaluation included three residential properties proposed for demolition. All properties were found not eligible under all designation criteria and integrity requirements. Ms. Corder's responsibilities for this project included the following: field survey, building permit research, background research, and co-authoring the final cultural resources report.

## Education

**John Adams Middle School Auditorium Replacement Project, City of Santa Monica, Los Angeles County, California (2018).** The Santa Monica-Malibu Unified School District retained Dudek write the Final Mitigated Negative Declaration for the John Adams Middle School Auditorium Replacement Project for the Santa Monica-Malibu Unified School District. The project proposed to demolish the existing auditorium and music building and replace them with a new performing arts center.

**Fullerton College Facilities Master Plan Program EIR, North Orange County Community College District, City of Fullerton, Orange County, California (2017).** The North Orange County Community College District (NOCCCD) contracted Dudek to evaluate all buildings and structures on campus over 45 years old that were proposed for demolition or substantial alteration as part of the proposed Master Plan Program. The study entailed conducting

archival and building development research, a records search, detailed impacts assessment, and development of mitigation measures for project conformance with the Secretary of the Interior's Standards for Rehabilitation. As a result of the significance evaluation, three historic districts and one individually eligible building were identified within the project area.

## Education

**Judicial Council of California Historical Resource Evaluation Report for the Santa Monica Courthouse, City of Santa Monica, Los Angeles County, California (2017)**. Dudek was retained by the Judicial Council of California (JCC) to prepare an evaluation of the Santa Monica Courthouse building, located at 1725 Main Street in the City of Santa Monica, California. To comply with Public Resources Code Section 5024(b), the JCC must submit to the State Historic Preservation Officer (SHPO) an inventory of all structures over 50 years of age under the JCC's jurisdiction that are listed in or that may be eligible for inclusion in the National Register of Historic Places (NRHP), or registered or that may be eligible for registration as a California Historical Landmark (CHL). The Santa Monica Courthouse was found not eligible for designation under all applicable criteria. Ms. Corder's responsibilities for the project included archival research and co-authoring the cultural resources report.

**Judicial Council of California Historical Resource Evaluation Report for the Figueroa Division Courthouse, City of Santa Barbara, Santa Barbara County, California (2017).** Dudek was retained by the Judicial Council of California (JCC) to prepare an evaluation of the Santa Monica Courthouse building, located at 118 E. Figueroa Street in the City of Santa Barbara, California. To comply with Public Resources Code Section 5024(b), the JCC must submit to the State Historic Preservation Officer (SHPO) an inventory of all structures over 50 years of age under the JCC's jurisdiction that are listed in or that may be eligible for inclusion in the National Register of Historic Places (NRHP), or registered or that may be eligible for registration as a California Historical Landmark (CHL). The Figueroa Division Courthouse was found not eligible for designation under all applicable criteria. Ms. Corder's responsibilities for the project included the following: background research and co-authoring of the final cultural resources report.

**Department of General Services Historical Resource Evaluation for the Normal Street Department of Motor Vehicles Site at 3960 Normal Street, San Diego, California (2017).** Dudek was retained by the State of California Department of General Services to complete a Historical Resources Technical Report for a project that proposes demolition and replacement of the Department of Motor Vehicles (DMV) building located at 3960 Normal Street in the City of San Diego. To comply with Public Resources Code Section 5024(b), DGS must submit to the State Historic Preservation Officer (SHPO) an inventory of all structures over 50 years of age under DGS's jurisdiction that are listed in or that may be eligible for inclusion in the National Register of Historic Places (NRHP), or that may be eligible for registration as a California Historical Landmark (CHL). The DMV was found not eligible. Ms. Corder's responsibilities for the project included background research for the historical resource technical report.

## Transportation

**Princeton Avenue Road Widening Project, City of Moorpark, Ventura County, California (2017).** Dudek was retained by Stantec and the City of Moorpark to prepare Caltrans-compliant cultural resource documentation for the Princeton Avenue Road Widening Project. The project includes approximately 0.75-miles of roadway widening and improvements, including sidewalks and bicycle lanes. Dudek prepared an ASR, HRER, and HPSR in support of this effort. Both properties were found ineligible under all designation criteria and integrity requirements. The reports are currently pending Caltrans District 7 approval. Ms. Corder's responsibilities for the project included background research for the required reports.

## Other California Project Experience (2009-2014)

**Crenshaw /LAX Transit Corridor Project, Los Angeles County, California (2011).** Ms. Corder conducted the architectural history survey and participated in the evaluation of over 100 built environment resources that may be affected by the Los Angeles County Metropolitan Transportation Authority's (Metro's) proposed Crenshaw/LAX Transit Corridor Project. The project is approximately 8.5 miles in length and is located within the cities of Los Angeles and Inglewood, Los Angeles County, California. Ms. Corder was involved in both architectural history field surveys and completion of over 100 DPR forms for the evaluation of built environment resources. The project was subsequently approved by SHPO with no comments. Client: Terry Hayes Associates, LLC; Agency: Metro.

**East Los Angeles College Satellite Campus Project, City of South Gate, Los Angeles County, California (2009).** Ms. Corder conducted the architectural history survey and participated in the evaluation of built environment resources for a land development project located in Los Angeles County, California. Client: Terry A. Hayes Associates, LLC.

**San Gabriel Trench Grade Separation Project (Phases I, II, and III); Cities of San Gabriel, Alhambra, and Rosemead, Los Angeles County, California (2008–2010, 2011-2014).** Ms. Corder conducted the architectural history survey and participated in the evaluation of over 100 built environment resources that may be effected by the a proposed grade separation located within the cities of San Gabriel, Alhambra, and Rosemead. The proposed project would lower a 2.2-mile section of Union Pacific Railroad tracks in the immediate vicinity of the historic Mission San Gabriel Arcángel. Ms. Corder was involved in both architectural history field surveys and completion of over 100 DPR forms for the evaluation of built environment resources. Client: Terry A. Hayes Associates, LLC.

**Wetlands Pocket Park Project, Los Angeles, California (2009):** Ms. Corder conducted the architectural history survey and participated in the evaluation of built environment resources for the project that was located on the site of a former rail yard for the City of Los Angeles Yellow Line. Client: City of Los Angeles Department of Public Works.

## Relevant Training

- *Practitioner's Implementation of the U.S. Secretary of the Interior's Standards and Guidelines, 2019*
- *A Commissioner and Planner's Primer to the California Environmental Quality Act, CPF, 2018*
- *Innovative Approaches to Section 106 Mitigation, ACRA, 2018*
- *Crowdfunding Historic Preservation: Direct Public Offerings and Other Ways to Raise Funds, CPF, 2018*
- *From Nuclear Waste to Manholes – the What, Why and How of Surveys, CPF, 2018*
- *Historic Districts: New Processes, SOI Standards for Districts, Infill Construction, Additions & ADU's, CPF, 2017*
- *Focus on Modernism: Design, Materials Conservation & Review, CPF, 2017*
- *Certified Historic Preservation Consulting Commonwealth of Virginia, 2004*

# Jennifer De Alba

## Archaeologist

Jennifer De Alba is an archaeologist with 3 years' experience in both field and laboratory settings, specializing in archaeological and paleontological monitoring, survey, cataloging and curation preparation, technical writing, and data entry. Ms. De Alba has experience studying early hunter–gatherer cultures and has worked on historic archaeological sites, specifically with the Santa Barbara Trust for Historic Preservation at the Santa Barbara Presidio. She works extensively as a monitor and archaeological technician on numerous sites throughout Ventura, Santa Barbara, San Luis Obispo, and Los Angeles Counties; has assisted in archaeological excavations in Ventura, Kings, Santa Cruz and Santa Barbara Counties, as well as the City of Ojai; conducts background research; and verifies requirements are met for the collection and cataloging of artifacts.



Jennifer De Alba

***Education***

*University of California, Santa Barbara*
*BA, Cultural Anthropology (Archaeology emphasis), History Minor, 2016*

*Santa Barbara City College*
*AA, Cultural Anthropology, 2010*

## Project Experience

### Development

**151 South Fairview Avenue Soils Testing Cultural Resource Monitoring, Salem Engineering Group Inc. Goleta, California.** Provided archaeological and paleontological monitoring in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. (August 2017) ~1 day

**235 North La Luna, Thomas and Kelly Adams, Ojai, California.** Performed Phase II investigation of field survey, excavation, and site inventory within and surrounding the project site to verify, in accordance with CEQA, the horizontal and vertical significance of the archaeological site CA-VEN-139 in Ojai, California, which was previously recorded as extending partially into the proposed project site. (January 2017)

**749-759 Ward Drive, The Mark Family Trust, Goleta, California.** Provided archaeological and paleontological monitoring in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. (March to May 2018) ~16 days

**Pacific Palisades Village 1, CAH Acquisitions Co. LLC, Pacific Palisades, California.** Provided archaeological and paleontological monitoring for the large mixed-use project in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. (July 2017) ~2 days

**Village at Los Carneros Lot 9 Archaeological Monitoring, Red Tail Acquisitions LLC, Goleta, California.** Provided archaeological and paleontological monitoring in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. (March 2018) ~2 days

**Montecito Avenue Pismo Phase I Archaeological Investigation, Studio Freeby, Pismo Beach, California.** Performed initial Phase I records search of the area within and surrounding the project site. (April 2018)

**Paradiso del Mare Construction, Farallon Dos Pueblos Investors LLC, Goleta, California.** Performed initial Phase I site inventory within and surrounding the project site. Provided archaeological and paleontological monitoring in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. (April 2018 to March 2019) ~6 days

**Tomate Canyon Ranch Concept Trail Alignment Extended Phase I Archaeological Investigation, Brooks Street, Goleta, California.** Performed extended Phase I field survey, site inventory and excavation within and surrounding the project site to verify, in accordance with CEQA, the nearby archaeological site CA-SBA-2439 did not extend into the project site. (May 2018)

**Village at Los Carneros Project Archaeological Monitoring, RCS–Los Carneros LLC, Goleta, California. Provided** archaeological and paleontological monitoring in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. (June 2017) ~2 days

**Ocean Meadows Residential, Ocean Meadows Investors, LLC, Goleta, California.** Performed initial Phase I intensive field survey and assisted in compiling the results of a records search and site inventory. (Feburary to March 2019)

**805 Agricultural Holdings, Helios Dayspring, Santa Barbara County, California.** Performed initial Phase I records search and field survey within and surrounding the project site. (July 2018)

**Rosewood Miramar PC, Caruso Affiliated, Montecito, California.** Provided archaeological and paleontological monitoring in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. (June 07, 2017)

**Bacara Executive Conference Center, Carey Watermark Investors Inc., Goleta, California.** Performed Phase II investigation of field survey, excavation, and site inventory within and surrounding the project site. (March to April 2018)

**North Side Specific Plan Parcel 22 Archaeological Resources, Direct Relief International, Goleta, California.** Provided archaeological and paleontological monitoring in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. Assisted in a Phase III excavation and performed the cataloging of artifacts recovered from the Phase III investigation, in accordance with CEQA. (September 2016 to November 2018)

**Marriott Residences Inn Cultural Resources Mitigation, R.D. Olson Development, Goleta, California.** Supported Dudek in the performance of cataloging and storing of artifacts recovered from a Phase III investigation, in accordance with CEQA. (September 2016 to January 2018)

**Cojo-Jalama Ranches, Coastal Resources LLC, Santa Barbara, California.** Performed initial Phase I intensive field survey within and surrounding the project site. (January 2017)

**Interfaith Food Closet, Auburn Interfaith Food Closet, Auburn, California**. Assisted in compiling the results of a Phase 1 records search. (May 2018)

**Phase I and II Archaeological Study, 5567 Calle Arena, Carpinteria.** Performed initial Phase I intensive field survey and site inventory revealing a previously recorded prehistoric site and state historic landmark (CA-SBA-7) extending within and surrounding the project site. Assisted in conducting a Phase II investigation to verify the horizontal and vertical significance in accordance with CEQA. (October 2017)

**101 Garden Street Property, Woodridge Capital Partners LLC, Santa Barbara, California.** Performed initial Phase I intensive field survey and assisted in compiling the results of a records search and site inventory. (December 2018 to Feburary 2019)

**2761 Cebada Canyon, Avo Vista Farms LLC, Lompoc, California.** Performed initial Phase I records search and field survey within and surrounding the project site. (May to July 2018)

**575 Brisa Del Mar Phase II Evaluation, Kyle Andeer, Santa Cruz, California.** Assisted a Phase II excavation within the project site to verify, in accordance with CEQA, the horizontal and vertical significance of an archaeological site, which was previously recorded as extending partially into the proposed project site. (November 2018)

**93 South Patera Lane, Apex Companies LLC, Goleta, California.** Performed extensive Phase I investigation of field survey, excavation, and site inventory within and surrounding the project site to verify, in accordance with CEQA, the horizontal and vertical significance of the archaeological site CA-SBA-58 in Goleta, California, which was previously recorded as extending partially into the proposed project site. Provided archaeological and paleontological monitoring in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. (December 2018 to May 2019)

**841 Cima Linda Lane, Darrell Becker, Montecito, California.** Performed a records search and field survey within and surrounding the project site for a Letter Report. (November 2018)

**125 Castro Canyon Road, Andrew James Jeknavorian, New Cuyama, California.** Performed initial Phase I records search and field survey within and surrounding the project site. (June 2018)

**7465 Hollister Ave, Daniel Guggenheim, Goleta, California.** Provided archaeological and paleontological monitoring in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. (May 2019) ~6 days

**Artis Senior Living, Artis Senior Living LLC, Rancho Cucamonga, California.** Performed initial Phase I field survey within and surrounding the project site. (July 2018)

**LinkedIn, Carpinteria, California.** Performed initial Phase I field survey within and surrounding the project site. (March 2019)

**Bacara Beach Facilities, Carey Watermark Investors Inc., Goleta, California**. Performed extended Phase I investigation of field survey, excavation, and site inventory within and surrounding the project site to verify, in accordance with CEQA, the nearby archaeological site CA-SBA-72 did not extend into the project site. (April 2019)

**130 Robin Hill Road, Santa Barbara County Employees Retirement System, Goleta, California.** Assisted in a Phase III excavation of CA-SBA-58, in accordance with CEQA. (May 2019)

## Energy

**Sales Pipeline and Solar Farm Project, Vaquero Energy Inc. – Petro Rock LLC, Santa Maria, California.** Performed initial Phase I field survey within and surrounding the project site. (November 2017)

**Strauss Wind Energy Project, BayWa Renewable Energy, Santa Barbara, California**. Performed initial Phase I site inventory and field survey within and surrounding the project site. Provided archaeological and paleontological monitoring in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. (June to December 2018) ~2 days monitoring

**Tres Amigos-Environmental Tech Studies, Terra-Gen Development Company LLC, Los Banos, California**. Performed initial Phase I field survey of the project site. (June 2018)

**Centennial Flats Solar Project, Eolus North America Inc., La Paz County, Arizona**. Performed initial Phase I field survey of the project site. (January 2019)

**Gonzaga Ridge Wind Farm, Scout Clean Energy LLC, Merced County, California.** Performed initial Phase I field survey of the project site. (September 2018)

**Fish Springs Solar Energy Center, NextEra Resources, Washoe County, Nevada.** Performed initial Phase I field survey of the project site. (August 2018)

## Municipal

**Lower Arroyo Burro Open Space Phase I Archaeological Investigation, City of Santa Barbara Department of Parks and Recreation, California.** Performed initial Phase I field survey of the project site. (September 2017)

**Rincon Multiuse Trail Completion, City of Carpinteria, California.** Performed initial Phase I records search within and surrounding the project site. (March 2018)

**Rey Road Archaeological Monitoring, City of Santa Barbara, California.** Providing archaeological monitoring in accordance with the monitoring and mitigation treatment plan stated in the environmental impact report. (August 2017) ~1 day

**Arroyo Burro Open Space Park Historic Assessment, City of Santa Barbara Department of Parks and Recreation, California.** Performed historic records and archival research, as well as an intensive field survey of the project site. (April to May 2018)

**5-Year On-Call Archaeological Services, City of Ventura, California.** Serving as qualified archaeologist to provide the City of Ventura on-call archaeological services including archaeological, historical, and Native American services, including but not limited to monitoring, archaeological record searches, historical research, architectural history, surveys for both prehistoric and historical resources, extended Phase I surveys, test excavations, data recovery, Native American coordination, coordination with the Native American Heritage Commission, AB 52 support, treatment protocols, feasibility/concept plan studies and recommendations, hiring and managing applicable subconsultants and specialty disciplines as required, preparation of management plans, design and implementation of mitigation methods. Potential projects include municipal infrastructure improvements such as domestic water distribution system, sanitary sewer collection system, storm drainage collection system and other undertakings as determined.

**Gilroy Citywide Historic Resource Inventory, City of Gilroy, California.** Assisted in a citywide survey of the historic built environment within the City of Gilroy. (Septmeber to October 2018)

**Waller Park Improvements, County of Santa Barbara Community Services Department, Orcutt, California.** Performed initial Phase I records search and field survey within the project site. (July 2018)

## Transportation

**High Speed Rail Geotechnical, Dragados-Flatiron Joint Venture, Fresno, California.** Assisted in the excavation of human remains, in accordance with NEPA and CEQA.

## Water/Wastewater

**Stormwater Resources Plan, Geosyntec Consultants, Santa Barbara County, California.** Performed initial Phase I records search and field survey within and surrounding the project site.

**CTP Export Sludge FM Final Design, South Orange County Wastewater Authority, Aliso Viejo, California.** Compiling Native American Response memos. (April 2018)

**Archaeological and Air Quality Study for Desal Conveyance Project, City of Santa Barbara, California.** Performed initial Phase I records search within and surrounding the project site. Assisted in compiling the results of a field survey. (January 2019)

**Emergency Technical Support, Montecito Water District, California.** Performed emergency technical services including intensive ground survey, archaeological and paleontological monitoring, and site inventory in conformance with emergency permit applications related to Montecito Water District's emergency repair of water pipes destroyed or damaged as a result of the catastrophic mudslide commencing January 9, 2018. The study tasks for this undertaking were carried out in a manner consistent with FEMA's regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800). (January to May 2019) ~14 days monitoring

## Relevant Previous Experience

**Archaeology Tech, Santa Barbara Trust for Historic Preservation, California.** Taught children, age's seven to ten, the fundamentals of archaeology: To assess what you expect to find before breaking ground, how to dig in a careful and methodical manner, how to dry screen, interpret what they have found, and how to fill out an archaeology form. (May 2017–June 2017)

**Intern, UCSB Data Collections Lab, Santa Barbara, California.** Performed Identification of marine shells commonly found among the Santa Barbara Channel Islands. Sorted, counted, weighed, and assisted with cataloging of artifacts. Organized lab to ensure things could be found quickly and referenced with ease. (January 2016–June 2016)

## Specialized Training

Institute for Field Research Field School, June–July 2016. Completed five weeks of field school focused on survey, site excavation, and artifact organization in Uspallata, Argentina.

# Adriane Gusick

## Associate Archaeologist

Adriane Gusick is an associate archaeologist with more than 18 years of experience in cultural resource management specializing in cultural resource studies with private, state, and federal regulatory agencies including National Historic Preservation Act (NHPA) Sections 106 and 110 and California Environmental Quality Act (CEQA) compliance extending primarily throughout Southern California. She has worked with Bureau of Land Management, the California Public Utilities Commission, California State Parks, the City and County of Los Angeles, Los Department of Water and Power, as well as numerous other local agencies and various military installations including the Marine Corps Air Ground Combat Center at Twentynine Palms, Marine Corps Base (MCB) Camp Pendleton, Naval Base Coronado, and Navy Installation San Clemente Island. She has experience in all aspects of project development from initial research, planning, and development to interpreting and synthesizing data in technical reports. Ms. Gusick has acted as project manager and field director on complex data recovery programs, managed multiple archaeology laboratories, worked as liaison between Native American tribes and clients, including assistance with AB-52, and has engaged in education and public outreach programs.

***Education***

*Catholic University of America, BA Anthropology, 2001*

*University of Oklahoma, BS Nursing, 2011*

***Certifications***

*City of San Diego Certified Archaeology and Paleontology Monitor*

*City of San Diego Certified Archaeology Crew Chief*

*Occupational Safety and Health Administration (OSHA) 10-Hour Construction Safety Training*

*OSHA 40-Hour Hazardous Waste Operations Worker (HAZWOPER) training*

*Registered Nurse*

*Wilderness First Responder*

## Relevant Project Experience

**8th, Grand and Hope Project, Los Angeles, California.** Dudek was retained to conduct a tribal cultural resources (TCRs) study in support of a proposed 45-story mixed use project in Downtown Los Angeles. Ms. Gusick was co-author on the report. Responsibilities included identification of any known or likely TCRs that have been documented in the proposed project site through archival records and Native American coordination.

**Bellwood Avenue Project, Los Angeles, California.** Dudek was retained to conduct a TCR study for a project that proposes to develop a new eldercare facility on a 2.22-acre site in the West Los Angeles Community Plan are of the City of Los Angeles. Ms. Gusick was co-author on the report. Responsibilities included identification of any known or likely TCRs that have been documented in the proposed project site through archival records and Native American coordination.

**313-333 San Vicente Boulevard Project, Los Angeles, California.** Dudek was retained to conduct a TCR study for a project that proposes to develop a 19-story, multi-family residential building with 153 apartment units, and the deconstruction, reassembly, rehabilitation and limited alteration of the existing cathedral of Our Lady of Mount Lebanon – Saint Maronite Catholic Cathedral. Ms. Gusick was co-author on the report. Responsibilities included identification of any known or likely TCRs that have been documented in the proposed project site through archival records and Native American coordination.

**De Soto Trunk Line Project, Los Angeles Department of Water and Power, Los Angeles, California.** Dudek was retained to conduct a cultural resources study pursuant to CEQA and Section 106.for a project proposing to replace approximately 13,700 feet of riveted steel pipe of the De Soto Trunk Line located in West San Fernando Valley. Ms. Gusick was co-author on the report, and conducted archival research and Native American coordination

**Haynes Generating Station Demolition Project, Los Angeles County Department of Public Works, Malibu, California.** Dudek was retained to provide archaeological monitoring for a project that included the demolition of Units 3, 4, 5, and 6 at the Haynes Generating Station. Ms. Gusick provided the Worker Environmental Awareness Training and monitor training and coordination.

**Compton Boulevard over Compton Creek and Wilmington Avenue over Compton Creek Bridge Replacement Projects, Compton, California.** Dudek was retained to conduct a cultural resources study pursuant to CEQA and Section 106 of the National Historic Preservation Act (NHPA) and in conformance with Caltrans requirements. The proposed projects involve replacing the existing two-span Wilmington Avenue Bridge over Compton Creek and as well as the replacement of the two-span steel-girder Compton Boulevard Bridge with new two-span, pre-cast concrete bridges. The projects are being proposed by the LADPW in cooperation with Caltrans. Ms. Gusick drafted the Caltrans Archaeological Survey Report and performed the archival research and Native American coordination.

**River Supply Conduit Unit 7 Project, Los Angeles Department of Water and Power, Los Angeles and Burbank, California.** Dudek was retained to provide archaeological and paleontological monitoring and reporting for a major transmission pipeline in the LADWP water distribution system. Ms. Gusick provided the paleontological monitoring and provided monitor training and coordination.

**City Trunk Line South Project, Los Angeles Department of Water and Power, Los Angeles, California.** Dudek was retained to conduct a cultural resources study pursuant to CEQA and Section 106 for a project proposing to replace an old and deteriorating trunk line that was built in 1914 and has a history of leaks and breaks. Ms. Gusick co-authored the report, in addition to performing archival research, conducting the pedestrian survey, providing Native American coordination, and recording newly identified cultural resources.

**PP1&2 Transmission Line Conversion Project, Los Angeles Department of Water and Power, Santa Clarita Valley, Los Angeles County, California.** Dudek was retained to complete a cultural resources study for the Power Plant #1 and #2 to Olive #1 Transmission Line Conversion Project which is proposing to replace and convert an existing 120-mile length of 115 kilovolt (kV) double circuit transmission line. Ms. Gusick co-authored the report, in addition to performing archival research, conducting the pedestrian survey, providing Native American coordination, and recording newly identified cultural resources.

**North Hollywood West Well Field Water Treatment Project, Los Angeles Department of Water and Power, City of Los Angeles, Los Angeles County, California.** Dudek was retained to complete a CEQA –Plus cultural resources study for a project that proposes to address releases of 1,4-dioxane in groundwater that are migrating to the North Hollywood West Well Field by installing water treatment equipment at the well field. Ms. Gusick co-authored the report, in addition to performing archival research, conducting the pedestrian survey, and providing Native American coordination.

**Power Plant 1 Long Term Maintenance Program Project, Los Angeles Department of Water and Power, Los Angeles County, California.** Dudek was retained to complete a cultural resources study for a project that proposes to develop a long-term operations and maintenance program for the Power Plant 1 hydroelectric facility in San Francisquito Canyon north of Santa Clarita. Ms. Gusick was lead author on the report, performed archival research, conducted the pedestrian survey, and recorded newly identified cultural resources.

# Linda Kry

## Archaeologist

Linda Kry is an archaeologist with over 14 years' experience in cultural resource management specializing in various aspects of cultural resources investigations within Southern and Central California. Ms. Kry's experience includes archival research, reconnaissance surveys, artifact analysis, assisting CEQA lead agencies with Assembly Bill 52 and Senate Bill 18 notification and consultation process, and authoring technical reports pursuant to CEQA and Section 106 of the NHPA. Ms. Kry's extensive experience includes the management of cultural resources specialists in support of various aspects of cultural resources compliance, construction monitoring, Native American consultation, archaeological testing and treatment, and prehistoric and historical resource significance evaluations.

***Education***

*University of California, Los Angeles*
*BA, Anthropology, 2006*

*Cerritos College*
*AA, Anthropology, 2004*

***Professional Affiliations***

*Society for California Archaeology*

***Volunteer History***

*AmeriCorps: Education and Community Volunteer, Los Angeles County, California*
*2002-2004*

## Selected Project Experience

### Los Angeles County

**Buena Vista Project, LPC West, LLC (LPC), Los Angeles, California.** Archaeological lead for a cultural resources study in support of a high-profile development project in the heart of Chinatown. The project footprint includes the mapped alignment of the Zanja Madre network, a series of interconnected historic-era irrigation system that was established during the 1700s and discontinued in the early 1900s. The study included the use of a ground-penetrating radar (GPR) to locate the presence of the Zanja Madre within the Project's footprint. Conducted a GPR survey and contributed to the reporting of the GPR results and the impacts analysis for cultural resources in the CEQA document. The City of Los Angeles is the lead agency under CEQA.

**Specific Plan for the C-17 Transition Master Plan Study Area for the City of Long Beach, City of Long Beach, Long Beach, California.** Archaeological lead for a cultural resources study in support of the CEQA document analyzing impacts to cultural and tribal cultural resources within the Specific Plan area. The scope of work for the project involved building upon the C-17 Transition Master Plan developed previously to provide a strategic planning framework for attracting quality industries and improving the character, design, and functionality of the Specific Plan area. The City of Long Beach is the lead agency under CEQA.

**Jefferson at Avalon Specific Plan EIR, City of Carson, Carson, California.** The Project includes the demolition of existing buildings and the construction of a mixed-use development on three parcels. The Project includes 998 apartment units, 40 attached townhomes, a 9,600-square-foot food pavilion, a 165-room hotel, and a 2,500-square foot restaurant pad. The proposed Specific Plan would allow for a slightly higher level of development than proposed, with up to 1,200 dwelling units, 15,000 square feet of commercial/food service uses, and 200 hotel rooms. As archaeological lead, provided management oversight for the cultural study and conducted the impacts analysis for cultural and tribal cultural resources for the CEQA document in support of the Project. The City of Carson is the lead agency under CEQA.

**De Soto Trunk Line Project, Los Angeles Department of Water and Power, Los Angeles, California.** Archaeological lead for a cultural resources study pursuant to CEQA and Section 106 of the National Historic Preservation Act (NHPA),

including conducting the impacts analysis for cultural and TCRs in the CEQA document for the Project. Los Angeles Department of Water and Power (LADWP) is proposing to replace the portions of the De Soto Trunk Line located in West San Fernando Valley. The proposed project would increase the safety, capacity and reliability of LADWP's water system in the western San Fernando Valley.

**Coronado Trunk Line Project, LADWP, Los Angeles, California.** Technical lead for a Phase I cultural resources study pursuant to CEQA and Section 106, including conducting the impacts analysis for cultural and TCRs in the CEQA document for the Project. LADWP is proposing to construct a new 30-inch diameter welded steel pipe, approximately 7,200 feet in length. The proposed trunk line would add reliability and redundancy to the system.

**City Trunk Line South Project, LADWP, Los Angeles, California.** Archaeological lead for a cultural resources study pursuant to CEQA and Section 106 of the NHPA, including conducting the impacts analysis for cultural and TCRs in the CEQA document for the Project. Los Angeles Department of Water and Power LADWP is proposing to replace an old and deteriorating trunk line that was built in 1914 and has a history of leaks and breaks. The proposed trunk link will improve capacity, reliability, and flexibility in the water system.

**River Supply Conduit Unit 7 Project, LADWP, Los Angeles and Burbank, California.** Technical lead and monitoring coordinator for the River Supply Conduit (RSC) Unit 7 Project. The existing River Supply Conduit (RSC) is a major transmission pipeline in the LADWP water distribution system. The Project is critical to meet safety of water supplies, reliability of water infrastructure, and sustainability of water supply.

**Sand Canyon Resort, City of Santa Clarita, Santa Clarita, California.** Archaeological lead for a cultural resources study for a project that proposes to develop an abandoned, approximately 75-acre existing open space into a new resort and spa in an effort to become the premiere golf destination in northern Los Angeles County. Tasks include management of the technical study including the archival research, pedestrian survey, and reporting of the study results. Additionally, authored the Cultural and Tribal Cultural Resources chapters for the EIR.

**Creek at Dominguez Hills Project, Plentitude Holdings LLC, Carson, California.** As archaeological lead, provided management oversight and reporting for archaeological and tribal cultural resources (TCRs) to assist in the analysis of impacts in the CEQA document. The proposed Ppoject includes the development of a including a multi-use indoor sports complex, youth learning experience facility, indoor skydiving facility, public golf recreation facility, marketplace, clubhouse, recreation and dining center, restaurants, and a sports wellness center.

**Haynes Generating Station Demolition Project, Los Angeles County Department of Public Works, Malibu, California.** Archaeological lead and monitoring coordinator. The project included the demolition of Units 3, 4, 5, and 6 at the Haynes Generating Station (HnGS), which were originally constructed more than five decades ago, to minimize health and safety risks and reduce future maintenance.

**Old Topanga Road Over Old Topanga Creek Bridge Maintenance Repair Project, Los Angeles County Department of Public Works, Val Verde Area of Unincorporated Los Angeles County, California.** Archaeological lead for a cultural resources study pursuant to CEQA in support of a Mitigated Negative Declaration. Tasks include Assembly Bill (AB) 52 consultation support to identify known tribal cultural resources within the project's proposed Area of Potential Effect (APE) to analyze the potential impacts to cultural resources and provide mitigation to a less than significant level.

**Compton Boulevard over Compton Creek and Wilmington Avenue over Compton Creek Bridge Replacement Projects, Compton, California.** Archaeological lead for a cultural resources study pursuant to CEQA and Section 106 of the NHPA and in conformance with Caltrans requirements. As archaeological lead, tasks include coordination for a cultural resources study, including AB 52 consultation support, and preparation of Archaeological Survey Reports (ASRs) for each proposed project.

**City Trunk Line South Project, Los Angeles Department of Water and Power, Los Angeles, California.** Archaeological lead for a cultural resources study pursuant to CEQA and Section 106 of the NHPA. Los Angeles Department of Water and

Power is proposing to replace an old and deteriorating trunk line that was built in 1914 and has a history of leaks and breaks. The proposed trunk link will improve capacity, reliability, and flexibility in the water system.

**February 2019 Storm Repair Project, Los Angeles County Department of Public Works, Malibu, California.** Archaeological lead responsible for managing the cultural resources inventory and assessment of cultural resources within the project area in support of emergency guardrail replacement work in the Woolsey Fire burn area. Responsibilities also include coordinating Native American monitoring needs for the project.

**FLOR 401 E 7th Street Construction Monitoring, Skid Row Housing Trust, Los Angeles, California.** Project manager for construction monitoring for the development of 99 units of permanent supportive housing for homeless veterans and/or special needs populations, and affordable housing for low-income individuals in Downtown Los Angeles.

**Woolsey Fire Guardrails Replacement Project, Los Angeles County Department of Public Works, Malibu, California.** Archaeological lead responsible for managing the cultural resources inventory and assessment of cultural resources within the project area in support of emergency guardrail replacement work in the Woolsey Fire burn area. Responsibilities also include coordinating Native American monitoring needs for the project.

**2159 Bay Street Project, Los Angeles, California.** The proposed project includes the development of a three-building creative office campus that would be comprised of an eight-story commercial high-rise building with up to four levels of subterranean parking, and two two-story commercial buildings. As archaeological lead, provided management oversight and reporting for archaeological and tribal cultural resources (TCRs) to assist in the analysis of impacts in the CEQA document.

**LA Spring Street Project, Los Angeles, California.** The proposed Project involves a new mixed-use development proposed on a 70,192 square-foot (1.61-acre) site in the City of Los Angeles. As archaeological lead, provided management oversight and reporting for archaeological and TCRs to assist in the analysis of impacts in the CEQA document. The City of Los Angeles is the lead agency under CEQA.

**Palmetto Street Project, Eyestone Environmental, Los Angeles, California.** Conducted GPR testing for the Project to determine the location of the zanja system subsurface within the Project site to provide appropriate recommendations in support Project needs. Responsibilities included providing management oversight and reporting for a TCR report and an archaeological assessment/GPR report for the Project. Studies prepared are in support of the impacts analysis for archaeological and tribal cultural resources in the CEQA document. The City of Los Angeles is the lead agency under CEQA.

**8th, Grand and Hope Project, Eyestone Environmental, Los Angeles, California.** Archaeological lead providing management oversight and reporting for tribal cultural resources (TCRs) and archaeological studies in support of a proposed 45-story mixed-use project in Downtown Los Angeles studies to assist in the analysis of impacts in the CEQA document. Studies prepared are in support of the impacts analysis for archaeological and tribal cultural resources in the CEQA document. The City of Los Angeles is the lead agency under CEQA.

**Bellwood Avenue Project, Eyestone Environmental, Los Angeles, California.** Archaeological lead providing management oversight and reporting for a TCR study for a project that proposes to develop a new eldercare facility on a 2.22-acre site in the West Los Angeles Community Plan are of the City of Los Angeles. Studies prepared are in support of the impacts analysis for archaeological and tribal cultural resources in the CEQA document. The City of Los Angeles is the lead agency under CEQA.

**313-333 San Vicente Boulevard Project, Eyestone Environmental, Los Angeles, California.** Archaeological lead providing management oversight and reporting for a TCR study for a project that proposes to develop a 19-story, multi-family residential building and the deconstruction, reassembly, rehabilitation and limited alteration of the existing cathedral of Our Lady of Mount Lebanon – Saint Maronite Catholic Cathedral. Studies prepared are in support of the impacts analysis for archaeological and tribal cultural resources in the CEQA document. The City of Los Angeles is the lead agency under CEQA.

**1000 Seward Street Project, Los Angeles, California.** Archaeological lead providing management oversight and reporting for TCR study for a proposed development project in the City of Los Angeles. Study prepared is in support of the impacts analysis for TCRs in the CEQA document.

**1235 Vine Street Project, Plus Development, Los Angeles, California.** Archaeological lead providing management oversight and reporting for TCR study for a proposed development project in the City of Los Angeles. Study prepared is in support of the impacts analysis for TCRs in the CEQA document.

## Orange County

**1225 Cliff Drive Project, City of Laguna Beach, California.** As Project Manager, conducted and managed a cultural and paleontological Phase I study in support of the proposed development for the subject property.

**Protea Memory Care Facility Project, City of San Juan Capistrano, San Juan Capistrano, California.** Archaeological lead for a Phase I cultural resources study in accordance with CEQA and subject to California Assembly Bill 52 and Senate Bill 18, in support of a project that proposes to construct a 59-unit (72-bed) memory care facility.

## Riverside County

**South Campus Specific Plan and Village West Drive Extension Project, Unincorporated Riverside County, California.** The proposed Project involves an amendment to the existing Specific Plan to shift land uses between parcels to reflect the evolving community priorities and environmental regulatory landscape. As archaeological lead, conducted the impacts analysis for cultural and tribal cultural resources for the CEQA document in support of the Project. The analyses were based on a review of separate technical studies prepared in support of the Project. The March Joint Powers Authority is the lead agency under CEQA.

**Kaiser Permanente Moreno Valley Medical Center Master Plan, Kaiser Permanente, Moreno Valley, California.** Kaiser Permanente is proposing the development of an approximately 400-bed hospital, hospital support buildings, outpatient medical office buildings, a central utility plant, and surface and structured parking within their existing hospital campus through a three-phase plan. The City of Moreno Valley is the lead agency under CEQA. As the technical lead for the project, responsibilities include the management of a cultural resources study in support of the Project's CEQA document.

**San Jacinto II Wind Energy Repowering Project, Terra-Gen, LLC, Palm Springs, California.** The project involves the decommissioning of approximately 126 existing wind turbines and the construction and operation of up to seven new wind turbines on private lands under the jurisdiction of the City of Palm Springs and on federal lands administered by the Bureau of Land Management. Responsibilities as technical lead include the management of a Phase I cultural resources study in compliance with the provisions of local regulations, CEQA, and Section 106 of the National Historic Preservation Act of 1966.

## San Bernardino County

**Montclair Place District Specific Plan EIR, City of Montclair, Montclair, California**. The Project involved the redevelopment and expansion of Montclair Plaza, an indoor shopping mall that opened in 1968. The Project proposes the addition of 4,376 dwelling units over the next 30 years, and 1.64 million square feet of commercial uses, including a 200-key hotel. As the archaeological lead, provided management oversight and reporting for tribal cultural resources (TCRs) in support of a TCR EIR section for the Project. The City of Montclair is the lead agency under CEQA.

**City of Colton Modern Pacific 88-DU Residential Project, City of Colton, Colton, California.** Technical lead and field director for a Phase I cultural resources study and Extended Phase I subsurface probing effort in accordance with CEQA. The City of Colton proposed the development of 89-detatched single-family homes on an approximately 41.58-acre site within a single tract.

## Santa Barbara County

**130 Robin Hill Road Site Improvements Project - Phase III Data Recovery, Santa Barbara County, California.** Field supervisor for a Phase III archaeological data recovery program, which included excavation of units to evaluate an archaeological site. Archaeological excavations were conducted to provide the data necessary to evaluate the cultural deposits pursuant to CEQA requirements.

**Agoura East Village – Extended Phase I Archaeological Investigation, Agoura Hills, California.** Field Supervisor for an Extended Phase I Archeological Investigation, which was conducted in support of a proposed mixed-use development. The scope of work associated with the project, involved a pre-excavation intensive pedestrian survey, subsurface exploratory backhoe trenching, shovel tests pits, and the recordation of all findings for evaluation. Tasks included screening excavated soils for artifacts as well as observe backhoe trenching. Additional tasks included standard operations for shovel test pits.

**Strauss Wind Energy - Cultural Testing Program, Lompoc, California.** Served as Crew Chief for archaeological testing and data recovery efforts. Phase II Archaeological Investigation to evaluate the significance of multiple prehistoric sites identified within the project's Area of Potential Effect (APE) pursuant to CEQA and Section 106 of the National Historic Preservation Act (NHPA). A Phase III Archaeological Investigation was conducted to further assess the types of resources identified during the previous investigations.

**MWD Ocean View Avenue - Extended Phase I, Carpinteria, California.** Field Supervisor for an Extended Phase I Archaeological Investigation. The scope of work associated with the work included screening excavated soils for artifacts, observation of backhoe trenching, and standard operations for shovel test pits.

**Santa Barbara Police Station Technical Studies, Santa Barbara, California.** Field Supervisor for an Extended Phase I Archaeological Investigation. The scope of work associated with the work included screening excavated soils for artifacts, observation of backhoe trenching, and standard operations for shovel test pits.

## Ventura County

**Acorn I Energy Storage Project, Ventura County, California.** Archaeological lead for a Phase I cultural resources study.

# Samantha Murray, MA

## Historic Built Environment Lead / Senior Architectural Historian

Samantha Murray is a senior architectural historian with 14 years' professional experience in in all elements of cultural resources management, including project management, intensive-level field investigations, architectural history studies, and historical significance evaluations in consideration of the California Register of Historical Resources (CRHR), the National Register of Historic Places (NRHP), and local-level evaluation criteria. Ms. Murray has conducted hundreds of historical resource evaluations and developed detailed historic context statements for a multitude of property types and architectural styles, including private residential, commercial, industrial, educational, medical, ranching, mining, airport, and cemetery properties, as well as a variety of engineering structures and objects. She has also provided expertise on numerous projects requiring conformance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

***Education***

*California State University, Los Angeles*
*MA, Anthropology, 2013*

*California State University, Northridge*
*BA, Anthropology, 2003*

***Professional Affiliations***

*California Preservation Foundation*

*Society of Architectural Historians*

*National Trust for Historic Preservation*

*Registered Professional Archaeologist*

Ms. Murray meets the Secretary of the Interior's Professional Qualification Standards for both Architectural History and Archaeology. She is experienced managing multidisciplinary projects in the lines of transportation, transmission and generation, federal land management, land development, state and local government, and the private sector. She has experience preparing environmental compliance documentation in support of projects that fall under the California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA), and Sections 106 and 110 of the National Historic Preservation Act (NHPA). She also prepared numerous Historic Resources Evaluation Reports (HRERs) and Historic Property Survey Reports (HPSRs) for the California Department of Transportation (Caltrans).

## Dudek Project Experience (2014-2019)

### Development

**Birch Specific Plan 32-Unit Condo Project, City of Carson, Los Angeles County, California (2018).** Dudek was retained by the City of Carson to prepare a cultural resources report for a project that proposes to demolish approximately 6,200 square feet of existing residential buildings and roughly 5,850 square feet of pavement on the project site, and construct a 32-unit residential condominium community with on-grade parking, landscaping, and other associated improvements. The historical significance evaluation included three residential properties proposed for demolition. All properties were found not eligible under all designation criteria and integrity requirements. Ms. Murray provided QA/QC of the final cultural resources report.

**Stickleback Movie Ranch Property Evaluation, Los Angeles County, California (2018).** Dudek was retained by the Metropolitan Water District of Southern California to complete a historical resource significance evaluation of the Stickleback Movie Ranch property, located in unincorporated Los Angeles County near Santa Clarita, California.

The study included a CHRIS records search of the Stickleback Movie Ranch property and a 0.25-mile radius; a pedestrian survey of the subject property for cultural resources; building development and archival research; recordation and evaluation of cultural resources identified within and around the Stickleback Movie Ranch portion of the study area; and an assessment of potential impacts to historical resources in conformance with CEQA and all applicable local municipal code and planning documents. The former Stickleback Movie Ranch and all associated buildings and structures were found not eligible under all NRHP, CRHR, and Los Angeles County designation criteria.

## Healthcare

**Kaiser Permanente Los Angeles Specialty Medical Center Project, Los Angeles, Los Angeles County, California (2019).** Dudek prepared a Historical Resource Assessment for the Kaiser Permanente Los Angeles Specialty Medical Center at 755-765 W. College Street in Los Angeles. Preparation of the report involved extensive archival research, reconnaissance level fieldwork, historic context development, building development descriptions, historical significance evaluations for buildings greater than 45-years in age, and DPR forms for the medical center buildings and structures that are proposed for demolition as part of the multi-phase project. As a result of the evaluations, all buildings were found not eligible for designation under all applicable national, state, and local designation criteria and integrity requirements. Ms. Murray provided QA/QC of the report and guidance on approach.

**Kaiser Permanente Los Angeles Medical Center Project, Los Angeles, Los Angeles County, California (2018).** Dudek prepared a Cultural Resources Report that involved extensive archival research, reconnaissance level fieldwork, historic context development, building development descriptions, historical significance evaluations, and DPR forms for six buildings greater than 45-years in age that are proposed for demolition as part of the multi-phase project. As a result of the evaluations, all buildings proposed for demolition were found not eligible for designation under all applicable national, state, and local designation criteria and integrity requirements.

## Municipal

**LACSD Gardena Pumping Station Project, Sanitation Districts of Los Angeles County, Gardena, California (2019).** Dudek prepared a Cultural Resources Technical Report for the Gardena Pumping Project. Preparation of the report involved site recordation, extensive archival research, historic context development, engineering feature development descriptions, historical significance evaluations, and State of California Department of Parks and Recreation Series 523 forms (DPR forms) for each building of the project. The project proposed to remove the 1929 and 1960 pumping plant above and below-ground structures, and two adjacent parcels containing commercial buildings (1954, 1957) and replace them with a larger capacity pumping plant facility. Ms. Murray provided oversight of all built environment components and provided QA/QC of all documents.

**LADWP De Soto Trunk Line Project, City of Los Angeles, Los Angeles County, California (2018).** Dudek was retained by Los Angeles Department of Water and Power (LADWP) to complete a cultural resources study for the De Soto Trunk Line Project. LADWP is proposing the replacement of portions of four existing water pipelines: De Soto, Roscoe, Canoga Topham, and Ventura Trunk Lines. The portions of the existing trunk lines that are proposed for replacement are aging, deteriorating, and nearing the end of their service life. As such, LADWP is proposing to replace these segments with new pipeline. The regulatory framework is CEQA Plus, as such the project was also subject to compliance with Section 106 of the NHPA. Ms. Murray provided QA/QC of the cultural resources report.

**The Santa Monica City Yards Master Plan Project, City of Santa Monica, Los Angeles County, California (2017).** The City of Santa Monica retained Dudek to complete a cultural resources study for the proposed City Yards Master Plan project site located at 2500 Michigan Avenue in the City of Santa Monica. The study involved evaluation of the entire City Yards site, including two murals and a set of concrete carvings for historical

significance and integrity. As a result, the City Yards and its associated public art work was found ineligible under all designation criteria. Ms. Murray conducted the intensive level survey, building permit research, co-authored the technical report, and provided QA/QC of the final cultural resources report.

**148 North Huntington Street, City of Pomona, Los Angeles County, California (2017).** Dudek was retained by the City of Pomona to conduct a cultural resources study for the remediation of the project site located at 148 North Huntington Street. The proposed project involves the excavation, removal, and off-site treatment of approximately 10,000 Cubic Yards (CYs) of contaminated soil due to the former presence of a manufactured gas plant (MGP) at the project site (currently the City of Pomona Water and Wastewater Yards). All buildings over 45 years of age within the project site were evaluated for the CRHR and local landmark eligibility as part of the Pomona Gas Plant site. The site was found not eligible with concurrence from the historic resources commission. Ms. Murray conducted the survey, prepared the evaluation, and authored the cultural resources report.

**LADWP West Los Angeles District Yard Project, City of Los Angeles, Los Angeles County, California (2017).** Dudek was retained by Los Angeles Department of Water and Power (LADWP) to complete a cultural resources study for a project that proposes demolition of five LADWP-owned administrative buildings and warehouses at the West Los Angeles District Headquarters located at 12300 West Nebraska Avenue. Dudek evaluated the yard for historical significance in consideration of NRHP, CRHR, and City of Los Angeles HCM criteria and integrity requirements. Ms. Murray co-authored the significance evaluation and provided QA/QC of the cultural resources report.

**LADWP Haynes Generating Station Units 3 through 6 Demolition Project, City of Long Beach, Los Angeles County, California (2017).** Dudek was retained by Los Angeles Department of Water and Power (LADWP) to complete a cultural resources study for a project that proposes demolition of Units 3-6 at the LADWP Haynes Generating Station. Ms. Murray evaluated the entire steam plant for historical significance in consideration of NRHP, CRHR, and City of Long Beach designation criteria and integrity requirements, and co-authored the cultural resources report.

**LADWP Green Verdugo Reservoir Improvement Project, City of Los Angeles, Los Angeles County, California (2017).** Dudek was retained by Los Angeles Department of Water and Power (LADWP) to complete a cultural resources study for a project that proposes facility updates at the reservoir site in order to ensure safe water quality. Ms. Murray evaluated the reservoir for historical significance in consideration of NRHP, CRHR, and City of Los Angeles HCM designation criteria and integrity requirements, and co-authored the cultural resources report.

**LADWP Upper Stone Canyon Reservoir Water Quality Improvement Project, City of Los Angeles, Los Angeles County, California (2016).** Dudek was retained by Los Angeles Department of Water and Power (LADWP) to complete a cultural resources study for a project that proposes to maintain and improve the quality, reliability, and stability of the Stone Canyon Reservoir Complex (SCRC) service area drinking water supply in order to continue to meet customer demand. Dudek prepared an updated evaluation of the reservoir in consideration of NRHP, CRHR, and City of Los Angeles HCM criteria and integrity requirements. Ms. Murray conducted the built environment survey, archival research, and co-authored the cultural resources report.

**LADWP Power Plant 1 Long-Term Maintenance Program Project, City of Los Angeles, Los Angeles County, California (2016).** Dudek was retained by Los Angeles Department of Water and Power (LADWP) to complete a cultural resources study for the proposed long-term maintenance of the flood control infrastructure in the vicinity of Power Plant 1. Ms. Murray prepared the cultural resources impacts assessment, co-authored the cultural resources report, and provided QA/QC of the cultural resources technical report.

## State of California

**Judicial Council of California Historical Resource Evaluation Report for the Stanley Mosk Courthouse, City of Los Angeles, Los Angeles County, California (2019).** Dudek was retained by the Judicial Council of California (JCC) to

prepare an evaluation of the Stanley Mosk Courthouse building, located at 111 N. Hill Street in the City of Los Angeles, California. To comply with Public Resources Code Section 5024(b), the JCC must submit to the State Historic Preservation Officer (SHPO) an inventory of all structures over 50 years of age under the JCC's jurisdiction that are listed in or that may be eligible for inclusion in the National Register of Historic Places (NRHP), or registered or that may be eligible for registration as a California Historical Landmark (CHL). Extensive research indicates that the building meets NRHP Criteria A and C; CRHR Criteria 1 and 3; the "important events" and "architecture" criteria for CHL; the "important to Los Angeles history" and "architecture" criteria for Los Angeles HCM; and Criteria 1, 2, and 3 for Los Angeles HPOZ for listing in any of these registration programs. Therefore, the Stanley Mosk Courthouse appears to be a historic resource for the purposes of California Public Resources Code 5024 and 5024.5. Ms. Murray managed the project and provided QA/QC of the final report.

**Judicial Council of California Historical Resource Evaluation Report for the Santa Monica Courthouse, City of Santa Monica, Los Angeles County, California (2017).** Dudek was retained by the Judicial Council of California (JCC) to prepare an evaluation of the Santa Monica Courthouse building, located at 1725 Main Street in the City of Santa Monica, California. To comply with Public Resources Code Section 5024(b), the JCC must submit to the State Historic Preservation Officer (SHPO) an inventory of all structures over 50 years of age under the JCC's jurisdiction that are listed in or that may be eligible for inclusion in the National Register of Historic Places (NRHP), or registered or that may be eligible for registration as a California Historical Landmark (CHL). The Santa Monica Courthouse was found not eligible for designation under all applicable criteria. Ms. Murray co-authored the report and provided QA/QC of the final cultural resources report.

**Department of General Services Historical Resource Evaluation for the Pomona Armory at 600 South Park Avenue, City of Pomona, Los Angeles County, California (2017).** Dudek was retained by the State of California Department of General Services to mitigate potential adverse effects to the Pomona Armory (600 South Park Avenue), a state-owned historical resource proposed to be transferred from State-ownership to a local agency or private owner. Ms. Murray prepared a detailed significance evaluation for the Pomona Park Armory in the consideration NRHP, CRHR, CHL, and City of Pomona designation criteria and integrity requirements, and prepared a single historic landmark application for the property. The Pomona Park Armory was locally designated after unanimous approval by the Historic Resources Commission and City Council. SHPO concurred with the evaluation findings and agreed that adverse effects had been adequately mitigated with no comments.

## Presentations

***Historical Resources under CEQA*. Prepared for the Orange County Historic Preservation Planner Working Group. Presented by Samantha Murray, Dudek. December 1, 2016.** Ms. Murray delivered a one-hour PowerPoint presentation to the Orange County Historic Preservation Planner Working Group, which included planners from different municipalities in Orange County, regarding the treatment of historical resources under CEQA. Topics of discussion included identification of historical resources, assessing impacts, avoiding or mitigating impacts, overcoming the challenges associated with impacts to historical resources, and developing effective preservation alternatives.

***Knowing What You're Asking For: Evaluation of Historic Resources*. Prepared for Lorman Education Services. Presented by Samantha Murray and Stephanie Standerfer, Dudek. September 19, 2014.** Ms. Murray and Ms. Standerfer delivered a one-hour PowerPoint presentation to paying workshop attendees from various cities and counties in Southern California. The workshop focused on outlining the basics of historical resources under CEQA, and delved into issues/challenges frequently encountered on preservation projects.

# Fallin Elizabeth Steffen, MPS

## Architectural Historian

Fallin Steffen is an architectural historian with 4 years' experience in historic preservation, architectural conservation, and cultural resource management. Ms. Steffen's professional experience encompasses a variety of projects for local agencies, private developers, and homeowners in both highly urbanized and rural areas, including reconnaissance- and intensive-level surveys, preparation of resource-appropriate and city-wide historic contexts, and historical significance evaluations in consideration of the NRHP, CRHR, and local designation criteria. Additionally, Ms. Steffen served as a commissioner on the Santa Cruz City Historic Preservation Commission and has participated in archeolgical fieldwork in the Bay Area. She meets the Secretary of the Interior's Professional Qualification Standards for Architectural History.

***Education***

*Tulane University*
*MPS, Preservation Studies*

*University of California, Santa Cruz*
*BA, History of Art and Visual Culture*

***Professional Affiliations***

*National Trust for Historic Preservation*

## Project Experience

**Gilroy Citywide Historic Resource Inventory, City of Gilroy, Santa Clara County, California (2020).** Dudek is currently bringing to completion a citywide historic context statement and historic resources inventory update of its outdated 1986 historic resource inventory. While the final approval hearings are pending for Summer 2020, Dudek has already hosted a public kickoff meeting/outreach session that was well received by the community, successfully completed reconnaissance-level survey of over 3,000 properties on time and within budget, and completed a draft citywide historic context statement. Over the course of this multi-year project, Ms. Steffen served as architectural historian and co-author for the citywide historic context statement, co-managed field work, and created building records and State of California Department of Parks and Recreation Series 523 forms (DPR forms) for thousands of surveyed properties.

**Santa Cruz Wharf Maintenance Project CEQA Compliance and USACE permitting- City of Santa Cruz, Santa Cruz, California (2020).** The purpose of this project is to replace and/or repair storm-damaged piles supporting the Santa Cruz Municipal Wharf in Santa Cruz, California. As lead architectural historian, Ms. Steffen conducted fieldwork and co-authored the Evaluation and Finding of Effect Report for the Santa Cruz Wharf Maintenance Project. The report was prepared in compliance with Section 106 and in support of the permitting process with the USACE. Although the Wharf had previously evaluated under CRHR and local Criteria by another historian in recent years, no NRHP Criteria evaluation existed. Ms. Steffen co-authored all documentation related to Wharf including the significance evaluation that recommended the Wharf as eligible under NRHP Criterion A for its continued associations with the industrial development, transportation, commerce, and recreation development of Santa Cruz and under C as a distinctive engineering structure known to be the longest wooden pier structure located along the United States Coast of the Pacific Ocean. Additionally, a detailed effects assessment determined that the proposed Wharf Maintenance project would have a less than significant impact on historical resources (CEQA)/no adverse effect on historic properties (Section 106).

**Juanita Avenue Project, City of Los Angeles, California (2019).** Dudek was retained to prepare a historic built environment report for the Juanita Avenue project, which proposed demolition of four properties within the City of

Los Angeles. Ms. Steffen served as architectural historian for the project and co-authored the historical resources evaluation report. Preparation of the report entailed extensive archival research, preparation of a historic context statement, building descriptions, review of building permits, significance evaluations for the buildings within the project area, and preparation of accompanying DPR forms.

**Campus-wide Historic Context Statement for California State University Long Beach, Long Beach, California (2019).** Ms. Steffen served as architectural historian and co-author of the historic context statement report analyzing the effect of master architect Edward Killingsworth on the development of the campus. Preparation of the historic context statement involved archival research, historic context development, in-person interviews of architects, review of building and landscape records, and coordination with Long Beach Heritage.

**California State University Long Beach Hillside Office/Commons Project, Long Beach, California (2019).** Dudek was retained by CSU Long Beach to prepare an architectural inventory and historic context for the campus and to evaluate the historic character of existing Administration Building located on the site of the proposed project. Ms. Steffen served as architectural historian for this project, preparing an appropriate historic context for the campus architect, Edward Killingsworth, who was responsible for designing a majority of buildings on the campus.

**The Santa Fe Springs Transitional Living Center Project, Santa Fe Springs, California (2019).** Dudek was retained to prepare a historical resources evaluation report for the Santa Fe Springs Transitional Living Center project, which proposed the alteration of a mixed-use property within the project area limits, located at 12000 Washington Boulevard. Ms. Steffen served as architectural historian for the project and co-authored the historical resources evaluation report. Preparation of the report entailed extensive archival research, the composition of an appropriate historic context focused on the history of Santa Fe Springs, evaluation of the built features of the property within the framework of NRHP, CRHP, and local designation requirements, and the preparation of accompanying DPR forms.

**Historical Resource Assessment for 855 North Sweetzer Avenue, West Hollywood, California (2019).** Ms. Steffen served as architectural historian of the historic resource assessment for 855 North Sweetzer Avenue in West Hollywood. The report included conducting a record search, developing the building development description, archival research, historical context development, historical significance evaluations, and preparation of DPR forms.

**601 East Montecito Street, Santa Barbara, California (2019).** The Housing Authority of the City of Santa Barbara retained Dudek to prepare a Historic Structures/Sites Report for a property located at 601 East Montecito Street. Ms. Steffen served as architectural historian for the project and co-authored the Historic Structures/Sites Report, which included the preparation of a building description including the various murals.

**Newell Creek Road Access Bridge Rehabilitation Memorandum Report, City of Santa Cruz, California (2019).** Dudek was retained by the City of Santa Cruz Water Department to review the proposed Newell Creek Access Road Bridge Rehabilitation project for potential impacts on historical resources during the course of repairs to the bridge's piers. The bridge was identified as a contributor to the Newell Creek Dam district as part of the 2018 historical resources evaluation report of the Newell Creek Dam complex. Ms. Steffen served as architectural historian for the project, conducting the intensive pedestrian survey of the project site and authoring the memorandum report ensuring that the project conformed to the Secretary of the Interior's Standards for the Treatment of Historic Properties.

**Oakmont/Tamarind Warehouse Project. Rialto, San Bernardino County, California (2018).** Ms. Steffen served as architectural historian and co-author of the Cultural Resources Report for the Oakmont/Tamarind Warehouse Project. Ms. Steffen contributed building development write-ups for the report. The project proposed to construct a 156,500 square feet, one story warehouse on six adjoining parcels on approximately 8 acres.

# Appendix B

## **Confidential** Records Search Results

# Appendix C

## Native American Heritage Commission
## Sacred Lands File Search Results

# Sacred Lands File & Native American Contacts List Request

**NATIVE AMERICAN HERITAGE COMMISSION**
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95501
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

*Information Below is Required for a Sacred Lands File Search*

Project: 12021 Woodruff Avenue Industrial Building Project

County: Los Angeles County

USGS Quadrangle

Name: Whittier and South Gate

Township: 3S Range: 12W Section(s): 10

Company/Firm/Agency:

DUDEK

Contact Person: Linda Kry

Street Address: 38 N Marengo Avenue

City: Pasadena Zip: 91101

Phone: (626) 590-1739 Extension:

Fax:

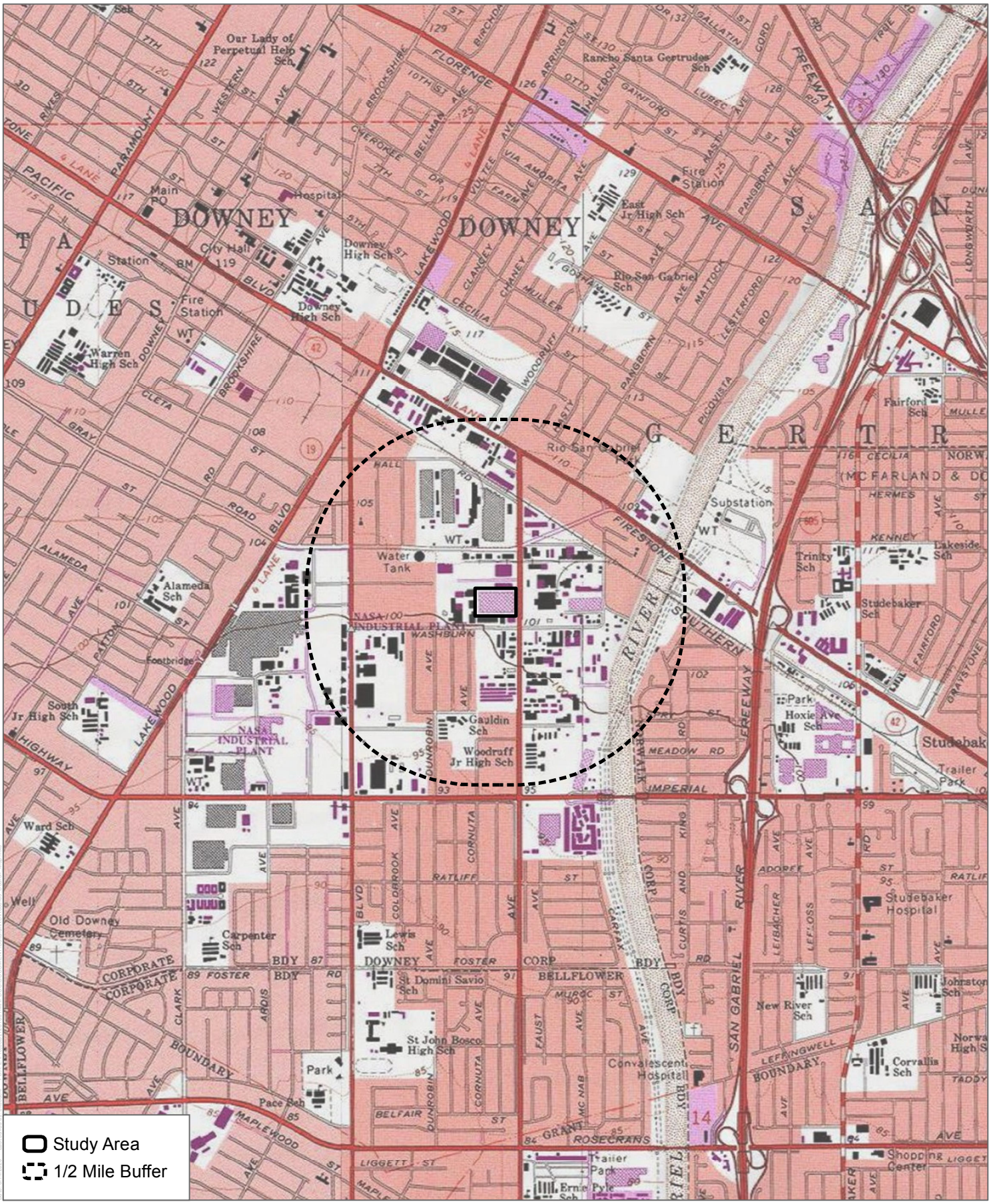
Email: lkry@dudek.com

Project Description:

The project site consists of a single parcel (Assessor's Parcel Number 6284-025-018). The addresses associated with the project site are 12021-12023 Woodruff Avenue, Downey, California 90241 (see attached Records Search Map). The 6.31-acre site currently consists of an industrial building located directly west of Woodruff Avenue. The project site is entirely developed and is the current location for Kirkhill Manufacturing Company, Inc. (KMC), which manufactures rubber products.

The project would include the demolition of the existing, 74,662-square-foot industrial building and construction of an approximately 44,162-square-foot industrial tilt-up building for truck terminal use

☑ Project Location Map is attached




SOURCE: USGS 7.5-Minute Series Whittier & South Gate Quadrangles
Township 3S; Range 12W; Section 10

DUDEK

0 1,000 2,000 Feet
0 285 570 Meters
1:24,000

## Records Search

12021 Woodruff Avenue Industrial Building Project

# NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
**Laura Miranda**
*Luiseño*

VICE CHAIRPERSON
**Reginald Pagaling**
*Chumash*

SECRETARY
**Merri Lopez-Keifer**
*Luiseño*

PARLIAMENTARIAN
**Russell Attebery**
*Karuk*

COMMISSIONER
**Marshall McKay**
*Wintun*

COMMISSIONER
**William Mungary**
*Paiute/White Mountain Apache*

COMMISSIONER
[**Vacant**]

COMMISSIONER
**Julie Tumamait-Stenslie**
*Chumash*

COMMISSIONER
[**Vacant**]

EXECUTIVE SECRETARY
**Christina Snider**
*Pomo*

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

September 17, 2020

Linda Kry
Dudek

Via Email to: lkry@dudek.com

**Re: 12021 Woodruff Avenue Industrial Building Project, Los Angeles County**

Dear Ms. Kry:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

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

Sincerely,

Steven Quinn
Cultural Resources Analyst

Attachment

**Native American Heritage Commission**
**Native American Contact List**
**Los Angeles County**
**9/17/2020**

***Gabrieleno Band of Mission Indians - Kizh Nation***
Andrew Salas, Chairperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

***Gabrieleno/Tongva San Gabriel Band of Mission Indians***
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

***Gabrielino /Tongva Nation***
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

***Gabrielino Tongva Indians of California Tribal Council***
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

***Gabrielino-Tongva Tribe***
Charles Alvarez,
23454 Vanowen Street — Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

***Santa Rosa Band of Cahuilla Indians***
Lovina Redner, Tribal Chair
P.O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosacahuilla-nsn.gov

***Soboba Band of Luiseno Indians***
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 — Cahuilla, Luiseno
San Jacinto, CA, 92581
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

***Soboba Band of Luiseno Indians***
Scott Cozart, Chairperson
P. O. Box 487 — Cahuilla, Luiseno
San Jacinto, CA, 92583
Phone: (951) 654 - 2765
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 12021 Woodruff Avenue Industrial Building Project, Los Angeles County.

# Appendix D

## DPR Form

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

**Page** 1 **of** 18 ***Resource Name or #:** (Assigned by recorder) Kirkhill Manufacturing Inc.
**P1. Other Identifier:** 12021-12023 Woodruff Avenue

*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** Whittier **Date** 1981 **T** 3S ; **R** 12W ; **of Sec** 10 ; San Bernardino **B.M.**
c. Address 12021-12023 Woodruff Avenue City Downey Zip 90241
d. UTM: (Give more than one for large and/or linear resources) Zone 11S , 396716.79 mE/ 3754454.78 mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)
Assessor's Identification Number (AIN) 6284-025-018

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The subject property faces east onto Woodruff Avenue (Figure 1) and features three geographically distinct, yet interconnected building wings: the main office, the north warehouse, and the south warehouse. These individual areas of the building are comprised of multiple additions and expansions that have caused them to display a range in style, scale, and materials. The three main sections are connected by interior hallways, as well as, a paved, U-shaped access driveway and parking area that extends around the perimeter of the building on the north, west and south sides. ***See Continuation Sheet**

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial Building




***P4. Resources Present:** ■ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) View looking NW, 08/12/2020 (IMG_0352)

***P6. Date Constructed/Age and Source:** ■ Historic ☐ Prehistoric ☐ Both
1951 (LA Co Assessor 2020)

***P7. Owner and Address:**
Felchco Investment Group LLC
12023 Woodruff Avenue
Downey, CA 90241

***P8. Recorded by:** (Name, affiliation, and address) Fallin Steffen
Dudek
38 North Marengo Avenue
Pasadena, CA 91101

***P9. Date Recorded:** 09/21/2020

***P10. Survey Type:** (Describe) Intensive Pedestrian

***P11. Report Citation**: (Cite survey report and other sources, or enter "none.")
Dudek. 2020. "Cultural Resources Technical Report for the 12021 Woodruff Avenue Project"

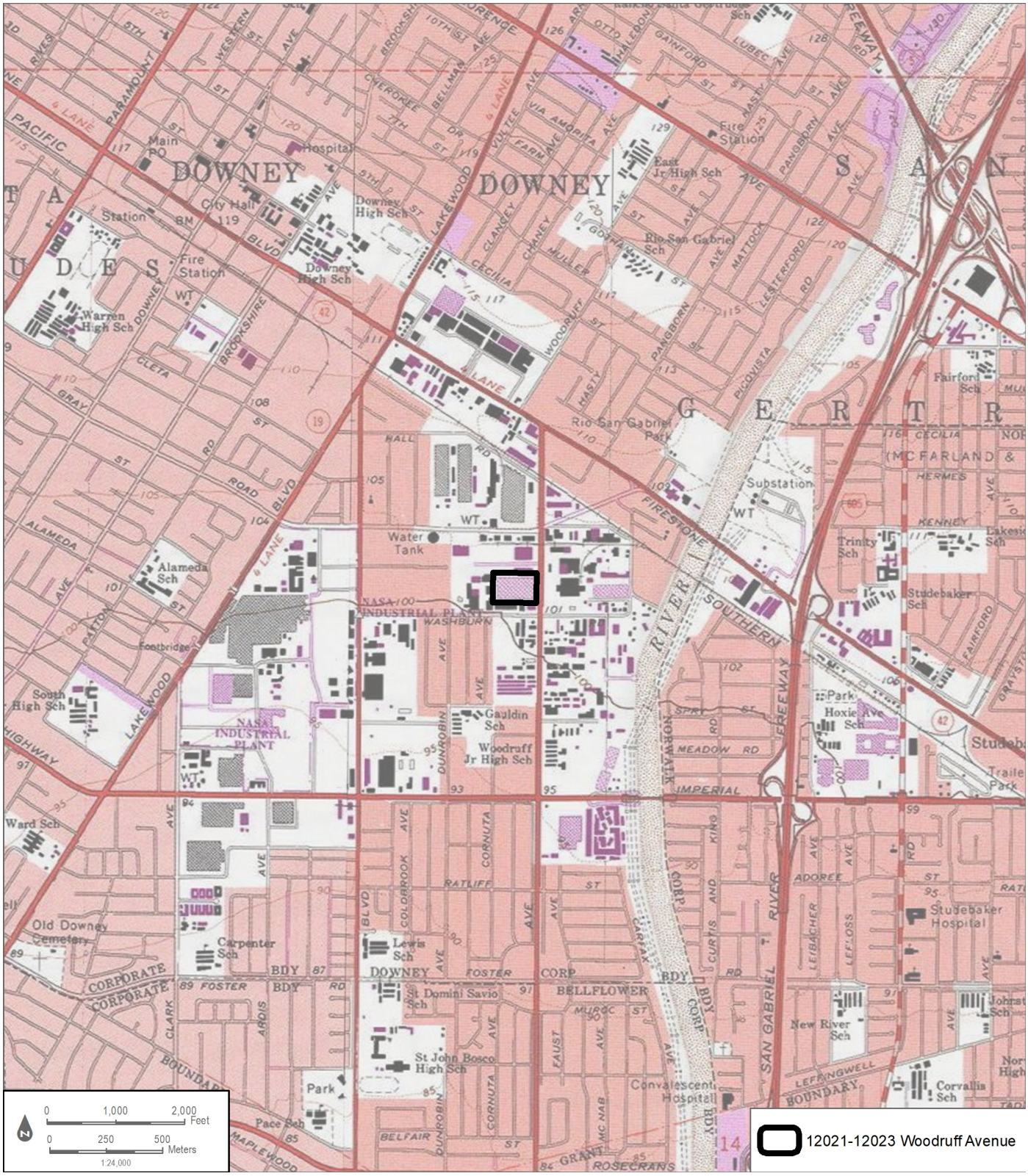
***Attachments:** ☐NONE ■Location Map ■Continuation Sheet ■Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

**State of California ♦ Natural Resources Agency**
**DEPARTMENT OF PARKS AND RECREATION**

# LOCATION MAP

Primary #
HRI#
Trinomial

**Page** 2 **of** 18 ***Resource Name or #** (Assigned by recorder) Kirkhill Manufacturing Inc.
***Map Name:** Whittier 7.5′ Quadrangle ***Scale:** 1:24000 ***Date of map:** 1981



State of California ♘ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary #
HRI#

# BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) Kirkhill Manufacturing Inc. ***NRHP Status Code** 6Z
**Page** 3 **of** 18

B1. Historic Name: Kirkhill Manufacturing Inc.
B2. Common Name: Kirkhill Inc.
B3. Original Use: Manufacturing B4. Present Use: Manufacturing
***B5. Architectural Style:** Mid-Century Modern

***B6. Construction History:** (Construction date, alterations, and date of alterations)

The Kirkhill Manufacturing Inc. building located at 12021-12023 Woodruff Avenue, first appears in the 1952 historical aerial photograph and Los Angeles County Assessor data indicates that it was constructed in 1951. The original architect for the facility as well as the architect(s) who designed the subsequent additions were not discovered during the course of research for this project. A 1958 photograph of the plant and a review of historical aerial photographs suggest that the plant has undergone numerous, major expansions that have effectually tripled the square-footage of the original Mid-Century Modern building (Figure 11).
***See Continuation Sheet**

***B7. Moved?** ■No ☐Yes ☐Unknown **Date:** **Original Location:**
***B8. Related Features:**

B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme** **Area**

**Period of Significance** **Property Type** **Applicable Criteria** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Kirkhill Manufacturing Inc. facility) does not appear eligible under any NRHP or CRHR designation criteria due to a lack of significant historical associations and architectural merit.
***See Continuation Sheet**

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**
***See Continuation Sheet**

B13. Remarks:

***B14. Evaluator:** Fallin Steffen, M.P.S., Dudek
***Date of Evaluation:** 09/14/2020



(This space reserved for official comments.)

***P3a. Description (Continued):**

A smaller U-shaped parking lot is located in front of the east (main) elevation of the main office wing, offers limited surface parking. This parking area is surrounded by modest landscaped areas and the remaining section of the original flat-brick company sign at the center of the drive.



Figure 1. Overview of Kirkhill Manufacturing Inc. property, view looking northwest across Woodruff Avenue (IMG_0352)

***Main Office (1951, multiple expansions)***

The main office wing is a one-story, Mid-Century Modern-style building featuring a flat roof and decorative breezeway block screens (Figure 2). The building is clad in a combination of flat brick and scored stucco in broad sections (Figure 3). The flat roof extends out to form a covered walkway along the front of the building. The primary entrance features a single, replaced full-lite door located at the center of the east (main) elevation that is surrounded by two fixed windows and a fixed transom (Figure 4). Each of the remaining tall, fixed rectangular windows on the building correspond to a breezeway block screen that diffuses the light entering the building. The north and south sections of the building shows evidence of multiple modifications and expansion over time displayed by incompatible rooflines and blunt transitions between exterior cladding materials (Figure 5).




Figure 2. Main office volume east (main) and south elevations, view looking northwest (IMG_0378)




Figure 3. Main office east (main) elevation showing decorative breezeway block screens situated in front of windows, view looking southwest (IMG_0414)




Figure 4. Primary entrance door on main office, view looking northwest (IMG_0423)



Figure 5. Main office volume north elevation shows the convergence of the various rooflines resulting from multiple additions, view looking south (IMG_0408)

***North Warehouse (1951, multiple expansions)***

The north warehouse portion of the building is located northwest of the main office and consists of two different utilitarian-style sections: a two-story section clad in ribbed metal siding atop a concrete masonry unit (CMU) substructure; and a tri-gable, one-story section which faces the western property line (Figure 6).



Figure 6. North warehouse showing the one-story, tri-gabled section in the foreground with the two-story section in the rear, view looking southeast (IMG_0495)

The two-story section of the north warehouse sits immediately behind the main office volume and features a shallow, front-facing gable roof supported by heavy steel framing (Figure 7). The roof is clad in ribbed metal material and contains multiple skylights as well as clerestory windows on the south elevation. A metal shed roof extends from the north elevation of the building to shelter a wide walkway full of equipment and machinery. The main entry point for this section of the

building is a large roll-up metal door. Additional doors are found throughout the elevation, but they appear to function as emergency doors and not as primary points of entry.



Figure 7. Main office volume north elevation shows the convergence of the various rooflines resulting from multiple additions, view looking south (IMG_0467)

The one-story, tri-gabled section of the north warehouse is located to the west of the two-story section (Figure 8). This segment of the building is clad in a ribbed metal siding in both a metallic and white color. Each of the three, equally-sized bays contains a single or a double metal roll up door which provides access to the interior areas. The northern wall on this section is faced with CMU to correspond with the two-story section.



Figure 8. View of the one-story, gabled section of the north warehouse, view looking southeast (IMG_0493)

***South Warehouse (1951, multiple expansions)***

The south warehouse is located to the southwest of the main office wing and south of the north warehouse. This building section features a front gable roof and a west elevation clad in a ribbed metal material (Figure 9). The south elevation consists of a broad wall of built from CMU which runs the length of this elevation (Figure 10). The entire stretch of this elevation is punctuated only by two full-leaf doors, a metal roll-up door, a sliding glass door with a small metal awning, and two decorative breezeway block screens shading a window on the east side of the elevation.



Figure 9. South warehouse west elevation (left) and partial south (right) elevations, view looking northeast (IMG_0519)



Figure 10. South warehouse partial south elevation, view looking east (IMG_0534)

***B6. Construction History (Continued):**



Figure 11. Kirkhill Manufacturing Inc. building in Downey, c.1958 (Blackburn 2009)

**Identified Alterations**

Dudek staff visited the City of Downey Permit Counter on August 12, 2020 and reviewed all available permits pertaining to the subject property (AIN 6284-025-018). Observed alterations are also included in this section with dates stated where known:

- 1950. Electrical permit to install six new motors (#62280)
- 1954. 9,000-square foot, one-story addition (#70040)
- 1954. Electrical permit to install three new transformers (#23605)
- 1954. Electrical permit to install several new motors (#1721)
- 1955. 50-foot by 80-foot, one-story addition (#3611)
- 1955. Electrical permit to install four motors (#8114)
- 1956. Electrical permit to update electrical receptacles and fixtures (#8429, #6922, and #5007)

- 1956. Install wet standpipe (#6194 and #3510)
- 1959. Demolish and replace former fire-damaged office building (#28490)
- 1959. Install fire sprinkler system in new office building (#29671)
- 1968. Existing shipping office remodeled (#91845)
- 1971. 18,000-square foot warehouse addition and 13,000-square foot packaging area addition (#31754)
- 1971. Install three-ton combined gas heating and air conditioning system (#65775)
- 1971. Pave approximately 50,000-square feet surrounding building (#61033)
- 1972. 8-foot tall, 120-foot long block fence (no permit #)
- 1973. 21,536-square foot warehouse addition (#80040)
- 1973. 14,268-square foot warehouse/office and lunch room addition (#80039)
- 1973. Install automatic fire sprinklers in new warehouses and office buildings (#84255)
- 1973. Added public sewer connection (#90479)
- 1974. 12-foot, 6-inches by 18-foot patio cover installed as lunch area (#15447)
- 1974. Install personnel sign (#04143)
- 1976. Add underground fuel storage tank (#46978)
- 1976. 3,024-square foot floor slab, building and canopy (#54228)
- 1976. Install fire sprinkler system (#56621),
- 1976. Install three water closets, two lavatories, and 1 drinking fountain (#45434)
- 2010. Install fire sprinkler system heads (#177-10)
- 2012. Install an approximately 33-square foot, non-illuminated sign (#BLD-12-00847)

***B10. Significance (Continued):**

**Historical Overview**

Post-Contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1821), Mexican Period (1821–1848), and American Period (1846–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War, signals the beginning of the American Period when California became a territory of the United States.

**Spanish Period (1769-1821)**

Spanish explorers made sailing expeditions along the coast of southern California between the mid-1500s and mid-1700s. In search of the legendary Northwest Passage, Juan Rodríquez Cabrillo stopped in 1542 at present-day San Diego Bay. With his crew, Cabrillo explored the shorelines of present Catalina Island as well as San Pedro and Santa Monica Bays. Much of the present California and Oregon coastline was mapped and recorded in the next half-century by Spanish naval officer Sebastián Vizcaíno. Vizcaíno's crew also landed on Santa Catalina Island and at San Pedro and Santa Monica Bays, giving each location its long-standing name. The Spanish crown laid claim to California based on the surveys conducted by Cabrillo and Vizcaíno (Bancroft 1885; Gumprecht 2001).

More than 200 years passed before Spain began the colonization and inland exploration of Alta California. The 1769 overland expedition by Captain Gaspar de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja (lower) California Native Americans, and Mexican civilians, Portolá established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement in Alta California. In July of 1769, while Portolá was exploring southern California, Franciscan Fr. Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823 (Bancroft 1885; Gumprecht 2001).

The Portolá expedition was the first known party of Europeans to set foot in the present-day boundaries of Los Angeles County in August 1769. Father Crespi called the campsite beside the river in the new territory, "Nuestra Señora la Reina de los Angeles de la Porciúncula" which translated

to "Our Lady the Queen of the Angels of the Porziuncola." The Porziuncola is the name of the small chapel within the Papal basilica of Saint Mary of the Angels in Assisi, Italy where the Franciscan order was said to have started in the thirteenth century. Two years later, Friar Junípero Serra returned to the valley to establish the Mission San Gabriel Arcángel, on September 8, 1771. In 1776, following a series of floods, the mission was moved to a second, temporary site before being moved again to the present site in 1791 (Bancroft 1885; Hoover et al. 2002).

Four years after the founding the secular Spanish settlement in 1781, El Pueblo de Nuestra Señora de Los Angeles, Manuel Nieto received a provisional grant for Rancho Los Nietos in 1784. The immense grant encompassed all the land between the Santa Ana and the Rio Hondo (then-called the San Gabriel) Rivers, and between the ocean and the now-called Coyote Hills. The Rancho was later partitioned into smaller Ranchos by Nieto's heirs during the Mexican period (Hoover et al. 2002).

**Mexican Period (1821-1846)**
A major emphasis during the Spanish Period in California was the construction of missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns, but just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles). Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants (Dallas 1955).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. The children of Manuel Nieto petitioned for the Mexican Governor to divide Rancho Los Nieto into six smaller Ranchos. The new ranchos included Rancho Loa Alamitos, Rancho Cerritos, Rancho Los Coyotes, Rancho Los Bolsas, Rancho Palo Altos, and Rancho Santa Gertrudes. Rancho Santa Gertrudes, where the proposed Project is located, was granted in 1834 to the widow of Antonio María Nieto, Josefa Cota de Nieto. The 21,713-acre Rancho encompasses present day Downey and Santa Fe Springs. The secularization of the missions (enacted 1833) following Mexico's independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos (Hoover et al. 2002).

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities.

**American Period (1846-Present)**
The Mexican–American War ended with the Treaty of Guadalupe Hidalgo in 1848, ushering California into its American Period. Los Angeles was designated as one of the 27 original counties of California on February 18, 1850, shortly before California officially became a state with the Compromise of 1850. Beginning with the California Land Act of 1851, the new State of California recognized the ownership of lands distributed under Spanish and Mexican land grants if they were formally claimed to the United States Land Claim Commission within two years. The owner was required to furnish proof of ownership and the size of their property which led to lengthy court cases throughout the state and rulings that were delayed for extended periods (U.S. Congress 1851).

An American man from Kentucky named Lemuel Carpenter arrived in the vicinity of Rancho Santa Gertrudes during the 1830s. Following his marriage to the granddaughter of Manuel Nieto and niece of Josefa Cota de Nieto, María de Los Angeles Domínquez, Carpenter purchased Rancho Santa Gertrudes from Doña Cota de Nieto in 1843. Carpenter often disputed with the owners of the Rancho to the north, Rancho Paso de Bortolo, concerning the overlap of the two Ranchos at the northern boundary of his Rancho (Figure 4). Carpenter applied for legal claim to Rancho San Gertrudes under the California Land Act of 1851, however, the appeal process took over 12 years, in which time Carpenter

began to default on the sizable loan he took out to purchase the Rancho. Rancho Santa Gertrudes was seized from Carpenter in 1859 and sold at auction by the sheriff to John G. Downey and Dr. James P. McFarland. Downey and McFarland purchased 17,602-acres of Rancho Santa Gertrudes at a bargain rate of $3.40 per acre. The court process concluded after Carpenter's death, and resulted in the preparation of the 1862 Plat Map of the Rancho Santa Gertrudes by the U.S. Surveyor General (Figure 12) attributing ownership of Rancho Santa Gertrudes and the small disputed triangular section containing the subject property as Carpenter's property. Although Downey and McFarland formally owned the property by this point, their ownership of this section was not formally accepted until 1866 (Hoover et al. 2002; Jensen 1991; Da Rold 1979).

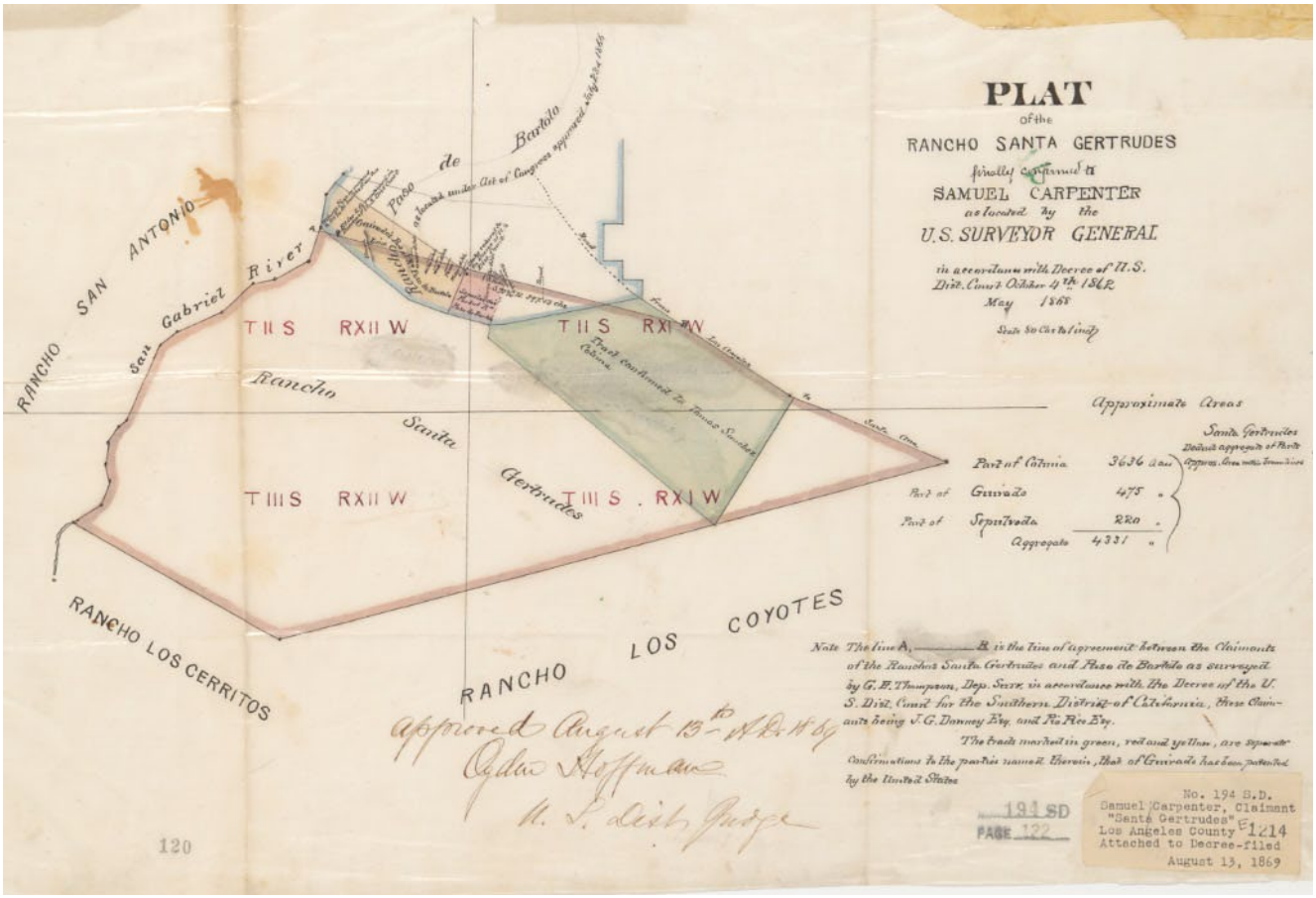



Figure 12. Plat of the Rancho Santa Gertrudes showing disputed northern territory overlap, 1866 (Bancroft Library, UC Berkley)

**Historical Overview of Downey**

John Downey (b. 1827) emigrated from Ireland to the Washington D.C. where he trained as a druggist for several years before traveling in California in 1849 at the height of the Gold Rush. Downey partnered with McFarland and together they opened the second drug store in Los Angeles in 1850. Downey continued his assent through local politics after becoming a naturalized American in 1851 and joining the Los Angeles City Council thereafter. In 1860, shortly after he purchased Rancho Santa Gertrudes, Downey became the seventh Governor of the State of California. He returned to the Rancho in 1862 at the conclusion of his two-year term and began the process, alongside McFarland, of dividing 96-acres of the Rancho into small farms. This subdivision facilitated the transition of the Rancho from a cattle range into fertile, agricultural properties that would attract new settlers to Los Angeles County. Governor Downey promoted the cultivation of oranges on the properties he sold, as he believed that the oranges would prove to be an extremely lucrative crop (Hoover et al. 2002; Latimer et al. 2010).

As Downey and McFarland subdivided and sold off portions of the Rancho during the 1860s and 1870s, the small communities of Gallatin and College Settlement organically developed, and then gradually grew together. When the Southern Pacific Railroad announced that they would route the railroad near, but not through either of the existing settlements, plans for a new, combined town surrounding the new depot developed. The settlement of Downey was officially established when Los Angeles County surveyor, Frank Lecouvreur, filed a map for the "Tract of the Downey Land Association" in October 1873. The map included two blocks devoted to the new Southern Pacific Railroad depot, which opened in April 1874. By the end of 1874, the fledgling town of Downey featured a hotel, three schools, two churches and a newspaper office (Downey Historical Society N.D.; Latimer et al. 2010).

As Governor Downey speculated when he advertised the Rancho Santa Gertrudes farms for sale, citrus fruit became an extremely successful crop. Valencia oranges were first grown on the farms surrounding the town of Downey in the 1870s, with Navel oranges following soon after. Other crops that thrived on the surrounding Downey farms included barley, castor beans, corn, English walnuts, sugar beets and potatoes. The arrival of the Southern Pacific Railroad in 1874 provided an efficient means to distribute the abundant agricultural products to a wider market, and in 1879 alone, 7,941,825-pounds of produce was transported from the Downey depot. By the 1890s, the northern portion of Downey was predominately populated by citrus orchards and was well-known as a citrus powerhouse. While Downey continued to prosper as a citrus-producing region well into the 20th century, it remained a predominately rural community during this period (Latimer et al. 2010).

During the late 1920s and the 1930s, aviation arose as a profitable industry in Downey. In March 1929, E.M Smith purchased a 73-acre ranch in southeast Downey that had been used to grow oranges and castor beans and established EMSCO Aircraft. Smith began building aircrafts onsite, constructed a 2,400-foot runway and various hangar buildings before the stock market crash later in 1929 caused EMSCO Aircraft to fold. In 1932, Smith rented the aviation-oriented property to an established aviation company owned by Bert Kinner, called the Security National Aircraft Company. Kinner gained early notoriety in the aviation field with his innovative "folding wing" design and he was also responsible for the design of the popular Kinner Airster plane, which was the first plane purchased by Amelia Earhart (Latimer et al. 2010).

In 1936, a seasoned aviation engineer named Gerard Vultee moved his company, Vultee Aircraft, from Glendale to the same facility that formerly housed both EMSCO Aircraft and the Security National Aircraft Company. Vultee saw significant success from the Downey plant, which employed over 500 people by 1938. After Vultee's death, the company was renamed the Consolidated Vultee Aircraft Corporation, or 'Convair' for short. By 1941, the Downey plant was responsible for the production of 15-percent of all military aircraft in the United States, including the B-13A, the Vultee BT-13 trainer, and B-24 Liberator bombers. Despite this, when the war effort came to a close, so too did the majority of production of military craft at the Downey plant. Limited projects carried the plant through the late 1940s including the Lark short range missile and the MX-774 ballistic missile before Convair moved operations from the Downey plant to San Diego in 1948 (Latimer et al. 2010; Blackburn 2009).

Another prominent aviation company that held military contracts through World War II, North American Aviation (NAA), did not experience the same economic downturn in the immediate post-war period. Instead, the El Segundo-based NAA saw a quick recovery that was fueled by federal contracts to produce the AJ Savage bomber, the T-6G, and the T-28 trainer aircrafts. NAA was also racing to produce jet-powered aircraft and began making use of the V-2 jet technology that was apprehended from Nazi Germany. In 1949, NAA established an additional production site at the former Convair facility in Downey that would also serve as the headquarters for the NAA's new, Aerophysics Design Group. NAA's refocus towards the establishment the Aerophysics Design Group laid the foundation for the NAA Missiles Division, which produced the X-10 Navaho missile and the Hound Dog. The missile program also formed the basis for the NAA's transition into spacecraft engineering. The NAA Missiles Division secured the National Aeronautics and Space Administration (NASA) contract to design and build the test booster for the Mercury, Gemini, and Apollo space crafts, known as the Little Joe booster. Alongside the work of the NAA in Downey during the 1950s, the City also saw a rise in the number of new industries related to aeronautical and spacecraft design overall during this period (Blackburn 2009).

Following World War II, a surge of residential and industrial development throughout Los Angeles County caused the population of Downey to balloon from 12,000 people in 1940 to 86,000 people by

1960. The residents of Downey voted to officially incorporate the City in 1956. The County experienced dramatic industrial growth during this period, with a gain of 70 percent in the number of factories and 300 percent increase in manufacturing county-wide between 1939 and 1947. With the express support of the aeronautical engineering companies in Downey, by 1952, Los Angeles County was leading nationally in six areas of industry including; aircraft and aircraft parts; pumps and compressors; canned seafood; the motion picture industry; refrigeration and associated equipment; and heating a plumbing equipment (Latimer et al. 2010; LAT 1952).

Downey remained a dominant force in the aerospace engineering industry throughout the 1960s and the 1970s and is known colloquially as the "Cradle of the Cosmic Age" due to the development there of so many technologies considered instrumental to the advent of manned spacecraft. Today, Downey maintains a population of approximately 113,350 people, and although a majority of the City's workforce is now employed by the healthcare and social assistance industries, manufacturing is still considered the second largest driver of employment in the City (Blackburn 2009; Data USA 2020).

**Kirkhill Manufacturing Inc. (1941-Present)**
Thomas Kirk Hill founded The Mechanical Rubber Co. in the City of Los Angeles in 1919 to produce rubber seals and flexible connectors for plumbing and industrial use. In 1926, the company was renamed the Kirkhill Rubber Co. As the demand for rubber products grew, the company enlarged the original plant during the 1930s (Figure 13) (Kirkhill Inc. 2019).




Figure 13. The original Kirkhill Rubber Company building in 1938 (Kirkhill Inc. 2019)

Prompted by the escalation of the aeronautical industry in Los Angeles County in response to World War II, the Kirkhill Rubber Co. divided into two separate companies in 1941: Kirkhill Rubber Co. remained focused on the manufacturing of rubber products related to plumbing and industrial goods, while the new branch of the company, Kirkhill Manufacturing Inc., focused on the production of seals related to aerospace products (Kirkhill Inc. 2019).

In 1949, the Kirkhill Rubber Co. completed a new, 360,000-square foot facility in Brea, California, that was capable of employing over 1,000 people. The Brea facility was expanded by 50,000-square feet in 1950 allowing it to become the center of operations and production for both Kirkhill companies. In 1951, as the NAA developed new, jet propelled aircraft, Kirkhill Manufacturing Inc. established a comparatively smaller plant in Downey to maintain close proximity to the rapid-paced-development in the Downey aerospace industry. A permit for an expansion of the Downey plant in 1955 suggests that the plant employed only 60 people, which was a nominal fraction of the overall company employment during this period (LAT 1950; Kirkhill Inc. 2019; Permit #3611).

Both Kirkhill entities continued to expand during the 1960s, as Kirkhill products were utilized in the first manned trip to the Moon and also in the development of the F104 and DC-9 aircrafts. During the 1970s, Kirkhill Inc. maintained growth with the assistance of the space shuttle programs, the Titan intercontinental ballistic missile, and the Minutemen missiles (Kirkhill Inc. 2019).
During the 1990s, the two companies under the Kirkhill name were sold and renamed. In 1996, the former employees of Kirkhill Inc. purchased the company and manufacturing equipment and formed the Kirkhill Manufacturing Company. In 1998, Kirkhill Manufacturing Company was acquired by Esterline, which then merged in 1999 with TA Manufacturing and the company name became the Kirkhill-TA Company. This company found success in the manufacture of parts used in the reusable rockets for the Space Shuttle program, as well as components of the Boeing 777 aircraft. Despite the multiple changes in company ownership and structure since the 1990s, the Kirkhill name was retained as part of the new businesses. In 2019, Kirkhill Manufacturing Company celebrated its 100th anniversary as a company (Hexpol 2020; Kirkhill Inc. 2019).

**Mid-Century Modern Architecture (1933-1965)**
The Mid-Century Modern design movement includes architecture that is reflective of International and Bauhaus styles popular in Europe in the early 20th century. This architecture and its living designers (e.g., Mies Van der Rohe and Gropius) were disrupted by World War II and moved to the United States. During World War II, the United States established itself as a burgeoning manufacturing and industrial leader, with incredible demand for modern buildings to reflect modern products in the mid-20th century. As a result, many industrial buildings are often "decorated boxes"—plain buildings with applied ornament to suit the era and appear more modern without detracting from the importance of the activity inside the building. Following World War II, the United States had a focus on forward thinking, which sparked architectural movements like Mid-Century Modern. Practitioners of the style were focused on the most cutting-edge materials and techniques. Architects throughout Southern California implemented the design aesthetics made famous by early Modernists like Richard Neutra and Frank Lloyd Wright, who created a variety of modern architectural forms. Like other buildings of this era, Mid-Century Modern buildings had to be quickly assembled, and use modern materials that could be mass-produced. Both residences and offices designed in this style expressed its structure and materials, displayed large expanses of glass, and had an open interior plan (McAlester 2013; Morgan 2004).

Characteristics of the Mid-Century Modern style include:

- One- to two-stories in height
- Low, boxy, horizontal proportions
- Simple geometric forms with a lack of exterior decoration
- Commonly asymmetrical
- Flat roofed without coping at roof line; flat roofs hidden behind parapets or cantilevered canopies
- Expressed post-and-beam construction in wood or steel
- Exterior walls are flat with smooth sheathing and typically display whites, buffs, and pale pastel colors
- Mass-produced materials
- Simple windows (metal or wood) flush-mounted and clerestory
- Industrially plain doors
- Large window groupings

**NRHP/CRHR Statement of Significance**

**Criterion A/1: That are associated with events that have made a significant contribution to the broad patterns of our history.**
Archival research indicates that by the time the Downey branch facility of Kirkhill Manufacturing Inc. was completed in 1951, parent company Kirkhill Rubber Co. had already been manufacturing rubber products for aerospace projects for 10 years. Kirkhill Manufacturing Inc. produced products specifically for airplanes and was established in order to distinguish between the parent company, Kirkhill Rubber Co., which was founded in 1919 to make household and industrial plumbing components. As Downey earned a reputation as an epicenter of aerospace engineering, Kirkhill Manufacturing Inc. had the opportunity to produce parts for multiple aircrafts and space crafts produced in the area

during the 1950s through the 1980s. Despite the facility's location in Downey and its proximity to the bustling NAA plant, the facility in Downey appears to have remained secondary in both production and staffing to the Kirkhill Manufacturing Inc. facility in Brea that was completed several years earlier in 1949. Archival research indicates the Brea plant served as the center of operations during this period, and the Downey location is not referenced in connection with any specific achievement credited to the Kirkhill Manufacturing Inc. Ultimately, the success of the company continues to be associated with the Brea facility, not the Downey location. The plant in Downey does not appear to have made a significant contribution to the local, state, or national history. While the current tenants of the building, Kirkhill Manufacturing Company Inc., continues to use the Kirkhill company name, the original Kirkhill Manufacturing Inc. was sold and restructured multiple times during the 1990s. Therefore, the current Kirkhill Manufacturing Company Inc. does not maintain continued association to the company started by Thomas Kirk Hill in 1919 that went on to assist in the engineering of aerospace industries in Downey. Consequently, the building does not retain integrity of association with the firm that established the branch of the Kirkhill Manufacturing Inc., in Downey in 1951. Moreover, with subsequent additions and alterations, the building no longer represents the time period in which the events for which the company gained notoriety within the field of aerospace design took place. For this reason, the property does not appear eligible under Criterion A of the NRHP or Criterion 1 of the CRHR.

**Criterion B/2: That are associated with the lives of persons significant in our past.**
Archival research did not indicate that any previous property owners or employees are known to be historically significant figures at the national, state, or local level. As such, this property is not known to have any historical associations with people important to the nation's or state's past. Therefore, the property does not appear eligible for the NRHP under Criterion B or CRHR under Criterion 2.

**Criterion C/3: That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.**
Construction of the subject property began in 1951 and the original building design would go on to receive five major additions in the years 1954, 1955, 1971, 1973, and 1976. The original 1951 footprint as displayed in the 1952 historical aerial photograph was an example of the modest Mid-Century Modern-style buildings designed for industrial and commercial uses following the end of World War II. Furthermore, the popularity of the architectural style in Southern California and its widespread use resulted in the creation of hundreds of buildings in this style that have a higher level of integrity, association with notable architects, and a higher level of architectural merit that that shown at the subject property. Therefore, the subject property cannot be considered a distinctive example of a Mid-Century Modern industrial building, nor can it be considered representative of a significant and distinguishable entity whose components lack individual distinction. Furthermore, as the original architect was not discovered during the course of research for this project, the building is not known to be the work of a master architect.
Following the multiple expansions and additions, the character-defining features including the low, boxy massing, articulated profile, grand semi-circular driveway, and original exterior cladding have been substantially altered. Although the building appears to retain the majority of the original breezeway block screens, later additions to the main office's east (main) elevation that are different in scale from the original building, also feature the same wide swaths of decorative block in the same pattern. This has resulted in a blurred distinction between the original design and features that were added at a later period. The property as a whole has been altered beyond recognition, diminishing the already modest architectural value of the property. These alterations and major additions have caused the building to lose integrity in the areas of design, materials and workmanship. For these reasons, the subject property does not appear eligible for listing in the NRHP under Criterion C or CRHR under Criterion 3.

**Criterion D/4: That have yielded, or may be likely to yield, information important in prehistory or history.**
The property is not significant under Criterion D of the NRHP or Criterion 4 of the CRHR as a source, or likely source, of important historical information nor does it appear likely to yield important information about historic construction methods, materials or technologies.

**Integrity Discussion**
The subject property retains integrity of location, as it remains in its original location. The

Kirkhill Manufacturing Inc. property, including all three wings, have undergone major exterior alterations and large-scale additions beginning in the 1950s. The building sections do not retain their original plan and massing, and later additions are not consistent with the original Mid-Century Modern-style building. Therefore, the subject property does not retain integrity of design. The property does not retain integrity of setting, as the setting in all directions has been altered from a rural farmland with periodic industrial development when it was initially constructed, to dense residential development, parking lots, strip malls with anchoring grocery and retail stores. The size, scale, and density of this modern setting differs dramatically from the 1950s and 1960s. Although the original distinctive breezeway block screens on the east elevation remain intact, the subject property does not retain integrity of materials and workmanship, due to the introduction of modern materials on the main and side elevations. For instance, key design elements such as the scale, massing, cladding, signage, original semi-circular driveway, and doors have all been replaced or heavily altered. The subject property also does not retain integrity of feeling, as the property as a whole no longer presents as a Mid-Century Modern-style industrial building. While the current tenants of the building, Kirkhill Manufacturing Company Inc., continue to employ the Kirkhill company name, the original Kirkhill Manufacturing Inc. was sold and restructured multiple times during the 1990s and no longer maintains any association to the company started by Thomas Kirk Hill in 1919. Consequently, the building no longer retains integrity of association with the original firm that established the branch of the Kirkhill Manufacturing Inc., in Downey. In summary, the subject property does not retain the requisite integrity and does not rise to the level of significance required for designation at the national, state or local levels.

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# Appendix B

## Air Quality, Greenhouse Gas Emission, and Energy Modeling Inputs and Outputs

# 12021 Wooddruff Avenue

**South Coast AQMD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Office Building | 8.02 | 1000sqft | 0.00 | 8,020.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 44.16 | 1000sqft | 6.31 | 44,162.00 | 0 |
| Parking Lot | 46.00 | Space | 0.00 | 28,540.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 9 | | | **Operational Year** | 2022 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 566.2 | **CH4 Intensity (lb/MWhr)** | 0.023 | **N2O Intensity (lb/MWhr)** | 0.00497 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics – GHG intensity data was updated based on the 2018 Power Content Label for SCE.

Land Use - Building square footage, parking lot area and lot acreage data values were provided by the project applicant.

Construction Phase - Construction schedule information was provided by the project applicant.

Off-road Equipment - Construction equipment information was provided by the project applicant.

Off-road Equipment - Construction equipment information was provided by the project applicant.

Trips and VMT - Odd trip values were rounded up to an even value.

Demolition - 3,200 tons of demolition debris was assumed based on information provided by the project applicant.

Grading - CalEEMod defaults were used.

Construction Off-road Equipment Mitigation - In compliance with SCAQMD Rule 402 watering twice daily and limiting speeds to 15 miles per hour on unpaved roads was assumed.

Vehicle Trips - Operational mobile source emissions were calculated in a spreadsheet model using ITE, CalEEMod and EMFAC data.

Operational Off-Road Equipment - Operational off-road equipment information was provided by the project applicant.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 230.00 | 132.00 |
| tblConstructionPhase | NumDays | 20.00 | 44.00 |
| tblConstructionPhase | NumDays | 20.00 | 22.00 |
| tblConstructionPhase | NumDays | 10.00 | 22.00 |
| tblLandUse | LandUseSquareFeet | 44,160.00 | 44,162.00 |
| tblLandUse | LandUseSquareFeet | 18,400.00 | 28,540.00 |
| tblLandUse | LotAcreage | 0.18 | 0.00 |
| tblLandUse | LotAcreage | 1.01 | 6.31 |
| tblLandUse | LotAcreage | 0.41 | 0.00 |
| tblOffRoadEquipment | HorsePower | 168.00 | 360.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 365.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 356.00 |
| tblOperationalOffRoadEquipment | OperFuelType | Diesel | Electrical |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 4.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.023 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.43634 | 566.2 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.00617 | 0.00497 |
| tblTripsAndVMT | HaulingTripNumber | 316.00 | 400.00 |
| tblTripsAndVMT | VendorTripNumber | 13.00 | 14.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblTripsAndVMT | WorkerTripNumber | 33.00 | 34.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | WorkerTripNumber | 7.00 | 8.00 |
| tblVehicleTrips | ST_TR | 2.46 | 0.00 |
| tblVehicleTrips | ST_TR | 1.68 | 0.00 |
| tblVehicleTrips | SU_TR | 1.05 | 0.00 |
| tblVehicleTrips | SU_TR | 1.68 | 0.00 |
| tblVehicleTrips | WD_TR | 11.03 | 0.00 |
| tblVehicleTrips | WD_TR | 1.68 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2021 | 0.2939 | 2.8560 | 2.1943 | 4.3500e-003 | 0.3474 | 0.1389 | 0.4863 | 0.1629 | 0.1294 | 0.2922 | 0.0000 | 383.2558 | 383.2558 | 0.0900 | 0.0000 | 385.5066 |
| 2022 | 0.2598 | 0.1260 | 0.1717 | 2.8000e-004 | 2.6300e-003 | 6.5200e-003 | 9.1500e-003 | 7.0000e-004 | 6.0600e-003 | 6.7600e-003 | 0.0000 | 24.7922 | 24.7922 | 6.7000e-003 | 0.0000 | 24.9596 |
| **Maximum** | **0.2939** | **2.8560** | **2.1943** | **4.3500e-003** | **0.3474** | **0.1389** | **0.4863** | **0.1629** | **0.1294** | **0.2922** | **0.0000** | **383.2558** | **383.2558** | **0.0900** | **0.0000** | **385.5066** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2021 | 0.2939 | 2.8560 | 2.1943 | 4.3500e-003 | 0.1796 | 0.1389 | 0.3185 | 0.0796 | 0.1294 | 0.2089 | 0.0000 | 383.2555 | 383.2555 | 0.0900 | 0.0000 | 385.5063 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022 | 0.2598 | 0.1260 | 0.1717 | 2.8000e-004 | 2.6300e-003 | 6.5200e-003 | 9.1500e-003 | 7.0000e-004 | 6.0600e-003 | 6.7600e-003 | 0.0000 | 24.7921 | 24.7921 | 6.7000e-003 | 0.0000 | 24.9596 |
| **Maximum** | **0.2939** | **2.8560** | **2.1943** | **4.3500e-003** | **0.1796** | **0.1389** | **0.3185** | **0.0796** | **0.1294** | **0.2089** | **0.0000** | **383.2555** | **383.2555** | **0.0900** | **0.0000** | **385.5063** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **47.93** | **0.00** | **33.87** | **50.93** | **0.00** | **27.86** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| **1** | **3-1-2021** | **5-31-2021** | 1.4595 | 1.4595 |
| **2** | **6-1-2021** | **8-31-2021** | 0.7545 | 0.7545 |
| **3** | **9-1-2021** | **11-30-2021** | 0.6811 | 0.6811 |
| **4** | **12-1-2021** | **2-28-2022** | 0.5905 | 0.5905 |
| | | **Highest** | 1.4595 | 1.4595 |

## 2.2 Overall Operational

### Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.2151 | 1.0000e-005 | 1.2500e-003 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.4400e-003 | 2.4400e-003 | 1.0000e-005 | 0.0000 | 2.6000e-003 |
| Energy | 6.6000e-004 | 5.9800e-003 | 5.0200e-003 | 4.0000e-005 | | 4.5000e-004 | 4.5000e-004 | | 4.5000e-004 | 4.5000e-004 | 0.0000 | 80.0601 | 80.0601 | 3.1100e-003 | 7.6000e-004 | 80.3658 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Offroad | 0.1495 | 1.4456 | 1.5542 | 2.2100e-003 | | 0.0863 | 0.0863 | | 0.0794 | 0.0794 | 0.0000 | 194.0825 | 194.0825 | 0.0628 | 0.0000 | 195.6517 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 9.9405 | 0.0000 | 9.9405 | 0.5875 | 0.0000 | 24.6271 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 3.6920 | 41.4096 | 45.1016 | 0.3809 | 9.3200e-003 | 57.4004 |
| **Total** | **0.3653** | **1.4516** | **1.5605** | **2.2500e-003** | **0.0000** | **0.0868** | **0.0868** | **0.0000** | **0.0799** | **0.0799** | **13.6325** | **315.5546** | **329.1871** | **1.0342** | **0.0101** | **358.0476** |

### Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.2151 | 1.0000e-005 | 1.2500e-003 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.4400e-003 | 2.4400e-003 | 1.0000e-005 | 0.0000 | 2.6000e-003 |
| Energy | 6.6000e-004 | 5.9800e-003 | 5.0200e-003 | 4.0000e-005 | | 4.5000e-004 | 4.5000e-004 | | 4.5000e-004 | 4.5000e-004 | 0.0000 | 80.0601 | 80.0601 | 3.1100e-003 | 7.6000e-004 | 80.3658 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Offroad | 0.1495 | 1.4456 | 1.5542 | 2.2100e-003 | | 0.0863 | 0.0863 | | 0.0794 | 0.0794 | 0.0000 | 194.0825 | 194.0825 | 0.0628 | 0.0000 | 195.6517 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 9.9405 | 0.0000 | 9.9405 | 0.5875 | 0.0000 | 24.6271 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 3.6920 | 41.4096 | 45.1016 | 0.3809 | 9.3200e-003 | 57.4004 |
| **Total** | **0.3653** | **1.4516** | **1.5605** | **2.2500e-003** | **0.0000** | **0.0868** | **0.0868** | **0.0000** | **0.0799** | **0.0799** | **13.6325** | **315.5546** | **329.1871** | **1.0342** | **0.0101** | **358.0476** |

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

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 3/1/2021 | 4/29/2021 | 5 | 44 | |
| 2 | Site Preparation | Site Preparation | 4/30/2021 | 5/31/2021 | 5 | 22 | |
| 3 | Grading | Grading | 6/1/2021 | 6/30/2021 | 5 | 22 | |
| 4 | Building Construction | Building Construction | 7/1/2021 | 12/31/2021 | 5 | 132 | |
| 5 | Paving | Paving | 1/3/2022 | 1/28/2022 | 5 | 20 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6 | Architectural Coating | Architectural Coating | 1/3/2022 | 1/28/2022 | 5 | 20 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 11**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 78,273; Non-Residential Outdoor: 26,091; Striped Parking Area:**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Other Material Handling Equipment | 1 | 8.00 | 360 | 0.40 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

## Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 7 | 18.00 | 0.00 | 400.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 16.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 34.00 | 14.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 16.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 8.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Demolition - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0342 | 0.0000 | 0.0342 | 5.1800e-003 | 0.0000 | 5.1800e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0838 | 0.8371 | 0.5550 | 1.1300e-003 | | 0.0398 | 0.0398 | | 0.0369 | 0.0369 | 0.0000 | 98.6402 | 98.6402 | 0.0288 | 0.0000 | 99.3592 |
| **Total** | **0.0838** | **0.8371** | **0.5550** | **1.1300e-003** | **0.0342** | **0.0398** | **0.0740** | **5.1800e-003** | **0.0369** | **0.0421** | **0.0000** | **98.6402** | **98.6402** | **0.0288** | **0.0000** | **99.3592** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 1.4700e-003 | 0.0521 | 0.0111 | 1.5000e-004 | 3.4400e-003 | 1.6000e-004 | 3.6000e-003 | 9.4000e-004 | 1.5000e-004 | 1.0900e-003 | 0.0000 | 14.9340 | 14.9340 | 1.0200e-003 | 0.0000 | 14.9596 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.6500e-003 | 1.2200e-003 | 0.0138 | 4.0000e-005 | 4.3400e-003 | 3.0000e-005 | 4.3800e-003 | 1.1500e-003 | 3.0000e-005 | 1.1800e-003 | 0.0000 | 3.7844 | 3.7844 | 1.0000e-004 | 0.0000 | 3.7870 |
| **Total** | **3.1200e-003** | **0.0533** | **0.0249** | **1.9000e-004** | **7.7800e-003** | **1.9000e-004** | **7.9800e-003** | **2.0900e-003** | **1.8000e-004** | **2.2700e-003** | **0.0000** | **18.7184** | **18.7184** | **1.1200e-003** | **0.0000** | **18.7465** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0154 | 0.0000 | 0.0154 | 2.3300e-003 | 0.0000 | 2.3300e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0838 | 0.8371 | 0.5550 | 1.1300e-003 | | 0.0398 | 0.0398 | | 0.0369 | 0.0369 | 0.0000 | 98.6400 | 98.6400 | 0.0288 | 0.0000 | 99.3591 |
| **Total** | **0.0838** | **0.8371** | **0.5550** | **1.1300e-003** | **0.0154** | **0.0398** | **0.0552** | **2.3300e-003** | **0.0369** | **0.0392** | **0.0000** | **98.6400** | **98.6400** | **0.0288** | **0.0000** | **99.3591** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 1.4700e-003 | 0.0521 | 0.0111 | 1.5000e-004 | 3.4400e-003 | 1.6000e-004 | 3.6000e-003 | 9.4000e-004 | 1.5000e-004 | 1.0900e-003 | 0.0000 | 14.9340 | 14.9340 | 1.0200e-003 | 0.0000 | 14.9596 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.6500e-003 | 1.2200e-003 | 0.0138 | 4.0000e-005 | 4.3400e-003 | 3.0000e-005 | 4.3800e-003 | 1.1500e-003 | 3.0000e-005 | 1.1800e-003 | 0.0000 | 3.7844 | 3.7844 | 1.0000e-004 | 0.0000 | 3.7870 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **3.1200e-003** | **0.0533** | **0.0249** | **1.9000e-004** | **7.7800e-003** | **1.9000e-004** | **7.9800e-003** | **2.0900e-003** | **1.8000e-004** | **2.2700e-003** | **0.0000** | **18.7184** | **18.7184** | **1.1200e-003** | **0.0000** | **18.7465** |

## 3.3 Site Preparation - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.1987 | 0.0000 | 0.1987 | 0.1092 | 0.0000 | 0.1092 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0428 | 0.4455 | 0.2327 | 4.2000e-004 | | 0.0225 | 0.0225 | | 0.0207 | 0.0207 | 0.0000 | 36.7793 | 36.7793 | 0.0119 | 0.0000 | 37.0767 |
| **Total** | **0.0428** | **0.4455** | **0.2327** | **4.2000e-004** | **0.1987** | **0.0225** | **0.2212** | **0.1092** | **0.0207** | **0.1299** | **0.0000** | **36.7793** | **36.7793** | **0.0119** | **0.0000** | **37.0767** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 8.3000e-004 | 6.1000e-004 | 6.9000e-003 | 2.0000e-005 | 2.1700e-003 | 2.0000e-005 | 2.1900e-003 | 5.8000e-004 | 2.0000e-005 | 5.9000e-004 | 0.0000 | 1.8922 | 1.8922 | 5.0000e-005 | 0.0000 | 1.8935 |
| **Total** | **8.3000e-004** | **6.1000e-004** | **6.9000e-003** | **2.0000e-005** | **2.1700e-003** | **2.0000e-005** | **2.1900e-003** | **5.8000e-004** | **2.0000e-005** | **5.9000e-004** | **0.0000** | **1.8922** | **1.8922** | **5.0000e-005** | **0.0000** | **1.8935** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0894 | 0.0000 | 0.0894 | 0.0492 | 0.0000 | 0.0492 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0428 | 0.4455 | 0.2327 | 4.2000e-004 | | 0.0225 | 0.0225 | | 0.0207 | 0.0207 | 0.0000 | 36.7792 | 36.7792 | 0.0119 | 0.0000 | 37.0766 |
| **Total** | **0.0428** | **0.4455** | **0.2327** | **4.2000e-004** | **0.0894** | **0.0225** | **0.1119** | **0.0492** | **0.0207** | **0.0699** | **0.0000** | **36.7792** | **36.7792** | **0.0119** | **0.0000** | **37.0766** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 8.3000e-004 | 6.1000e-004 | 6.9000e-003 | 2.0000e-005 | 2.1700e-003 | 2.0000e-005 | 2.1900e-003 | 5.8000e-004 | 2.0000e-005 | 5.9000e-004 | 0.0000 | 1.8922 | 1.8922 | 5.0000e-005 | 0.0000 | 1.8935 |
| **Total** | **8.3000e-004** | **6.1000e-004** | **6.9000e-003** | **2.0000e-005** | **2.1700e-003** | **2.0000e-005** | **2.1900e-003** | **5.8000e-004** | **2.0000e-005** | **5.9000e-004** | **0.0000** | **1.8922** | **1.8922** | **5.0000e-005** | **0.0000** | **1.8935** |

## 3.4 Grading - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fugitive Dust | | | | | 0.0721 | 0.0000 | 0.0721 | 0.0370 | 0.0000 | 0.0370 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0252 | 0.2721 | 0.1744 | 3.3000e-004 | | 0.0128 | 0.0128 | | 0.0117 | 0.0117 | 0.0000 | 28.6591 | 28.6591 | 9.2700e-003 | 0.0000 | 28.8908 |
| **Total** | **0.0252** | **0.2721** | **0.1744** | **3.3000e-004** | **0.0721** | **0.0128** | **0.0848** | **0.0370** | **0.0117** | **0.0488** | **0.0000** | **28.6591** | **28.6591** | **9.2700e-003** | **0.0000** | **28.8908** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 7.3000e-004 | 5.4000e-004 | 6.1300e-003 | 2.0000e-005 | 1.9300e-003 | 1.0000e-005 | 1.9500e-003 | 5.1000e-004 | 1.0000e-005 | 5.3000e-004 | 0.0000 | 1.6820 | 1.6820 | 5.0000e-005 | 0.0000 | 1.6831 |
| **Total** | **7.3000e-004** | **5.4000e-004** | **6.1300e-003** | **2.0000e-005** | **1.9300e-003** | **1.0000e-005** | **1.9500e-003** | **5.1000e-004** | **1.0000e-005** | **5.3000e-004** | **0.0000** | **1.6820** | **1.6820** | **5.0000e-005** | **0.0000** | **1.6831** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0324 | 0.0000 | 0.0324 | 0.0167 | 0.0000 | 0.0167 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0252 | 0.2721 | 0.1744 | 3.3000e-004 | | 0.0128 | 0.0128 | | 0.0117 | 0.0117 | 0.0000 | 28.6590 | 28.6590 | 9.2700e-003 | 0.0000 | 28.8908 |
| **Total** | **0.0252** | **0.2721** | **0.1744** | **3.3000e-004** | **0.0324** | **0.0128** | **0.0452** | **0.0167** | **0.0117** | **0.0284** | **0.0000** | **28.6590** | **28.6590** | **9.2700e-003** | **0.0000** | **28.8908** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 7.3000e-004 | 5.4000e-004 | 6.1300e-003 | 2.0000e-005 | 1.9300e-003 | 1.0000e-005 | 1.9500e-003 | 5.1000e-004 | 1.0000e-005 | 5.3000e-004 | 0.0000 | 1.6820 | 1.6820 | 5.0000e-005 | 0.0000 | 1.6831 |
| **Total** | **7.3000e-004** | **5.4000e-004** | **6.1300e-003** | **2.0000e-005** | **1.9300e-003** | **1.0000e-005** | **1.9500e-003** | **5.1000e-004** | **1.0000e-005** | **5.3000e-004** | **0.0000** | **1.6820** | **1.6820** | **5.0000e-005** | **0.0000** | **1.6831** |

## 3.5 Building Construction - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1255 | 1.1505 | 1.0940 | 1.7800e-003 | | 0.0633 | 0.0633 | | 0.0595 | 0.0595 | 0.0000 | 152.8806 | 152.8806 | 0.0369 | 0.0000 | 153.8027 |
| **Total** | **0.1255** | **1.1505** | **1.0940** | **1.7800e-003** | | **0.0633** | **0.0633** | | **0.0595** | **0.0595** | **0.0000** | **152.8806** | **152.8806** | **0.0369** | **0.0000** | **153.8027** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.6300e-003 | 0.0894 | 0.0222 | 2.3000e-004 | 5.8200e-003 | 1.8000e-004 | 6.0000e-003 | 1.6800e-003 | 1.7000e-004 | 1.8500e-003 | 0.0000 | 22.5591 | 22.5591 | 1.4300e-003 | 0.0000 | 22.5948 |
| Worker | 9.3500e-003 | 6.9100e-003 | 0.0782 | 2.4000e-004 | 0.0246 | 1.8000e-004 | 0.0248 | 6.5400e-003 | 1.7000e-004 | 6.7100e-003 | 0.0000 | 21.4450 | 21.4450 | 5.8000e-004 | 0.0000 | 21.4594 |
| **Total** | **0.0120** | **0.0963** | **0.1004** | **4.7000e-004** | **0.0304** | **3.6000e-004** | **0.0308** | **8.2200e-003** | **3.4000e-004** | **8.5600e-003** | **0.0000** | **44.0042** | **44.0042** | **2.0100e-003** | **0.0000** | **44.0542** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1255 | 1.1505 | 1.0940 | 1.7800e-003 | | 0.0633 | 0.0633 | | 0.0595 | 0.0595 | 0.0000 | 152.8804 | 152.8804 | 0.0369 | 0.0000 | 153.8025 |
| **Total** | **0.1255** | **1.1505** | **1.0940** | **1.7800e-003** | | **0.0633** | **0.0633** | | **0.0595** | **0.0595** | **0.0000** | **152.8804** | **152.8804** | **0.0369** | **0.0000** | **153.8025** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.6300e-003 | 0.0894 | 0.0222 | 2.3000e-004 | 5.8200e-003 | 1.8000e-004 | 6.0000e-003 | 1.6800e-003 | 1.7000e-004 | 1.8500e-003 | 0.0000 | 22.5591 | 22.5591 | 1.4300e-003 | 0.0000 | 22.5948 |
| Worker | 9.3500e-003 | 6.9100e-003 | 0.0782 | 2.4000e-004 | 0.0246 | 1.8000e-004 | 0.0248 | 6.5400e-003 | 1.7000e-004 | 6.7100e-003 | 0.0000 | 21.4450 | 21.4450 | 5.8000e-004 | 0.0000 | 21.4594 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **0.0120** | **0.0963** | **0.1004** | **4.7000e-004** | **0.0304** | **3.6000e-004** | **0.0308** | **8.2200e-003** | **3.4000e-004** | **8.5600e-003** | **0.0000** | **44.0042** | **44.0042** | **2.0100e-003** | **0.0000** | **44.0542** |

## 3.6 Paving - 2022

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0110 | 0.1113 | 0.1458 | 2.3000e-004 | | 5.6800e-003 | 5.6800e-003 | | 5.2200e-003 | 5.2200e-003 | 0.0000 | 20.0276 | 20.0276 | 6.4800e-003 | 0.0000 | 20.1895 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0110** | **0.1113** | **0.1458** | **2.3000e-004** | | **5.6800e-003** | **5.6800e-003** | | **5.2200e-003** | **5.2200e-003** | **0.0000** | **20.0276** | **20.0276** | **6.4800e-003** | **0.0000** | **20.1895** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 6.3000e-004 | 4.5000e-004 | 5.1500e-003 | 2.0000e-005 | 1.7600e-003 | 1.0000e-005 | 1.7700e-003 | 4.7000e-004 | 1.0000e-005 | 4.8000e-004 | 0.0000 | 1.4742 | 1.4742 | 4.0000e-005 | 0.0000 | 1.4752 |
| **Total** | **6.3000e-004** | **4.5000e-004** | **5.1500e-003** | **2.0000e-005** | **1.7600e-003** | **1.0000e-005** | **1.7700e-003** | **4.7000e-004** | **1.0000e-005** | **4.8000e-004** | **0.0000** | **1.4742** | **1.4742** | **4.0000e-005** | **0.0000** | **1.4752** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0110 | 0.1113 | 0.1458 | 2.3000e-004 | | 5.6800e-003 | 5.6800e-003 | | 5.2200e-003 | 5.2200e-003 | 0.0000 | 20.0275 | 20.0275 | 6.4800e-003 | 0.0000 | 20.1895 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0110** | **0.1113** | **0.1458** | **2.3000e-004** | | **5.6800e-003** | **5.6800e-003** | | **5.2200e-003** | **5.2200e-003** | **0.0000** | **20.0275** | **20.0275** | **6.4800e-003** | **0.0000** | **20.1895** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 6.3000e-004 | 4.5000e-004 | 5.1500e-003 | 2.0000e-005 | 1.7600e-003 | 1.0000e-005 | 1.7700e-003 | 4.7000e-004 | 1.0000e-005 | 4.8000e-004 | 0.0000 | 1.4742 | 1.4742 | 4.0000e-005 | 0.0000 | 1.4752 |
| **Total** | **6.3000e-004** | **4.5000e-004** | **5.1500e-003** | **2.0000e-005** | **1.7600e-003** | **1.0000e-005** | **1.7700e-003** | **4.7000e-004** | **1.0000e-005** | **4.8000e-004** | **0.0000** | **1.4742** | **1.4742** | **4.0000e-005** | **0.0000** | **1.4752** |

## 3.7 Architectural Coating - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Archit. Coating | 0.2458 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.0500e-003 | 0.0141 | 0.0181 | 3.0000e-005 | | 8.2000e-004 | 8.2000e-004 | | 8.2000e-004 | 8.2000e-004 | 0.0000 | 2.5533 | 2.5533 | 1.7000e-004 | 0.0000 | 2.5574 |
| **Total** | **0.2479** | **0.0141** | **0.0181** | **3.0000e-005** | | **8.2000e-004** | **8.2000e-004** | | **8.2000e-004** | **8.2000e-004** | **0.0000** | **2.5533** | **2.5533** | **1.7000e-004** | **0.0000** | **2.5574** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 3.1000e-004 | 2.2000e-004 | 2.5700e-003 | 1.0000e-005 | 8.8000e-004 | 1.0000e-005 | 8.8000e-004 | 2.3000e-004 | 1.0000e-005 | 2.4000e-004 | 0.0000 | 0.7371 | 0.7371 | 2.0000e-005 | 0.0000 | 0.7376 |
| **Total** | **3.1000e-004** | **2.2000e-004** | **2.5700e-003** | **1.0000e-005** | **8.8000e-004** | **1.0000e-005** | **8.8000e-004** | **2.3000e-004** | **1.0000e-005** | **2.4000e-004** | **0.0000** | **0.7371** | **0.7371** | **2.0000e-005** | **0.0000** | **0.7376** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.2458 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.0500e-003 | 0.0141 | 0.0181 | 3.0000e-005 | | 8.2000e-004 | 8.2000e-004 | | 8.2000e-004 | 8.2000e-004 | 0.0000 | 2.5533 | 2.5533 | 1.7000e-004 | 0.0000 | 2.5574 |
| **Total** | **0.2479** | **0.0141** | **0.0181** | **3.0000e-005** | | **8.2000e-004** | **8.2000e-004** | | **8.2000e-004** | **8.2000e-004** | **0.0000** | **2.5533** | **2.5533** | **1.7000e-004** | **0.0000** | **2.5574** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 3.1000e-004 | 2.2000e-004 | 2.5700e-003 | 1.0000e-005 | 8.8000e-004 | 1.0000e-005 | 8.8000e-004 | 2.3000e-004 | 1.0000e-005 | 2.4000e-004 | 0.0000 | 0.7371 | 0.7371 | 2.0000e-005 | 0.0000 | 0.7376 |
| **Total** | **3.1000e-004** | **2.2000e-004** | **2.5700e-003** | **1.0000e-005** | **8.8000e-004** | **1.0000e-005** | **8.8000e-004** | **2.3000e-004** | **1.0000e-005** | **2.4000e-004** | **0.0000** | **0.7371** | **0.7371** | **2.0000e-005** | **0.0000** | **0.7376** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Office Building | 0.00 | 0.00 | 0.00 | | |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Unrefrigerated Warehouse-No Rail | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Office Building | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 77 | 19 | 4 |
| Parking Lot | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Unrefrigerated Warehouse-No Rail | 16.60 | 8.40 | 6.90 | 59.00 | 0.00 | 41.00 | 92 | 5 | 3 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |
| Parking Lot | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |
| Unrefrigerated Warehouse-No Rail | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 73.5546 | 73.5546 | 2.9900e-003 | 6.5000e-004 | 73.8217 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 73.5546 | 73.5546 | 2.9900e-003 | 6.5000e-004 | 73.8217 |
| NaturalGas Mitigated | 6.6000e-004 | 5.9800e-003 | 5.0200e-003 | 4.0000e-005 | | 4.5000e-004 | 4.5000e-004 | | 4.5000e-004 | 4.5000e-004 | 0.0000 | 6.5055 | 6.5055 | 1.2000e-004 | 1.2000e-004 | 6.5442 |
| NaturalGas Unmitigated | 6.6000e-004 | 5.9800e-003 | 5.0200e-003 | 4.0000e-005 | | 4.5000e-004 | 4.5000e-004 | | 4.5000e-004 | 4.5000e-004 | 0.0000 | 6.5055 | 6.5055 | 1.2000e-004 | 1.2000e-004 | 6.5442 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| General Office Building | 83488.2 | 4.5000e-004 | 4.0900e-003 | 3.4400e-003 | 2.0000e-005 | | 3.1000e-004 | 3.1000e-004 | | 3.1000e-004 | 3.1000e-004 | 0.0000 | 4.4553 | 4.4553 | 9.0000e-005 | 8.0000e-005 | 4.4817 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 38420.9 | 2.1000e-004 | 1.8800e-003 | 1.5800e-003 | 1.0000e-005 | | 1.4000e-004 | 1.4000e-004 | | 1.4000e-004 | 1.4000e-004 | 0.0000 | 2.0503 | 2.0503 | 4.0000e-005 | 4.0000e-005 | 2.0625 |
| **Total** | | **6.6000e-004** | **5.9700e-003** | **5.0200e-003** | **3.0000e-005** | | **4.5000e-004** | **4.5000e-004** | | **4.5000e-004** | **4.5000e-004** | **0.0000** | **6.5055** | **6.5055** | **1.3000e-004** | **1.2000e-004** | **6.5442** |

### Mitigated

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| General Office Building | 83488.2 | 4.5000e-004 | 4.0900e-003 | 3.4400e-003 | 2.0000e-005 | | 3.1000e-004 | 3.1000e-004 | | 3.1000e-004 | 3.1000e-004 | 0.0000 | 4.4553 | 4.4553 | 9.0000e-005 | 8.0000e-005 | 4.4817 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 38420.9 | 2.1000e-004 | 1.8800e-003 | 1.5800e-003 | 1.0000e-005 | | 1.4000e-004 | 1.4000e-004 | | 1.4000e-004 | 1.4000e-004 | 0.0000 | 2.0503 | 2.0503 | 4.0000e-005 | 4.0000e-005 | 2.0625 |
| **Total** | | **6.6000e-004** | **5.9700e-003** | **5.0200e-003** | **3.0000e-005** | | **4.5000e-004** | **4.5000e-004** | | **4.5000e-004** | **4.5000e-004** | **0.0000** | **6.5055** | **6.5055** | **1.3000e-004** | **1.2000e-004** | **6.5442** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| General Office Building | 104180 | 26.7559 | 1.0900e-003 | 2.3000e-004 | 26.8530 |
| Parking Lot | 9989 | 2.5654 | 1.0000e-004 | 2.0000e-005 | 2.5747 |
| Unrefrigerated Warehouse-No Rail | 172232 | 44.2333 | 1.8000e-003 | 3.9000e-004 | 44.3939 |
| **Total** | | **73.5545** | **2.9900e-003** | **6.4000e-004** | **73.8217** |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| General Office Building | 104180 | 26.7559 | 1.0900e-003 | 2.3000e-004 | 26.8530 |
| Parking Lot | 9989 | 2.5654 | 1.0000e-004 | 2.0000e-005 | 2.5747 |
| Unrefrigerated Warehouse-No Rail | 172232 | 44.2333 | 1.8000e-003 | 3.9000e-004 | 44.3939 |
| **Total** | | **73.5545** | **2.9900e-003** | **6.4000e-004** | **73.8217** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.2151 | 1.0000e-005 | 1.2500e-003 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.4400e-003 | 2.4400e-003 | 1.0000e-005 | 0.0000 | 2.6000e-003 |
| Unmitigated | 0.2151 | 1.0000e-005 | 1.2500e-003 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.4400e-003 | 2.4400e-003 | 1.0000e-005 | 0.0000 | 2.6000e-003 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0246 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.1904 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.2000e-004 | 1.0000e-005 | 1.2500e-003 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.4400e-003 | 2.4400e-003 | 1.0000e-005 | 0.0000 | 2.6000e-003 |
| **Total** | **0.2151** | **1.0000e-005** | **1.2500e-003** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **2.4400e-003** | **2.4400e-003** | **1.0000e-005** | **0.0000** | **2.6000e-003** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural Coating | 0.0246 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.1904 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.2000e-004 | 1.0000e-005 | 1.2500e-003 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.4400e-003 | 2.4400e-003 | 1.0000e-005 | 0.0000 | 2.6000e-003 |
| **Total** | **0.2151** | **1.0000e-005** | **1.2500e-003** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **2.4400e-003** | **2.4400e-003** | **1.0000e-005** | **0.0000** | **2.6000e-003** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 45.1016 | 0.3809 | 9.3200e-003 | 57.4004 |
| Unmitigated | 45.1016 | 0.3809 | 9.3200e-003 | 57.4004 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| General Office Building | 1.42542 / 0.873647 | 7.7118 | 0.0467 | 1.1600e-003 | 9.2262 |

| | | | | | |
|---|---|---|---|---|---|
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 10.212 / 0 | 37.3898 | 0.3342 | 8.1600e-003 | 48.1742 |
| **Total** | | **45.1016** | **0.3809** | **9.3200e-003** | **57.4004** |

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| General Office Building | 1.42542 / 0.873647 | 7.7118 | 0.0467 | 1.1600e-003 | 9.2262 |
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 10.212 / 0 | 37.3898 | 0.3342 | 8.1600e-003 | 48.1742 |
| **Total** | | **45.1016** | **0.3809** | **9.3200e-003** | **57.4004** |

# 8.0 Waste Detail

## 8.1 Mitigation Measures Waste

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 9.9405 | 0.5875 | 0.0000 | 24.6271 |

| | | | | |
|---|---|---|---|---|
| Unmitigated | 9.9405 | 0.5875 | 0.0000 | 24.6271 |

## 8.2 Waste by Land Use

### Unmitigated

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| General Office Building | 7.46 | 1.5143 | 0.0895 | 0.0000 | 3.7517 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 41.51 | 8.4262 | 0.4980 | 0.0000 | 20.8754 |
| **Total** | | **9.9405** | **0.5875** | **0.0000** | **24.6271** |

### Mitigated

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| General Office Building | 7.46 | 1.5143 | 0.0895 | 0.0000 | 3.7517 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 41.51 | 8.4262 | 0.4980 | 0.0000 | 20.8754 |
| **Total** | | **9.9405** | **0.5875** | **0.0000** | **24.6271** |

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Forklifts | 4 | 8.00 | 365 | 89 | 0.20 | Electrical |
| Other Construction Equipment | 1 | 8.00 | 356 | 172 | 0.42 | Diesel |

**UnMitigated/Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Forklifts | 0.0833 | 0.7739 | 0.8465 | 1.1200e-003 | | 0.0513 | 0.0513 | | 0.0472 | 0.0472 | 0.0000 | 98.5228 | 98.5228 | 0.0319 | 0.0000 | 99.3194 |
| Other Construction Equipment | 0.0662 | 0.6717 | 0.7078 | 1.0900e-003 | | 0.0350 | 0.0350 | | 0.0322 | 0.0322 | 0.0000 | 95.5597 | 95.5597 | 0.0309 | 0.0000 | 96.3323 |
| **Total** | **0.1495** | **1.4456** | **1.5542** | **2.2100e-003** | | **0.0863** | **0.0863** | | **0.0794** | **0.0794** | **0.0000** | **194.0825** | **194.0825** | **0.0628** | **0.0000** | **195.6518** |

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# Downey Truck Terminal - Exsisting

**South Coast AQMD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Manufacturing | 44.16 | 1000sqft | 0.00 | 44,162.00 | 0 |
| Other Asphalt Surfaces | 297.23 | 1000sqft | 6.82 | 297,234.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 9 | | | **Operational Year** | 2020 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 702.44 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assumed a 2020 operational year

Land Use - Building square footage and asphault surfaces area are based on existing conditions.

Construction Phase - No construction calculations

Vehicle Trips - Operational mobile source emissions were calculated in a spreadsheet model using ITE, CalEEMod and EMFAC data.

Fleet Mix - CalEEMod defaults

Vehicle Emission Factors - CalEEMod defaults

Vehicle Emission Factors - CalEEMod defaults

Vehicle Emission Factors - CalEEMod defaults

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 230.00 | 0.00 |
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 10.00 | 0.00 |
| tblConstructionPhase | PhaseEndDate | 12/7/2021 | 11/9/2021 |
| tblConstructionPhase | PhaseEndDate | 10/12/2021 | 11/24/2020 |
| tblConstructionPhase | PhaseEndDate | 10/13/2020 | 9/15/2020 |
| tblConstructionPhase | PhaseEndDate | 11/24/2020 | 10/27/2020 |
| tblConstructionPhase | PhaseEndDate | 11/9/2021 | 10/12/2021 |
| tblConstructionPhase | PhaseEndDate | 10/27/2020 | 10/13/2020 |
| tblGrading | AcresOfGrading | 0.00 | 10.00 |
| tblLandUse | LotAcreage | 1.01 | 0.00 |
| tblVehicleTrips | ST_TR | 1.49 | 0.00 |
| tblVehicleTrips | SU_TR | 0.62 | 0.00 |
| tblVehicleTrips | WD_TR | 3.82 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2020 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 2021 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Maximum** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2020 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 2021 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Maximum** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

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

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| | | **Highest** | | |

## 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.2038 | 4.0000e-005 | 4.3800e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 8.4700e-003 | 8.4700e-003 | 2.0000e-005 | 0.0000 | 9.0400e-003 |
| Energy | 4.3100e-003 | 0.0392 | 0.0329 | 2.4000e-004 | | 2.9800e-003 | 2.9800e-003 | | 2.9800e-003 | 2.9800e-003 | 0.0000 | 198.8431 | 198.8431 | 7.2700e-003 | 2.1200e-003 | 199.6553 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 11.1158 | 0.0000 | 11.1158 | 0.6569 | 0.0000 | 27.5389 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 3.2398 | 42.3672 | 45.6070 | 0.3345 | 8.2200e-003 | 56.4190 |
| **Total** | **0.2081** | **0.0392** | **0.0373** | **2.4000e-004** | **0.0000** | **3.0000e-003** | **3.0000e-003** | **0.0000** | **3.0000e-003** | **3.0000e-003** | **14.3556** | **241.2188** | **255.5744** | **0.9987** | **0.0103** | **283.6222** |

### Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.2038 | 4.0000e-005 | 4.3800e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 8.4700e-003 | 8.4700e-003 | 2.0000e-005 | 0.0000 | 9.0400e-003 |
| Energy | 4.3100e-003 | 0.0392 | 0.0329 | 2.4000e-004 | | 2.9800e-003 | 2.9800e-003 | | 2.9800e-003 | 2.9800e-003 | 0.0000 | 198.8431 | 198.8431 | 7.2700e-003 | 2.1200e-003 | 199.6553 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 11.1158 | 0.0000 | 11.1158 | 0.6569 | 0.0000 | 27.5389 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 3.2398 | 42.3672 | 45.6070 | 0.3345 | 8.2200e-003 | 56.4190 |
| **Total** | **0.2081** | **0.0392** | **0.0373** | **2.4000e-004** | **0.0000** | **3.0000e-003** | **3.0000e-003** | **0.0000** | **3.0000e-003** | **3.0000e-003** | **14.3556** | **241.2188** | **255.5744** | **0.9987** | **0.0103** | **283.6222** |

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

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 9/16/2020 | 9/15/2020 | 5 | 0 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2 | Site Preparation | Site Preparation | 10/14/2020 | 10/13/2020 | 5 | 0 | |
| 3 | Grading | Grading | 10/28/2020 | 10/27/2020 | 5 | 0 | |
| 4 | Building Construction | Building Construction | 11/25/2020 | 11/24/2020 | 5 | 0 | |
| 5 | Paving | Paving | 10/13/2021 | 10/12/2021 | 5 | 0 | |
| 6 | Architectural Coating | Architectural Coating | 11/10/2021 | 11/9/2021 | 5 | 0 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 6.82**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 66,243; Non-Residential Outdoor: 22,081; Striped Parking Area:**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |

| | | | | | |
|---|---|---|---|---|---|
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 143.00 | 56.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 29.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

## 3.2 Demolition - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.3 Site Preparation - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.4 Grading - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.5 Building Construction - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.6 Paving - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Paving | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Paving | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.7 Architectural Coating - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Manufacturing | 0.00 | 0.00 | 0.00 | | |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Manufacturing | 16.60 | 8.40 | 6.90 | 59.00 | 28.00 | 13.00 | 92 | 5 | 3 |
| Other Asphalt Surfaces | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manufacturing | 0.547828 | 0.043645 | 0.199892 | 0.122290 | 0.016774 | 0.005862 | 0.020637 | 0.032653 | 0.002037 | 0.001944 | 0.004777 | 0.000705 | 0.000956 |
| Other Asphalt Surfaces | 0.547828 | 0.043645 | 0.199892 | 0.122290 | 0.016774 | 0.005862 | 0.020637 | 0.032653 | 0.002037 | 0.001944 | 0.004777 | 0.000705 | 0.000956 |

# 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 156.1877 | 156.1877 | 6.4500e-003 | 1.3300e-003 | 156.7464 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 156.1877 | 156.1877 | 6.4500e-003 | 1.3300e-003 | 156.7464 |
| NaturalGas Mitigated | 4.3100e-003 | 0.0392 | 0.0329 | 2.4000e-004 | | 2.9800e-003 | 2.9800e-003 | | 2.9800e-003 | 2.9800e-003 | 0.0000 | 42.6554 | 42.6554 | 8.2000e-004 | 7.8000e-004 | 42.9089 |
| NaturalGas Unmitigated | 4.3100e-003 | 0.0392 | 0.0329 | 2.4000e-004 | | 2.9800e-003 | 2.9800e-003 | | 2.9800e-003 | 2.9800e-003 | 0.0000 | 42.6554 | 42.6554 | 8.2000e-004 | 7.8000e-004 | 42.9089 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Manufacturing | 799332 | 4.3100e-003 | 0.0392 | 0.0329 | 2.4000e-004 | | 2.9800e-003 | 2.9800e-003 | | 2.9800e-003 | 2.9800e-003 | 0.0000 | 42.6554 | 42.6554 | 8.2000e-004 | 7.8000e-004 | 42.9089 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **4.3100e-003** | **0.0392** | **0.0329** | **2.4000e-004** | | **2.9800e-003** | **2.9800e-003** | | **2.9800e-003** | **2.9800e-003** | **0.0000** | **42.6554** | **42.6554** | **8.2000e-004** | **7.8000e-004** | **42.9089** |

### Mitigated

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Manufacturing | 799332 | 4.3100e-003 | 0.0392 | 0.0329 | 2.4000e-004 | | 2.9800e-003 | 2.9800e-003 | | 2.9800e-003 | 2.9800e-003 | 0.0000 | 42.6554 | 42.6554 | 8.2000e-004 | 7.8000e-004 | 42.9089 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **4.3100e-003** | **0.0392** | **0.0329** | **2.4000e-004** | | **2.9800e-003** | **2.9800e-003** | | **2.9800e-003** | **2.9800e-003** | **0.0000** | **42.6554** | **42.6554** | **8.2000e-004** | **7.8000e-004** | **42.9089** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Manufacturing | 490198 | 156.1877 | 6.4500e-003 | 1.3300e-003 | 156.7464 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **156.1877** | **6.4500e-003** | **1.3300e-003** | **156.7464** |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Manufacturing | 490198 | 156.1877 | 6.4500e-003 | 1.3300e-003 | 156.7464 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **156.1877** | **6.4500e-003** | **1.3300e-003** | **156.7464** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.2038 | 4.0000e-005 | 4.3800e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 8.4700e-003 | 8.4700e-003 | 2.0000e-005 | 0.0000 | 9.0400e-003 |
| Unmitigated | 0.2038 | 4.0000e-005 | 4.3800e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 8.4700e-003 | 8.4700e-003 | 2.0000e-005 | 0.0000 | 9.0400e-003 |

## 6.2 Area by SubCategory

### Unmitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0246 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.1788 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 4.1000e-004 | 4.0000e-005 | 4.3800e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 8.4700e-003 | 8.4700e-003 | 2.0000e-005 | 0.0000 | 9.0400e-003 |
| **Total** | **0.2038** | **4.0000e-005** | **4.3800e-003** | **0.0000** | | **2.0000e-005** | **2.0000e-005** | | **2.0000e-005** | **2.0000e-005** | **0.0000** | **8.4700e-003** | **8.4700e-003** | **2.0000e-005** | **0.0000** | **9.0400e-003** |

### Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0246 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.1788 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Landscaping | 4.1000e-004 | 4.0000e-005 | 4.3800e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 8.4700e-003 | 8.4700e-003 | 2.0000e-005 | 0.0000 | 9.0400e-003 |
| **Total** | **0.2038** | **4.0000e-005** | **4.3800e-003** | **0.0000** | | **2.0000e-005** | **2.0000e-005** | | **2.0000e-005** | **2.0000e-005** | **0.0000** | **8.4700e-003** | **8.4700e-003** | **2.0000e-005** | **0.0000** | **9.0400e-003** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 45.6070 | 0.3345 | 8.2200e-003 | 56.4190 |
| Unmitigated | 45.6070 | 0.3345 | 8.2200e-003 | 56.4190 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Manufacturing | 10.212 / 0 | 45.6070 | 0.3345 | 8.2200e-003 | 56.4190 |
| Other Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **45.6070** | **0.3345** | **8.2200e-003** | **56.4190** |

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Manufacturing | 10.212 / 0 | 45.6070 | 0.3345 | 8.2200e-003 | 56.4190 |
| Other Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **45.6070** | **0.3345** | **8.2200e-003** | **56.4190** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 11.1158 | 0.6569 | 0.0000 | 27.5389 |
| Unmitigated | 11.1158 | 0.6569 | 0.0000 | 27.5389 |

### 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Manufacturing | 54.76 | 11.1158 | 0.6569 | 0.0000 | 27.5389 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **11.1158** | **0.6569** | **0.0000** | **27.5389** |

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Manufacturing | 54.76 | 11.1158 | 0.6569 | 0.0000 | 27.5389 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **11.1158** | **0.6569** | **0.0000** | **27.5389** |

## 9.0 Operational Offroad

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

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# Downey Truck Terminal - Exsisting

**South Coast AQMD Air District, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Manufacturing | 44.16 | 1000sqft | 0.00 | 44,162.00 | 0 |
| Other Asphalt Surfaces | 297.23 | 1000sqft | 6.82 | 297,234.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 9 | | | **Operational Year** | 2020 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 702.44 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assumed a 2020 operational year

Land Use - Building square footage and asphault surfaces area are based on existing conditions.

Construction Phase - No construction calculations

Vehicle Trips - Operational mobile source emissions were calculated in a spreadsheet model using ITE, CalEEMod and EMFAC data.

Fleet Mix - CalEEMod defaults

Vehicle Emission Factors - CalEEMod defaults

Vehicle Emission Factors - CalEEMod defaults

Vehicle Emission Factors - CalEEMod defaults

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 230.00 | 0.00 |
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 10.00 | 0.00 |
| tblConstructionPhase | PhaseEndDate | 12/7/2021 | 11/9/2021 |
| tblConstructionPhase | PhaseEndDate | 10/12/2021 | 11/24/2020 |
| tblConstructionPhase | PhaseEndDate | 10/13/2020 | 9/15/2020 |
| tblConstructionPhase | PhaseEndDate | 11/24/2020 | 10/27/2020 |
| tblConstructionPhase | PhaseEndDate | 11/9/2021 | 10/12/2021 |
| tblConstructionPhase | PhaseEndDate | 10/27/2020 | 10/13/2020 |
| tblGrading | AcresOfGrading | 0.00 | 10.00 |
| tblLandUse | LotAcreage | 1.01 | 0.00 |
| tblVehicleTrips | ST_TR | 1.49 | 0.00 |
| tblVehicleTrips | SU_TR | 0.62 | 0.00 |
| tblVehicleTrips | WD_TR | 3.82 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2020 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 6.2919 | 0.0000 | 0.0000 | 5.8281 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 2021 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.7754 | 0.0000 | 0.0000 | 0.7209 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Maximum** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **6.2919** | **0.0000** | **0.0000** | **5.8281** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2020 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 6.2919 | 0.0000 | 0.0000 | 5.8281 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 2021 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.7754 | 0.0000 | 0.0000 | 0.7209 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Maximum** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **6.2919** | **0.0000** | **0.0000** | **5.8281** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

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

## 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1178 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |
| Energy | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **1.1414** | **0.2150** | **0.2154** | **1.2900e-003** | **0.0000** | **0.0165** | **0.0165** | **0.0000** | **0.0165** | **0.0165** | | **257.7160** | **257.7160** | **5.1400e-003** | **4.7200e-003** | **259.2521** |

### Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1178 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |
| Energy | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **1.1414** | **0.2150** | **0.2154** | **1.2900e-003** | **0.0000** | **0.0165** | **0.0165** | **0.0000** | **0.0165** | **0.0165** | | **257.7160** | **257.7160** | **5.1400e-003** | **4.7200e-003** | **259.2521** |

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

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 9/16/2020 | 9/15/2020 | 5 | 0 | |
| 2 | Site Preparation | Site Preparation | 10/14/2020 | 10/13/2020 | 5 | 0 | |
| 3 | Grading | Grading | 10/28/2020 | 10/27/2020 | 5 | 0 | |
| 4 | Building Construction | Building Construction | 11/25/2020 | 11/24/2020 | 5 | 0 | |
| 5 | Paving | Paving | 10/13/2021 | 10/12/2021 | 5 | 0 | |
| 6 | Architectural Coating | Architectural Coating | 11/10/2021 | 11/9/2021 | 5 | 0 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 6.82**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 66,243; Non-Residential Outdoor: 22,081; Striped Parking Area:**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |

## Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Building Construction | 9 | 143.00 | 56.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 29.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

## 3.2 Demolition - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.3 Site Preparation - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.4 Grading - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.5 Building Construction - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.6 Paving - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Paving | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Paving | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.7 Architectural Coating - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Manufacturing | 0.00 | 0.00 | 0.00 | | |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

### 4.3 Trip Type Information

| | Miles | Trip % | Trip Purpose % |
|---|---|---|---|

| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
|---|---|---|---|---|---|---|---|---|---|
| Manufacturing | 16.60 | 8.40 | 6.90 | 59.00 | 28.00 | 13.00 | 92 | 5 | 3 |
| Other Asphalt Surfaces | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manufacturing | 0.547828 | 0.043645 | 0.199892 | 0.122290 | 0.016774 | 0.005862 | 0.020637 | 0.032653 | 0.002037 | 0.001944 | 0.004777 | 0.000705 | 0.000956 |
| Other Asphalt Surfaces | 0.547828 | 0.043645 | 0.199892 | 0.122290 | 0.016774 | 0.005862 | 0.020637 | 0.032653 | 0.002037 | 0.001944 | 0.004777 | 0.000705 | 0.000956 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |
| NaturalGas Unmitigated | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manufacturing | 2189.95 | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0236** | **0.2147** | **0.1804** | **1.2900e-003** | | **0.0163** | **0.0163** | | **0.0163** | **0.0163** | | **257.6413** | **257.6413** | **4.9400e-003** | **4.7200e-003** | **259.1724** |

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Manufacturing | 2.18995 | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0236** | **0.2147** | **0.1804** | **1.2900e-003** | | **0.0163** | **0.0163** | | **0.0163** | **0.0163** | | **257.6413** | **257.6413** | **4.9400e-003** | **4.7200e-003** | **259.1724** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 1.1178 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unmitigated | 1.1178 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.1348 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.9797 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 3.3000e-003 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |
| **Total** | **1.1178** | **3.2000e-004** | **0.0351** | **0.0000** | | **1.3000e-004** | **1.3000e-004** | | **1.3000e-004** | **1.3000e-004** | | **0.0747** | **0.0747** | **2.0000e-004** | | **0.0797** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.1348 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.9797 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 3.3000e-003 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |
| **Total** | **1.1178** | **3.2000e-004** | **0.0351** | **0.0000** | | **1.3000e-004** | **1.3000e-004** | | **1.3000e-004** | **1.3000e-004** | | **0.0747** | **0.0747** | **2.0000e-004** | | **0.0797** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# Downey Truck Terminal - Exsisting

**South Coast AQMD Air District, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Manufacturing | 44.16 | 1000sqft | 0.00 | 44,162.00 | 0 |
| Other Asphalt Surfaces | 297.23 | 1000sqft | 6.82 | 297,234.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 9 | | | **Operational Year** | 2020 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 702.44 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assumed a 2020 operational year

Land Use - Building square footage and asphault surfaces area are based on existing conditions.

Construction Phase - No construction calculations

Vehicle Trips - Operational mobile source emissions were calculated in a spreadsheet model using ITE, CalEEMod and EMFAC data.

Fleet Mix - CalEEMod defaults

Vehicle Emission Factors - CalEEMod defaults

Vehicle Emission Factors - CalEEMod defaults

Vehicle Emission Factors - CalEEMod defaults

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 230.00 | 0.00 |
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 20.00 | 0.00 |
| tblConstructionPhase | NumDays | 10.00 | 0.00 |
| tblConstructionPhase | PhaseEndDate | 12/7/2021 | 11/9/2021 |
| tblConstructionPhase | PhaseEndDate | 10/12/2021 | 11/24/2020 |
| tblConstructionPhase | PhaseEndDate | 10/13/2020 | 9/15/2020 |
| tblConstructionPhase | PhaseEndDate | 11/24/2020 | 10/27/2020 |
| tblConstructionPhase | PhaseEndDate | 11/9/2021 | 10/12/2021 |
| tblConstructionPhase | PhaseEndDate | 10/27/2020 | 10/13/2020 |
| tblGrading | AcresOfGrading | 0.00 | 10.00 |
| tblLandUse | LotAcreage | 1.01 | 0.00 |
| tblVehicleTrips | ST_TR | 1.49 | 0.00 |
| tblVehicleTrips | SU_TR | 0.62 | 0.00 |
| tblVehicleTrips | WD_TR | 3.82 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2020 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 6.2923 | 0.0000 | 0.0000 | 5.8285 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 2021 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.7754 | 0.0000 | 0.0000 | 0.7209 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Maximum** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **6.2923** | **0.0000** | **0.0000** | **5.8285** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2020 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 6.2923 | 0.0000 | 0.0000 | 5.8285 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 2021 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.7754 | 0.0000 | 0.0000 | 0.7209 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Maximum** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **6.2923** | **0.0000** | **0.0000** | **5.8285** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

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

## 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1178 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |
| Energy | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **1.1414** | **0.2150** | **0.2154** | **1.2900e-003** | **0.0000** | **0.0165** | **0.0165** | **0.0000** | **0.0165** | **0.0165** | | **257.7160** | **257.7160** | **5.1400e-003** | **4.7200e-003** | **259.2521** |

### Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1178 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |
| Energy | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **1.1414** | **0.2150** | **0.2154** | **1.2900e-003** | **0.0000** | **0.0165** | **0.0165** | **0.0000** | **0.0165** | **0.0165** | | **257.7160** | **257.7160** | **5.1400e-003** | **4.7200e-003** | **259.2521** |

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

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 9/16/2020 | 9/15/2020 | 5 | 0 | |
| 2 | Site Preparation | Site Preparation | 10/14/2020 | 10/13/2020 | 5 | 0 | |
| 3 | Grading | Grading | 10/28/2020 | 10/27/2020 | 5 | 0 | |
| 4 | Building Construction | Building Construction | 11/25/2020 | 11/24/2020 | 5 | 0 | |
| 5 | Paving | Paving | 10/13/2021 | 10/12/2021 | 5 | 0 | |
| 6 | Architectural Coating | Architectural Coating | 11/10/2021 | 11/9/2021 | 5 | 0 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 6.82**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 66,243; Non-Residential Outdoor: 22,081; Striped Parking Area:**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |

## Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Building Construction | 9 | 143.00 | 56.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 29.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

## 3.2 Demolition - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.3 Site Preparation - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.4 Grading - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.5 Building Construction - 2020

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.6 Paving - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Paving | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Paving | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.7 Architectural Coating - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Manufacturing | 0.00 | 0.00 | 0.00 | | |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

### 4.3 Trip Type Information

| | Miles | Trip % | Trip Purpose % |
|---|---|---|---|

| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
|---|---|---|---|---|---|---|---|---|---|
| Manufacturing | 16.60 | 8.40 | 6.90 | 59.00 | 28.00 | 13.00 | 92 | 5 | 3 |
| Other Asphalt Surfaces | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manufacturing | 0.547828 | 0.043645 | 0.199892 | 0.122290 | 0.016774 | 0.005862 | 0.020637 | 0.032653 | 0.002037 | 0.001944 | 0.004777 | 0.000705 | 0.000956 |
| Other Asphalt Surfaces | 0.547828 | 0.043645 | 0.199892 | 0.122290 | 0.016774 | 0.005862 | 0.020637 | 0.032653 | 0.002037 | 0.001944 | 0.004777 | 0.000705 | 0.000956 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |
| NaturalGas Unmitigated | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manufacturing | 2189.95 | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0236** | **0.2147** | **0.1804** | **1.2900e-003** | | **0.0163** | **0.0163** | | **0.0163** | **0.0163** | | **257.6413** | **257.6413** | **4.9400e-003** | **4.7200e-003** | **259.1724** |

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Manufacturing | 2.18995 | 0.0236 | 0.2147 | 0.1804 | 1.2900e-003 | | 0.0163 | 0.0163 | | 0.0163 | 0.0163 | | 257.6413 | 257.6413 | 4.9400e-003 | 4.7200e-003 | 259.1724 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0236** | **0.2147** | **0.1804** | **1.2900e-003** | | **0.0163** | **0.0163** | | **0.0163** | **0.0163** | | **257.6413** | **257.6413** | **4.9400e-003** | **4.7200e-003** | **259.1724** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 1.1178 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unmitigated | 1.1178 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.1348 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.9797 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 3.3000e-003 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |
| **Total** | **1.1178** | **3.2000e-004** | **0.0351** | **0.0000** | | **1.3000e-004** | **1.3000e-004** | | **1.3000e-004** | **1.3000e-004** | | **0.0747** | **0.0747** | **2.0000e-004** | | **0.0797** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.1348 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.9797 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 3.3000e-003 | 3.2000e-004 | 0.0351 | 0.0000 | | 1.3000e-004 | 1.3000e-004 | | 1.3000e-004 | 1.3000e-004 | | 0.0747 | 0.0747 | 2.0000e-004 | | 0.0797 |
| **Total** | **1.1178** | **3.2000e-004** | **0.0351** | **0.0000** | | **1.3000e-004** | **1.3000e-004** | | **1.3000e-004** | **1.3000e-004** | | **0.0747** | **0.0747** | **2.0000e-004** | | **0.0797** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# 12021 Wooddruff Avenue - Construction LST Analysis

**South Coast AQMD Air District, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Office Building | 8.02 | 1000sqft | 0.00 | 8,020.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 44.16 | 1000sqft | 6.31 | 44,162.00 | 0 |
| Parking Lot | 46.00 | Space | 0.00 | 28,540.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 9 | | | **Operational Year** | 2022 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 566.2 | **CH4 Intensity (lb/MWhr)** | 0.023 | **N2O Intensity (lb/MWhr)** | 0.005 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics – GHG intensity data was updated based on the 2018 Power Content Label for SCE.

Land Use - Building square footage, parking lot area and lot acreage data values were provided by the project applicant.

Construction Phase - Construction schedule information was provided by the project applicant.

Off-road Equipment - Construction equipment information was provided by the project applicant.

Off-road Equipment - Construction equipment information was provided by the project applicant.

Trips and VMT - Odd trip values were rounded up to an even value. Trip distances were reduced to 1,000 feet to only account for vehicle travel at the project site.

Demolition - 3,200 tons of demolition debris was assumed based on information provided by the project applicant.

Grading - CalEEMod defaults were used.

Construction Off-road Equipment Mitigation - In compliance with SCAQMD Rule 402 watering twice daily and limiting speeds to 15 miles per hour on unpaved roads was assumed.

Vehicle Trips - Operational mobile source emissions were calculated in a spreadsheet model using ITE, CalEEMod and EMFAC data.

Operational Off-Road Equipment - Operational off-road equipment information was provided by the project applicant.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 230.00 | 132.00 |
| tblConstructionPhase | NumDays | 20.00 | 44.00 |
| tblConstructionPhase | NumDays | 20.00 | 22.00 |
| tblConstructionPhase | NumDays | 10.00 | 22.00 |
| tblLandUse | LandUseSquareFeet | 44,160.00 | 44,162.00 |
| tblLandUse | LandUseSquareFeet | 18,400.00 | 28,540.00 |
| tblLandUse | LotAcreage | 0.18 | 0.00 |
| tblLandUse | LotAcreage | 1.01 | 6.31 |
| tblLandUse | LotAcreage | 0.41 | 0.00 |
| tblOffRoadEquipment | HorsePower | 168.00 | 360.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 365.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 356.00 |
| tblOperationalOffRoadEquipment | OperFuelType | Diesel | Electrical |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 4.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.023 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44 | 566.2 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.005 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |
| tblTripsAndVMT | HaulingTripNumber | 316.00 | 400.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripNumber | 13.00 | 14.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblTripsAndVMT | WorkerTripNumber | 33.00 | 34.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblTripsAndVMT | WorkerTripNumber | 7.00 | 8.00 |
| tblVehicleTrips | ST_TR | 2.46 | 0.00 |
| tblVehicleTrips | ST_TR | 1.68 | 0.00 |
| tblVehicleTrips | SU_TR | 1.05 | 0.00 |
| tblVehicleTrips | SU_TR | 1.68 | 0.00 |
| tblVehicleTrips | WD_TR | 11.03 | 0.00 |
| tblVehicleTrips | WD_TR | 1.68 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2021 | 3.9080 | 40.5022 | 25.3987 | 0.0523 | 18.0690 | 2.0446 | 20.1136 | 9.9314 | 1.8810 | 11.8125 | 0.0000 | 5,063.5252 | 5,063.5252 | 1.4581 | 0.0000 | 5,099.9766 |
| 2022 | 25.9149 | 12.5394 | 16.4807 | 0.0259 | 3.7000e-003 | 0.6498 | 0.6535 | 1.0100e-003 | 0.6043 | 0.6054 | 0.0000 | 2,497.5246 | 2,497.5246 | 0.7328 | 0.0000 | 2,515.8448 |
| **Maximum** | **25.9149** | **40.5022** | **25.3987** | **0.0523** | **18.0690** | **2.0446** | **20.1136** | **9.9314** | **1.8810** | **11.8125** | **0.0000** | **5,063.5252** | **5,063.5252** | **1.4581** | **0.0000** | **5,099.9766** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2021 | 3.9080 | 40.5022 | 25.3987 | 0.0523 | 7.0486 | 2.0446 | 9.0932 | 3.8737 | 1.8810 | 5.7548 | 0.0000 | 5,063.5252 | 5,063.5252 | 1.4581 | 0.0000 | 5,099.9766 |
| 2022 | 25.9149 | 12.5394 | 16.4807 | 0.0259 | 3.7000e-003 | 0.6498 | 0.6535 | 1.0100e-003 | 0.6043 | 0.6054 | 0.0000 | 2,497.5246 | 2,497.5246 | 0.7328 | 0.0000 | 2,515.8448 |
| **Maximum** | **25.9149** | **40.5022** | **25.3987** | **0.0523** | **7.0486** | **2.0446** | **9.0932** | **3.8737** | **1.8810** | **5.7548** | **0.0000** | **5,063.5252** | **5,063.5252** | **1.4581** | **0.0000** | **5,099.9766** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **60.98** | **0.00** | **53.07** | **60.99** | **0.00** | **48.78** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| Energy | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Offroad | 0.8304 | 8.0347 | 8.6353 | 0.0123 | | 0.4786 | 0.4786 | | 0.4403 | 0.4403 | | 1,190.4546 | 1,190.4546 | 0.3850 | | 1,200.0800 |
| **Total** | **2.0129** | **8.0675** | **8.6728** | **0.0125** | **0.0000** | **0.4811** | **0.4811** | **0.0000** | **0.4428** | **0.4428** | | **1,229.7699** | **1,229.7699** | **0.3858** | **7.2000e-004** | **1,239.6302** |

## Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| Energy | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Offroad | 0.8304 | 8.0347 | 8.6353 | 0.0123 | | 0.4786 | 0.4786 | | 0.4403 | 0.4403 | | 1,190.4546 | 1,190.4546 | 0.3850 | | 1,200.0800 |
| **Total** | **2.0129** | **8.0675** | **8.6728** | **0.0125** | **0.0000** | **0.4811** | **0.4811** | **0.0000** | **0.4428** | **0.4428** | | **1,229.7699** | **1,229.7699** | **0.3858** | **7.2000e-004** | **1,239.6302** |

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

## 3.0 Construction Detail

## Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 3/1/2021 | 4/29/2021 | 5 | 44 | |
| 2 | Site Preparation | Site Preparation | 4/30/2021 | 5/31/2021 | 5 | 22 | |
| 3 | Grading | Grading | 6/1/2021 | 6/30/2021 | 5 | 22 | |
| 4 | Building Construction | Building Construction | 7/1/2021 | 12/31/2021 | 5 | 132 | |
| 5 | Paving | Paving | 1/3/2022 | 1/28/2022 | 5 | 20 | |
| 6 | Architectural Coating | Architectural Coating | 1/3/2022 | 1/28/2022 | 5 | 20 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 11**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 78,273; Non-Residential Outdoor: 26,091; Striped Parking Area:**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Other Material Handling Equipment | 1 | 8.00 | 360 | 0.40 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |

| | | | | | |
|---|---|---|---|---|---|
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 7 | 18.00 | 0.00 | 400.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 16.00 | 0.00 | 0.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 34.00 | 14.00 | 0.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 16.00 | 0.00 | 0.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 8.00 | 0.00 | 0.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Demolition - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.5563 | 0.0000 | 1.5563 | 0.2356 | 0.0000 | 0.2356 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8105 | 38.0482 | 25.2270 | 0.0512 | | 1.8082 | 1.8082 | | 1.6774 | 1.6774 | | 4,942.3707 | 4,942.3707 | 1.4412 | | 4,978.4007 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **3.8105** | **38.0482** | **25.2270** | **0.0512** | **1.5563** | **1.8082** | **3.3644** | **0.2356** | **1.6774** | **1.9130** | | **4,942.3707** | **4,942.3707** | **1.4412** | | **4,978.4007** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0151 | 0.8754 | 0.1001 | 1.0600e-003 | 1.7000e-003 | 3.8000e-004 | 2.0800e-003 | 4.8000e-004 | 3.7000e-004 | 8.5000e-004 | | 114.6171 | 114.6171 | 0.0165 | | 115.0285 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0198 | 5.1100e-003 | 0.0716 | 7.0000e-005 | 2.7800e-003 | 1.3000e-004 | 2.9100e-003 | 7.6000e-004 | 1.2000e-004 | 8.8000e-004 | | 6.5374 | 6.5374 | 4.0000e-004 | | 6.5475 |
| **Total** | **0.0349** | **0.8805** | **0.1717** | **1.1300e-003** | **4.4800e-003** | **5.1000e-004** | **4.9900e-003** | **1.2400e-003** | **4.9000e-004** | **1.7300e-003** | | **121.1545** | **121.1545** | **0.0169** | | **121.5760** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.6070 | 0.0000 | 0.6070 | 0.0919 | 0.0000 | 0.0919 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8105 | 38.0482 | 25.2270 | 0.0512 | | 1.8082 | 1.8082 | | 1.6774 | 1.6774 | 0.0000 | 4,942.3707 | 4,942.3707 | 1.4412 | | 4,978.4007 |
| **Total** | **3.8105** | **38.0482** | **25.2270** | **0.0512** | **0.6070** | **1.8082** | **2.4151** | **0.0919** | **1.6774** | **1.7693** | **0.0000** | **4,942.3707** | **4,942.3707** | **1.4412** | | **4,978.4007** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0151 | 0.8754 | 0.1001 | 1.0600e-003 | 1.7000e-003 | 3.8000e-004 | 2.0800e-003 | 4.8000e-004 | 3.7000e-004 | 8.5000e-004 | | 114.6171 | 114.6171 | 0.0165 | | 115.0285 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0198 | 5.1100e-003 | 0.0716 | 7.0000e-005 | 2.7800e-003 | 1.3000e-004 | 2.9100e-003 | 7.6000e-004 | 1.2000e-004 | 8.8000e-004 | | 6.5374 | 6.5374 | 4.0000e-004 | | 6.5475 |
| **Total** | **0.0349** | **0.8805** | **0.1717** | **1.1300e-003** | **4.4800e-003** | **5.1000e-004** | **4.9900e-003** | **1.2400e-003** | **4.9000e-004** | **1.7300e-003** | | **121.1545** | **121.1545** | **0.0169** | | **121.5760** |

## 3.3 Site Preparation - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 18.0663 | 0.0000 | 18.0663 | 9.9307 | 0.0000 | 9.9307 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8882 | 40.4971 | 21.1543 | 0.0380 | | 2.0445 | 2.0445 | | 1.8809 | 1.8809 | | 3,685.6569 | 3,685.6569 | 1.1920 | | 3,715.4573 |
| **Total** | **3.8882** | **40.4971** | **21.1543** | **0.0380** | **18.0663** | **2.0445** | **20.1107** | **9.9307** | **1.8809** | **11.8116** | | **3,685.6569** | **3,685.6569** | **1.1920** | | **3,715.4573** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0198 | 5.1100e-003 | 0.0716 | 7.0000e-005 | 2.7800e-003 | 1.3000e-004 | 2.9100e-003 | 7.6000e-004 | 1.2000e-004 | 8.8000e-004 | | 6.5374 | 6.5374 | 4.0000e-004 | | 6.5475 |
| **Total** | **0.0198** | **5.1100e-003** | **0.0716** | **7.0000e-005** | **2.7800e-003** | **1.3000e-004** | **2.9100e-003** | **7.6000e-004** | **1.2000e-004** | **8.8000e-004** | | **6.5374** | **6.5374** | **4.0000e-004** | | **6.5475** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 7.0458 | 0.0000 | 7.0458 | 3.8730 | 0.0000 | 3.8730 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8882 | 40.4971 | 21.1543 | 0.0380 | | 2.0445 | 2.0445 | | 1.8809 | 1.8809 | 0.0000 | 3,685.6569 | 3,685.6569 | 1.1920 | | 3,715.4573 |
| **Total** | **3.8882** | **40.4971** | **21.1543** | **0.0380** | **7.0458** | **2.0445** | **9.0903** | **3.8730** | **1.8809** | **5.7539** | **0.0000** | **3,685.6569** | **3,685.6569** | **1.1920** | | **3,715.4573** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0198 | 5.1100e-003 | 0.0716 | 7.0000e-005 | 2.7800e-003 | 1.3000e-004 | 2.9100e-003 | 7.6000e-004 | 1.2000e-004 | 8.8000e-004 | | 6.5374 | 6.5374 | 4.0000e-004 | | 6.5475 |
| **Total** | **0.0198** | **5.1100e-003** | **0.0716** | **7.0000e-005** | **2.7800e-003** | **1.3000e-004** | **2.9100e-003** | **7.6000e-004** | **1.2000e-004** | **8.8000e-004** | | **6.5374** | **6.5374** | **4.0000e-004** | | **6.5475** |

## 3.4 Grading - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.5523 | 0.0000 | 6.5523 | 3.3675 | 0.0000 | 3.3675 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.2903 | 24.7367 | 15.8575 | 0.0296 | | 1.1599 | 1.1599 | | 1.0671 | 1.0671 | | 2,871.9285 | 2,871.9285 | 0.9288 | | 2,895.1495 |
| **Total** | **2.2903** | **24.7367** | **15.8575** | **0.0296** | **6.5523** | **1.1599** | **7.7123** | **3.3675** | **1.0671** | **4.4346** | | **2,871.9285** | **2,871.9285** | **0.9288** | | **2,895.1495** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0176 | 4.5400e-003 | 0.0637 | 6.0000e-005 | 2.4700e-003 | 1.2000e-004 | 2.5800e-003 | 6.7000e-004 | 1.1000e-004 | 7.8000e-004 | | 5.8110 | 5.8110 | 3.6000e-004 | | 5.8200 |
| **Total** | **0.0176** | **4.5400e-003** | **0.0637** | **6.0000e-005** | **2.4700e-003** | **1.2000e-004** | **2.5800e-003** | **6.7000e-004** | **1.1000e-004** | **7.8000e-004** | | **5.8110** | **5.8110** | **3.6000e-004** | | **5.8200** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.5554 | 0.0000 | 2.5554 | 1.3133 | 0.0000 | 1.3133 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.2903 | 24.7367 | 15.8575 | 0.0296 | | 1.1599 | 1.1599 | | 1.0671 | 1.0671 | 0.0000 | 2,871.9285 | 2,871.9285 | 0.9288 | | 2,895.1495 |
| **Total** | **2.2903** | **24.7367** | **15.8575** | **0.0296** | **2.5554** | **1.1599** | **3.7153** | **1.3133** | **1.0671** | **2.3804** | **0.0000** | **2,871.9285** | **2,871.9285** | **0.9288** | | **2,895.1495** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0176 | 4.5400e-003 | 0.0637 | 6.0000e-005 | 2.4700e-003 | 1.2000e-004 | 2.5800e-003 | 6.7000e-004 | 1.1000e-004 | 7.8000e-004 | | 5.8110 | 5.8110 | 3.6000e-004 | | 5.8200 |
| **Total** | **0.0176** | **4.5400e-003** | **0.0637** | **6.0000e-005** | **2.4700e-003** | **1.2000e-004** | **2.5800e-003** | **6.7000e-004** | **1.1000e-004** | **7.8000e-004** | | **5.8110** | **5.8110** | **3.6000e-004** | | **5.8200** |

## 3.5 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **1.9009** | **17.4321** | **16.5752** | **0.0269** | | **0.9586** | **0.9586** | | **0.9013** | **0.9013** | | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0190 | 0.8485 | 0.1774 | 9.0000e-004 | 2.8200e-003 | 3.4000e-004 | 3.1600e-003 | 8.5000e-004 | 3.2000e-004 | 1.1700e-003 | | 96.5789 | 96.5789 | 0.0137 | | 96.9221 |
| Worker | 0.0374 | 9.6400e-003 | 0.1353 | 1.3000e-004 | 5.2400e-003 | 2.5000e-004 | 5.4900e-003 | 1.4300e-003 | 2.3000e-004 | 1.6600e-003 | | 12.3483 | 12.3483 | 7.6000e-004 | | 12.3674 |
| **Total** | **0.0564** | **0.8581** | **0.3126** | **1.0300e-003** | **8.0600e-003** | **5.9000e-004** | **8.6500e-003** | **2.2800e-003** | **5.5000e-004** | **2.8300e-003** | | **108.9272** | **108.9272** | **0.0145** | | **109.2895** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | 0.0000 | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| **Total** | **1.9009** | **17.4321** | **16.5752** | **0.0269** | | **0.9586** | **0.9586** | | **0.9013** | **0.9013** | **0.0000** | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0190 | 0.8485 | 0.1774 | 9.0000e-004 | 2.8200e-003 | 3.4000e-004 | 3.1600e-003 | 8.5000e-004 | 3.2000e-004 | 1.1700e-003 | | 96.5789 | 96.5789 | 0.0137 | | 96.9221 |
| Worker | 0.0374 | 9.6400e-003 | 0.1353 | 1.3000e-004 | 5.2400e-003 | 2.5000e-004 | 5.4900e-003 | 1.4300e-003 | 2.3000e-004 | 1.6600e-003 | | 12.3483 | 12.3483 | 7.6000e-004 | | 12.3674 |
| **Total** | **0.0564** | **0.8581** | **0.3126** | **1.0300e-003** | **8.0600e-003** | **5.9000e-004** | **8.6500e-003** | **2.2800e-003** | **5.5000e-004** | **2.8300e-003** | | **108.9272** | **108.9272** | **0.0145** | | **109.2895** |

## 3.6 Paving - 2022

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.1028 | 11.1249 | 14.5805 | 0.0228 | | 0.5679 | 0.5679 | | 0.5225 | 0.5225 | | 2,207.6603 | 2,207.6603 | 0.7140 | | 2,225.5104 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.1028** | **11.1249** | **14.5805** | **0.0228** | | **0.5679** | **0.5679** | | **0.5225** | **0.5225** | | **2,207.6603** | **2,207.6603** | **0.7140** | | **2,225.5104** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0163 | 4.0200e-003 | 0.0578 | 6.0000e-005 | 2.4700e-003 | 1.1000e-004 | 2.5800e-003 | 6.7000e-004 | 1.0000e-004 | 7.8000e-004 | | 5.6109 | 5.6109 | 3.2000e-004 | | 5.6188 |
| **Total** | **0.0163** | **4.0200e-003** | **0.0578** | **6.0000e-005** | **2.4700e-003** | **1.1000e-004** | **2.5800e-003** | **6.7000e-004** | **1.0000e-004** | **7.8000e-004** | | **5.6109** | **5.6109** | **3.2000e-004** | | **5.6188** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.1028 | 11.1249 | 14.5805 | 0.0228 | | 0.5679 | 0.5679 | | 0.5225 | 0.5225 | 0.0000 | 2,207.6603 | 2,207.6603 | 0.7140 | | 2,225.5104 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.1028** | **11.1249** | **14.5805** | **0.0228** | | **0.5679** | **0.5679** | | **0.5225** | **0.5225** | **0.0000** | **2,207.6603** | **2,207.6603** | **0.7140** | | **2,225.5104** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0163 | 4.0200e-003 | 0.0578 | 6.0000e-005 | 2.4700e-003 | 1.1000e-004 | 2.5800e-003 | 6.7000e-004 | 1.0000e-004 | 7.8000e-004 | | 5.6109 | 5.6109 | 3.2000e-004 | | 5.6188 |
| **Total** | **0.0163** | **4.0200e-003** | **0.0578** | **6.0000e-005** | **2.4700e-003** | **1.1000e-004** | **2.5800e-003** | **6.7000e-004** | **1.0000e-004** | **7.8000e-004** | | **5.6109** | **5.6109** | **3.2000e-004** | | **5.6188** |

## 3.7 Architectural Coating - 2022

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 24.5831 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2045 | 1.4085 | 1.8136 | 2.9700e-003 | | 0.0817 | 0.0817 | | 0.0817 | 0.0817 | | 281.4481 | 281.4481 | 0.0183 | | 281.9062 |
| **Total** | **24.7877** | **1.4085** | **1.8136** | **2.9700e-003** | | **0.0817** | **0.0817** | | **0.0817** | **0.0817** | | **281.4481** | **281.4481** | **0.0183** | | **281.9062** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 8.1300e-003 | 2.0100e-003 | 0.0289 | 3.0000e-005 | 1.2300e-003 | 6.0000e-005 | 1.2900e-003 | 3.4000e-004 | 5.0000e-005 | 3.9000e-004 | | 2.8054 | 2.8054 | 1.6000e-004 | | 2.8094 |
| **Total** | **8.1300e-003** | **2.0100e-003** | **0.0289** | **3.0000e-005** | **1.2300e-003** | **6.0000e-005** | **1.2900e-003** | **3.4000e-004** | **5.0000e-005** | **3.9000e-004** | | **2.8054** | **2.8054** | **1.6000e-004** | | **2.8094** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 24.5831 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2045 | 1.4085 | 1.8136 | 2.9700e-003 | | 0.0817 | 0.0817 | | 0.0817 | 0.0817 | 0.0000 | 281.4481 | 281.4481 | 0.0183 | | 281.9062 |
| **Total** | **24.7877** | **1.4085** | **1.8136** | **2.9700e-003** | | **0.0817** | **0.0817** | | **0.0817** | **0.0817** | **0.0000** | **281.4481** | **281.4481** | **0.0183** | | **281.9062** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 8.1300e-003 | 2.0100e-003 | 0.0289 | 3.0000e-005 | 1.2300e-003 | 6.0000e-005 | 1.2900e-003 | 3.4000e-004 | 5.0000e-005 | 3.9000e-004 | | 2.8054 | 2.8054 | 1.6000e-004 | | 2.8094 |
| **Total** | **8.1300e-003** | **2.0100e-003** | **0.0289** | **3.0000e-005** | **1.2300e-003** | **6.0000e-005** | **1.2900e-003** | **3.4000e-004** | **5.0000e-005** | **3.9000e-004** | | **2.8054** | **2.8054** | **1.6000e-004** | | **2.8094** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Category | lb/day | | | | | | | | | | | lb/day | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Office Building | 0.00 | 0.00 | 0.00 | | |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Unrefrigerated Warehouse-No Rail | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Office Building | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 77 | 19 | 4 |
| Parking Lot | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Unrefrigerated Warehouse-No Rail | 16.60 | 8.40 | 6.90 | 59.00 | 0.00 | 41.00 | 92 | 5 | 3 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |
| Parking Lot | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |
| Unrefrigerated Warehouse-No Rail | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |
| NaturalGas Unmitigated | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| General Office Building | 228.735 | 2.4700e-003 | 0.0224 | 0.0188 | 1.3000e-004 | | 1.7000e-003 | 1.7000e-003 | | 1.7000e-003 | 1.7000e-003 | | 26.9100 | 26.9100 | 5.2000e-004 | 4.9000e-004 | 27.0699 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 105.263 | 1.1400e-003 | 0.0103 | 8.6700e-003 | 6.0000e-005 | | 7.8000e-004 | 7.8000e-004 | | 7.8000e-004 | 7.8000e-004 | | 12.3839 | 12.3839 | 2.4000e-004 | 2.3000e-004 | 12.4575 |
| **Total** | | **3.6100e-003** | **0.0327** | **0.0275** | **1.9000e-004** | | **2.4800e-003** | **2.4800e-003** | | **2.4800e-003** | **2.4800e-003** | | **39.2938** | **39.2938** | **7.6000e-004** | **7.2000e-004** | **39.5274** |

### Mitigated

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building | 0.228735 | 2.4700e-003 | 0.0224 | 0.0188 | 1.3000e-004 | | 1.7000e-003 | 1.7000e-003 | | 1.7000e-003 | 1.7000e-003 | | 26.9100 | 26.9100 | 5.2000e-004 | 4.9000e-004 | 27.0699 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No | 0.105263 | 1.1400e-003 | 0.0103 | 8.6700e-003 | 6.0000e-005 | | 7.8000e-004 | 7.8000e-004 | | 7.8000e-004 | 7.8000e-004 | | 12.3839 | 12.3839 | 2.4000e-004 | 2.3000e-004 | 12.4575 |
| **Total** | | **3.6100e-003** | **0.0327** | **0.0275** | **1.9000e-004** | | **2.4800e-003** | **2.4800e-003** | | **2.4800e-003** | **2.4800e-003** | | **39.2938** | **39.2938** | **7.6000e-004** | **7.2000e-004** | **39.5274** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| Unmitigated | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural Coating | 0.1347 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.0433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 9.3000e-004 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| **Total** | **1.1789** | **9.0000e-005** | **0.0100** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0215** | **0.0215** | **6.0000e-005** | | **0.0229** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.1347 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.0433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 9.3000e-004 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| **Total** | **1.1789** | **9.0000e-005** | **0.0100** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0215** | **0.0215** | **6.0000e-005** | | **0.0229** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Forklifts | 4 | 8.00 | 365 | 89 | 0.20 | Electrical |

| | | | | | | |
|---|---|---|---|---|---|---|
| Other Construction Equipment | 1 | 8.00 | 356 | 172 | 0.42 | Diesel |

### UnMitigated/Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | lb/day | | | | | | | | | | lb/day | | | | | |
| Forklifts | 0.4544 | 4.2196 | 4.6150 | 6.1100e-003 | | 0.2795 | 0.2795 | | 0.2572 | 0.2572 | | 592.1233 | 592.1233 | 0.1915 | | 596.9109 |
| Other Construction Equipment | 0.3760 | 3.8151 | 4.0203 | 6.1800e-003 | | 0.1991 | 0.1991 | | 0.1831 | 0.1831 | | 598.3313 | 598.3313 | 0.1935 | | 603.1691 |
| **Total** | **0.8304** | **8.0347** | **8.6353** | **0.0123** | | **0.4786** | **0.4786** | | **0.4403** | **0.4403** | | **1,190.4546** | **1,190.4546** | **0.3850** | | **1,200.0800** |

## 10.0 Stationary Equipment

### Fire Pumps and Emergency Generators

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

### Boilers

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

### User Defined Equipment

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# 12021 Wooddruff Avenue - Construction LST Analysis

**South Coast AQMD Air District, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Office Building | 8.02 | 1000sqft | 0.00 | 8,020.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 44.16 | 1000sqft | 6.31 | 44,162.00 | 0 |
| Parking Lot | 46.00 | Space | 0.00 | 28,540.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 9 | | | **Operational Year** | 2022 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 566.2 | **CH4 Intensity (lb/MWhr)** | 0.023 | **N2O Intensity (lb/MWhr)** | 0.005 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics – GHG intensity data was updated based on the 2018 Power Content Label for SCE.

Land Use - Building square footage, parking lot area and lot acreage data values were provided by the project applicant.

Construction Phase - Construction schedule information was provided by the project applicant.

Off-road Equipment - Construction equipment information was provided by the project applicant.

Off-road Equipment - Construction equipment information was provided by the project applicant.

Trips and VMT - Odd trip values were rounded up to an even value. Trip distances were reduced to 1,000 feet to only account for vehicle travel at the project site.

Demolition - 3,200 tons of demolition debris was assumed based on information provided by the project applicant.

Grading - CalEEMod defaults were used.

Construction Off-road Equipment Mitigation - In compliance with SCAQMD Rule 402 watering twice daily and limiting speeds to 15 miles per hour on unpaved roads was assumed.

Vehicle Trips - Operational mobile source emissions were calculated in a spreadsheet model using ITE, CalEEMod and EMFAC data.

Operational Off-Road Equipment - Operational off-road equipment information was provided by the project applicant.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 230.00 | 132.00 |
| tblConstructionPhase | NumDays | 20.00 | 44.00 |
| tblConstructionPhase | NumDays | 20.00 | 22.00 |
| tblConstructionPhase | NumDays | 10.00 | 22.00 |
| tblLandUse | LandUseSquareFeet | 44,160.00 | 44,162.00 |
| tblLandUse | LandUseSquareFeet | 18,400.00 | 28,540.00 |
| tblLandUse | LotAcreage | 0.18 | 0.00 |
| tblLandUse | LotAcreage | 1.01 | 6.31 |
| tblLandUse | LotAcreage | 0.41 | 0.00 |
| tblOffRoadEquipment | HorsePower | 168.00 | 360.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 365.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 356.00 |
| tblOperationalOffRoadEquipment | OperFuelType | Diesel | Electrical |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 4.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.023 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44 | 566.2 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.005 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.19 |
| tblTripsAndVMT | HaulingTripNumber | 316.00 | 400.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.19 |
| tblTripsAndVMT | VendorTripNumber | 13.00 | 14.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.19 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblTripsAndVMT | WorkerTripNumber | 33.00 | 34.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblTripsAndVMT | WorkerTripNumber | 7.00 | 8.00 |
| tblVehicleTrips | ST_TR | 2.46 | 0.00 |
| tblVehicleTrips | ST_TR | 1.68 | 0.00 |
| tblVehicleTrips | SU_TR | 1.05 | 0.00 |
| tblVehicleTrips | SU_TR | 1.68 | 0.00 |
| tblVehicleTrips | WD_TR | 11.03 | 0.00 |
| tblVehicleTrips | WD_TR | 1.68 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2021 | 3.9059 | 40.5027 | 25.4473 | 0.0522 | 18.0690 | 2.0446 | 20.1136 | 9.9314 | 1.8810 | 11.8125 | 0.0000 | 5,049.3228 | 5,049.3228 | 1.4602 | 0.0000 | 5,085.8288 |
| 2022 | 25.9122 | 12.5399 | 16.4932 | 0.0259 | 3.7000e-003 | 0.6498 | 0.6535 | 1.0100e-003 | 0.6043 | 0.6054 | 0.0000 | 2,497.1993 | 2,497.1993 | 0.7329 | 0.0000 | 2,515.5206 |
| **Maximum** | **25.9122** | **40.5027** | **25.4473** | **0.0522** | **18.0690** | **2.0446** | **20.1136** | **9.9314** | **1.8810** | **11.8125** | **0.0000** | **5,049.3228** | **5,049.3228** | **1.4602** | **0.0000** | **5,085.8288** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2021 | 3.9059 | 40.5026 | 25.4473 | 0.0522 | 7.0486 | 2.0446 | 9.0932 | 3.8737 | 1.8810 | 5.7548 | 0.0000 | 5,049.3228 | 5,049.3228 | 1.4602 | 0.0000 | 5,085.8288 |
| 2022 | 25.9122 | 12.5399 | 16.4932 | 0.0259 | 3.7000e-003 | 0.6498 | 0.6535 | 1.0100e-003 | 0.6043 | 0.6054 | 0.0000 | 2,497.1993 | 2,497.1993 | 0.7329 | 0.0000 | 2,515.5206 |
| **Maximum** | **25.9122** | **40.5026** | **25.4473** | **0.0522** | **7.0486** | **2.0446** | **9.0932** | **3.8737** | **1.8810** | **5.7548** | **0.0000** | **5,049.3228** | **5,049.3228** | **1.4602** | **0.0000** | **5,085.8288** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **60.98** | **0.00** | **53.07** | **60.99** | **0.00** | **48.78** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| Energy | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Offroad | 0.8304 | 8.0347 | 8.6353 | 0.0123 | | 0.4786 | 0.4786 | | 0.4403 | 0.4403 | | 1,190.4546 | 1,190.4546 | 0.3850 | | 1,200.0800 |
| **Total** | **2.0129** | **8.0675** | **8.6728** | **0.0125** | **0.0000** | **0.4811** | **0.4811** | **0.0000** | **0.4428** | **0.4428** | | **1,229.7699** | **1,229.7699** | **0.3858** | **7.2000e-004** | **1,239.6302** |

## Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| Energy | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Offroad | 0.8304 | 8.0347 | 8.6353 | 0.0123 | | 0.4786 | 0.4786 | | 0.4403 | 0.4403 | | 1,190.4546 | 1,190.4546 | 0.3850 | | 1,200.0800 |
| **Total** | **2.0129** | **8.0675** | **8.6728** | **0.0125** | **0.0000** | **0.4811** | **0.4811** | **0.0000** | **0.4428** | **0.4428** | | **1,229.7699** | **1,229.7699** | **0.3858** | **7.2000e-004** | **1,239.6302** |

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

## 3.0 Construction Detail

## Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 3/1/2021 | 4/29/2021 | 5 | 44 | |
| 2 | Site Preparation | Site Preparation | 4/30/2021 | 5/31/2021 | 5 | 22 | |
| 3 | Grading | Grading | 6/1/2021 | 6/30/2021 | 5 | 22 | |
| 4 | Building Construction | Building Construction | 7/1/2021 | 12/31/2021 | 5 | 132 | |
| 5 | Paving | Paving | 1/3/2022 | 1/28/2022 | 5 | 20 | |
| 6 | Architectural Coating | Architectural Coating | 1/3/2022 | 1/28/2022 | 5 | 20 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 11**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 78,273; Non-Residential Outdoor: 26,091; Striped Parking Area:**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Other Material Handling Equipment | 1 | 8.00 | 360 | 0.40 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |

| | | | | | |
|---|---|---|---|---|---|
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 7 | 18.00 | 0.00 | 400.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 16.00 | 0.00 | 0.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 34.00 | 14.00 | 0.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 16.00 | 0.00 | 0.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 8.00 | 0.00 | 0.00 | 0.19 | 0.19 | 0.19 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Demolition - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.5563 | 0.0000 | 1.5563 | 0.2356 | 0.0000 | 0.2356 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8105 | 38.0482 | 25.2270 | 0.0512 | | 1.8082 | 1.8082 | | 1.6774 | 1.6774 | | 4,942.3707 | 4,942.3707 | 1.4412 | | 4,978.4007 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **3.8105** | **38.0482** | **25.2270** | **0.0512** | **1.5563** | **1.8082** | **3.3644** | **0.2356** | **1.6774** | **1.9130** | | **4,942.3707** | **4,942.3707** | **1.4412** | | **4,978.4007** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0170 | 0.8427 | 0.1383 | 9.3000e-004 | 1.7000e-003 | 4.9000e-004 | 2.1900e-003 | 4.8000e-004 | 4.7000e-004 | 9.5000e-004 | | 100.6678 | 100.6678 | 0.0186 | | 101.1327 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0177 | 5.5500e-003 | 0.0820 | 6.0000e-005 | 2.7800e-003 | 1.3000e-004 | 2.9100e-003 | 7.6000e-004 | 1.2000e-004 | 8.8000e-004 | | 6.2843 | 6.2843 | 4.4000e-004 | | 6.2954 |
| **Total** | **0.0347** | **0.8483** | **0.2203** | **9.9000e-004** | **4.4800e-003** | **6.2000e-004** | **5.1000e-003** | **1.2400e-003** | **5.9000e-004** | **1.8300e-003** | | **106.9521** | **106.9521** | **0.0190** | | **107.4281** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.6070 | 0.0000 | 0.6070 | 0.0919 | 0.0000 | 0.0919 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8105 | 38.0482 | 25.2270 | 0.0512 | | 1.8082 | 1.8082 | | 1.6774 | 1.6774 | 0.0000 | 4,942.3707 | 4,942.3707 | 1.4412 | | 4,978.4007 |
| **Total** | **3.8105** | **38.0482** | **25.2270** | **0.0512** | **0.6070** | **1.8082** | **2.4151** | **0.0919** | **1.6774** | **1.7693** | **0.0000** | **4,942.3707** | **4,942.3707** | **1.4412** | | **4,978.4007** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0170 | 0.8427 | 0.1383 | 9.3000e-004 | 1.7000e-003 | 4.9000e-004 | 2.1900e-003 | 4.8000e-004 | 4.7000e-004 | 9.5000e-004 | | 100.6678 | 100.6678 | 0.0186 | | 101.1327 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0177 | 5.5500e-003 | 0.0820 | 6.0000e-005 | 2.7800e-003 | 1.3000e-004 | 2.9100e-003 | 7.6000e-004 | 1.2000e-004 | 8.8000e-004 | | 6.2843 | 6.2843 | 4.4000e-004 | | 6.2954 |
| **Total** | **0.0347** | **0.8483** | **0.2203** | **9.9000e-004** | **4.4800e-003** | **6.2000e-004** | **5.1000e-003** | **1.2400e-003** | **5.9000e-004** | **1.8300e-003** | | **106.9521** | **106.9521** | **0.0190** | | **107.4281** |

## 3.3 Site Preparation - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 18.0663 | 0.0000 | 18.0663 | 9.9307 | 0.0000 | 9.9307 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8882 | 40.4971 | 21.1543 | 0.0380 | | 2.0445 | 2.0445 | | 1.8809 | 1.8809 | | 3,685.6569 | 3,685.6569 | 1.1920 | | 3,715.4573 |
| **Total** | **3.8882** | **40.4971** | **21.1543** | **0.0380** | **18.0663** | **2.0445** | **20.1107** | **9.9307** | **1.8809** | **11.8116** | | **3,685.6569** | **3,685.6569** | **1.1920** | | **3,715.4573** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0177 | 5.5500e-003 | 0.0820 | 6.0000e-005 | 2.7800e-003 | 1.3000e-004 | 2.9100e-003 | 7.6000e-004 | 1.2000e-004 | 8.8000e-004 | | 6.2843 | 6.2843 | 4.4000e-004 | | 6.2954 |
| **Total** | **0.0177** | **5.5500e-003** | **0.0820** | **6.0000e-005** | **2.7800e-003** | **1.3000e-004** | **2.9100e-003** | **7.6000e-004** | **1.2000e-004** | **8.8000e-004** | | **6.2843** | **6.2843** | **4.4000e-004** | | **6.2954** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 7.0458 | 0.0000 | 7.0458 | 3.8730 | 0.0000 | 3.8730 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8882 | 40.4971 | 21.1543 | 0.0380 | | 2.0445 | 2.0445 | | 1.8809 | 1.8809 | 0.0000 | 3,685.6569 | 3,685.6569 | 1.1920 | | 3,715.4573 |
| **Total** | **3.8882** | **40.4971** | **21.1543** | **0.0380** | **7.0458** | **2.0445** | **9.0903** | **3.8730** | **1.8809** | **5.7539** | **0.0000** | **3,685.6569** | **3,685.6569** | **1.1920** | | **3,715.4573** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0177 | 5.5500e-003 | 0.0820 | 6.0000e-005 | 2.7800e-003 | 1.3000e-004 | 2.9100e-003 | 7.6000e-004 | 1.2000e-004 | 8.8000e-004 | | 6.2843 | 6.2843 | 4.4000e-004 | | 6.2954 |
| **Total** | **0.0177** | **5.5500e-003** | **0.0820** | **6.0000e-005** | **2.7800e-003** | **1.3000e-004** | **2.9100e-003** | **7.6000e-004** | **1.2000e-004** | **8.8000e-004** | | **6.2843** | **6.2843** | **4.4000e-004** | | **6.2954** |

## 3.4 Grading - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.5523 | 0.0000 | 6.5523 | 3.3675 | 0.0000 | 3.3675 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.2903 | 24.7367 | 15.8575 | 0.0296 | | 1.1599 | 1.1599 | | 1.0671 | 1.0671 | | 2,871.9285 | 2,871.9285 | 0.9288 | | 2,895.1495 |
| **Total** | **2.2903** | **24.7367** | **15.8575** | **0.0296** | **6.5523** | **1.1599** | **7.7123** | **3.3675** | **1.0671** | **4.4346** | | **2,871.9285** | **2,871.9285** | **0.9288** | | **2,895.1495** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0158 | 4.9400e-003 | 0.0729 | 6.0000e-005 | 2.4700e-003 | 1.2000e-004 | 2.5800e-003 | 6.7000e-004 | 1.1000e-004 | 7.8000e-004 | | 5.5861 | 5.5861 | 3.9000e-004 | | 5.5960 |
| **Total** | **0.0158** | **4.9400e-003** | **0.0729** | **6.0000e-005** | **2.4700e-003** | **1.2000e-004** | **2.5800e-003** | **6.7000e-004** | **1.1000e-004** | **7.8000e-004** | | **5.5861** | **5.5861** | **3.9000e-004** | | **5.5960** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.5554 | 0.0000 | 2.5554 | 1.3133 | 0.0000 | 1.3133 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.2903 | 24.7367 | 15.8575 | 0.0296 | | 1.1599 | 1.1599 | | 1.0671 | 1.0671 | 0.0000 | 2,871.9285 | 2,871.9285 | 0.9288 | | 2,895.1495 |
| **Total** | **2.2903** | **24.7367** | **15.8575** | **0.0296** | **2.5554** | **1.1599** | **3.7153** | **1.3133** | **1.0671** | **2.3804** | **0.0000** | **2,871.9285** | **2,871.9285** | **0.9288** | | **2,895.1495** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0158 | 4.9400e-003 | 0.0729 | 6.0000e-005 | 2.4700e-003 | 1.2000e-004 | 2.5800e-003 | 6.7000e-004 | 1.1000e-004 | 7.8000e-004 | | 5.5861 | 5.5861 | 3.9000e-004 | | 5.5960 |
| **Total** | **0.0158** | **4.9400e-003** | **0.0729** | **6.0000e-005** | **2.4700e-003** | **1.2000e-004** | **2.5800e-003** | **6.7000e-004** | **1.1000e-004** | **7.8000e-004** | | **5.5861** | **5.5861** | **3.9000e-004** | | **5.5960** |

## 3.5 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **1.9009** | **17.4321** | **16.5752** | **0.0269** | | **0.9586** | **0.9586** | | **0.9013** | **0.9013** | | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0208 | 0.8236 | 0.2163 | 8.0000e-004 | 2.8200e-003 | 4.2000e-004 | 3.2500e-003 | 8.5000e-004 | 4.0000e-004 | 1.2500e-003 | | 85.5353 | 85.5353 | 0.0155 | | 85.9216 |
| Worker | 0.0335 | 0.0105 | 0.1549 | 1.2000e-004 | 5.2400e-003 | 2.5000e-004 | 5.4900e-003 | 1.4300e-003 | 2.3000e-004 | 1.6600e-003 | | 11.8704 | 11.8704 | 8.4000e-004 | | 11.8914 |
| **Total** | **0.0543** | **0.8341** | **0.3712** | **9.2000e-004** | **8.0600e-003** | **6.7000e-004** | **8.7400e-003** | **2.2800e-003** | **6.3000e-004** | **2.9100e-003** | | **97.4057** | **97.4057** | **0.0163** | | **97.8130** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | 0.0000 | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| **Total** | **1.9009** | **17.4321** | **16.5752** | **0.0269** | | **0.9586** | **0.9586** | | **0.9013** | **0.9013** | **0.0000** | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0208 | 0.8236 | 0.2163 | 8.0000e-004 | 2.8200e-003 | 4.2000e-004 | 3.2500e-003 | 8.5000e-004 | 4.0000e-004 | 1.2500e-003 | | 85.5353 | 85.5353 | 0.0155 | | 85.9216 |
| Worker | 0.0335 | 0.0105 | 0.1549 | 1.2000e-004 | 5.2400e-003 | 2.5000e-004 | 5.4900e-003 | 1.4300e-003 | 2.3000e-004 | 1.6600e-003 | | 11.8704 | 11.8704 | 8.4000e-004 | | 11.8914 |
| **Total** | **0.0543** | **0.8341** | **0.3712** | **9.2000e-004** | **8.0600e-003** | **6.7000e-004** | **8.7400e-003** | **2.2800e-003** | **6.3000e-004** | **2.9100e-003** | | **97.4057** | **97.4057** | **0.0163** | | **97.8130** |

## 3.6 Paving - 2022

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.1028 | 11.1249 | 14.5805 | 0.0228 | | 0.5679 | 0.5679 | | 0.5225 | 0.5225 | | 2,207.6603 | 2,207.6603 | 0.7140 | | 2,225.5104 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.1028** | **11.1249** | **14.5805** | **0.0228** | | **0.5679** | **0.5679** | | **0.5225** | **0.5225** | | **2,207.6603** | **2,207.6603** | **0.7140** | | **2,225.5104** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0145 | 4.3700e-003 | 0.0661 | 6.0000e-005 | 2.4700e-003 | 1.1000e-004 | 2.5800e-003 | 6.7000e-004 | 1.0000e-004 | 7.8000e-004 | | 5.3939 | 5.3939 | 3.5000e-004 | | 5.4027 |
| **Total** | **0.0145** | **4.3700e-003** | **0.0661** | **6.0000e-005** | **2.4700e-003** | **1.1000e-004** | **2.5800e-003** | **6.7000e-004** | **1.0000e-004** | **7.8000e-004** | | **5.3939** | **5.3939** | **3.5000e-004** | | **5.4027** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.1028 | 11.1249 | 14.5805 | 0.0228 | | 0.5679 | 0.5679 | | 0.5225 | 0.5225 | 0.0000 | 2,207.6603 | 2,207.6603 | 0.7140 | | 2,225.5104 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.1028** | **11.1249** | **14.5805** | **0.0228** | | **0.5679** | **0.5679** | | **0.5225** | **0.5225** | **0.0000** | **2,207.6603** | **2,207.6603** | **0.7140** | | **2,225.5104** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0145 | 4.3700e-003 | 0.0661 | 6.0000e-005 | 2.4700e-003 | 1.1000e-004 | 2.5800e-003 | 6.7000e-004 | 1.0000e-004 | 7.8000e-004 | | 5.3939 | 5.3939 | 3.5000e-004 | | 5.4027 |
| **Total** | **0.0145** | **4.3700e-003** | **0.0661** | **6.0000e-005** | **2.4700e-003** | **1.1000e-004** | **2.5800e-003** | **6.7000e-004** | **1.0000e-004** | **7.8000e-004** | | **5.3939** | **5.3939** | **3.5000e-004** | | **5.4027** |

## 3.7 Architectural Coating - 2022

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 24.5831 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2045 | 1.4085 | 1.8136 | 2.9700e-003 | | 0.0817 | 0.0817 | | 0.0817 | 0.0817 | | 281.4481 | 281.4481 | 0.0183 | | 281.9062 |
| **Total** | **24.7877** | **1.4085** | **1.8136** | **2.9700e-003** | | **0.0817** | **0.0817** | | **0.0817** | **0.0817** | | **281.4481** | **281.4481** | **0.0183** | | **281.9062** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 7.2400e-003 | 2.1900e-003 | 0.0330 | 3.0000e-005 | 1.2300e-003 | 6.0000e-005 | 1.2900e-003 | 3.4000e-004 | 5.0000e-005 | 3.9000e-004 | | 2.6970 | 2.6970 | 1.8000e-004 | | 2.7014 |
| **Total** | **7.2400e-003** | **2.1900e-003** | **0.0330** | **3.0000e-005** | **1.2300e-003** | **6.0000e-005** | **1.2900e-003** | **3.4000e-004** | **5.0000e-005** | **3.9000e-004** | | **2.6970** | **2.6970** | **1.8000e-004** | | **2.7014** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 24.5831 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2045 | 1.4085 | 1.8136 | 2.9700e-003 | | 0.0817 | 0.0817 | | 0.0817 | 0.0817 | 0.0000 | 281.4481 | 281.4481 | 0.0183 | | 281.9062 |
| **Total** | **24.7877** | **1.4085** | **1.8136** | **2.9700e-003** | | **0.0817** | **0.0817** | | **0.0817** | **0.0817** | **0.0000** | **281.4481** | **281.4481** | **0.0183** | | **281.9062** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 7.2400e-003 | 2.1900e-003 | 0.0330 | 3.0000e-005 | 1.2300e-003 | 6.0000e-005 | 1.2900e-003 | 3.4000e-004 | 5.0000e-005 | 3.9000e-004 | | 2.6970 | 2.6970 | 1.8000e-004 | | 2.7014 |
| **Total** | **7.2400e-003** | **2.1900e-003** | **0.0330** | **3.0000e-005** | **1.2300e-003** | **6.0000e-005** | **1.2900e-003** | **3.4000e-004** | **5.0000e-005** | **3.9000e-004** | | **2.6970** | **2.6970** | **1.8000e-004** | | **2.7014** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Category | lb/day | | | | | | | | | | | lb/day | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Office Building | 0.00 | 0.00 | 0.00 | | |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Unrefrigerated Warehouse-No Rail | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Office Building | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 77 | 19 | 4 |
| Parking Lot | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Unrefrigerated Warehouse-No Rail | 16.60 | 8.40 | 6.90 | 59.00 | 0.00 | 41.00 | 92 | 5 | 3 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |
| Parking Lot | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |
| Unrefrigerated Warehouse-No Rail | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |
| NaturalGas Unmitigated | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| General Office Building | 228.735 | 2.4700e-003 | 0.0224 | 0.0188 | 1.3000e-004 | | 1.7000e-003 | 1.7000e-003 | | 1.7000e-003 | 1.7000e-003 | | 26.9100 | 26.9100 | 5.2000e-004 | 4.9000e-004 | 27.0699 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 105.263 | 1.1400e-003 | 0.0103 | 8.6700e-003 | 6.0000e-005 | | 7.8000e-004 | 7.8000e-004 | | 7.8000e-004 | 7.8000e-004 | | 12.3839 | 12.3839 | 2.4000e-004 | 2.3000e-004 | 12.4575 |
| **Total** | | **3.6100e-003** | **0.0327** | **0.0275** | **1.9000e-004** | | **2.4800e-003** | **2.4800e-003** | | **2.4800e-003** | **2.4800e-003** | | **39.2938** | **39.2938** | **7.6000e-004** | **7.2000e-004** | **39.5274** |

### Mitigated

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building | 0.228735 | 2.4700e-003 | 0.0224 | 0.0188 | 1.3000e-004 | | 1.7000e-003 | 1.7000e-003 | | 1.7000e-003 | 1.7000e-003 | | 26.9100 | 26.9100 | 5.2000e-004 | 4.9000e-004 | 27.0699 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No | 0.105263 | 1.1400e-003 | 0.0103 | 8.6700e-003 | 6.0000e-005 | | 7.8000e-004 | 7.8000e-004 | | 7.8000e-004 | 7.8000e-004 | | 12.3839 | 12.3839 | 2.4000e-004 | 2.3000e-004 | 12.4575 |
| **Total** | | **3.6100e-003** | **0.0327** | **0.0275** | **1.9000e-004** | | **2.4800e-003** | **2.4800e-003** | | **2.4800e-003** | **2.4800e-003** | | **39.2938** | **39.2938** | **7.6000e-004** | **7.2000e-004** | **39.5274** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| Unmitigated | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural Coating | 0.1347 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.0433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 9.3000e-004 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| **Total** | **1.1789** | **9.0000e-005** | **0.0100** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0215** | **0.0215** | **6.0000e-005** | | **0.0229** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.1347 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.0433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 9.3000e-004 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| **Total** | **1.1789** | **9.0000e-005** | **0.0100** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0215** | **0.0215** | **6.0000e-005** | | **0.0229** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Forklifts | 4 | 8.00 | 365 | 89 | 0.20 | Electrical |

| | | | | | | |
|---|---|---|---|---|---|---|
| Other Construction Equipment | 1 | 8.00 | 356 | 172 | 0.42 | Diesel |

### UnMitigated/Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | lb/day | | | | | | | | | | lb/day | | | | | |
| Forklifts | 0.4544 | 4.2196 | 4.6150 | 6.1100e-003 | | 0.2795 | 0.2795 | | 0.2572 | 0.2572 | | 592.1233 | 592.1233 | 0.1915 | | 596.9109 |
| Other Construction Equipment | 0.3760 | 3.8151 | 4.0203 | 6.1800e-003 | | 0.1991 | 0.1991 | | 0.1831 | 0.1831 | | 598.3313 | 598.3313 | 0.1935 | | 603.1691 |
| **Total** | **0.8304** | **8.0347** | **8.6353** | **0.0123** | | **0.4786** | **0.4786** | | **0.4403** | **0.4403** | | **1,190.4546** | **1,190.4546** | **0.3850** | | **1,200.0800** |

## 10.0 Stationary Equipment

### Fire Pumps and Emergency Generators

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

### Boilers

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

### User Defined Equipment

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

12021 Wooddruff Avenue - South Coast AQMD Air District, Summer

# 12021 Wooddruff Avenue

**South Coast AQMD Air District, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Office Building | 8.02 | 1000sqft | 0.00 | 8,020.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 44.16 | 1000sqft | 6.31 | 44,162.00 | 0 |
| Parking Lot | 46.00 | Space | 0.00 | 28,540.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 9 | | | **Operational Year** | 2022 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 566.2 | **CH4 Intensity (lb/MWhr)** | 0.023 | **N2O Intensity (lb/MWhr)** | 0.00497 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics – GHG intensity data was updated based on the 2018 Power Content Label for SCE.

Land Use - Building square footage, parking lot area and lot acreage data values were provided by the project applicant.

Construction Phase - Construction schedule information was provided by the project applicant.

Off-road Equipment - Construction equipment information was provided by the project applicant.

Off-road Equipment - Construction equipment information was provided by the project applicant.

Trips and VMT - Odd trip values were rounded up to an even value.

Demolition - 3,200 tons of demolition debris was assumed based on information provided by the project applicant.

Grading - CalEEMod defaults were used.

Construction Off-road Equipment Mitigation - In compliance with SCAQMD Rule 402 watering twice daily and limiting speeds to 15 miles per hour on unpaved roads was assumed.

Vehicle Trips - Operational mobile source emissions were calculated in a spreadsheet model using ITE, CalEEMod and EMFAC data.

Operational Off-Road Equipment - Operational off-road equipment information was provided by the project applicant.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 230.00 | 132.00 |
| tblConstructionPhase | NumDays | 20.00 | 44.00 |
| tblConstructionPhase | NumDays | 20.00 | 22.00 |
| tblConstructionPhase | NumDays | 10.00 | 22.00 |
| tblLandUse | LandUseSquareFeet | 44,160.00 | 44,162.00 |
| tblLandUse | LandUseSquareFeet | 18,400.00 | 28,540.00 |
| tblLandUse | LotAcreage | 0.18 | 0.00 |
| tblLandUse | LotAcreage | 1.01 | 6.31 |
| tblLandUse | LotAcreage | 0.41 | 0.00 |
| tblOffRoadEquipment | HorsePower | 168.00 | 360.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 365.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 356.00 |
| tblOperationalOffRoadEquipment | OperFuelType | Diesel | Electrical |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 4.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.023 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.43634 | 566.2 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.00617 | 0.00497 |
| tblTripsAndVMT | HaulingTripNumber | 316.00 | 400.00 |
| tblTripsAndVMT | VendorTripNumber | 13.00 | 14.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblTripsAndVMT | WorkerTripNumber | 33.00 | 34.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | WorkerTripNumber | 7.00 | 8.00 |
| tblVehicleTrips | ST_TR | 2.46 | 0.00 |
| tblVehicleTrips | ST_TR | 1.68 | 0.00 |
| tblVehicleTrips | SU_TR | 1.05 | 0.00 |
| tblVehicleTrips | SU_TR | 1.68 | 0.00 |
| tblVehicleTrips | WD_TR | 11.03 | 0.00 |
| tblVehicleTrips | WD_TR | 1.68 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2021 | 3.9642 | 40.5464 | 26.3920 | 0.0601 | 18.2675 | 2.0459 | 20.3134 | 9.9840 | 1.8823 | 11.8663 | 0.0000 | 5,895.8302 | 5,895.8302 | 1.4969 | 0.0000 | 5,933.2519 |
| 2022 | 25.9855 | 12.5927 | 17.2301 | 0.0283 | 0.2683 | 0.6515 | 0.9198 | 0.0711 | 0.6060 | 0.6771 | 0.0000 | 2,745.3621 | 2,745.3621 | 0.7388 | 0.0000 | 2,763.8317 |
| **Maximum** | **25.9855** | **40.5464** | **26.3920** | **0.0601** | **18.2675** | **2.0459** | **20.3134** | **9.9840** | **1.8823** | **11.8663** | **0.0000** | **5,895.8302** | **5,895.8302** | **1.4969** | **0.0000** | **5,933.2519** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2021 | 3.9642 | 40.5464 | 26.3920 | 0.0601 | 8.3310 | 2.0459 | 10.3770 | 4.5222 | 1.8823 | 6.4044 | 0.0000 | 5,895.8302 | 5,895.8302 | 1.4969 | 0.0000 | 5,933.2519 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022 | 25.9855 | 12.5927 | 17.2301 | 0.0283 | 0.2683 | 0.6515 | 0.9198 | 0.0711 | 0.6060 | 0.6771 | 0.0000 | 2,745.3621 | 2,745.3621 | 0.7388 | 0.0000 | 2,763.8317 |
| **Maximum** | **25.9855** | **40.5464** | **26.3920** | **0.0601** | **8.3310** | **2.0459** | **10.3770** | **4.5222** | **1.8823** | **6.4044** | **0.0000** | **5,895.8302** | **5,895.8302** | **1.4969** | **0.0000** | **5,933.2519** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **53.61** | **0.00** | **46.80** | **54.32** | **0.00** | **43.54** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 2.2 Overall Operational

### Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| Energy | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Offroad | 0.8304 | 8.0347 | 8.6353 | 0.0123 | | 0.4786 | 0.4786 | | 0.4403 | 0.4403 | | 1,190.4546 | 1,190.4546 | 0.3850 | | 1,200.0800 |
| **Total** | **2.0129** | **8.0675** | **8.6728** | **0.0125** | **0.0000** | **0.4811** | **0.4811** | **0.0000** | **0.4428** | **0.4428** | | **1,229.7699** | **1,229.7699** | **0.3858** | **7.2000e-004** | **1,239.6302** |

### Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Offroad | 0.8304 | 8.0347 | 8.6353 | 0.0123 | | 0.4786 | 0.4786 | | 0.4403 | 0.4403 | | 1,190.4546 | 1,190.4546 | 0.3850 | | 1,200.0800 |
| **Total** | **2.0129** | **8.0675** | **8.6728** | **0.0125** | **0.0000** | **0.4811** | **0.4811** | **0.0000** | **0.4428** | **0.4428** | | **1,229.7699** | **1,229.7699** | **0.3858** | **7.2000e-004** | **1,239.6302** |

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

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 3/1/2021 | 4/29/2021 | 5 | 44 | |
| 2 | Site Preparation | Site Preparation | 4/30/2021 | 5/31/2021 | 5 | 22 | |
| 3 | Grading | Grading | 6/1/2021 | 6/30/2021 | 5 | 22 | |
| 4 | Building Construction | Building Construction | 7/1/2021 | 12/31/2021 | 5 | 132 | |
| 5 | Paving | Paving | 1/3/2022 | 1/28/2022 | 5 | 20 | |
| 6 | Architectural Coating | Architectural Coating | 1/3/2022 | 1/28/2022 | 5 | 20 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 11**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 78,273; Non-Residential Outdoor: 26,091; Striped Parking Area:**

### OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |

| | | | | | |
|---|---|---|---|---|---|
| Demolition | Other Material Handling Equipment | 1 | 8.00 | 360 | 0.40 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 7 | 18.00 | 0.00 | 400.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 16.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 34.00 | 14.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 16.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 8.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Demolition - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.5563 | 0.0000 | 1.5563 | 0.2356 | 0.0000 | 0.2356 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8105 | 38.0482 | 25.2270 | 0.0512 | | 1.8082 | 1.8082 | | 1.6774 | 1.6774 | | 4,942.3707 | 4,942.3707 | 1.4412 | | 4,978.4007 |
| **Total** | **3.8105** | **38.0482** | **25.2270** | **0.0512** | **1.5563** | **1.8082** | **3.3644** | **0.2356** | **1.6774** | **1.9130** | | **4,942.3707** | **4,942.3707** | **1.4412** | | **4,978.4007** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0660 | 2.2999 | 0.4868 | 6.9700e-003 | 0.1589 | 7.1300e-003 | 0.1660 | 0.0435 | 6.8200e-003 | 0.0504 | | 754.1269 | 754.1269 | 0.0503 | | 755.3847 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0760 | 0.0493 | 0.6781 | 2.0000e-003 | 0.2012 | 1.4800e-003 | 0.2027 | 0.0534 | 1.3600e-003 | 0.0547 | | 199.3326 | 199.3326 | 5.3600e-003 | | 199.4666 |
| **Total** | **0.1419** | **2.3492** | **1.1649** | **8.9700e-003** | **0.3601** | **8.6100e-003** | **0.3687** | **0.0969** | **8.1800e-003** | **0.1051** | | **953.4595** | **953.4595** | **0.0557** | | **954.8513** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.7003 | 0.0000 | 0.7003 | 0.1060 | 0.0000 | 0.1060 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8105 | 38.0482 | 25.2270 | 0.0512 | | 1.8082 | 1.8082 | | 1.6774 | 1.6774 | 0.0000 | 4,942.3707 | 4,942.3707 | 1.4412 | | 4,978.4007 |
| **Total** | **3.8105** | **38.0482** | **25.2270** | **0.0512** | **0.7003** | **1.8082** | **2.5085** | **0.1060** | **1.6774** | **1.7834** | **0.0000** | **4,942.3707** | **4,942.3707** | **1.4412** | | **4,978.4007** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0660 | 2.2999 | 0.4868 | 6.9700e-003 | 0.1589 | 7.1300e-003 | 0.1660 | 0.0435 | 6.8200e-003 | 0.0504 | | 754.1269 | 754.1269 | 0.0503 | | 755.3847 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0760 | 0.0493 | 0.6781 | 2.0000e-003 | 0.2012 | 1.4800e-003 | 0.2027 | 0.0534 | 1.3600e-003 | 0.0547 | | 199.3326 | 199.3326 | 5.3600e-003 | | 199.4666 |
| **Total** | **0.1419** | **2.3492** | **1.1649** | **8.9700e-003** | **0.3601** | **8.6100e-003** | **0.3687** | **0.0969** | **8.1800e-003** | **0.1051** | | **953.4595** | **953.4595** | **0.0557** | | **954.8513** |

## 3.3 Site Preparation - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fugitive Dust | | | | | 18.0663 | 0.0000 | 18.0663 | 9.9307 | 0.0000 | 9.9307 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8882 | 40.4971 | 21.1543 | 0.0380 | | 2.0445 | 2.0445 | | 1.8809 | 1.8809 | | 3,685.6569 | 3,685.6569 | 1.1920 | | 3,715.4573 |
| **Total** | **3.8882** | **40.4971** | **21.1543** | **0.0380** | **18.0663** | **2.0445** | **20.1107** | **9.9307** | **1.8809** | **11.8116** | | **3,685.6569** | **3,685.6569** | **1.1920** | | **3,715.4573** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0760 | 0.0493 | 0.6781 | 2.0000e-003 | 0.2012 | 1.4800e-003 | 0.2027 | 0.0534 | 1.3600e-003 | 0.0547 | | 199.3326 | 199.3326 | 5.3600e-003 | | 199.4666 |
| **Total** | **0.0760** | **0.0493** | **0.6781** | **2.0000e-003** | **0.2012** | **1.4800e-003** | **0.2027** | **0.0534** | **1.3600e-003** | **0.0547** | | **199.3326** | **199.3326** | **5.3600e-003** | | **199.4666** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 8.1298 | 0.0000 | 8.1298 | 4.4688 | 0.0000 | 4.4688 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8882 | 40.4971 | 21.1543 | 0.0380 | | 2.0445 | 2.0445 | | 1.8809 | 1.8809 | 0.0000 | 3,685.6569 | 3,685.6569 | 1.1920 | | 3,715.4573 |
| **Total** | **3.8882** | **40.4971** | **21.1543** | **0.0380** | **8.1298** | **2.0445** | **10.1743** | **4.4688** | **1.8809** | **6.3497** | **0.0000** | **3,685.6569** | **3,685.6569** | **1.1920** | | **3,715.4573** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0760 | 0.0493 | 0.6781 | 2.0000e-003 | 0.2012 | 1.4800e-003 | 0.2027 | 0.0534 | 1.3600e-003 | 0.0547 | | 199.3326 | 199.3326 | 5.3600e-003 | | 199.4666 |
| **Total** | **0.0760** | **0.0493** | **0.6781** | **2.0000e-003** | **0.2012** | **1.4800e-003** | **0.2027** | **0.0534** | **1.3600e-003** | **0.0547** | | **199.3326** | **199.3326** | **5.3600e-003** | | **199.4666** |

## 3.4 Grading - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.5523 | 0.0000 | 6.5523 | 3.3675 | 0.0000 | 3.3675 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.2903 | 24.7367 | 15.8575 | 0.0296 | | 1.1599 | 1.1599 | | 1.0671 | 1.0671 | | 2,871.9285 | 2,871.9285 | 0.9288 | | 2,895.1495 |
| **Total** | **2.2903** | **24.7367** | **15.8575** | **0.0296** | **6.5523** | **1.1599** | **7.7123** | **3.3675** | **1.0671** | **4.4346** | | **2,871.9285** | **2,871.9285** | **0.9288** | | **2,895.1495** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Category | lb/day | | | | | | | | | | | lb/day | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0675 | 0.0438 | 0.6028 | 1.7800e-003 | 0.1788 | 1.3200e-003 | 0.1802 | 0.0474 | 1.2100e-003 | 0.0486 | | 177.1845 | 177.1845 | 4.7600e-003 | | 177.3037 |
| **Total** | **0.0675** | **0.0438** | **0.6028** | **1.7800e-003** | **0.1788** | **1.3200e-003** | **0.1802** | **0.0474** | **1.2100e-003** | **0.0486** | | **177.1845** | **177.1845** | **4.7600e-003** | | **177.3037** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.9486 | 0.0000 | 2.9486 | 1.5154 | 0.0000 | 1.5154 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.2903 | 24.7367 | 15.8575 | 0.0296 | | 1.1599 | 1.1599 | | 1.0671 | 1.0671 | 0.0000 | 2,871.9285 | 2,871.9285 | 0.9288 | | 2,895.1495 |
| **Total** | **2.2903** | **24.7367** | **15.8575** | **0.0296** | **2.9486** | **1.1599** | **4.1085** | **1.5154** | **1.0671** | **2.5825** | **0.0000** | **2,871.9285** | **2,871.9285** | **0.9288** | | **2,895.1495** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0675 | 0.0438 | 0.6028 | 1.7800e-003 | 0.1788 | 1.3200e-003 | 0.1802 | 0.0474 | 1.2100e-003 | 0.0486 | | 177.1845 | 177.1845 | 4.7600e-003 | | 177.3037 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **0.0675** | **0.0438** | **0.6028** | **1.7800e-003** | **0.1788** | **1.3200e-003** | **0.1802** | **0.0474** | **1.2100e-003** | **0.0486** | | **177.1845** | **177.1845** | **4.7600e-003** | | **177.3037** |

## 3.5 Building Construction - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| **Total** | **1.9009** | **17.4321** | **16.5752** | **0.0269** | | **0.9586** | **0.9586** | | **0.9013** | **0.9013** | | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0390 | 1.3353 | 0.3169 | 3.5700e-003 | 0.0896 | 2.6900e-003 | 0.0923 | 0.0258 | 2.5700e-003 | 0.0284 | | 381.4139 | 381.4139 | 0.0231 | | 381.9907 |
| Worker | 0.1435 | 0.0931 | 1.2809 | 3.7800e-003 | 0.3800 | 2.8000e-003 | 0.3828 | 0.1008 | 2.5800e-003 | 0.1034 | | 376.5171 | 376.5171 | 0.0101 | | 376.7703 |
| **Total** | **0.1825** | **1.4283** | **1.5977** | **7.3500e-003** | **0.4696** | **5.4900e-003** | **0.4751** | **0.1266** | **5.1500e-003** | **0.1317** | | **757.9310** | **757.9310** | **0.0332** | | **758.7609** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | 0.0000 | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| **Total** | **1.9009** | **17.4321** | **16.5752** | **0.0269** | | **0.9586** | **0.9586** | | **0.9013** | **0.9013** | **0.0000** | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0390 | 1.3353 | 0.3169 | 3.5700e-003 | 0.0896 | 2.6900e-003 | 0.0923 | 0.0258 | 2.5700e-003 | 0.0284 | | 381.4139 | 381.4139 | 0.0231 | | 381.9907 |
| Worker | 0.1435 | 0.0931 | 1.2809 | 3.7800e-003 | 0.3800 | 2.8000e-003 | 0.3828 | 0.1008 | 2.5800e-003 | 0.1034 | | 376.5171 | 376.5171 | 0.0101 | | 376.7703 |
| **Total** | **0.1825** | **1.4283** | **1.5977** | **7.3500e-003** | **0.4696** | **5.4900e-003** | **0.4751** | **0.1266** | **5.1500e-003** | **0.1317** | | **757.9310** | **757.9310** | **0.0332** | | **758.7609** |

## 3.6 Paving - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road | 1.1028 | 11.1249 | 14.5805 | 0.0228 | | 0.5679 | 0.5679 | | 0.5225 | 0.5225 | | 2,207.6603 | 2,207.6603 | 0.7140 | | 2,225.5104 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.1028** | **11.1249** | **14.5805** | **0.0228** | | **0.5679** | **0.5679** | | **0.5225** | **0.5225** | | **2,207.6603** | **2,207.6603** | **0.7140** | | **2,225.5104** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0634 | 0.0396 | 0.5574 | 1.7100e-003 | 0.1788 | 1.2800e-003 | 0.1801 | 0.0474 | 1.1800e-003 | 0.0486 | | 170.8358 | 170.8358 | 4.3100e-003 | | 170.9435 |
| **Total** | **0.0634** | **0.0396** | **0.5574** | **1.7100e-003** | **0.1788** | **1.2800e-003** | **0.1801** | **0.0474** | **1.1800e-003** | **0.0486** | | **170.8358** | **170.8358** | **4.3100e-003** | | **170.9435** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.1028 | 11.1249 | 14.5805 | 0.0228 | | 0.5679 | 0.5679 | | 0.5225 | 0.5225 | 0.0000 | 2,207.6603 | 2,207.6603 | 0.7140 | | 2,225.5104 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.1028** | **11.1249** | **14.5805** | **0.0228** | | **0.5679** | **0.5679** | | **0.5225** | **0.5225** | **0.0000** | **2,207.6603** | **2,207.6603** | **0.7140** | | **2,225.5104** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0634 | 0.0396 | 0.5574 | 1.7100e-003 | 0.1788 | 1.2800e-003 | 0.1801 | 0.0474 | 1.1800e-003 | 0.0486 | | 170.8358 | 170.8358 | 4.3100e-003 | | 170.9435 |
| **Total** | **0.0634** | **0.0396** | **0.5574** | **1.7100e-003** | **0.1788** | **1.2800e-003** | **0.1801** | **0.0474** | **1.1800e-003** | **0.0486** | | **170.8358** | **170.8358** | **4.3100e-003** | | **170.9435** |

## 3.7 Architectural Coating - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 24.5831 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2045 | 1.4085 | 1.8136 | 2.9700e-003 | | 0.0817 | 0.0817 | | 0.0817 | 0.0817 | | 281.4481 | 281.4481 | 0.0183 | | 281.9062 |
| **Total** | **24.7877** | **1.4085** | **1.8136** | **2.9700e-003** | | **0.0817** | **0.0817** | | **0.0817** | **0.0817** | | **281.4481** | **281.4481** | **0.0183** | | **281.9062** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Category | lb/day | | | | | | | | | | | lb/day | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0317 | 0.0198 | 0.2787 | 8.6000e-004 | 0.0894 | 6.4000e-004 | 0.0901 | 0.0237 | 5.9000e-004 | 0.0243 | | 85.4179 | 85.4179 | 2.1500e-003 | | 85.4717 |
| **Total** | **0.0317** | **0.0198** | **0.2787** | **8.6000e-004** | **0.0894** | **6.4000e-004** | **0.0901** | **0.0237** | **5.9000e-004** | **0.0243** | | **85.4179** | **85.4179** | **2.1500e-003** | | **85.4717** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 24.5831 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2045 | 1.4085 | 1.8136 | 2.9700e-003 | | 0.0817 | 0.0817 | | 0.0817 | 0.0817 | 0.0000 | 281.4481 | 281.4481 | 0.0183 | | 281.9062 |
| **Total** | **24.7877** | **1.4085** | **1.8136** | **2.9700e-003** | | **0.0817** | **0.0817** | | **0.0817** | **0.0817** | **0.0000** | **281.4481** | **281.4481** | **0.0183** | | **281.9062** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0317 | 0.0198 | 0.2787 | 8.6000e-004 | 0.0894 | 6.4000e-004 | 0.0901 | 0.0237 | 5.9000e-004 | 0.0243 | | 85.4179 | 85.4179 | 2.1500e-003 | | 85.4717 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **0.0317** | **0.0198** | **0.2787** | **8.6000e-004** | **0.0894** | **6.4000e-004** | **0.0901** | **0.0237** | **5.9000e-004** | **0.0243** | | **85.4179** | **85.4179** | **2.1500e-003** | | **85.4717** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Office Building | 0.00 | 0.00 | 0.00 | | |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Unrefrigerated Warehouse-No Rail | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Office Building | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 77 | 19 | 4 |
| Parking Lot | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Unrefrigerated Warehouse-No | 16.60 | 8.40 | 6.90 | 59.00 | 0.00 | 41.00 | 92 | 5 | 3 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |
| Parking Lot | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |
| Unrefrigerated Warehouse-No Rail | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |
| NaturalGas Unmitigated | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building | 228.735 | 2.4700e-003 | 0.0224 | 0.0188 | 1.3000e-004 | | 1.7000e-003 | 1.7000e-003 | | 1.7000e-003 | 1.7000e-003 | | 26.9100 | 26.9100 | 5.2000e-004 | 4.9000e-004 | 27.0699 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 105.263 | 1.1400e-003 | 0.0103 | 8.6700e-003 | 6.0000e-005 | | 7.8000e-004 | 7.8000e-004 | | 7.8000e-004 | 7.8000e-004 | | 12.3839 | 12.3839 | 2.4000e-004 | 2.3000e-004 | 12.4575 |
| **Total** | | **3.6100e-003** | **0.0327** | **0.0275** | **1.9000e-004** | | **2.4800e-003** | **2.4800e-003** | | **2.4800e-003** | **2.4800e-003** | | **39.2938** | **39.2938** | **7.6000e-004** | **7.2000e-004** | **39.5274** |

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| General Office Building | 0.228735 | 2.4700e-003 | 0.0224 | 0.0188 | 1.3000e-004 | | 1.7000e-003 | 1.7000e-003 | | 1.7000e-003 | 1.7000e-003 | | 26.9100 | 26.9100 | 5.2000e-004 | 4.9000e-004 | 27.0699 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 0.105263 | 1.1400e-003 | 0.0103 | 8.6700e-003 | 6.0000e-005 | | 7.8000e-004 | 7.8000e-004 | | 7.8000e-004 | 7.8000e-004 | | 12.3839 | 12.3839 | 2.4000e-004 | 2.3000e-004 | 12.4575 |
| **Total** | | **3.6100e-003** | **0.0327** | **0.0275** | **1.9000e-004** | | **2.4800e-003** | **2.4800e-003** | | **2.4800e-003** | **2.4800e-003** | | **39.2938** | **39.2938** | **7.6000e-004** | **7.2000e-004** | **39.5274** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mitigated | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| Unmitigated | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |

## 6.2 Area by SubCategory

### Unmitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.1347 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.0433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 9.3000e-004 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| **Total** | **1.1789** | **9.0000e-005** | **0.0100** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0215** | **0.0215** | **6.0000e-005** | | **0.0229** |

### Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.1347 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.0433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 9.3000e-004 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| **Total** | **1.1789** | **9.0000e-005** | **0.0100** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0215** | **0.0215** | **6.0000e-005** | | **0.0229** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Forklifts | 4 | 8.00 | 365 | 89 | 0.20 | Electrical |
| Other Construction Equipment | 1 | 8.00 | 356 | 172 | 0.42 | Diesel |

**UnMitigated/Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | lb/day | | | | | | | | | | lb/day | | | | | |
| Forklifts | 0.4544 | 4.2196 | 4.6150 | 6.1100e-003 | | 0.2795 | 0.2795 | | 0.2572 | 0.2572 | | 592.1233 | 592.1233 | 0.1915 | | 596.9109 |
| Other Construction Equipment | 0.3760 | 3.8151 | 4.0203 | 6.1800e-003 | | 0.1991 | 0.1991 | | 0.1831 | 0.1831 | | 598.3313 | 598.3313 | 0.1935 | | 603.1691 |
| **Total** | **0.8304** | **8.0347** | **8.6353** | **0.0123** | | **0.4786** | **0.4786** | | **0.4403** | **0.4403** | | **1,190.4546** | **1,190.4546** | **0.3850** | | **1,200.0800** |

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# 12021 Wooddruff Avenue

**South Coast AQMD Air District, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Office Building | 8.02 | 1000sqft | 0.00 | 8,020.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 44.16 | 1000sqft | 6.31 | 44,162.00 | 0 |
| Parking Lot | 46.00 | Space | 0.00 | 28,540.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 9 | | | **Operational Year** | 2022 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 566.2 | **CH4 Intensity (lb/MWhr)** | 0.023 | **N2O Intensity (lb/MWhr)** | 0.00497 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics – GHG intensity data was updated based on the 2018 Power Content Label for SCE.

Land Use - Building square footage, parking lot area and lot acreage data values were provided by the project applicant.

Construction Phase - Construction schedule information was provided by the project applicant.

Off-road Equipment - Construction equipment information was provided by the project applicant.

Off-road Equipment - Construction equipment information was provided by the project applicant.

Trips and VMT - Odd trip values were rounded up to an even value.

Demolition - 3,200 tons of demolition debris was assumed based on information provided by the project applicant.

Grading - CalEEMod defaults were used.

Construction Off-road Equipment Mitigation - In compliance with SCAQMD Rule 402 watering twice daily and limiting speeds to 15 miles per hour on unpaved roads was assumed.

Vehicle Trips - Operational mobile source emissions were calculated in a spreadsheet model using ITE, CalEEMod and EMFAC data.

Operational Off-Road Equipment - Operational off-road equipment information was provided by the project applicant.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 230.00 | 132.00 |
| tblConstructionPhase | NumDays | 20.00 | 44.00 |
| tblConstructionPhase | NumDays | 20.00 | 22.00 |
| tblConstructionPhase | NumDays | 10.00 | 22.00 |
| tblLandUse | LandUseSquareFeet | 44,160.00 | 44,162.00 |
| tblLandUse | LandUseSquareFeet | 18,400.00 | 28,540.00 |
| tblLandUse | LotAcreage | 0.18 | 0.00 |
| tblLandUse | LotAcreage | 1.01 | 6.31 |
| tblLandUse | LotAcreage | 0.41 | 0.00 |
| tblOffRoadEquipment | HorsePower | 168.00 | 360.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 365.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 356.00 |
| tblOperationalOffRoadEquipment | OperFuelType | Diesel | Electrical |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 4.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.023 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.43634 | 566.2 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.00617 | 0.00497 |
| tblTripsAndVMT | HaulingTripNumber | 316.00 | 400.00 |
| tblTripsAndVMT | VendorTripNumber | 13.00 | 14.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblTripsAndVMT | WorkerTripNumber | 33.00 | 34.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblTripsAndVMT | WorkerTripNumber | 7.00 | 8.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | ST_TR | 2.46 | 0.00 |
| tblVehicleTrips | ST_TR | 1.68 | 0.00 |
| tblVehicleTrips | SU_TR | 1.05 | 0.00 |
| tblVehicleTrips | SU_TR | 1.68 | 0.00 |
| tblVehicleTrips | WD_TR | 11.03 | 0.00 |
| tblVehicleTrips | WD_TR | 1.68 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2021 | 3.9712 | 40.5510 | 26.3590 | 0.0599 | 18.2675 | 2.0459 | 20.3134 | 9.9840 | 1.8823 | 11.8663 | 0.0000 | 5,868.9685 | 5,868.9685 | 1.4986 | 0.0000 | 5,906.4343 |
| 2022 | 25.9946 | 12.5983 | 17.1440 | 0.0282 | 0.2683 | 0.6515 | 0.9198 | 0.0711 | 0.6060 | 0.6771 | 0.0000 | 2,728.7571 | 2,728.7571 | 0.7383 | 0.0000 | 2,747.2157 |
| **Maximum** | **25.9946** | **40.5510** | **26.3590** | **0.0599** | **18.2675** | **2.0459** | **20.3134** | **9.9840** | **1.8823** | **11.8663** | **0.0000** | **5,868.9685** | **5,868.9685** | **1.4986** | **0.0000** | **5,906.4343** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2021 | 3.9712 | 40.5510 | 26.3590 | 0.0599 | 8.3310 | 2.0459 | 10.3770 | 4.5222 | 1.8823 | 6.4044 | 0.0000 | 5,868.9685 | 5,868.9685 | 1.4986 | 0.0000 | 5,906.4342 |
| 2022 | 25.9946 | 12.5983 | 17.1440 | 0.0282 | 0.2683 | 0.6515 | 0.9198 | 0.0711 | 0.6060 | 0.6771 | 0.0000 | 2,728.7571 | 2,728.7571 | 0.7383 | 0.0000 | 2,747.2157 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Maximum** | **25.9946** | **40.5510** | **26.3590** | **0.0599** | **8.3310** | **2.0459** | **10.3770** | **4.5222** | **1.8823** | **6.4044** | **0.0000** | **5,868.9685** | **5,868.9685** | **1.4986** | **0.0000** | **5,906.4342** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **53.61** | **0.00** | **46.80** | **54.32** | **0.00** | **43.54** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 2.2 Overall Operational

### Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| Energy | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Offroad | 0.8304 | 8.0347 | 8.6353 | 0.0123 | | 0.4786 | 0.4786 | | 0.4403 | 0.4403 | | 1,190.4546 | 1,190.4546 | 0.3850 | | 1,200.0800 |
| **Total** | **2.0129** | **8.0675** | **8.6728** | **0.0125** | **0.0000** | **0.4811** | **0.4811** | **0.0000** | **0.4428** | **0.4428** | | **1,229.7699** | **1,229.7699** | **0.3858** | **7.2000e-004** | **1,239.6302** |

### Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| Energy | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Offroad | 0.8304 | 8.0347 | 8.6353 | 0.0123 | | 0.4786 | 0.4786 | | 0.4403 | 0.4403 | | 1,190.4546 | 1,190.4546 | 0.3850 | | 1,200.0800 |
| **Total** | **2.0129** | **8.0675** | **8.6728** | **0.0125** | **0.0000** | **0.4811** | **0.4811** | **0.0000** | **0.4428** | **0.4428** | | **1,229.7699** | **1,229.7699** | **0.3858** | **7.2000e-004** | **1,239.6302** |

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

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 3/1/2021 | 4/29/2021 | 5 | 44 | |
| 2 | Site Preparation | Site Preparation | 4/30/2021 | 5/31/2021 | 5 | 22 | |
| 3 | Grading | Grading | 6/1/2021 | 6/30/2021 | 5 | 22 | |
| 4 | Building Construction | Building Construction | 7/1/2021 | 12/31/2021 | 5 | 132 | |
| 5 | Paving | Paving | 1/3/2022 | 1/28/2022 | 5 | 20 | |
| 6 | Architectural Coating | Architectural Coating | 1/3/2022 | 1/28/2022 | 5 | 20 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 11**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 78,273; Non-Residential Outdoor: 26,091; Striped Parking Area:**

### OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Other Material Handling Equipment | 1 | 8.00 | 360 | 0.40 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |

| | | | | | |
|---|---|---|---|---|---|
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 7 | 18.00 | 0.00 | 400.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 16.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 34.00 | 14.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 16.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 8.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Demolition - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.5563 | 0.0000 | 1.5563 | 0.2356 | 0.0000 | 0.2356 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8105 | 38.0482 | 25.2270 | 0.0512 | | 1.8082 | 1.8082 | | 1.6774 | 1.6774 | | 4,942.3707 | 4,942.3707 | 1.4412 | | 4,978.4007 |
| **Total** | **3.8105** | **38.0482** | **25.2270** | **0.0512** | **1.5563** | **1.8082** | **3.3644** | **0.2356** | **1.6774** | **1.9130** | | **4,942.3707** | **4,942.3707** | **1.4412** | | **4,978.4007** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0678 | 2.3272 | 0.5226 | 6.8400e-003 | 0.1589 | 7.2400e-003 | 0.1661 | 0.0435 | 6.9200e-003 | 0.0505 | | 740.1776 | 740.1776 | 0.0524 | | 741.4885 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0830 | 0.0539 | 0.6094 | 1.8700e-003 | 0.2012 | 1.4800e-003 | 0.2027 | 0.0534 | 1.3600e-003 | 0.0547 | | 186.4202 | 186.4202 | 5.0000e-003 | | 186.5451 |
| **Total** | **0.1509** | **2.3812** | **1.1320** | **8.7100e-003** | **0.3601** | **8.7200e-003** | **0.3688** | **0.0969** | **8.2800e-003** | **0.1052** | | **926.5978** | **926.5978** | **0.0574** | | **928.0336** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Category | lb/day | | | | | | | | | | lb/day | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fugitive Dust | | | | | 0.7003 | 0.0000 | 0.7003 | 0.1060 | 0.0000 | 0.1060 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8105 | 38.0482 | 25.2270 | 0.0512 | | 1.8082 | 1.8082 | | 1.6774 | 1.6774 | 0.0000 | 4,942.3707 | 4,942.3707 | 1.4412 | | 4,978.4007 |
| **Total** | **3.8105** | **38.0482** | **25.2270** | **0.0512** | **0.7003** | **1.8082** | **2.5085** | **0.1060** | **1.6774** | **1.7834** | **0.0000** | **4,942.3707** | **4,942.3707** | **1.4412** | | **4,978.4007** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0678 | 2.3272 | 0.5226 | 6.8400e-003 | 0.1589 | 7.2400e-003 | 0.1661 | 0.0435 | 6.9200e-003 | 0.0505 | | 740.1776 | 740.1776 | 0.0524 | | 741.4885 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0830 | 0.0539 | 0.6094 | 1.8700e-003 | 0.2012 | 1.4800e-003 | 0.2027 | 0.0534 | 1.3600e-003 | 0.0547 | | 186.4202 | 186.4202 | 5.0000e-003 | | 186.5451 |
| **Total** | **0.1509** | **2.3812** | **1.1320** | **8.7100e-003** | **0.3601** | **8.7200e-003** | **0.3688** | **0.0969** | **8.2800e-003** | **0.1052** | | **926.5978** | **926.5978** | **0.0574** | | **928.0336** |

## 3.3 Site Preparation - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 18.0663 | 0.0000 | 18.0663 | 9.9307 | 0.0000 | 9.9307 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8882 | 40.4971 | 21.1543 | 0.0380 | | 2.0445 | 2.0445 | | 1.8809 | 1.8809 | | 3,685.6569 | 3,685.6569 | 1.1920 | | 3,715.4573 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **3.8882** | **40.4971** | **21.1543** | **0.0380** | **18.0663** | **2.0445** | **20.1107** | **9.9307** | **1.8809** | **11.8116** | | **3,685.6569** | **3,685.6569** | **1.1920** | | **3,715.4573** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0830 | 0.0539 | 0.6094 | 1.8700e-003 | 0.2012 | 1.4800e-003 | 0.2027 | 0.0534 | 1.3600e-003 | 0.0547 | | 186.4202 | 186.4202 | 5.0000e-003 | | 186.5451 |
| **Total** | **0.0830** | **0.0539** | **0.6094** | **1.8700e-003** | **0.2012** | **1.4800e-003** | **0.2027** | **0.0534** | **1.3600e-003** | **0.0547** | | **186.4202** | **186.4202** | **5.0000e-003** | | **186.5451** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 8.1298 | 0.0000 | 8.1298 | 4.4688 | 0.0000 | 4.4688 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8882 | 40.4971 | 21.1543 | 0.0380 | | 2.0445 | 2.0445 | | 1.8809 | 1.8809 | 0.0000 | 3,685.6569 | 3,685.6569 | 1.1920 | | 3,715.4573 |
| **Total** | **3.8882** | **40.4971** | **21.1543** | **0.0380** | **8.1298** | **2.0445** | **10.1743** | **4.4688** | **1.8809** | **6.3497** | **0.0000** | **3,685.6569** | **3,685.6569** | **1.1920** | | **3,715.4573** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0830 | 0.0539 | 0.6094 | 1.8700e-003 | 0.2012 | 1.4800e-003 | 0.2027 | 0.0534 | 1.3600e-003 | 0.0547 | | 186.4202 | 186.4202 | 5.0000e-003 | | 186.5451 |
| **Total** | **0.0830** | **0.0539** | **0.6094** | **1.8700e-003** | **0.2012** | **1.4800e-003** | **0.2027** | **0.0534** | **1.3600e-003** | **0.0547** | | **186.4202** | **186.4202** | **5.0000e-003** | | **186.5451** |

## 3.4 Grading - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.5523 | 0.0000 | 6.5523 | 3.3675 | 0.0000 | 3.3675 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.2903 | 24.7367 | 15.8575 | 0.0296 | | 1.1599 | 1.1599 | | 1.0671 | 1.0671 | | 2,871.9285 | 2,871.9285 | 0.9288 | | 2,895.1495 |
| **Total** | **2.2903** | **24.7367** | **15.8575** | **0.0296** | **6.5523** | **1.1599** | **7.7123** | **3.3675** | **1.0671** | **4.4346** | | **2,871.9285** | **2,871.9285** | **0.9288** | | **2,895.1495** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0738 | 0.0480 | 0.5417 | 1.6600e-003 | 0.1788 | 1.3200e-003 | 0.1802 | 0.0474 | 1.2100e-003 | 0.0486 | | 165.7069 | 165.7069 | 4.4400e-003 | | 165.8179 |
| **Total** | **0.0738** | **0.0480** | **0.5417** | **1.6600e-003** | **0.1788** | **1.3200e-003** | **0.1802** | **0.0474** | **1.2100e-003** | **0.0486** | | **165.7069** | **165.7069** | **4.4400e-003** | | **165.8179** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.9486 | 0.0000 | 2.9486 | 1.5154 | 0.0000 | 1.5154 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.2903 | 24.7367 | 15.8575 | 0.0296 | | 1.1599 | 1.1599 | | 1.0671 | 1.0671 | 0.0000 | 2,871.9285 | 2,871.9285 | 0.9288 | | 2,895.1495 |
| **Total** | **2.2903** | **24.7367** | **15.8575** | **0.0296** | **2.9486** | **1.1599** | **4.1085** | **1.5154** | **1.0671** | **2.5825** | **0.0000** | **2,871.9285** | **2,871.9285** | **0.9288** | | **2,895.1495** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0738 | 0.0480 | 0.5417 | 1.6600e-003 | 0.1788 | 1.3200e-003 | 0.1802 | 0.0474 | 1.2100e-003 | 0.0486 | | 165.7069 | 165.7069 | 4.4400e-003 | | 165.8179 |
| **Total** | **0.0738** | **0.0480** | **0.5417** | **1.6600e-003** | **0.1788** | **1.3200e-003** | **0.1802** | **0.0474** | **1.2100e-003** | **0.0486** | | **165.7069** | **165.7069** | **4.4400e-003** | | **165.8179** |

## 3.5 Building Construction - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| **Total** | **1.9009** | **17.4321** | **16.5752** | **0.0269** | | **0.9586** | **0.9586** | | **0.9013** | **0.9013** | | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0410 | 1.3310 | 0.3546 | 3.4700e-003 | 0.0896 | 2.7700e-003 | 0.0924 | 0.0258 | 2.6500e-003 | 0.0285 | | 370.3703 | 370.3703 | 0.0248 | | 370.9898 |
| Worker | 0.1568 | 0.1019 | 1.1510 | 3.5300e-003 | 0.3800 | 2.8000e-003 | 0.3828 | 0.1008 | 2.5800e-003 | 0.1034 | | 352.1271 | 352.1271 | 9.4400e-003 | | 352.3630 |
| **Total** | **0.1978** | **1.4329** | **1.5056** | **7.0000e-003** | **0.4696** | **5.5700e-003** | **0.4752** | **0.1266** | **5.2300e-003** | **0.1318** | | **722.4974** | **722.4974** | **0.0342** | | **723.3528** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | 0.0000 | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| **Total** | **1.9009** | **17.4321** | **16.5752** | **0.0269** | | **0.9586** | **0.9586** | | **0.9013** | **0.9013** | **0.0000** | **2,553.3639** | **2,553.3639** | **0.6160** | | **2,568.7643** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0410 | 1.3310 | 0.3546 | 3.4700e-003 | 0.0896 | 2.7700e-003 | 0.0924 | 0.0258 | 2.6500e-003 | 0.0285 | | 370.3703 | 370.3703 | 0.0248 | | 370.9898 |
| Worker | 0.1568 | 0.1019 | 1.1510 | 3.5300e-003 | 0.3800 | 2.8000e-003 | 0.3828 | 0.1008 | 2.5800e-003 | 0.1034 | | 352.1271 | 352.1271 | 9.4400e-003 | | 352.3630 |
| **Total** | **0.1978** | **1.4329** | **1.5056** | **7.0000e-003** | **0.4696** | **5.5700e-003** | **0.4752** | **0.1266** | **5.2300e-003** | **0.1318** | | **722.4974** | **722.4974** | **0.0342** | | **723.3528** |

## 3.6 Paving - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.1028 | 11.1249 | 14.5805 | 0.0228 | | 0.5679 | 0.5679 | | 0.5225 | 0.5225 | | 2,207.6603 | 2,207.6603 | 0.7140 | | 2,225.5104 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.1028** | **11.1249** | **14.5805** | **0.0228** | | **0.5679** | **0.5679** | | **0.5225** | **0.5225** | | **2,207.6603** | **2,207.6603** | **0.7140** | | **2,225.5104** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0694 | 0.0433 | 0.5000 | 1.6000e-003 | 0.1788 | 1.2800e-003 | 0.1801 | 0.0474 | 1.1800e-003 | 0.0486 | | 159.7658 | 159.7658 | 4.0100e-003 | | 159.8661 |
| **Total** | **0.0694** | **0.0433** | **0.5000** | **1.6000e-003** | **0.1788** | **1.2800e-003** | **0.1801** | **0.0474** | **1.1800e-003** | **0.0486** | | **159.7658** | **159.7658** | **4.0100e-003** | | **159.8661** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.1028 | 11.1249 | 14.5805 | 0.0228 | | 0.5679 | 0.5679 | | 0.5225 | 0.5225 | 0.0000 | 2,207.6603 | 2,207.6603 | 0.7140 | | 2,225.5104 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.1028** | **11.1249** | **14.5805** | **0.0228** | | **0.5679** | **0.5679** | | **0.5225** | **0.5225** | **0.0000** | **2,207.6603** | **2,207.6603** | **0.7140** | | **2,225.5104** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0694 | 0.0433 | 0.5000 | 1.6000e-003 | 0.1788 | 1.2800e-003 | 0.1801 | 0.0474 | 1.1800e-003 | 0.0486 | | 159.7658 | 159.7658 | 4.0100e-003 | | 159.8661 |
| **Total** | **0.0694** | **0.0433** | **0.5000** | **1.6000e-003** | **0.1788** | **1.2800e-003** | **0.1801** | **0.0474** | **1.1800e-003** | **0.0486** | | **159.7658** | **159.7658** | **4.0100e-003** | | **159.8661** |

## 3.7 Architectural Coating - 2022

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 24.5831 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2045 | 1.4085 | 1.8136 | 2.9700e-003 | | 0.0817 | 0.0817 | | 0.0817 | 0.0817 | | 281.4481 | 281.4481 | 0.0183 | | 281.9062 |
| **Total** | **24.7877** | **1.4085** | **1.8136** | **2.9700e-003** | | **0.0817** | **0.0817** | | **0.0817** | **0.0817** | | **281.4481** | **281.4481** | **0.0183** | | **281.9062** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0347 | 0.0217 | 0.2500 | 8.0000e-004 | 0.0894 | 6.4000e-004 | 0.0901 | 0.0237 | 5.9000e-004 | 0.0243 | | 79.8829 | 79.8829 | 2.0100e-003 | | 79.9331 |
| **Total** | **0.0347** | **0.0217** | **0.2500** | **8.0000e-004** | **0.0894** | **6.4000e-004** | **0.0901** | **0.0237** | **5.9000e-004** | **0.0243** | | **79.8829** | **79.8829** | **2.0100e-003** | | **79.9331** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 24.5831 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2045 | 1.4085 | 1.8136 | 2.9700e-003 | | 0.0817 | 0.0817 | | 0.0817 | 0.0817 | 0.0000 | 281.4481 | 281.4481 | 0.0183 | | 281.9062 |
| **Total** | **24.7877** | **1.4085** | **1.8136** | **2.9700e-003** | | **0.0817** | **0.0817** | | **0.0817** | **0.0817** | **0.0000** | **281.4481** | **281.4481** | **0.0183** | | **281.9062** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0347 | 0.0217 | 0.2500 | 8.0000e-004 | 0.0894 | 6.4000e-004 | 0.0901 | 0.0237 | 5.9000e-004 | 0.0243 | | 79.8829 | 79.8829 | 2.0100e-003 | | 79.9331 |
| **Total** | **0.0347** | **0.0217** | **0.2500** | **8.0000e-004** | **0.0894** | **6.4000e-004** | **0.0901** | **0.0237** | **5.9000e-004** | **0.0243** | | **79.8829** | **79.8829** | **2.0100e-003** | | **79.9331** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Office Building | 0.00 | 0.00 | 0.00 | | |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Unrefrigerated Warehouse-No Rail | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Office Building | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 77 | 19 | 4 |
| Parking Lot | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Unrefrigerated Warehouse-No | 16.60 | 8.40 | 6.90 | 59.00 | 0.00 | 41.00 | 92 | 5 | 3 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |
| Parking Lot | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |
| Unrefrigerated Warehouse-No Rail | 0.549559 | 0.042893 | 0.201564 | 0.118533 | 0.015569 | 0.005846 | 0.021394 | 0.034255 | 0.002099 | 0.001828 | 0.004855 | 0.000709 | 0.000896 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |
| NaturalGas Unmitigated | 3.6000e-003 | 0.0327 | 0.0275 | 2.0000e-004 | | 2.4900e-003 | 2.4900e-003 | | 2.4900e-003 | 2.4900e-003 | | 39.2938 | 39.2938 | 7.5000e-004 | 7.2000e-004 | 39.5273 |

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| General Office Building | 228.735 | 2.4700e-003 | 0.0224 | 0.0188 | 1.3000e-004 | | 1.7000e-003 | 1.7000e-003 | | 1.7000e-003 | 1.7000e-003 | | 26.9100 | 26.9100 | 5.2000e-004 | 4.9000e-004 | 27.0699 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 105.263 | 1.1400e-003 | 0.0103 | 8.6700e-003 | 6.0000e-005 | | 7.8000e-004 | 7.8000e-004 | | 7.8000e-004 | 7.8000e-004 | | 12.3839 | 12.3839 | 2.4000e-004 | 2.3000e-004 | 12.4575 |
| **Total** | | **3.6100e-003** | **0.0327** | **0.0275** | **1.9000e-004** | | **2.4800e-003** | **2.4800e-003** | | **2.4800e-003** | **2.4800e-003** | | **39.2938** | **39.2938** | **7.6000e-004** | **7.2000e-004** | **39.5274** |

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| General Office Building | 0.228735 | 2.4700e-003 | 0.0224 | 0.0188 | 1.3000e-004 | | 1.7000e-003 | 1.7000e-003 | | 1.7000e-003 | 1.7000e-003 | | 26.9100 | 26.9100 | 5.2000e-004 | 4.9000e-004 | 27.0699 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 0.105263 | 1.1400e-003 | 0.0103 | 8.6700e-003 | 6.0000e-005 | | 7.8000e-004 | 7.8000e-004 | | 7.8000e-004 | 7.8000e-004 | | 12.3839 | 12.3839 | 2.4000e-004 | 2.3000e-004 | 12.4575 |
| **Total** | | **3.6100e-003** | **0.0327** | **0.0275** | **1.9000e-004** | | **2.4800e-003** | **2.4800e-003** | | **2.4800e-003** | **2.4800e-003** | | **39.2938** | **39.2938** | **7.6000e-004** | **7.2000e-004** | **39.5274** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unmitigated | 1.1790 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.1347 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.0433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 9.3000e-004 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| **Total** | **1.1789** | **9.0000e-005** | **0.0100** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0215** | **0.0215** | **6.0000e-005** | | **0.0229** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.1347 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 1.0433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 9.3000e-004 | 9.0000e-005 | 0.0100 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0215 | 0.0215 | 6.0000e-005 | | 0.0229 |
| **Total** | **1.1789** | **9.0000e-005** | **0.0100** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0215** | **0.0215** | **6.0000e-005** | | **0.0229** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Forklifts | 4 | 8.00 | 365 | 89 | 0.20 | Electrical |
| Other Construction Equipment | 1 | 8.00 | 356 | 172 | 0.42 | Diesel |

**UnMitigated/Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | lb/day | | | | | | | | | | lb/day | | | | | |
| Forklifts | 0.4544 | 4.2196 | 4.6150 | 6.1100e-003 | | 0.2795 | 0.2795 | | 0.2572 | 0.2572 | | 592.1233 | 592.1233 | 0.1915 | | 596.9109 |
| Other Construction Equipment | 0.3760 | 3.8151 | 4.0203 | 6.1800e-003 | | 0.1991 | 0.1991 | | 0.1831 | 0.1831 | | 598.3313 | 598.3313 | 0.1935 | | 603.1691 |
| **Total** | **0.8304** | **8.0347** | **8.6353** | **0.0123** | | **0.4786** | **0.4786** | | **0.4403** | **0.4403** | | **1,190.4546** | **1,190.4546** | **0.3850** | | **1,200.0800** |

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

**Existing Operational Mobile Source Emissions Summary - EMFAC2017**

| Vehicle Type | EMFAC Class | Average Daily Trip Length (miles) | Avg. Daily Trips (trips/day) | Avg. Daily VMT (VMT/day) | Annual Trips (trips/year) | Annual VMT (VMT/year) | Idling Minutes per Day (min/day) | ROG | NOx | CO | SOx | PM10 | PM2.5 | CO2 | CH4 | N2O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | **Emission Factors** | | | | | | | | |
| Passenger Vehicles | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear (grams/mile)** | | | | | | | | |
| | LDA, LDT1, LDT2 | 16.6 | 341 | 5,658 | 124,414 | 2,065,271 | N/A | 0.015893 | 0.048203 | 0.861113 | 0.002879063 | 0.000628 | 0.00182 | 291.0077 | 0 | 0.027101 |
| | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative (grams/trip)** | | | | | | | | |
| | | | | | | | | 0.657318 | 0.209959 | 2.237855 | 0.000567791 | 0.000611 | 0.001753 | 57.4031 | 0.055341 | 0.026722 |
| | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap (grams/vehicle/day)** | | | | | | | | |
| | | | | | | | | 0.579876 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | **Paved Road (PM only, grams/mile)** | | | | | | | | |
| | | | | | | | | N/A | N/A | N/A | N/A | 0.29985 | 0.073599 | N/A | N/A | N/A |
| Trucks | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear (grams/mile)** | | | | | | | | |
| | LHDT1, LHDT2, MHDT, HHDT | 40 | 153 | 6,126 | 55,896 | 2,235,844 | 15 | 0.07273 | 2.74738 | 0.552347 | 0.011851639 | 0.13416 | 0.066805 | 1280.855 | 0.167185 | 0.003761 |
| | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative (grams/trip)** | | | | | | | | |
| | | | | | | | | 0.097736 | 1.721026 | 0.297069 | 0.00003 | 0.00004 | 0.00004 | 2.799903 | 0.003137 | 0.003719 |
| | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap (grams/trip)** | | | | | | | | |
| | | | | | | | | 0.008567 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | **Idling (grams/minute/vehicle)** | | | | | | | | |
| | | | | | | | | 0.055449 | 0.68136 | 0.709549 | 0.001054407 | 0.00161 | 0.00154 | 111.5771 | 0.007774 | 0.011526 |
| | | | | | | | | **Paved Road (PM only, grams/mile)** | | | | | | | | |
| | | | | | | | | N/A | N/A | N/A | N/A | 1.680004 | 0.412365 | N/A | N/A | N/A |
| Total: | | | | | | | | | | | | | | | | |
| Passenger Vehicles and Trucks | | | | | | | | | | | | | | | | |

**Existing Operational Mobile Source Emissions Summary - EMFAC2017**

| Vehicle Type | EMFAC Class | Average Daily Trip Length (miles) | Avg. Daily Trips (trips/day) | Avg. Daily VMT (VMT/day) | Annual Trips (trips/year) | Annual VMT (VMT/year) | Idling Minutes per Day (min/day) | | Emissions - Daily (Pounds/day) ROG | NOx | CO | SOx | PM10 | PM2.5 | CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Passenger Vehicles | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear** | | | | | | | | | | |
| | LDA, LDT1, LDT2 | 16.6 | 341 | 5,658 | 124,414 | 2,065,271 | N/A | | 0.198 | 0.601 | 10.742 | 0.036 | 0.008 | 0.023 | 3,630.138 | - | 0.338 | 3,730.21 |
| | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative** | 0.494 | 0.158 | 1.682 | 0.000 | 0.000 | 0.001 | 43.137 | 0.042 | 0.020 | 50.04 |
| | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap** | 0.436 | - | - | - | - | - | - | - | - | - |
| | | | | | | | | **Paved Road (PM only)** | N/A | N/A | N/A | N/A | 3.74 | 0.92 | N/A | N/A | N/A | N/A |
| | | | | | | | | **Subtotal** | **1.13** | **0.76** | **12.42** | **0.04** | **3.75** | **0.94** | **3,673.27** | **0.04** | **0.36** | **3,780.24** |
| Trucks | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear** | | | | | | | | | | |
| | LHDT1, LHDT2, MHDT, HHDT | 40 | 153 | 6,126 | 55,896 | 2,235,844 | 15 | | 0.982 | 37.102 | 7.459 | 0.160 | 1.812 | 0.902 | 17,297.501 | 2.258 | 0.051 | 17,364.46 |
| | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative** | 0.033 | 0.581 | 0.100 | 0.000 | 0.000 | 0.000 | 0.945 | 0.001 | 0.001 | 1.34 |
| | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap** | 0.003 | - | - | - | - | - | - | - | - | - |
| | | | | | | | | **Idling** | 0.281 | 3.451 | 3.593 | 0.005 | 0.008 | 0.008 | 565.054 | 0.039 | 0.058 | - |
| | | | | | | | | **Paved Road (PM only)** | N/A | N/A | N/A | N/A | 22.69 | 5.57 | N/A | N/A | N/A | N/A |
| | | | | | | | | **Subtotal** | **1.30** | **41.13** | **11.15** | **0.17** | **24.51** | **6.48** | **17,863.50** | **2.30** | **0.11** | **17,365.80** |
| Total: Passenger Vehicles and Trucks | | | | | | | | **Total** | **2.43** | **41.89** | **23.58** | **0.20** | **28.26** | **7.42** | **21,536.77** | **2.34** | **0.47** | **21,146.05** |

**Existing Operational Mobile Source Emissions Summary - EMFAC2017**

| Vehicle Type | EMFAC Class | Average Daily Trip Length (miles) | Avg. Daily Trips (trips/day) | Avg. Daily VMT (VMT/day) | Annual Trips (trips/year) | Annual VMT (VMT/year) | Idling Minutes per Day (min/day) | | Emissions - Annual (Tons/yr) ROG | NOx | CO | SOx | PM10 | PM2.5 | (Metric Tons/yr) CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Passenger Vehicles | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear** | | | | | | | | | | |
| | LDA, LDT1, LDT2 | 16.6 | 341 | 5,658 | 124,414 | 2,065,271 | N/A | | 0.04 | 0.11 | 1.96 | 0.01 | 0.00 | 0.00 | 601.02 | - | 0.06 | 617.58 |
| | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative** | 0.09 | 0.03 | 0.31 | 0.00 | 0.00 | 0.00 | 7.14 | 0.01 | 0.00 | 8.28 |
| | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap** | 0.08 | - | - | - | - | - | - | - | - | - |
| | | | | | | | | **Paved Road (PM only)** | N/A | N/A | N/A | N/A | 0.68 | 0.17 | N/A | N/A | N/A | N/A |
| | | | | | | | | **Subtotal** | **0.21** | **0.14** | **2.27** | **0.01** | **0.68** | **0.17** | **608.16** | **0.01** | **0.06** | **625.87** |
| Trucks | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear** | | | | | | | | | | |
| | LHDT1, LHDT2, MHDT, HHDT | 40 | 153 | 6,126 | 55,896 | 2,235,844 | 15 | | 0.18 | 6.77 | 1.36 | 0.03 | 0.33 | 0.16 | 2,863.82 | 0.37 | 0.01 | 2,874.91 |
| | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative** | 0.01 | 0.11 | 0.02 | 0.00 | 0.00 | 0.00 | 0.16 | 0.00 | 0.00 | 0.22 |
| | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap** | 0.00 | - | - | - | - | - | - | - | - | - |
| | | | | | | | | **Idling** | 0.05 | 0.63 | 0.66 | 0.00 | 0.00 | 0.00 | 103.12 | 0.01 | 0.01 | 106.44 |
| | | | | | | | | **Paved Road (PM only)** | N/A | N/A | N/A | N/A | 4.14 | 1.02 | N/A | N/A | N/A | N/A |
| | | | | | | | | **Subtotal** | **0.24** | **7.51** | **2.04** | **0.03** | **4.47** | **1.18** | **2,967.10** | **0.38** | **0.02** | **2,981.57** |
| Total: Passenger Vehicles and Trucks | | | | | | | | **Total** | **0.44** | **7.65** | **4.30** | **0.04** | **5.16** | **1.35** | **3,575.26** | **0.39** | **0.08** | **3,607.44** |

**Proposed Project Operational Mobile Source Emissions Summary - EMFAC2017**

| Vehicle Type | EMFAC Class | Average Daily Trip Length (miles) | Avg. Daily Trips (trips/day) | Avg. Daily VMT (VMT/day) | Annual Trips (trips/year) | Annual VMT (VMT/year) | Idling Minutes per Day (min/day) | Emission Factors | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | ROG | NOx | CO | SOx | PM10 | PM2.5 | CO2 | CH4 | N2O |
| Passenger Vehicles | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear (grams/mile)** | | | | | | | | |
| | LDA, LDT1, LDT2 | 16.6 | 238 | 3,946 | 86,769 | 1,440,363 | N/A | 0.015893 | 0.048203 | 0.861113 | 0.002879063 | 0.000628 | 0.00182 | 291.0077 | 0 | 0.027101 |
| | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative (grams/trip)** | | | | | | | | |
| | | | | | | | | 0.657318 | 0.209959 | 2.237855 | 0.000567791 | 0.000611 | 0.001753 | 57.4031 | 0.055341 | 0.026722 |
| | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap (grams/vehicle/day)** | | | | | | | | |
| | | | | | | | | 0.579876 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | **Paved Road (PM only, grams/mile)** | | | | | | | | |
| | | | | | | | | N/A | N/A | N/A | N/A | 0.29985 | 0.073599 | N/A | N/A | N/A |
| Trucks | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear (grams/mile)** | | | | | | | | |
| | LHDT1, LHDT2, MHDT, HHDT | 40 | 279 | 11,163 | 101,859 | 4,074,364 | 15 | 0.07273 | 2.74738 | 0.552347 | 0.011851639 | 0.13416 | 0.066805 | 1280.855 | 0.167185 | 0.003761 |
| | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative (grams/trip)** | | | | | | | | |
| | | | | | | | | 0.097736 | 1.721026 | 0.297069 | 0.00003 | 0.00004 | 0.00004 | 2.799903 | 0.003137 | 0.003719 |
| | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap (grams/trip)** | | | | | | | | |
| | | | | | | | | 0.008567 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | **Idling (grams/minute/vehicle)** | | | | | | | | |
| | | | | | | | | 0.055449 | 0.68136 | 0.709549 | 0.001054407 | 0.00161 | 0.00154 | 111.5771 | 0.007774 | 0.011526 |
| | | | | | | | | **Paved Road (PM only, grams/mile)** | | | | | | | | |
| | | | | | | | | N/A | N/A | N/A | N/A | 1.680004 | 0.412365 | N/A | N/A | N/A |
| Total: | | | | | | | | | | | | | | | | |
| Passenger Vehicles and Trucks | | | | | | | | | | | | | | | | |

**Proposed Project Operational Mobile Source Emissions Summary - EMFAC2017**

| Vehicle Type | EMFAC Class | Average Daily Trip Length (miles) | Avg. Daily Trips (trips/day) | Avg. Daily VMT (VMT/day) | Annual Trips (trips/year) | Annual VMT (VMT/year) | Idling Minutes per Day (min/day) | | Emissions - Daily (Pounds/day) ROG | NOx | CO | SOx | PM10 | PM2.5 | CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Passenger Vehicles | | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear** | | | | | | | | | |
| | LDA, LDT1, LDT2 | 16.6 | 238 | 3,946 | 86,769 | 1,440,363 | N/A | | 0.138 | 0.419 | 7.492 | 0.025 | 0.005 | 0.016 | 2,531.735 | - | 0.236 | 2,601.53 |
| | | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative** | | | | | | | | | |
| | | | | | | | | | 0.344 | 0.110 | 1.173 | 0.000 | 0.000 | 0.001 | 30.084 | 0.029 | 0.014 | 34.90 |
| | | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap** | | | | | | | | | |
| | | | | | | | | | 0.304 | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | **Paved Road (PM only)** | | | | | | | | | |
| | | | | | | | | | N/A | N/A | N/A | N/A | 2.61 | 0.64 | N/A | N/A | N/A | N/A |
| | | | | | | | | **Subtotal** | **0.79** | **0.53** | **8.66** | **0.03** | **2.61** | **0.66** | **2,561.82** | **0.03** | **0.25** | **2,636.42** |
| Trucks | | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear** | | | | | | | | | |
| | LHDT1, LHDT2, MHDT, HHDT | 40 | 279 | 11,163 | 101,859 | 4,074,364 | 15 | | 1.790 | 67.611 | 13.593 | 0.292 | 3.302 | 1.644 | 31,521.128 | 4.114 | 0.093 | 31,643.15 |
| | | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative** | | | | | | | | | |
| | | | | | | | | | 0.060 | 1.059 | 0.183 | 0.000 | 0.000 | 0.000 | 1.723 | 0.002 | 0.002 | 2.44 |
| | | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap** | | | | | | | | | |
| | | | | | | | | | 0.005 | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | **Idling** | | | | | | | | | |
| | | | | | | | | | 0.512 | 6.288 | 6.548 | 0.010 | 0.015 | 0.014 | 1,029.693 | 0.072 | 0.106 | - |
| | | | | | | | | | **Paved Road (PM only)** | | | | | | | | | |
| | | | | | | | | | N/A | N/A | N/A | N/A | 41.34 | 10.15 | N/A | N/A | N/A | N/A |
| | | | | | | | | **Subtotal** | **2.37** | **74.96** | **20.32** | **0.30** | **44.66** | **11.81** | **32,552.54** | **4.19** | **0.20** | **31,645.60** |
| Total: Passenger Vehicles and Trucks | | | | | | | | **Total** | **3.15** | **75.49** | **28.99** | **0.33** | **47.27** | **12.46** | **35,114.36** | **4.22** | **0.45** | **34,282.02** |

**Proposed Project Operational Mobile Source Emissions Summary - EMFAC2017**

| Vehicle Type | EMFAC Class | Average Daily Trip Length (miles) | Avg. Daily Trips (trips/day) | Avg. Daily VMT (VMT/day) | Annual Trips (trips/year) | Annual VMT (VMT/year) | Idling Minutes per Day (min/day) | | Emissions - Annual (Tons/yr) ROG | NOx | CO | SOx | PM10 | PM2.5 | (Metric Tons/yr) CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Passenger Vehicles | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear** | | | | | | | | | | |
| | LDA, LDT1, LDT2 | 16.6 | 238 | 3,946 | 86,769 | 1,440,363 | N/A | | 0.03 | 0.08 | 1.37 | 0.00 | 0.00 | 0.00 | 419.16 | - | 0.04 | 430.72 |
| | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative** | 0.06 | 0.02 | 0.21 | 0.00 | 0.00 | 0.00 | 4.98 | 0.00 | 0.00 | 5.78 |
| | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap** | 0.06 | - | - | - | - | - | - | - | - | - |
| | | | | | | | | **Paved Road (PM only)** | N/A | N/A | N/A | N/A | 0.48 | 0.12 | N/A | N/A | N/A | N/A |
| | | | | | | | | **Subtotal** | **0.14** | **0.10** | **1.58** | **0.00** | **0.48** | **0.12** | **424.14** | **0.00** | **0.04** | **436.49** |
| Trucks | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear** | | | | | | | | | | |
| | LHDT1, LHDT2, MHDT, HHDT | 40 | 279 | 11,163 | 101,859 | 4,074,364 | 15 | | 0.33 | 12.34 | 2.48 | 0.05 | 0.60 | 0.30 | 5,218.73 | 0.68 | 0.02 | 5,238.93 |
| | | | | | | | | **Starting Exhaust, Hot Soak, Running Loss Evaporative** | 0.01 | 0.19 | 0.03 | 0.00 | 0.00 | 0.00 | 0.29 | 0.00 | 0.00 | 0.40 |
| | | | | | | | | **Resting Loss Evap and Diurnal Loss Evap** | 0.00 | - | - | - | - | - | - | - | - | - |
| | | | | | | | | **Idling** | 0.09 | 1.15 | 1.20 | 0.00 | 0.00 | 0.00 | 187.92 | 0.01 | 0.02 | 193.97 |
| | | | | | | | | **Paved Road (PM only)** | N/A | N/A | N/A | N/A | 7.55 | 1.85 | N/A | N/A | N/A | N/A |
| | | | | | | | | **Subtotal** | **0.43** | **13.68** | **3.71** | **0.06** | **8.15** | **2.15** | **5,406.93** | **0.69** | **0.04** | **5,433.30** |
| Total: Passenger Vehicles and Trucks | | | | | | | | **Total** | **0.58** | **13.78** | **5.29** | **0.06** | **8.63** | **2.27** | **5,831.08** | **0.70** | **0.08** | **5,869.80** |

## Truck Terminal, Downey

**Project Operational Energy Demand**

**Mobile Source Gasoline Demand**

| Scenario | Vehicle MT $CO_2$ | Kg CO2/Gallon | Gallons |
|---|---|---|---|
| Project | 436.49 | 8.78 | 49,714.12 |
| Existing | 625.87 | 8.78 | 71,283.60 |
| | | **Net Increase** | **-21,569.48** |

**Mobile Source Diesel Demand**

| Scenario | Vehicle MT $CO_2$ | Kg CO2/Gallon | Gallons |
|---|---|---|---|
| Project | 5,433.30 | 10.21 | 532,154.75 |
| Existing | 2,981.57 | 10.21 | 292,024.49 |
| | | **Net Increase** | **240,130.26** |

**Electricity Demand**

| Project Facility | kWh/Year |
|---|---|
| *Proposed Project* | |
| Buildings | 286,401.00 |
| Water/Wastewater | 161,237.06 |
| **Total** | **447,638.06** |
| *Existing* | |
| Buildings | 490,198.00 |
| Water/Wastewater | 132,970.45 |
| **Total** | **623,168.45** |
| **Net Increase in Electricity Demand** | **-175,530.39** |

**Natural Gas Demand**

| Scenario | kBTu/Year |
|---|---|
| Project Buildings | 5,842,808.90 |
| Existing Buildings | 307,856.60 |
| **Net Increase in Natural Gas Demand** | **5,534,952.30** |

## Truck Terminal, Downey
## Operational Electricity - Project

| Total Electricity - Project | kWh/yr |
|---|---|
| Buildings | 286,401.00 |
| Water/Wastewater | 161,237.06 |
| **Total** | **447,638.06** |

**Electricity Intensity Factors - Water/Wastewater**

| Process | Units | |
|---|---|---|
| Supply | kwh/MG | 9,727 |
| Treat | kwh/MG | 111 |
| Distribute | kwh/MG | 1,272 |
| Wastewater Treatment | kwh/MG | 1,911 |
| **Total** | **kwh/MG** | **13,021** |

* Electricity intensity factors from CalEEMod Appendix D for Los Angeles County

**Electricity Demand - Water/Wastewater**

| | Units | Potable Water - Indoor | Potable Water - Outdoor | Total |
|---|---|---|---|---|
| **Electricity Intensity Factor** | | | | |
| Supply | kwh/MG | 9,727 | 9,727 | N/A |
| Treat | kwh/MG | 111 | 111 | N/A |
| Distribute | kwh/MG | 1,272 | 1,272 | N/A |
| Wastewater Treatment | kwh/MG | 1,911 | - | N/A |
| **Total** | **kwh/MG** | **13,021** | **11,110** | N/A |
| **Water Consumption - Project** | | | | |
| Project Water | MG/yr | 11.64 | 0.87 | 12.51 |
| **Total** | **MG/yr** | **11.6** | **0.9** | **12.5** |
| **Electricity Usage - Project** | **kwh/yr** | **151,531** | **9,706** | **161,237** |

## Truck Terminal, Downey
## Operational Electricity - Existing

| Total Electricity - Existing | kWh/yr |
|---|---|
| Buildings | 490,198.00 |
| Water/Wastewater | 132,970.45 |
| **Total** | **623,168.45** |

**Electricity Intensity Factors - Water/Wastewater** 5.97E-06

| Process | Units | |
|---|---|---|
| Supply | kwh/MG | 9,727 |
| Treat | kwh/MG | 111 |
| Distribute | kwh/MG | 1,272 |
| Wastewater Treatment | kwh/MG | 1,911 |
| **Total** | **kwh/MG** | **13,021** |

* Electricity intensity factors from CalEEMod Appendix D for Los Angeles County

**Electricity Demand - Water/Wastewater**

| | Units | Potable Water - Indoor | Potable Water - Outdoor | Total |
|---|---|---|---|---|
| **Electricity Intensity Factor** | | | | |
| Supply | kwh/MG | 9,727 | 9,727 | N/A |
| Treat | kwh/MG | 111 | 111 | N/A |
| Distribute | kwh/MG | 1,272 | 1,272 | N/A |
| Wastewater Treatment | kwh/MG | 1,911 | - | N/A |
| **Total** | **kwh/MG** | **13,021** | **11,110** | N/A |
| **Water Consumption - Project** | | | | |
| Project Water | MG/yr | 10.21 | 0.00 | 10.21 |
| **Total** | **MG/yr** | **10.2** | **0.0** | **10.2** |
| **Electricity Usage - Project** | **kwh/yr** | **132,970** | **0** | **132,970** |

**Operational Mobile Source Emissions Summary - EMFAC2017**

**Emission Factors**

| Vehicle Type | EMFAC Class | Average Daily Trip Length (miles) | Avg. Daily Trips (trips/day) | Avg. Daily VMT (VMT/day) | Annual Trips (trips/year) | Annual VMT (VMT/year) | Idling Minutes per Day (min/day) | PM10 |
|---|---|---|---|---|---|---|---|---|
| Trucks | | | | | | | | **Running Exhaust, Running Loss, Tire Wear, and Break Wear (grams/mile)** |
| | LHDT1, LHDT2, MHDT, HHDT | 40 | 279 | 11,163 | 101,859 | 4,074,364 | 15 | 0.13416014 |

**Starting Exhaust, Hot Soak, Running Loss Evaporative (grams/trip)**
0.00004

| Per TIA | % Trips |
|---|---|
| OFFSITE 1 (North Arrival) | 40 |
| OFFSITE 2 (North Exit) | 40 |
| OFFSITE (South Arrival) | 10 |
| OFFSITE 4 (South Exit) | 10 |
| | 100 |

Total offiste 1 - 4 trips should equal total avg. daily trips from TIA

| Check | Check |
|---|---|
| 279 | 101,859.11 |

**Idling (grams/minute/vehicle)**
0.001609734

**Operaitonal HRA Emissions Summary**

| | | | | | | | PM Emission Factors | | | Emissions | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AERMOD Source | Length (m) | Length (miles) | Avg. Daily Trips (trips/day) | Annual Trips (trips/year) | Annual VMT (VMT/year) Along Route | Idling Minutes per Day (min/day) | Running PM10 Exhaust (g/mile) | Starting PM10 Exhaust (g/trip) | Idling PM10 (g/min/vehicle) | PM10 (lb/year) | PM10 (lb/hr) |
| OFFSITE 1 | 1500 | 0.93 | 112 | 40,743.64 | 37,975.49 | - | 0.13 | - | - | 11.23 | 1.28E-03 |
| OFFSITE 2 | 1500 | 0.93 | 112 | 40,743.64 | 37,975.49 | - | 0.13 | - | - | 11.23 | 1.28E-03 |
| OFFSITE 3 | 1870 | 1.16 | 28 | 10,185.91 | 11,835.69 | - | 0.13 | - | - | 3.50 | 4.00E-04 |
| OFFSITE 4 | 1870 | 1.16 | 28 | 10,185.91 | 11,835.69 | - | 0.13 | - | - | 3.50 | 4.00E-04 |
| ONSITE | 400 | 0.25 | 140 | 50,929.56 | 12,658.50 | - | 0.13 | - | - | 3.74 | 4.27E-04 |
| IDLE1 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE2 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE3 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE4 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE5 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE6 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE7 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE8 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE9 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE10 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE11 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE12 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE13 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE14 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE15 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE16 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE17 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE18 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE19 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE20 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE21 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE22 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE23 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE24 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE25 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE26 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE27 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE28 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE29 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE30 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE31 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE32 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE33 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE34 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE35 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE36 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE37 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE38 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE39 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE40 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE41 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE42 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE43 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE44 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |

Conservatively assumes each truck makes single pass around building during entrance and exit (Trucks = trips/2) divided between 70 loading bays

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IDLE45 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE46 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE47 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE48 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE49 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE50 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE51 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE52 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE53 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE54 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE55 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE56 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE57 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE58 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE59 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE60 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE61 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE62 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE63 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE64 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE65 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE66 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE67 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE68 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE69 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |
| IDLE70 | - | - | 2 | 730.00 | - | 15 | - | 0.00004 | 0.0016 | 0.04 | 4.44E-06 |

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.9.0
** Lakes Environmental Software Inc.
** Date: 9/10/2020
** File: C:\Users\dlarocca\Desktop\Air Quality Work\Lakes\Downey HRA
Op\Downey HRA Op.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\dlarocca\Desktop\Air Quality Work\Lakes\Downey HRA
Op\Downe
   MODELOPT DFAULT CONC
   AVERTIME 1 PERIOD
   URBANOPT 9818605 LA
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Downey HRA Op.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = OFFSITE1
** DESCRSRC Truck route departing site to north
** PREFIX
** Length of Side = 3.12
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 3.16
** SZINIT = 1.47
** Nodes = 4
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** 396791.077, 3754715.847, 32.60, 3.40, 1.45
** 397236.428, 3754885.081, 33.92, 3.40, 1.45
** 397884.662, 3754396.184, 33.11, 3.40, 1.45
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LOCATION L0000004 VOLUME 396790.134 3754495.184 32.01
LOCATION L0000005 VOLUME 396790.148 3754498.304 32.01
LOCATION L0000006 VOLUME 396790.161 3754501.424 32.01
LOCATION L0000007 VOLUME 396790.174 3754504.544 32.01
LOCATION L0000008 VOLUME 396790.188 3754507.664 32.01
LOCATION L0000009 VOLUME 396790.201 3754510.784 32.01
LOCATION L0000010 VOLUME 396790.214 3754513.904 32.02
LOCATION L0000011 VOLUME 396790.228 3754517.024 32.03
LOCATION L0000012 VOLUME 396790.241 3754520.144 32.04
LOCATION L0000013 VOLUME 396790.254 3754523.264 32.04
LOCATION L0000014 VOLUME 396790.268 3754526.384 32.05
LOCATION L0000015 VOLUME 396790.281 3754529.504 32.05
LOCATION L0000016 VOLUME 396790.294 3754532.624 32.06
LOCATION L0000017 VOLUME 396790.308 3754535.744 32.08
LOCATION L0000018 VOLUME 396790.321 3754538.864 32.09
LOCATION L0000019 VOLUME 396790.334 3754541.984 32.10
LOCATION L0000020 VOLUME 396790.348 3754545.104 32.11
LOCATION L0000021 VOLUME 396790.361 3754548.224 32.12
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LOCATION L0000026 VOLUME 396790.428 3754563.824 32.19
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LOCATION L0000033 VOLUME 396790.521 3754585.664 32.24
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LOCATION L0000487 VOLUME 397883.022 3754397.421 33.13

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** End of LINE VOLUME Source ID = OFFSITE1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = OFFSITE2
** DESCRSRC Truck route arriving from north
** PREFIX
** Length of Side = 3.12
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 3.16
** SZINIT = 1.47
** Nodes = 4
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** 396783.160, 3754723.764, 32.72, 3.40, 1.45
** 397242.367, 3754899.926, 34.08, 3.40, 1.45
** 397885.651, 3754414.988, 33.25, 3.40, 1.45
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LOCATION L0000956 VOLUME 397828.729 3754457.898 33.35

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** End of LINE VOLUME Source ID = OFFSITE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = OFFSITE3
** DESCRSRC Truck route departing to south
** PREFIX
** Length of Side = 3.12
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 3.16
** SZINIT = 1.47
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LOCATION L0001282 VOLUME 396819.781 3753516.553 29.76
LOCATION L0001283 VOLUME 396822.901 3753516.535 29.77
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   LOCATION L0001578     VOLUME   397743.285 3753511.056 30.38
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   LOCATION L0001584     VOLUME   397762.005 3753510.945 30.42
   LOCATION L0001585     VOLUME   397765.125 3753510.926 30.43
** End of LINE VOLUME Source ID = OFFSITE3
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** Line Source Represented by Adjacent Volume Sources
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** LINE VOLUME Source ID = OFFSITE4
** DESCRSRC Truck route arriving from the south
** PREFIX
** Length of Side = 3.12
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 3.16
** SZINIT = 1.47
** Nodes = 3
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** 396776.973, 3753534.675, 29.61, 3.40, 1.45
** 397750.811, 3753524.283, 30.29, 3.40, 1.45
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LOCATION L0001919 VOLUME 396937.108 3753532.966 29.93
LOCATION L0001920 VOLUME 396940.228 3753532.933 29.94
LOCATION L0001921 VOLUME 396943.348 3753532.900 29.94
LOCATION L0001922 VOLUME 396946.468 3753532.866 29.96
LOCATION L0001923 VOLUME 396949.588 3753532.833 29.98
LOCATION L0001924 VOLUME 396952.707 3753532.800 29.99
LOCATION L0001925 VOLUME 396955.827 3753532.767 30.01
LOCATION L0001926 VOLUME 396958.947 3753532.733 30.03
LOCATION L0001927 VOLUME 396962.067 3753532.700 30.05
LOCATION L0001928 VOLUME 396965.187 3753532.667 30.06
LOCATION L0001929 VOLUME 396968.307 3753532.633 30.08
LOCATION L0001930 VOLUME 396971.426 3753532.600 30.09
LOCATION L0001931 VOLUME 396974.546 3753532.567 30.09
LOCATION L0001932 VOLUME 396977.666 3753532.534 30.10
LOCATION L0001933 VOLUME 396980.786 3753532.500 30.12
LOCATION L0001934 VOLUME 396983.906 3753532.467 30.14
LOCATION L0001935 VOLUME 396987.026 3753532.434 30.16
LOCATION L0001936 VOLUME 396990.145 3753532.400 30.18
LOCATION L0001937 VOLUME 396993.265 3753532.367 30.20
LOCATION L0001938 VOLUME 396996.385 3753532.334 30.22
LOCATION L0001939 VOLUME 396999.505 3753532.300 30.25
LOCATION L0001940 VOLUME 397002.625 3753532.267 30.27
LOCATION L0001941 VOLUME 397005.744 3753532.234 30.31
LOCATION L0001942 VOLUME 397008.864 3753532.201 30.35
LOCATION L0001943 VOLUME 397011.984 3753532.167 30.40
LOCATION L0001944 VOLUME 397015.104 3753532.134 30.45
LOCATION L0001945 VOLUME 397018.224 3753532.101 30.50
LOCATION L0001946 VOLUME 397021.344 3753532.067 30.57
LOCATION L0001947 VOLUME 397024.463 3753532.034 30.64
LOCATION L0001948 VOLUME 397027.583 3753532.001 30.71
LOCATION L0001949 VOLUME 397030.703 3753531.968 30.78
LOCATION L0001950 VOLUME 397033.823 3753531.934 30.85

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LOCATION L0001952 VOLUME 397040.063 3753531.868 31.01
LOCATION L0001953 VOLUME 397043.182 3753531.834 31.10
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LOCATION L0001956 VOLUME 397052.542 3753531.735 31.33
LOCATION L0001957 VOLUME 397055.662 3753531.701 31.40
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LOCATION L0001960 VOLUME 397065.021 3753531.601 31.63
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LOCATION L0001962 VOLUME 397071.261 3753531.535 31.80
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LOCATION L0001969 VOLUME 397093.099 3753531.302 32.40
LOCATION L0001970 VOLUME 397096.219 3753531.268 32.48
LOCATION L0001971 VOLUME 397099.339 3753531.235 32.56
LOCATION L0001972 VOLUME 397102.459 3753531.202 32.64
LOCATION L0001973 VOLUME 397105.579 3753531.169 32.72
LOCATION L0001974 VOLUME 397108.699 3753531.135 32.79
LOCATION L0001975 VOLUME 397111.818 3753531.102 32.86
LOCATION L0001976 VOLUME 397114.938 3753531.069 32.93
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LOCATION L0001978 VOLUME 397121.178 3753531.002 33.08
LOCATION L0001979 VOLUME 397124.298 3753530.969 33.15
LOCATION L0001980 VOLUME 397127.418 3753530.936 33.22
LOCATION L0001981 VOLUME 397130.537 3753530.902 33.28
LOCATION L0001982 VOLUME 397133.657 3753530.869 33.35
LOCATION L0001983 VOLUME 397136.777 3753530.836 33.42
LOCATION L0001984 VOLUME 397139.897 3753530.802 33.50
LOCATION L0001985 VOLUME 397143.017 3753530.769 33.57
LOCATION L0001986 VOLUME 397146.136 3753530.736 33.65
LOCATION L0001987 VOLUME 397149.256 3753530.703 33.71
LOCATION L0001988 VOLUME 397152.376 3753530.669 33.76
LOCATION L0001989 VOLUME 397155.496 3753530.636 33.81
LOCATION L0001990 VOLUME 397158.616 3753530.603 33.86
LOCATION L0001991 VOLUME 397161.736 3753530.569 33.91
LOCATION L0001992 VOLUME 397164.855 3753530.536 33.97
LOCATION L0001993 VOLUME 397167.975 3753530.503 34.01
LOCATION L0001994 VOLUME 397171.095 3753530.469 34.06
LOCATION L0001995 VOLUME 397174.215 3753530.436 34.10
LOCATION L0001996 VOLUME 397177.335 3753530.403 34.14
LOCATION L0001997 VOLUME 397180.455 3753530.370 34.18
LOCATION L0001998 VOLUME 397183.574 3753530.336 34.22
LOCATION L0001999 VOLUME 397186.694 3753530.303 34.27
LOCATION L0002000 VOLUME 397189.814 3753530.270 34.32
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LOCATION L0002002 VOLUME 397196.054 3753530.203 34.39
LOCATION L0002003 VOLUME 397199.173 3753530.170 34.42
LOCATION L0002004 VOLUME 397202.293 3753530.137 34.45

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LOCATION L0002006 VOLUME 397208.533 3753530.070 34.51
LOCATION L0002007 VOLUME 397211.653 3753530.037 34.53
LOCATION L0002008 VOLUME 397214.773 3753530.003 34.55
LOCATION L0002009 VOLUME 397217.892 3753529.970 34.23
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LOCATION L0002011 VOLUME 397224.132 3753529.904 32.57
LOCATION L0002012 VOLUME 397227.252 3753529.870 31.51
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LOCATION L0002016 VOLUME 397239.731 3753529.737 30.88
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LOCATION L0002020 VOLUME 397252.210 3753529.604 27.82
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LOCATION L0002022 VOLUME 397258.450 3753529.537 27.70
LOCATION L0002023 VOLUME 397261.570 3753529.504 27.53
LOCATION L0002024 VOLUME 397264.690 3753529.471 27.31
LOCATION L0002025 VOLUME 397267.810 3753529.437 27.08
LOCATION L0002026 VOLUME 397270.929 3753529.404 27.29
LOCATION L0002027 VOLUME 397274.049 3753529.371 27.53
LOCATION L0002028 VOLUME 397277.169 3753529.338 27.71
LOCATION L0002029 VOLUME 397280.289 3753529.304 27.72
LOCATION L0002030 VOLUME 397283.409 3753529.271 27.73
LOCATION L0002031 VOLUME 397286.528 3753529.238 28.30
LOCATION L0002032 VOLUME 397289.648 3753529.204 29.53
LOCATION L0002033 VOLUME 397292.768 3753529.171 30.76
LOCATION L0002034 VOLUME 397295.888 3753529.138 31.21
LOCATION L0002035 VOLUME 397299.008 3753529.105 31.34
LOCATION L0002036 VOLUME 397302.128 3753529.071 31.48
LOCATION L0002037 VOLUME 397305.247 3753529.038 31.60
LOCATION L0002038 VOLUME 397308.367 3753529.005 31.71
LOCATION L0002039 VOLUME 397311.487 3753528.971 32.00
LOCATION L0002040 VOLUME 397314.607 3753528.938 32.87
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LOCATION L0002054 VOLUME 397358.284 3753528.472 33.15
LOCATION L0002055 VOLUME 397361.404 3753528.439 33.07
LOCATION L0002056 VOLUME 397364.524 3753528.405 32.98
LOCATION L0002057 VOLUME 397367.644 3753528.372 32.89
LOCATION L0002058 VOLUME 397370.764 3753528.339 32.79

LOCATION L0002059 VOLUME 397373.884 3753528.306 32.69
LOCATION L0002060 VOLUME 397377.003 3753528.272 32.59
LOCATION L0002061 VOLUME 397380.123 3753528.239 32.49
LOCATION L0002062 VOLUME 397383.243 3753528.206 32.41
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LOCATION L0002064 VOLUME 397389.483 3753528.139 32.25
LOCATION L0002065 VOLUME 397392.602 3753528.106 32.18
LOCATION L0002066 VOLUME 397395.722 3753528.073 32.10
LOCATION L0002067 VOLUME 397398.842 3753528.039 32.02
LOCATION L0002068 VOLUME 397401.962 3753528.006 31.93
LOCATION L0002069 VOLUME 397405.082 3753527.973 31.85
LOCATION L0002070 VOLUME 397408.202 3753527.939 31.76
LOCATION L0002071 VOLUME 397411.321 3753527.906 31.67
LOCATION L0002072 VOLUME 397414.441 3753527.873 31.58
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LOCATION L0002074 VOLUME 397420.681 3753527.806 31.41
LOCATION L0002075 VOLUME 397423.801 3753527.773 31.33
LOCATION L0002076 VOLUME 397426.920 3753527.740 31.25
LOCATION L0002077 VOLUME 397430.040 3753527.706 31.17
LOCATION L0002078 VOLUME 397433.160 3753527.673 31.09
LOCATION L0002079 VOLUME 397436.280 3753527.640 31.02
LOCATION L0002080 VOLUME 397439.400 3753527.606 30.94
LOCATION L0002081 VOLUME 397442.520 3753527.573 30.87
LOCATION L0002082 VOLUME 397445.639 3753527.540 30.81
LOCATION L0002083 VOLUME 397448.759 3753527.507 30.74
LOCATION L0002084 VOLUME 397451.879 3753527.473 30.69
LOCATION L0002085 VOLUME 397454.999 3753527.440 30.63
LOCATION L0002086 VOLUME 397458.119 3753527.407 30.58
LOCATION L0002087 VOLUME 397461.239 3753527.373 30.53
LOCATION L0002088 VOLUME 397464.358 3753527.340 30.47
LOCATION L0002089 VOLUME 397467.478 3753527.307 30.43
LOCATION L0002090 VOLUME 397470.598 3753527.274 30.39
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LOCATION L0002093 VOLUME 397479.957 3753527.174 30.27
LOCATION L0002094 VOLUME 397483.077 3753527.140 30.23
LOCATION L0002095 VOLUME 397486.197 3753527.107 30.21
LOCATION L0002096 VOLUME 397489.317 3753527.074 30.18
LOCATION L0002097 VOLUME 397492.437 3753527.041 30.16
LOCATION L0002098 VOLUME 397495.557 3753527.007 30.15
LOCATION L0002099 VOLUME 397498.676 3753526.974 30.13
LOCATION L0002100 VOLUME 397501.796 3753526.941 30.13
LOCATION L0002101 VOLUME 397504.916 3753526.907 30.12
LOCATION L0002102 VOLUME 397508.036 3753526.874 30.12
LOCATION L0002103 VOLUME 397511.156 3753526.841 30.12
LOCATION L0002104 VOLUME 397514.276 3753526.807 30.12
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LOCATION L0002108 VOLUME 397526.755 3753526.674 30.12
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LOCATION L0002111 VOLUME 397536.114 3753526.574 30.12
LOCATION L0002112 VOLUME 397539.234 3753526.541 30.12

LOCATION L0002113 VOLUME 397542.354 3753526.508 30.11
LOCATION L0002114 VOLUME 397545.474 3753526.475 30.11
LOCATION L0002115 VOLUME 397548.594 3753526.441 30.10
LOCATION L0002116 VOLUME 397551.713 3753526.408 30.09
LOCATION L0002117 VOLUME 397554.833 3753526.375 30.09
LOCATION L0002118 VOLUME 397557.953 3753526.341 30.08
LOCATION L0002119 VOLUME 397561.073 3753526.308 30.07
LOCATION L0002120 VOLUME 397564.193 3753526.275 30.06
LOCATION L0002121 VOLUME 397567.312 3753526.242 30.05
LOCATION L0002122 VOLUME 397570.432 3753526.208 30.07
LOCATION L0002123 VOLUME 397573.552 3753526.175 30.10
LOCATION L0002124 VOLUME 397576.672 3753526.142 30.12
LOCATION L0002125 VOLUME 397579.792 3753526.108 30.13
LOCATION L0002126 VOLUME 397582.912 3753526.075 30.14
LOCATION L0002127 VOLUME 397586.031 3753526.042 30.14
LOCATION L0002128 VOLUME 397589.151 3753526.009 30.15
LOCATION L0002129 VOLUME 397592.271 3753525.975 30.15
LOCATION L0002130 VOLUME 397595.391 3753525.942 30.15
LOCATION L0002131 VOLUME 397598.511 3753525.909 30.15
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LOCATION L0002134 VOLUME 397607.870 3753525.809 30.17
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LOCATION L0002138 VOLUME 397620.349 3753525.676 30.18
LOCATION L0002139 VOLUME 397623.469 3753525.642 30.18
LOCATION L0002140 VOLUME 397626.589 3753525.609 30.18
LOCATION L0002141 VOLUME 397629.709 3753525.576 30.17
LOCATION L0002142 VOLUME 397632.829 3753525.542 30.16
LOCATION L0002143 VOLUME 397635.949 3753525.509 30.15
LOCATION L0002144 VOLUME 397639.068 3753525.476 30.16
LOCATION L0002145 VOLUME 397642.188 3753525.443 30.16
LOCATION L0002146 VOLUME 397645.308 3753525.409 30.17
LOCATION L0002147 VOLUME 397648.428 3753525.376 30.17
LOCATION L0002148 VOLUME 397651.548 3753525.343 30.17
LOCATION L0002149 VOLUME 397654.668 3753525.309 30.17
LOCATION L0002150 VOLUME 397657.787 3753525.276 30.18
LOCATION L0002151 VOLUME 397660.907 3753525.243 30.19
LOCATION L0002152 VOLUME 397664.027 3753525.210 30.19
LOCATION L0002153 VOLUME 397667.147 3753525.176 30.20
LOCATION L0002154 VOLUME 397670.267 3753525.143 30.21
LOCATION L0002155 VOLUME 397673.386 3753525.110 30.21
LOCATION L0002156 VOLUME 397676.506 3753525.076 30.22
LOCATION L0002157 VOLUME 397679.626 3753525.043 30.23
LOCATION L0002158 VOLUME 397682.746 3753525.010 30.23
LOCATION L0002159 VOLUME 397685.866 3753524.976 30.23
LOCATION L0002160 VOLUME 397688.986 3753524.943 30.24
LOCATION L0002161 VOLUME 397692.105 3753524.910 30.23
LOCATION L0002162 VOLUME 397695.225 3753524.877 30.23
LOCATION L0002163 VOLUME 397698.345 3753524.843 30.24
LOCATION L0002164 VOLUME 397701.465 3753524.810 30.25
LOCATION L0002165 VOLUME 397704.585 3753524.777 30.26
LOCATION L0002166 VOLUME 397707.705 3753524.743 30.27

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   LOCATION L0002167     VOLUME   397710.824 3753524.710 30.27
   LOCATION L0002168     VOLUME   397713.944 3753524.677 30.27
   LOCATION L0002169     VOLUME   397717.064 3753524.644 30.27
   LOCATION L0002170     VOLUME   397720.184 3753524.610 30.26
   LOCATION L0002171     VOLUME   397723.304 3753524.577 30.27
   LOCATION L0002172     VOLUME   397726.423 3753524.544 30.27
   LOCATION L0002173     VOLUME   397729.543 3753524.510 30.28
   LOCATION L0002174     VOLUME   397732.663 3753524.477 30.28
   LOCATION L0002175     VOLUME   397735.783 3753524.444 30.29
   LOCATION L0002176     VOLUME   397738.903 3753524.411 30.29
   LOCATION L0002177     VOLUME   397742.023 3753524.377 30.28
   LOCATION L0002178     VOLUME   397745.142 3753524.344 30.28
   LOCATION L0002179     VOLUME   397748.262 3753524.311 30.27
** End of LINE VOLUME Source ID = OFFSITE4
   LOCATION IDLE1        POINT      396602.330  3754462.410       32.010
** DESCRSRC Loading Bay 1 of 70
   LOCATION IDLE2        POINT      396605.920  3754462.610       32.010
** DESCRSRC Loading Bay 2 of 70
   LOCATION IDLE3        POINT      396609.310  3754462.510       32.020
** DESCRSRC Loading Bay 3 of 70
   LOCATION IDLE4        POINT      396612.402  3754462.607       32.030
** DESCRSRC Loading Bay 4 of 70
   LOCATION IDLE5        POINT      396616.290  3754462.507       32.060
** DESCRSRC Loading Bay 5 of 70
   LOCATION IDLE6        POINT      396619.580  3754462.806       32.080
** DESCRSRC Loading Bay 6 of 70
   LOCATION IDLE7        POINT      396623.369  3754462.407       32.070
** DESCRSRC Loading Bay 7 of 70
   LOCATION IDLE8        POINT      396627.058  3754462.308       32.060
** DESCRSRC Loading Bay 8 of 70
   LOCATION IDLE9        POINT      396630.149  3754462.507       32.070
** DESCRSRC Loading Bay 9 of 70
   LOCATION IDLE10       POINT      396633.937  3754462.407       32.080
** DESCRSRC Loading Bay 10 of 70
   LOCATION IDLE11       POINT      396637.427  3754462.308       32.090
** DESCRSRC Loading Bay 11 of 70
   LOCATION IDLE12       POINT      396640.916  3754462.607       32.090
** DESCRSRC Loading Bay 12 of 70
   LOCATION IDLE13       POINT      396644.705  3754462.407       32.080
** DESCRSRC Loading Bay 13 of 70
   LOCATION IDLE14       POINT      396647.995  3754462.407       32.070
** DESCRSRC Loading Bay 14 of 70
   LOCATION IDLE15       POINT      396651.385  3754462.607       32.050
** DESCRSRC Loading Bay 15 of 70
   LOCATION IDLE16       POINT      396654.974  3754462.407       32.040
** DESCRSRC Loading Bay 16 of 70
   LOCATION IDLE17       POINT      396658.364  3754462.407       32.020
** DESCRSRC Loading Bay 17 of 70
   LOCATION IDLE18       POINT      396662.053  3754462.308       32.010
** DESCRSRC Loading Bay 18 of 70
   LOCATION IDLE19       POINT      396665.543  3754462.407       31.990
** DESCRSRC Loading Bay 19 of 70
   LOCATION IDLE20       POINT      396669.032  3754462.308       31.970
** DESCRSRC Loading Bay 20 of 70
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   LOCATION IDLE21       POINT     396672.921  3754462.507       31.970
** DESCRSRC Loading Bay 21 of 70
   LOCATION IDLE22       POINT     396676.012  3754462.308       31.980
** DESCRSRC Loading Bay 22 of 70
   LOCATION IDLE23       POINT     396679.601  3754462.407       32.000
** DESCRSRC Loading Bay 23 of 70
   LOCATION IDLE24       POINT     396683.190  3754462.208       32.030
** DESCRSRC Loading Bay 24 of 70
   LOCATION IDLE25       POINT     396686.680  3754462.407       32.050
** DESCRSRC Loading Bay 25 of 70
   LOCATION IDLE26       POINT     396690.169  3754462.308       32.060
** DESCRSRC Loading Bay 26 of 70
   LOCATION IDLE27       POINT     396693.759  3754462.607       32.080
** DESCRSRC Loading Bay 27 of 70
   LOCATION IDLE28       POINT     396697.148  3754462.407       32.090
** DESCRSRC Loading Bay 28 of 70
   LOCATION IDLE29       POINT     396700.937  3754462.208       32.110
** DESCRSRC Loading Bay 29 of 70
   LOCATION IDLE30       POINT     396704.028  3754462.407       32.120
** DESCRSRC Loading Bay 30 of 70
   LOCATION IDLE31       POINT     396707.617  3754462.108       32.140
** DESCRSRC Loading Bay 31 of 70
   LOCATION IDLE32       POINT     396711.406  3754462.407       32.150
** DESCRSRC Loading Bay 32 of 70
   LOCATION IDLE33       POINT     396714.397  3754462.707       32.150
** DESCRSRC Loading Bay 33 of 70
   LOCATION IDLE34       POINT     396718.385  3754462.607       32.130
** DESCRSRC Loading Bay 34 of 70
   LOCATION IDLE35       POINT     396721.575  3754462.806       32.110
** DESCRSRC Loading Bay 35 of 70
   LOCATION IDLE36       POINT     396602.068  3754435.450       31.940
** DESCRSRC Loading Bay 36 of 70
   LOCATION IDLE37       POINT     396605.658  3754435.650       31.950
** DESCRSRC Loading Bay 37 of 70
   LOCATION IDLE38       POINT     396609.048  3754435.550       31.950
** DESCRSRC Loading Bay 38 of 70
   LOCATION IDLE39       POINT     396612.140  3754435.647       31.960
** DESCRSRC Loading Bay 39 of 70
   LOCATION IDLE47       POINT     396644.443  3754435.448       31.960
** DESCRSRC Loading Bay 47 of 70
   LOCATION IDLE48       POINT     396647.733  3754435.448       32.040
** DESCRSRC Loading Bay 48 of 70
   LOCATION IDLE49       POINT     396651.123  3754435.647       32.130
** DESCRSRC Loading Bay 49 of 70
   LOCATION IDLE50       POINT     396654.713  3754435.448       32.180
** DESCRSRC Loading Bay 50 of 70
   LOCATION IDLE51       POINT     396658.102  3754435.448       32.170
** DESCRSRC Loading Bay 51 of 70
   LOCATION IDLE52       POINT     396661.791  3754435.348       32.170
** DESCRSRC Loading Bay 52 of 70
   LOCATION IDLE53       POINT     396665.281  3754435.448       32.140
** DESCRSRC Loading Bay 53 of 70
   LOCATION IDLE54       POINT     396668.771  3754435.348       32.120
** DESCRSRC Loading Bay 54 of 70
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   LOCATION IDLE55       POINT      396672.659  3754435.547       32.100
** DESCRSRC Loading Bay 55 of 70
   LOCATION IDLE56       POINT      396675.750  3754435.348       32.090
** DESCRSRC Loading Bay 56 of 70
   LOCATION IDLE40       POINT      396616.028  3754435.547       31.960
** DESCRSRC Loading Bay 40 of 70
   LOCATION IDLE41       POINT      396679.339  3754435.448       32.090
** DESCRSRC Loading Bay 41 of 70
   LOCATION IDLE42       POINT      396682.928  3754435.248       32.110
** DESCRSRC Loading Bay 42 of 70
   LOCATION IDLE43       POINT      396686.418  3754435.448       32.140
** DESCRSRC Loading Bay 43 of 70
   LOCATION IDLE44       POINT      396689.907  3754435.348       32.130
** DESCRSRC Loading Bay 44 of 70
   LOCATION IDLE45       POINT      396693.497  3754435.647       32.110
** DESCRSRC Loading Bay 45 of 70
   LOCATION IDLE46       POINT      396696.886  3754435.448       32.100
** DESCRSRC Loading Bay 46 of 70
   LOCATION IDLE57       POINT      396700.675  3754435.248       32.080
** DESCRSRC Loading Bay 57 of 70
   LOCATION IDLE58       POINT      396703.766  3754435.448       32.060
** DESCRSRC Loading Bay 58 of 70
   LOCATION IDLE59       POINT      396707.355  3754435.149       32.040
** DESCRSRC Loading Bay 59 of 70
   LOCATION IDLE60       POINT      396711.144  3754435.448       32.020
** DESCRSRC Loading Bay 60 of 70
   LOCATION IDLE61       POINT      396619.318  3754435.847       31.980
** DESCRSRC Loading Bay 61 of 70
   LOCATION IDLE62       POINT      396714.135  3754435.747       32.000
** DESCRSRC Loading Bay 62 of 70
   LOCATION IDLE63       POINT      396718.123  3754435.647       31.980
** DESCRSRC Loading Bay 63 of 70
   LOCATION IDLE64       POINT      396721.313  3754435.847       31.970
** DESCRSRC Loading Bay 64 of 70
   LOCATION IDLE65       POINT      396623.107  3754435.448       32.020
** DESCRSRC Loading Bay 65 of 70
   LOCATION IDLE66       POINT      396626.796  3754435.348       32.060
** DESCRSRC Loading Bay 66 of 70
   LOCATION IDLE67       POINT      396629.887  3754435.547       32.070
** DESCRSRC Loading Bay 67 of 70
   LOCATION IDLE68       POINT      396633.675  3754435.448       32.080
** DESCRSRC Loading Bay 68 of 70
   LOCATION IDLE69       POINT      396637.165  3754435.348       32.060
** DESCRSRC Loading Bay 69 of 70
   LOCATION IDLE70       POINT      396640.655  3754435.647       32.010
** DESCRSRC Loading Bay 70 of 70
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = ONSITE
** DESCRSRC Onsite truck route
** PREFIX
** Length of Side = 3.12
** Configuration = Adjacent
** Emission Rate = 1.0
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** Vertical Dimension = 3.16
** SZINIT = 1.47
** Nodes = 4
** 396778.269, 3754482.124, 31.83, 3.40, 1.45
** 396589.382, 3754482.797, 31.69, 3.40, 1.45
** 396589.382, 3754415.722, 31.65, 3.40, 1.45
** 396775.802, 3754414.824, 31.62, 3.40, 1.45
** ------------------------------------------------------------------
   LOCATION L0002180     VOLUME   396776.709 3754482.129 31.86
   LOCATION L0002181     VOLUME   396773.589 3754482.140 31.75
   LOCATION L0002182     VOLUME   396770.469 3754482.152 31.81
   LOCATION L0002183     VOLUME   396767.349 3754482.163 31.89
   LOCATION L0002184     VOLUME   396764.229 3754482.174 31.97
   LOCATION L0002185     VOLUME   396761.109 3754482.185 32.02
   LOCATION L0002186     VOLUME   396757.989 3754482.196 32.07
   LOCATION L0002187     VOLUME   396754.869 3754482.207 32.10
   LOCATION L0002188     VOLUME   396751.749 3754482.218 32.11
   LOCATION L0002189     VOLUME   396748.629 3754482.229 32.11
   LOCATION L0002190     VOLUME   396745.509 3754482.240 32.11
   LOCATION L0002191     VOLUME   396742.389 3754482.252 32.12
   LOCATION L0002192     VOLUME   396739.270 3754482.263 32.13
   LOCATION L0002193     VOLUME   396736.150 3754482.274 32.12
   LOCATION L0002194     VOLUME   396733.030 3754482.285 32.11
   LOCATION L0002195     VOLUME   396729.910 3754482.296 32.10
   LOCATION L0002196     VOLUME   396726.790 3754482.307 32.11
   LOCATION L0002197     VOLUME   396723.670 3754482.318 32.11
   LOCATION L0002198     VOLUME   396720.550 3754482.329 32.12
   LOCATION L0002199     VOLUME   396717.430 3754482.341 32.14
   LOCATION L0002200     VOLUME   396714.310 3754482.352 32.16
   LOCATION L0002201     VOLUME   396711.190 3754482.363 32.16
   LOCATION L0002202     VOLUME   396708.070 3754482.374 32.15
   LOCATION L0002203     VOLUME   396704.950 3754482.385 32.15
   LOCATION L0002204     VOLUME   396701.830 3754482.396 32.14
   LOCATION L0002205     VOLUME   396698.710 3754482.407 32.12
   LOCATION L0002206     VOLUME   396695.590 3754482.418 32.10
   LOCATION L0002207     VOLUME   396692.470 3754482.429 32.07
   LOCATION L0002208     VOLUME   396689.350 3754482.441 32.04
   LOCATION L0002209     VOLUME   396686.230 3754482.452 32.01
   LOCATION L0002210     VOLUME   396683.110 3754482.463 31.98
   LOCATION L0002211     VOLUME   396679.990 3754482.474 31.95
   LOCATION L0002212     VOLUME   396676.870 3754482.485 31.95
   LOCATION L0002213     VOLUME   396673.750 3754482.496 31.95
   LOCATION L0002214     VOLUME   396670.630 3754482.507 31.95
   LOCATION L0002215     VOLUME   396667.510 3754482.518 31.94
   LOCATION L0002216     VOLUME   396664.390 3754482.530 31.94
   LOCATION L0002217     VOLUME   396661.270 3754482.541 31.94
   LOCATION L0002218     VOLUME   396658.150 3754482.552 31.96
   LOCATION L0002219     VOLUME   396655.030 3754482.563 31.97
   LOCATION L0002220     VOLUME   396651.910 3754482.574 32.00
   LOCATION L0002221     VOLUME   396648.790 3754482.585 32.06
   LOCATION L0002222     VOLUME   396645.670 3754482.596 32.11
   LOCATION L0002223     VOLUME   396642.550 3754482.607 32.11
   LOCATION L0002224     VOLUME   396639.430 3754482.618 32.10
   LOCATION L0002225     VOLUME   396636.310 3754482.630 32.08
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LOCATION L0002226 VOLUME 396633.190 3754482.641 32.06
LOCATION L0002227 VOLUME 396630.070 3754482.652 32.04
LOCATION L0002228 VOLUME 396626.950 3754482.663 32.04
LOCATION L0002229 VOLUME 396623.830 3754482.674 32.07
LOCATION L0002230 VOLUME 396620.710 3754482.685 32.10
LOCATION L0002231 VOLUME 396617.590 3754482.696 32.10
LOCATION L0002232 VOLUME 396614.470 3754482.707 32.07
LOCATION L0002233 VOLUME 396611.350 3754482.718 32.04
LOCATION L0002234 VOLUME 396608.230 3754482.730 32.02
LOCATION L0002235 VOLUME 396605.110 3754482.741 32.00
LOCATION L0002236 VOLUME 396601.990 3754482.752 31.98
LOCATION L0002237 VOLUME 396598.870 3754482.763 31.90
LOCATION L0002238 VOLUME 396595.750 3754482.774 31.82
LOCATION L0002239 VOLUME 396592.630 3754482.785 31.75
LOCATION L0002240 VOLUME 396589.510 3754482.796 31.71
LOCATION L0002241 VOLUME 396589.382 3754479.805 31.70
LOCATION L0002242 VOLUME 396589.382 3754476.685 31.69
LOCATION L0002243 VOLUME 396589.382 3754473.565 31.69
LOCATION L0002244 VOLUME 396589.382 3754470.445 31.69
LOCATION L0002245 VOLUME 396589.382 3754467.325 31.70
LOCATION L0002246 VOLUME 396589.382 3754464.205 31.70
LOCATION L0002247 VOLUME 396589.382 3754461.085 31.71
LOCATION L0002248 VOLUME 396589.382 3754457.965 31.71
LOCATION L0002249 VOLUME 396589.382 3754454.845 31.71
LOCATION L0002250 VOLUME 396589.382 3754451.725 31.70
LOCATION L0002251 VOLUME 396589.382 3754448.605 31.71
LOCATION L0002252 VOLUME 396589.382 3754445.485 31.72
LOCATION L0002253 VOLUME 396589.382 3754442.365 31.74
LOCATION L0002254 VOLUME 396589.382 3754439.245 31.75
LOCATION L0002255 VOLUME 396589.382 3754436.125 31.74
LOCATION L0002256 VOLUME 396589.382 3754433.005 31.73
LOCATION L0002257 VOLUME 396589.382 3754429.885 31.73
LOCATION L0002258 VOLUME 396589.382 3754426.765 31.71
LOCATION L0002259 VOLUME 396589.382 3754423.645 31.69
LOCATION L0002260 VOLUME 396589.382 3754420.525 31.68
LOCATION L0002261 VOLUME 396589.382 3754417.405 31.67
LOCATION L0002262 VOLUME 396590.819 3754415.715 31.72
LOCATION L0002263 VOLUME 396593.939 3754415.700 31.78
LOCATION L0002264 VOLUME 396597.059 3754415.685 31.77
LOCATION L0002265 VOLUME 396600.179 3754415.670 31.77
LOCATION L0002266 VOLUME 396603.299 3754415.655 31.77
LOCATION L0002267 VOLUME 396606.419 3754415.640 31.78
LOCATION L0002268 VOLUME 396609.539 3754415.625 31.79
LOCATION L0002269 VOLUME 396612.659 3754415.610 31.79
LOCATION L0002270 VOLUME 396615.779 3754415.595 31.80
LOCATION L0002271 VOLUME 396618.899 3754415.580 31.82
LOCATION L0002272 VOLUME 396622.019 3754415.565 31.85
LOCATION L0002273 VOLUME 396625.139 3754415.550 31.89
LOCATION L0002274 VOLUME 396628.259 3754415.535 31.92
LOCATION L0002275 VOLUME 396631.379 3754415.520 31.92
LOCATION L0002276 VOLUME 396634.499 3754415.505 31.92
LOCATION L0002277 VOLUME 396637.619 3754415.490 31.96
LOCATION L0002278 VOLUME 396640.739 3754415.475 32.02
LOCATION L0002279 VOLUME 396643.859 3754415.460 32.08

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   LOCATION L0002281     VOLUME   396650.099 3754415.429 32.12
   LOCATION L0002282     VOLUME   396653.219 3754415.414 32.13
   LOCATION L0002283     VOLUME   396656.339 3754415.399 32.12
   LOCATION L0002284     VOLUME   396659.458 3754415.384 32.12
   LOCATION L0002285     VOLUME   396662.578 3754415.369 32.09
   LOCATION L0002286     VOLUME   396665.698 3754415.354 32.03
   LOCATION L0002287     VOLUME   396668.818 3754415.339 31.98
   LOCATION L0002288     VOLUME   396671.938 3754415.324 31.96
   LOCATION L0002289     VOLUME   396675.058 3754415.309 31.96
   LOCATION L0002290     VOLUME   396678.178 3754415.294 31.95
   LOCATION L0002291     VOLUME   396681.298 3754415.279 31.97
   LOCATION L0002292     VOLUME   396684.418 3754415.264 31.99
   LOCATION L0002293     VOLUME   396687.538 3754415.249 32.00
   LOCATION L0002294     VOLUME   396690.658 3754415.234 32.00
   LOCATION L0002295     VOLUME   396693.778 3754415.219 32.00
   LOCATION L0002296     VOLUME   396696.898 3754415.204 32.00
   LOCATION L0002297     VOLUME   396700.018 3754415.189 31.99
   LOCATION L0002298     VOLUME   396703.138 3754415.174 31.99
   LOCATION L0002299     VOLUME   396706.258 3754415.159 31.97
   LOCATION L0002300     VOLUME   396709.378 3754415.144 31.96
   LOCATION L0002301     VOLUME   396712.498 3754415.129 31.94
   LOCATION L0002302     VOLUME   396715.618 3754415.114 31.92
   LOCATION L0002303     VOLUME   396718.738 3754415.099 31.90
   LOCATION L0002304     VOLUME   396721.858 3754415.084 31.88
   LOCATION L0002305     VOLUME   396724.978 3754415.069 31.84
   LOCATION L0002306     VOLUME   396728.098 3754415.054 31.81
   LOCATION L0002307     VOLUME   396731.218 3754415.039 31.80
   LOCATION L0002308     VOLUME   396734.338 3754415.024 31.82
   LOCATION L0002309     VOLUME   396737.458 3754415.009 31.85
   LOCATION L0002310     VOLUME   396740.578 3754414.994 31.83
   LOCATION L0002311     VOLUME   396743.698 3754414.979 31.80
   LOCATION L0002312     VOLUME   396746.817 3754414.964 31.77
   LOCATION L0002313     VOLUME   396749.937 3754414.949 31.76
   LOCATION L0002314     VOLUME   396753.057 3754414.934 31.74
   LOCATION L0002315     VOLUME   396756.177 3754414.919 31.73
   LOCATION L0002316     VOLUME   396759.297 3754414.904 31.73
   LOCATION L0002317     VOLUME   396762.417 3754414.889 31.74
   LOCATION L0002318     VOLUME   396765.537 3754414.874 31.71
   LOCATION L0002319     VOLUME   396768.657 3754414.859 31.65
   LOCATION L0002320     VOLUME   396771.777 3754414.844 31.60
   LOCATION L0002321     VOLUME   396774.897 3754414.829 31.66
** End of LINE VOLUME Source ID = ONSITE
** Source Parameters **
** LINE VOLUME Source ID = OFFSITE1
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   SRCPARAM L0000002     0.0020533881      3.40      1.45      1.47
   SRCPARAM L0000003     0.0020533881      3.40      1.45      1.47
   SRCPARAM L0000004     0.0020533881      3.40      1.45      1.47
   SRCPARAM L0000005     0.0020533881      3.40      1.45      1.47
   SRCPARAM L0000006     0.0020533881      3.40      1.45      1.47
   SRCPARAM L0000007     0.0020533881      3.40      1.45      1.47
   SRCPARAM L0000008     0.0020533881      3.40      1.45      1.47
   SRCPARAM L0000009     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0000010     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000011     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000012     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0000014     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000015     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000016     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000017     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0000019     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000020     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000021     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0000061     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0000063     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0000068     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000069     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000070     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000071     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000072     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0000074     0.0020533881      3.40      1.45      1.47
SRCPARAM L0000075     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0000078     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0000080     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0000111     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0000119     0.0020533881      3.40      1.45      1.47
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SRCPARAM L0002126     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002127     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002128     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002129     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002130     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002131     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002132     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002133     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002134     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002135     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002136     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002137     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002138     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002139     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002140     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002141     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002142     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002143     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002144     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002145     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002146     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002147     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002148     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002149     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002150     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002151     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002152     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002153     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002154     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002155     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002156     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002157     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002158     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002159     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002160     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002161     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002162     0.0016835017      3.40      1.45      1.47
SRCPARAM L0002163     0.0016835017      3.40      1.45      1.47
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   SRCPARAM L0002169     0.0016835017      3.40      1.45      1.47
   SRCPARAM L0002170     0.0016835017      3.40      1.45      1.47
   SRCPARAM L0002171     0.0016835017      3.40      1.45      1.47
   SRCPARAM L0002172     0.0016835017      3.40      1.45      1.47
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   SRCPARAM L0002175     0.0016835017      3.40      1.45      1.47
   SRCPARAM L0002176     0.0016835017      3.40      1.45      1.47
   SRCPARAM L0002177     0.0016835017      3.40      1.45      1.47
   SRCPARAM L0002178     0.0016835017      3.40      1.45      1.47
   SRCPARAM L0002179     0.0016835017      3.40      1.45      1.47
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   SRCPARAM IDLE3              1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE4              1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE5              1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE6              1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE7              1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE8              1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE9              1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE10             1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE11             1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE12             1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE13             1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE14             1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE15             1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE16             1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE17             1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE18             1.0     4.000   366.000  51.71000
0.100
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0.100
   SRCPARAM IDLE20            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE21            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE22            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE23            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE24            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE25            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE26            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE27            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE28            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE29            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE30            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE31            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE32            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE33            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE34            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE35            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE36            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE37            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE38            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE39            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE47            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE48            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE49            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE50            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE51            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE52            1.0     4.000   366.000  51.71000
0.100
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0.100
   SRCPARAM IDLE54            1.0     4.000   366.000  51.71000
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   SRCPARAM IDLE55            1.0     4.000   366.000  51.71000
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   SRCPARAM IDLE56            1.0     4.000   366.000  51.71000
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   SRCPARAM IDLE40            1.0     4.000   366.000  51.71000
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   SRCPARAM IDLE44            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE45            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE46            1.0     4.000   366.000  51.71000
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   SRCPARAM IDLE57            1.0     4.000   366.000  51.71000
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   SRCPARAM IDLE58            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE59            1.0     4.000   366.000  51.71000
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   SRCPARAM IDLE60            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE61            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE62            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE63            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE64            1.0     4.000   366.000  51.71000
0.100
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0.100
   SRCPARAM IDLE66            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE67            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE68            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE69            1.0     4.000   366.000  51.71000
0.100
   SRCPARAM IDLE70            1.0     4.000   366.000  51.71000
0.100
** LINE VOLUME Source ID = ONSITE
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   SRCPARAM L0002181     0.0070422535      3.40      1.45      1.47
   SRCPARAM L0002182     0.0070422535      3.40      1.45      1.47
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SRCPARAM L0002185     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002186     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002187     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002188     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002189     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002190     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002191     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002192     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002193     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002194     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002195     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002196     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002197     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002198     0.0070422535      3.40      1.45      1.47
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SRCPARAM L0002200     0.0070422535      3.40      1.45      1.47
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SRCPARAM L0002205     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002206     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002207     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002208     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002209     0.0070422535      3.40      1.45      1.47
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SRCPARAM L0002211     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002212     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002213     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002214     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002215     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002216     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002217     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002218     0.0070422535      3.40      1.45      1.47
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SRCPARAM L0002225     0.0070422535      3.40      1.45      1.47
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SRCPARAM L0002227     0.0070422535      3.40      1.45      1.47
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SRCPARAM L0002230     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002231     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002232     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002233     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002234     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002235     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002236     0.0070422535      3.40      1.45      1.47
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SRCPARAM L0002243     0.0070422535      3.40      1.45      1.47
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SRCPARAM L0002286     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002287     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002288     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002289     0.0070422535      3.40      1.45      1.47
SRCPARAM L0002290     0.0070422535      3.40      1.45      1.47
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   SRCPARAM L0002307     0.0070422535      3.40      1.45      1.47
   SRCPARAM L0002308     0.0070422535      3.40      1.45      1.47
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   SRCPARAM L0002312     0.0070422535      3.40      1.45      1.47
   SRCPARAM L0002313     0.0070422535      3.40      1.45      1.47
   SRCPARAM L0002314     0.0070422535      3.40      1.45      1.47
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   SRCPARAM L0002316     0.0070422535      3.40      1.45      1.47
   SRCPARAM L0002317     0.0070422535      3.40      1.45      1.47
   SRCPARAM L0002318     0.0070422535      3.40      1.45      1.47
   SRCPARAM L0002319     0.0070422535      3.40      1.45      1.47
   SRCPARAM L0002320     0.0070422535      3.40      1.45      1.47
   SRCPARAM L0002321     0.0070422535      3.40      1.45      1.47
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** Building Downwash **
   BUILDHGT IDLE1           13.72    13.72    13.72    13.72    13.72
13.72
   BUILDHGT IDLE1           13.72    13.72    13.72    13.72    13.72
13.72
   BUILDHGT IDLE1           13.72    13.72    13.72    13.72    13.72
13.72
   BUILDHGT IDLE1           13.72    13.72    13.72    13.72    13.72
13.72
   BUILDHGT IDLE1           13.72    13.72    13.72    13.72    13.72
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143.96

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143.96

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143.96

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143.96
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143.96

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143.96

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143.96

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143.96

BUILDWID IDLE69 147.48 146.52 141.11 131.41 117.72
100.45

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143.96
   BUILDWID IDLE69         147.48   146.52   141.11   131.41   117.72
100.45
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97.90
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143.96

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100.45
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97.90
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143.96
   BUILDWID IDLE70         147.48   146.52   141.11   131.41   117.72
100.45
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97.90
   BUILDWID IDLE70         115.46   129.52   139.64   145.51   146.97
143.96

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141.11
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39.27
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139.64
   BUILDLEN IDLE1          145.51   146.97   143.96   147.48   146.52
141.11
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39.27

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141.11
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139.64
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141.11
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39.27

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139.64
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141.11
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141.11
BUILDLEN IDLE3 131.41 117.72 100.45 80.13 57.38
39.27

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39.27

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39.27

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39.27

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39.27

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BUILDLEN IDLE19 131.41 117.72 100.45 80.13 57.38
39.27

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139.64
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141.11
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39.27

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141.11
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139.64
   BUILDLEN IDLE21         145.51   146.97   143.96   147.48   146.52
141.11
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39.27

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141.11
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139.64
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141.11
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39.27

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141.11
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139.64
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141.11
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39.27
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39.27

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BUILDLEN IDLE30 54.47 77.36 97.90 115.46 129.52
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BUILDLEN IDLE30 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE30 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE31 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
BUILDLEN IDLE31 131.41 117.72 100.45 80.13 57.38
39.27
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BUILDLEN IDLE31 145.51 146.97 143.96 147.48 146.52
141.11
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39.27

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139.64
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141.11

BUILDLEN IDLE32 131.41 117.72 100.45 80.13 57.38
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139.64
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141.11
BUILDLEN IDLE32 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE33 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
BUILDLEN IDLE33 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE33 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE33 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE33 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE34 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE34 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE34 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE34 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE34 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE34 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE35 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
BUILDLEN IDLE35 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE35 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE35 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE35 131.41 117.72 100.45 80.13 57.38
39.27

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139.64
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141.11
BUILDLEN IDLE36 131.41 117.72 100.45 80.13 57.38
39.27

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139.64
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141.11
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39.27

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139.64
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141.11
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39.27
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139.64
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141.11
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39.27

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141.11
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39.27
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139.64
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141.11
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39.27

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139.64
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141.11
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39.27
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139.64
   BUILDLEN IDLE39         145.51   146.97   143.96   147.48   146.52
141.11
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39.27

   BUILDLEN IDLE47          54.47    77.36    97.90   115.46   129.52
139.64
   BUILDLEN IDLE47         145.51   146.97   143.96   147.48   146.52
141.11
   BUILDLEN IDLE47         131.41   117.72   100.45    80.13    57.38
39.27
   BUILDLEN IDLE47          54.47    77.36    97.90   115.46   129.52
139.64
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BUILDLEN IDLE47 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE47 131.41 117.72 100.45 80.13 57.38
39.27

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139.64
BUILDLEN IDLE48 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE48 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE48 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE48 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE48 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE49 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
BUILDLEN IDLE49 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE49 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
BUILDLEN IDLE49 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE50 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
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39.27
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139.64
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141.11
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39.27

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139.64
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141.11
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39.27
BUILDLEN IDLE51 54.47 77.36 97.90 115.46 129.52
139.64
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141.11

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39.27

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139.64
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141.11
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39.27
BUILDLEN IDLE52 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
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39.27

BUILDLEN IDLE53 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
BUILDLEN IDLE53 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE53 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE53 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE53 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE54 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
BUILDLEN IDLE54 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE54 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE54 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE54 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE55 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE55 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE55 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE55 54.47 77.36 97.90 115.46 129.52
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BUILDLEN IDLE55 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE55 131.41 117.72 100.45 80.13 57.38
39.27

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139.64
   BUILDLEN IDLE56         145.51   146.97   143.96   147.48   146.52
141.11
   BUILDLEN IDLE56         131.41   117.72   100.45    80.13    57.38
39.27
   BUILDLEN IDLE56          54.47    77.36    97.90   115.46   129.52
139.64
   BUILDLEN IDLE56         145.51   146.97   143.96   147.48   146.52
141.11
   BUILDLEN IDLE56         131.41   117.72   100.45    80.13    57.38
39.27

   BUILDLEN IDLE40          54.47    77.36    97.90   115.46   129.52
139.64
   BUILDLEN IDLE40         145.51   146.97   143.96   147.48   146.52
141.11
   BUILDLEN IDLE40         131.41   117.72   100.45    80.13    57.38
39.27
   BUILDLEN IDLE40          54.47    77.36    97.90   115.46   129.52
139.64
   BUILDLEN IDLE40         145.51   146.97   143.96   147.48   146.52
141.11
   BUILDLEN IDLE40         131.41   117.72   100.45    80.13    57.38
39.27

   BUILDLEN IDLE41          54.47    77.36    97.90   115.46   129.52
139.64
   BUILDLEN IDLE41         145.51   146.97   143.96   147.48   146.52
141.11
   BUILDLEN IDLE41         131.41   117.72   100.45    80.13    57.38
39.27
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139.64
   BUILDLEN IDLE41         145.51   146.97   143.96   147.48   146.52
141.11
   BUILDLEN IDLE41         131.41   117.72   100.45    80.13    57.38
39.27

   BUILDLEN IDLE42          54.47    77.36    97.90   115.46   129.52
139.64
   BUILDLEN IDLE42         145.51   146.97   143.96   147.48   146.52
141.11
   BUILDLEN IDLE42         131.41   117.72   100.45    80.13    57.38
39.27
   BUILDLEN IDLE42          54.47    77.36    97.90   115.46   129.52
139.64
   BUILDLEN IDLE42         145.51   146.97   143.96   147.48   146.52
141.11
   BUILDLEN IDLE42         131.41   117.72   100.45    80.13    57.38
39.27
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139.64
BUILDLEN IDLE43 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE43 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE43 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE43 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE43 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE44 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE44 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE44 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE44 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE44 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE44 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE45 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
BUILDLEN IDLE45 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE45 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE45 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE45 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE46 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
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139.64
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141.11
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39.27

BUILDLEN IDLE57 54.47 77.36 97.90 115.46 129.52
139.64

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141.11
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39.27
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139.64
BUILDLEN IDLE57 145.51 146.97 143.96 147.48 146.52
141.11
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39.27

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139.64
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141.11
BUILDLEN IDLE58 131.41 117.72 100.45 80.13 57.38
39.27
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139.64
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141.11
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39.27

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139.64
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BUILDLEN IDLE59 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE59 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE59 145.51 146.97 143.96 147.48 146.52
141.11
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39.27

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139.64
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141.11
BUILDLEN IDLE60 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE60 54.47 77.36 97.90 115.46 129.52
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BUILDLEN IDLE61 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE61 145.51 146.97 143.96 147.48 146.52
141.11

BUILDLEN IDLE61 131.41 117.72 100.45 80.13 57.38
39.27
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139.64
BUILDLEN IDLE61 145.51 146.97 143.96 147.48 146.52
141.11
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39.27

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139.64
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BUILDLEN IDLE62 131.41 117.72 100.45 80.13 57.38
39.27
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139.64
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141.11
BUILDLEN IDLE62 131.41 117.72 100.45 80.13 57.38
39.27

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139.64
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141.11
BUILDLEN IDLE63 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE63 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
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39.27

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139.64
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141.11
BUILDLEN IDLE64 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE64 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE64 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE64 131.41 117.72 100.45 80.13 57.38
39.27

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139.64
BUILDLEN IDLE65 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE65 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE65 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE65 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE65 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE66 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE66 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE66 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE66 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE66 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE66 131.41 117.72 100.45 80.13 57.38
39.27

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139.64
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141.11
BUILDLEN IDLE67 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE67 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE67 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE67 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE68 54.47 77.36 97.90 115.46 129.52
139.64
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141.11
BUILDLEN IDLE68 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE68 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE68 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE68 131.41 117.72 100.45 80.13 57.38
39.27

BUILDLEN IDLE69 54.47 77.36 97.90 115.46 129.52
139.64
BUILDLEN IDLE69 145.51 146.97 143.96 147.48 146.52
141.11
BUILDLEN IDLE69 131.41 117.72 100.45 80.13 57.38
39.27
BUILDLEN IDLE69 54.47 77.36 97.90 115.46 129.52
139.64

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   BUILDLEN IDLE69         145.51   146.97   143.96   147.48   146.52
141.11
   BUILDLEN IDLE69         131.41   117.72   100.45    80.13    57.38
39.27

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139.64
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141.11
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39.27
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139.64
   BUILDLEN IDLE70         145.51   146.97   143.96   147.48   146.52
141.11
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39.27

   XBADJ    IDLE1          -24.80   -23.91   -22.30   -20.01   -17.10   -
13.68
   XBADJ    IDLE1           -9.85    -5.71    -1.40    -1.17    -0.89
-0.60
   XBADJ    IDLE1           -0.28     0.04     0.37     0.68     0.97
-5.16
   XBADJ    IDLE1          -29.67   -53.45   -75.60   -95.46  -112.41  -
125.96
   XBADJ    IDLE1         -135.67  -141.26  -142.56  -146.32  -145.63  -
140.52
   XBADJ    IDLE1         -131.13  -117.77  -100.82   -80.81   -58.35   -
34.11

   XBADJ    IDLE2          -25.62   -25.33   -24.27   -22.47   -19.98   -
16.89
   XBADJ    IDLE2          -13.29    -9.28    -4.99    -4.67    -4.20
-3.61
   XBADJ    IDLE2           -2.90    -2.11    -1.26    -0.36     0.54
-4.96
   XBADJ    IDLE2          -28.85   -52.03   -73.63   -93.00  -109.54  -
122.75
   XBADJ    IDLE2         -132.23  -137.69  -138.97  -142.82  -142.32  -
137.51
   XBADJ    IDLE2         -128.51  -115.61   -99.20   -79.77   -57.92   -
34.31

   XBADJ    IDLE3          -26.11   -26.40   -25.88   -24.57   -22.51   -
19.78
   XBADJ    IDLE3          -16.44   -12.60    -8.38    -8.02    -7.42
-6.59
   XBADJ    IDLE3           -5.56    -4.37    -3.04    -1.62    -0.15
-5.06
   XBADJ    IDLE3          -28.36   -50.97   -72.02   -90.90  -107.00  -
119.86
   XBADJ    IDLE3         -129.08  -134.37  -135.58  -139.46  -139.10  -
134.52
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   XBADJ    IDLE3         -125.85  -113.36   -97.42   -78.52   -57.23   -
34.21

   XBADJ    IDLE4          -26.75   -27.55   -27.51   -26.63   -24.95   -
22.50
   XBADJ    IDLE4          -19.38   -15.66   -11.47   -11.05   -10.29
-9.22
   XBADJ    IDLE4           -7.87    -6.28    -4.50    -2.58    -0.58
-4.96
   XBADJ    IDLE4          -27.72   -49.82   -70.39   -88.83  -104.57  -
117.13
   XBADJ    IDLE4         -126.14  -131.31  -132.49  -136.44  -136.23  -
131.89
   XBADJ    IDLE4         -123.55  -111.45   -95.96   -77.56   -56.80   -
34.31

   XBADJ    IDLE5          -27.33   -28.78   -29.37   -29.05   -27.86   -
25.82
   XBADJ    IDLE5          -23.00   -19.47   -15.36   -14.90   -13.98   -
12.64
   XBADJ    IDLE5          -10.91    -8.85    -6.53    -4.00    -1.36
-5.06
   XBADJ    IDLE5          -27.15   -48.58   -68.53   -86.41  -101.66  -
113.82
   XBADJ    IDLE5         -122.52  -127.50  -128.60  -132.59  -132.54  -
128.48
   XBADJ    IDLE5         -120.50  -108.87   -93.93   -76.13   -56.02   -
34.21

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28.82
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15.34
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-4.76
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110.82
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125.78
   XBADJ    IDLE6         -118.18  -106.98   -92.54   -75.29   -55.75   -
34.51

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31.90
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18.82
   XBADJ    IDLE7          -16.40   -13.48   -10.15    -6.52    -2.69
-5.16
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107.73
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122.29
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34.11
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22.06
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-5.26
   XBADJ    IDLE8          -25.47   -45.08   -63.32   -79.64   -93.53  -
104.59
   XBADJ    IDLE8         -112.46  -116.92  -117.83  -121.95  -122.36  -
119.05
   XBADJ    IDLE8         -112.12  -101.79   -88.37   -72.26   -53.95   -
34.01

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37.83
   XBADJ    IDLE9          -36.02   -33.12   -29.22   -28.55   -27.00   -
24.64
   XBADJ    IDLE9          -21.53   -17.76   -13.46    -8.74    -3.76
-5.06
   XBADJ    IDLE9          -24.74   -43.84   -61.60   -77.50   -91.04  -
101.81
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116.47
   XBADJ    IDLE9         -109.89   -99.96   -87.00   -71.39   -53.61   -
34.21

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27.97
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113.14
   XBADJ    IDLE10        -106.92   -97.45   -85.02   -70.00   -52.86   -
34.11

   XBADJ    IDLE11         -30.80   -35.83   -39.76   -42.49   -43.93   -
44.03
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31.04
   XBADJ    IDLE11         -27.23   -22.60   -17.27   -11.42    -5.23
-5.26
   XBADJ    IDLE11         -23.67   -41.54   -58.14   -72.97   -85.59   -
95.61
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110.07
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34.01
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107.20
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34.31

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103.81
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34.11

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100.96
   XBADJ    IDLE14         -96.15   -88.41   -77.99   -65.19   -50.42   -
34.11

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94.93
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58.41
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33.91

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34.11

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76.72
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34.01

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34.31

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43.84
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34.11

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33.81

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95.06
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31.49
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46.05
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43.61
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34.41

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25.35
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40.11
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34.31

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117.16
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103.67
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22.48
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37.44
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34.51

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32.12
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-3.19
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16.86
   XBADJ    IDLE37        -20.03   -22.60   -24.47   -25.61   -25.96   -
31.92
   XBADJ    IDLE37        -55.44   -77.45   -97.11  -113.82  -127.06  -
136.45
   XBADJ    IDLE37       -141.69  -142.63  -139.23  -138.39  -133.35  -
124.25
   XBADJ    IDLE37       -111.38   -95.13   -75.98   -54.53   -31.42
-7.35

   XBADJ    IDLE38          0.48    -0.97    -2.40    -3.75    -4.99
-6.07
   XBADJ    IDLE38         -6.97    -7.66    -8.12   -12.45   -16.40   -
19.85
   XBADJ    IDLE38        -22.69   -24.85   -26.26   -26.86   -26.65   -
32.02
   XBADJ    IDLE38        -54.95   -76.39   -95.50  -111.71  -124.53  -
133.57
   XBADJ    IDLE38       -138.54  -139.31  -135.84  -135.04  -130.13  -
121.27
   XBADJ    IDLE38       -108.72   -92.87   -74.20   -53.27   -30.73
-7.25

   XBADJ    IDLE39         -0.15    -2.12    -4.03    -5.81    -7.42
-8.80
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22.47
   XBADJ    IDLE39        -25.00   -26.76   -27.71   -27.82   -27.09   -
31.92
   XBADJ    IDLE39        -54.32   -75.24   -93.87  -109.65  -122.10  -
130.84
   XBADJ    IDLE39       -135.60  -136.25  -132.75  -132.01  -127.26  -
118.64
   XBADJ    IDLE39       -106.42   -90.96   -72.74   -52.31   -30.29
-7.35

   XBADJ    IDLE47         -5.57   -12.98   -20.01   -26.42   -32.03   -
36.67
   XBADJ    IDLE47        -40.20   -42.50   -43.51   -47.32   -49.69   -
50.55
   XBADJ    IDLE47        -49.87   -47.68   -44.04   -39.06   -32.89   -
32.12
   XBADJ    IDLE47        -48.91   -64.38   -77.89   -89.04   -97.49  -
102.97
   XBADJ    IDLE47       -105.32  -104.47  -100.45  -100.17   -96.84   -
90.57
   XBADJ    IDLE47        -81.55   -70.05   -56.42   -41.07   -24.48
-7.15
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| XBADJ | IDLE48 | -6.14 | -14.11 | -21.65 | -28.54 | -34.55 | -39.52 |
| XBADJ | IDLE48 | -43.29 | -45.74 | -46.80 | -50.56 | -52.78 | -53.39 |
| XBADJ | IDLE48 | -52.39 | -49.79 | -45.68 | -40.18 | -33.47 | -32.12 |
| XBADJ | IDLE48 | -48.34 | -63.25 | -76.25 | -86.93 | -94.97 | -100.12 |
| XBADJ | IDLE48 | -102.23 | -101.23 | -97.16 | -96.93 | -93.75 | -87.72 |
| XBADJ | IDLE48 | -79.02 | -67.93 | -54.77 | -39.95 | -23.91 | -7.15 |
| XBADJ | IDLE49 | -6.92 | -15.46 | -23.52 | -30.87 | -37.28 | -42.56 |
| XBADJ | IDLE49 | -46.54 | -49.11 | -50.19 | -53.86 | -55.89 | -56.23 |
| XBADJ | IDLE49 | -54.86 | -51.82 | -47.20 | -41.16 | -33.86 | -31.92 |
| XBADJ | IDLE49 | -47.55 | -61.91 | -74.38 | -84.60 | -92.24 | -97.08 |
| XBADJ | IDLE49 | -98.97 | -97.86 | -93.77 | -93.62 | -90.63 | -84.88 |
| XBADJ | IDLE49 | -76.56 | -65.90 | -53.25 | -38.98 | -23.52 | -7.35 |
| XBADJ | IDLE50 | -7.35 | -16.50 | -25.14 | -33.02 | -39.90 | -45.56 |
| XBADJ | IDLE50 | -49.85 | -52.61 | -53.78 | -57.43 | -59.34 | -59.44 |
| XBADJ | IDLE50 | -57.74 | -54.28 | -49.17 | -42.57 | -34.68 | -32.12 |
| XBADJ | IDLE50 | -47.12 | -60.87 | -72.76 | -82.44 | -89.62 | -94.07 |
| XBADJ | IDLE50 | -95.67 | -94.36 | -90.18 | -90.05 | -87.19 | -81.67 |
| XBADJ | IDLE50 | -73.68 | -63.44 | -51.28 | -37.56 | -22.70 | -7.15 |
| XBADJ | IDLE51 | -7.94 | -17.66 | -26.84 | -35.20 | -42.50 | -48.50 |
| XBADJ | IDLE51 | -53.03 | -55.95 | -57.17 | -60.77 | -62.52 | -62.38 |
| XBADJ | IDLE51 | -60.33 | -56.46 | -50.87 | -43.73 | -35.27 | -32.12 |
| XBADJ | IDLE51 | -46.54 | -59.71 | -71.06 | -80.26 | -87.02 | -91.14 |
| XBADJ | IDLE51 | -92.48 | -91.02 | -86.79 | -86.71 | -84.00 | -78.74 |
| XBADJ | IDLE51 | -71.08 | -61.26 | -49.59 | -36.40 | -22.11 | -7.15 |
| XBADJ | IDLE52 | -8.48 | -18.82 | -28.59 | -37.50 | -45.26 | -51.65 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| XBADJ | IDLE52 | -56.46 | -59.57 | -60.86 | -64.42 | -66.02 | -65.62 |
| XBADJ | IDLE52 | -63.22 | -58.91 | -52.80 | -45.09 | -36.01 | -32.22 |
| XBADJ | IDLE52 | -45.99 | -58.54 | -69.31 | -77.97 | -84.26 | -87.99 |
| XBADJ | IDLE52 | -89.05 | -87.40 | -83.10 | -83.06 | -80.50 | -75.49 |
| XBADJ | IDLE52 | -68.19 | -58.82 | -47.66 | -35.05 | -21.37 | -7.05 |
| XBADJ | IDLE53 | -9.18 | -20.11 | -30.43 | -39.82 | -48.00 | -54.72 |
| XBADJ | IDLE53 | -59.78 | -63.02 | -64.35 | -67.84 | -69.27 | -68.59 |
| XBADJ | IDLE53 | -65.83 | -61.07 | -54.46 | -46.19 | -36.51 | -32.12 |
| XBADJ | IDLE53 | -45.29 | -57.25 | -67.47 | -75.65 | -81.52 | -84.92 |
| XBADJ | IDLE53 | -85.74 | -83.95 | -79.61 | -79.64 | -77.25 | -72.52 |
| XBADJ | IDLE53 | -65.58 | -56.65 | -46.00 | -33.95 | -20.87 | -7.15 |
| XBADJ | IDLE54 | -9.69 | -21.21 | -32.08 | -41.98 | -50.61 | -57.69 |
| XBADJ | IDLE54 | -63.02 | -66.44 | -67.84 | -71.29 | -72.58 | -71.67 |
| XBADJ | IDLE54 | -68.57 | -63.39 | -56.29 | -47.47 | -37.22 | -32.22 |
| XBADJ | IDLE54 | -44.78 | -56.15 | -65.82 | -73.48 | -78.91 | -81.95 |
| XBADJ | IDLE54 | -82.49 | -80.53 | -76.12 | -76.19 | -73.94 | -69.45 |
| XBADJ | IDLE54 | -62.84 | -54.33 | -44.17 | -32.66 | -20.16 | -7.05 |
| XBADJ | IDLE55 | -10.56 | -22.73 | -34.20 | -44.64 | -53.71 | -61.16 |
| XBADJ | IDLE55 | -66.75 | -70.31 | -71.73 | -75.09 | -76.17 | -74.93 |
| XBADJ | IDLE55 | -71.42 | -65.74 | -58.06 | -48.62 | -37.70 | -32.02 |
| XBADJ | IDLE55 | -43.91 | -54.63 | -63.70 | -70.83 | -75.80 | -78.48 |
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| XBADJ | IDLE55 | -59.99 | -51.98 | -42.39 | -31.52 | -19.68 | -7.25 |
| XBADJ | IDLE56 | -10.90 | -23.60 | -35.57 | -46.47 | -55.95 | -63.74 |
| XBADJ | IDLE56 | -69.58 | -73.32 | -74.82 | -78.17 | -79.14 | -77.71 |

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63.40
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-7.05

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25.89
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32.02
   XBADJ    IDLE40         -53.74   -74.00   -92.01  -107.23  -119.19  -
127.52
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115.22
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-7.25

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80.77
   XBADJ    IDLE41         -76.60   -70.11   -61.49   -51.00   -38.95   -
32.12
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   XBADJ    IDLE41         -72.52   -70.10   -65.55   -65.80   -64.04   -
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   XBADJ    IDLE41         -54.81   -47.61   -38.97   -29.14   -18.42
-7.15

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   XBADJ    IDLE42         -79.48   -72.57   -63.46   -52.41   -39.78   -
32.32
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69.73
   XBADJ    IDLE42         -69.22   -66.60   -61.96   -62.23   -60.60   -
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   XBADJ    IDLE42         -51.93   -45.15   -37.00   -27.72   -17.60
-6.95

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73.03
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32.12
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54.21
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-7.15

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76.00
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89.97
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32.22
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63.64
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51.14
   XBADJ    IDLE44         -46.65   -40.74   -33.60   -25.43   -16.49
-7.05

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79.26
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92.93
   XBADJ    IDLE45         -87.32   -79.06   -68.39   -55.65   -41.22   -
31.92
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60.38
   XBADJ    IDLE45         -59.15   -56.12   -51.39   -51.89   -50.80   -
48.18
   XBADJ    IDLE45         -44.09   -38.66   -32.06   -24.48   -16.16
-7.35

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95.97
   XBADJ    IDLE46         -90.05   -81.39   -70.26   -57.00   -42.00   -
32.12
   XBADJ    IDLE46         -39.80   -46.44   -51.67   -55.33   -57.31   -
57.54
   XBADJ    IDLE46         -56.03   -52.82   -48.00   -48.51   -47.55   -
45.14
   XBADJ    IDLE46         -41.37   -36.33   -30.19   -23.14   -15.38
-7.15

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85.28
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99.35
   XBADJ    IDLE57         -93.08   -83.98   -72.33   -58.48   -42.86   -
32.32
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54.36
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41.76
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-6.95

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88.05
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101.93
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32.12
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51.59
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39.19
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-7.15

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91.01
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105.19
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32.42
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48.63
   XBADJ    IDLE59         -46.30   -42.56   -37.53   -38.15   -37.61   -
35.93
   XBADJ    IDLE59         -33.15   -29.37   -24.70   -19.27   -13.26
-6.85

   XBADJ    IDLE60         -17.15   -35.80   -53.36   -69.29   -83.13   -
94.43
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108.31
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32.12
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45.20
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32.80
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-7.15

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15.12
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28.59
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31.72
   XBADJ    IDLE61         -52.88   -72.59   -90.11  -104.88  -116.47  -
124.52
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112.52
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-7.55

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110.75
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31.82
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42.46
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30.36
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-7.45

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100.58
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114.25
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31.92
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39.06
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26.86
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-7.35

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103.44
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116.92
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31.72
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24.20
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-7.55

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32.07
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32.12
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121.44
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109.04
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-7.15
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21.34
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35.32
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32.22
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118.29
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105.79
   XBADJ    IDLE66         -94.99   -81.31   -65.15   -47.01   -27.45
-7.05

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24.12
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37.90
   XBADJ    IDLE67         -38.66   -38.25   -36.68   -33.99   -30.27   -
32.02
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115.52
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103.22
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-7.25

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27.35
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41.23
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32.12
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112.29
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99.89
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-7.15

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30.32
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44.29
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32.22
   XBADJ    IDLE69         -50.27   -66.96   -81.62   -93.80  -103.13  -
109.32
   XBADJ    IDLE69        -112.19  -111.66  -107.73  -107.32  -103.64   -
96.82
   XBADJ    IDLE69         -87.06   -74.65   -59.97   -43.47   -25.65
-7.05
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| XBADJ | IDLE70 | -5.10 | -11.87 | -18.28 | -24.14 | -29.26 | -33.49 |
| XBADJ | IDLE70 | -36.70 | -38.80 | -39.72 | -43.55 | -46.06 | -47.16 |
| XBADJ | IDLE70 | -46.84 | -45.09 | -41.97 | -37.58 | -32.04 | -31.92 |
| XBADJ | IDLE70 | -49.37 | -65.49 | -79.62 | -91.33 | -100.26 | -106.15 |
| XBADJ | IDLE70 | -108.81 | -108.17 | -104.24 | -103.93 | -100.47 | -93.95 |
| XBADJ | IDLE70 | -84.58 | -72.63 | -58.49 | -42.56 | -25.34 | -7.35 |
| YBADJ | IDLE1 | -72.58 | -72.37 | -69.96 | -65.43 | -58.90 | -50.59 |
| YBADJ | IDLE1 | -40.74 | -29.66 | -14.47 | 2.43 | 14.77 | 26.65 |
| YBADJ | IDLE1 | 37.73 | 47.66 | 56.14 | 62.91 | 67.78 | 70.58 |
| YBADJ | IDLE1 | 72.58 | 72.37 | 69.96 | 65.43 | 58.90 | 50.59 |
| YBADJ | IDLE1 | 40.74 | 29.66 | 14.47 | -2.43 | -14.77 | -26.65 |
| YBADJ | IDLE1 | -37.73 | -47.66 | -56.14 | -62.91 | -67.78 | -70.58 |
| YBADJ | IDLE2 | -69.08 | -69.06 | -66.95 | -62.80 | -56.75 | -48.97 |
| YBADJ | IDLE2 | -39.70 | -29.23 | -14.67 | 1.61 | 13.35 | 24.68 |
| YBADJ | IDLE2 | 35.27 | 44.78 | 52.93 | 59.47 | 64.21 | 66.99 |
| YBADJ | IDLE2 | 69.08 | 69.06 | 66.95 | 62.80 | 56.75 | 48.97 |
| YBADJ | IDLE2 | 39.70 | 29.23 | 14.67 | -1.61 | -13.35 | -24.68 |
| YBADJ | IDLE2 | -35.27 | -44.78 | -52.93 | -59.47 | -64.21 | -66.99 |
| YBADJ | IDLE3 | -65.72 | -65.84 | -63.96 | -60.14 | -54.49 | -47.19 |
| YBADJ | IDLE3 | -38.45 | -28.54 | -14.57 | 1.12 | 12.29 | 23.07 |
| YBADJ | IDLE3 | 33.16 | 42.24 | 50.04 | 56.32 | 60.88 | 63.60 |
| YBADJ | IDLE3 | 65.72 | 65.84 | 63.96 | 60.14 | 54.49 | 47.19 |
| YBADJ | IDLE3 | 38.45 | 28.54 | 14.57 | -1.12 | -12.29 | -23.07 |
| YBADJ | IDLE3 | -33.16 | -42.24 | -50.04 | -56.32 | -60.88 | -63.60 |
| YBADJ | IDLE4 | -62.69 | -62.97 | -61.34 | -57.84 | -52.58 | -45.73 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| YBADJ | IDLE4 | -37.49 | -28.11 | -14.67 | 0.49 | 11.13 | 21.44 |
| YBADJ | IDLE4 | 31.10 | 39.81 | 47.32 | 53.38 | 57.82 | 60.51 |
| YBADJ | IDLE4 | 62.69 | 62.97 | 61.34 | 57.84 | 52.58 | 45.73 |
| YBADJ | IDLE4 | 37.49 | 28.11 | 14.67 | -0.49 | -11.13 | -21.44 |
| YBADJ | IDLE4 | -31.10 | -39.81 | -47.32 | -53.38 | -57.82 | -60.51 |
| YBADJ | IDLE5 | -58.85 | -59.28 | -57.92 | -54.80 | -50.01 | -43.70 |
| YBADJ | IDLE5 | -36.06 | -27.33 | -14.57 | -0.09 | 9.90 | 19.58 |
| YBADJ | IDLE5 | 28.68 | 36.90 | 44.00 | 49.76 | 54.01 | 56.62 |
| YBADJ | IDLE5 | 58.85 | 59.28 | 57.92 | 54.80 | 50.01 | 43.70 |
| YBADJ | IDLE5 | 36.06 | 27.33 | 14.57 | 0.09 | -9.90 | -19.58 |
| YBADJ | IDLE5 | -28.68 | -36.90 | -44.00 | -49.76 | -54.01 | -56.62 |
| YBADJ | IDLE6 | -55.66 | -56.29 | -55.22 | -52.47 | -48.12 | -42.31 |
| YBADJ | IDLE6 | -35.22 | -27.06 | -14.87 | -0.96 | 8.49 | 17.68 |
| YBADJ | IDLE6 | 26.33 | 34.18 | 41.00 | 46.57 | 50.72 | 53.33 |
| YBADJ | IDLE6 | 55.66 | 56.29 | 55.22 | 52.47 | 48.12 | 42.31 |
| YBADJ | IDLE6 | 35.22 | 27.06 | 14.87 | 0.96 | -8.49 | -17.68 |
| YBADJ | IDLE6 | -26.33 | -34.18 | -41.00 | -46.57 | -50.72 | -53.33 |
| YBADJ | IDLE7 | -51.86 | -52.60 | -51.74 | -49.31 | -45.38 | -40.07 |
| YBADJ | IDLE7 | -33.55 | -26.00 | -14.47 | -1.22 | 7.57 | 16.13 |
| YBADJ | IDLE7 | 24.20 | 31.54 | 37.92 | 43.14 | 47.06 | 49.54 |
| YBADJ | IDLE7 | 51.86 | 52.60 | 51.74 | 49.31 | 45.38 | 40.07 |
| YBADJ | IDLE7 | 33.55 | 26.00 | 14.47 | 1.22 | -7.57 | -16.13 |
| YBADJ | IDLE7 | -24.20 | -31.54 | -37.92 | -43.14 | -47.06 | -49.54 |
| YBADJ | IDLE8 | -48.20 | -49.09 | -48.49 | -46.42 | -42.93 | -38.14 |
| YBADJ | IDLE8 | -32.19 | -25.26 | -14.37 | -1.76 | 6.40 | 14.37 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| YBADJ | IDLE8 | 21.91 | 28.78 | 34.77 | 39.71 | 43.44 | 45.85 |
| YBADJ | IDLE8 | 48.20 | 49.09 | 48.49 | 46.42 | 42.93 | 38.14 |
| YBADJ | IDLE8 | 32.19 | 25.26 | 14.37 | 1.76 | -6.40 | -14.37 |
| YBADJ | IDLE8 | -21.91 | -28.78 | -34.77 | -39.71 | -43.44 | -45.85 |
| YBADJ | IDLE9 | -45.20 | -46.26 | -45.92 | -44.18 | -41.10 | -36.77 |
| YBADJ | IDLE9 | -31.32 | -24.93 | -14.57 | -2.50 | 5.16 | 12.65 |
| YBADJ | IDLE9 | 19.77 | 26.28 | 31.99 | 36.74 | 40.36 | 42.76 |
| YBADJ | IDLE9 | 45.20 | 46.26 | 45.92 | 44.18 | 41.10 | 36.77 |
| YBADJ | IDLE9 | 31.32 | 24.93 | 14.57 | 2.50 | -5.16 | -12.65 |
| YBADJ | IDLE9 | -19.77 | -26.28 | -31.99 | -36.74 | -40.36 | -42.76 |
| YBADJ | IDLE10 | -41.45 | -42.66 | -42.58 | -41.21 | -38.59 | -34.79 |
| YBADJ | IDLE10 | -29.93 | -24.17 | -14.47 | -3.06 | 3.96 | 10.85 |
| YBADJ | IDLE10 | 17.41 | 23.44 | 28.76 | 33.21 | 36.65 | 38.97 |
| YBADJ | IDLE10 | 41.45 | 42.66 | 42.58 | 41.21 | 38.59 | 34.79 |
| YBADJ | IDLE10 | 29.93 | 24.17 | 14.47 | 3.06 | -3.96 | -10.85 |
| YBADJ | IDLE10 | -17.41 | -23.44 | -28.76 | -33.21 | -36.65 | -38.97 |
| YBADJ | IDLE11 | -37.99 | -39.35 | -39.51 | -38.47 | -36.27 | -32.96 |
| YBADJ | IDLE11 | -28.65 | -23.46 | -14.37 | -3.56 | 2.86 | 9.19 |
| YBADJ | IDLE11 | 15.24 | 20.83 | 25.79 | 29.96 | 33.23 | 35.48 |
| YBADJ | IDLE11 | 37.99 | 39.35 | 39.51 | 38.47 | 36.27 | 32.96 |
| YBADJ | IDLE11 | 28.65 | 23.46 | 14.37 | 3.56 | -2.86 | -9.19 |
| YBADJ | IDLE11 | -15.24 | -20.83 | -25.79 | -29.96 | -33.23 | -35.48 |
| YBADJ | IDLE12 | -34.61 | -36.17 | -36.64 | -35.99 | -34.25 | -31.47 |
| YBADJ | IDLE12 | -27.73 | -23.15 | -14.67 | -4.47 | 1.38 | 7.18 |
| YBADJ | IDLE12 | 12.77 | 17.97 | 22.62 | 26.58 | 29.74 | 31.99 |

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31.47
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31.99

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29.40
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5.46
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28.20
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29.40
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-5.46
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28.20

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27.76
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3.82
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24.91
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27.76
   YBADJ    IDLE14          25.12    21.73    14.47     5.50     0.85
-3.82
   YBADJ    IDLE14          -8.37   -12.67   -16.59   -20.00   -22.80   -
24.91

   YBADJ    IDLE15         -24.30   -26.33   -27.57   -27.97   -27.52   -
26.24
   YBADJ    IDLE15         -24.15   -21.34   -14.67    -6.28    -2.20
1.95
   YBADJ    IDLE15           6.04     9.94    13.55    16.74    19.43
21.52
   YBADJ    IDLE15          24.30    26.33    27.57    27.97    27.52
26.24
   YBADJ    IDLE15          24.15    21.34    14.67     6.28     2.20
-1.95
   YBADJ    IDLE15          -6.04    -9.94   -13.55   -16.74   -19.43   -
21.52

   YBADJ    IDLE16         -20.74   -22.90   -24.37   -25.10   -25.07   -
24.27
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0.33
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17.94
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24.27
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-0.33
   YBADJ    IDLE16          -3.89    -7.33   -10.55   -13.45   -15.94   -
17.94

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22.58
   YBADJ    IDLE17         -21.58   -19.93   -14.47    -7.30    -4.40
-1.36
   YBADJ    IDLE17           1.71     4.73     7.61    10.26    12.60
14.55
   YBADJ    IDLE17          17.40    19.72    21.44    22.50    22.89
22.58
   YBADJ    IDLE17          21.58    19.93    14.47     7.30     4.40
1.36
   YBADJ    IDLE17          -1.71    -4.73    -7.61   -10.26   -12.60   -
14.55

   YBADJ    IDLE18         -13.75   -16.21   -18.19   -19.61   -20.44   -
20.65
   YBADJ    IDLE18         -20.22   -19.19   -14.37    -7.84    -5.57
-3.12
   YBADJ    IDLE18          -0.58     1.97     4.47     6.83     8.98
10.86
   YBADJ    IDLE18          13.75    16.21    18.19    19.61    20.44
20.65
   YBADJ    IDLE18          20.22    19.19    14.37     7.84     5.57
3.12
   YBADJ    IDLE18           0.58    -1.97    -4.47    -6.83    -8.98   -
10.86

   YBADJ    IDLE19         -10.33   -12.97   -15.22   -17.00   -18.27   -
18.99
   YBADJ    IDLE19         -19.13   -18.68   -14.47    -8.54    -6.85
-4.95
   YBADJ    IDLE19          -2.90    -0.77     1.40     3.51     5.53
7.37
   YBADJ    IDLE19          10.33    12.97    15.22    17.00    18.27
18.99
   YBADJ    IDLE19          19.13    18.68    14.47     8.54     6.85
4.95
   YBADJ    IDLE19           2.90     0.77    -1.40    -3.51    -5.53
-7.37

   YBADJ    IDLE20          -6.87    -9.66   -12.15   -14.27   -15.95   -
17.16
   YBADJ    IDLE20         -17.84   -17.98   -14.37    -9.05    -7.95
-6.61
   YBADJ    IDLE20          -5.07    -3.38    -1.58     0.27     2.11
3.88
   YBADJ    IDLE20           6.87     9.66    12.15    14.27    15.95
17.16
   YBADJ    IDLE20          17.84    17.98    14.37     9.05     7.95
6.61
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-3.88

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15.38
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-8.73
   YBADJ    IDLE21         -7.72    -6.48    -5.05    -3.46    -1.76
-0.01
   YBADJ    IDLE21          3.08     6.07     8.88    11.41    13.61
15.38
   YBADJ    IDLE21         16.69    17.50    14.57     9.92     9.47
8.73
   YBADJ    IDLE21          7.72     6.48     5.05     3.46     1.76
0.01

   YBADJ    IDLE22          0.00    -3.10    -6.10    -8.92   -11.47   -
13.67
   YBADJ    IDLE22        -15.45   -16.76   -14.37   -10.26   -10.34   -
10.10
   YBADJ    IDLE22         -9.56    -8.72    -7.62    -6.29    -4.77
-3.10
   YBADJ    IDLE22          0.00     3.10     6.10     8.92    11.47
13.67
   YBADJ    IDLE22         15.45    16.76    14.37    10.26    10.34
10.10
   YBADJ    IDLE22          9.56     8.72     7.62     6.29     4.77
3.10

   YBADJ    IDLE23          3.52     0.24    -3.04    -6.23    -9.24   -
11.96
   YBADJ    IDLE23        -14.32   -16.24   -14.47   -10.99   -11.66   -
11.98
   YBADJ    IDLE23        -11.94   -11.54   -10.78    -9.70    -8.32
-6.69
   YBADJ    IDLE23         -3.52    -0.24     3.04     6.23     9.24
11.96
   YBADJ    IDLE23         14.32    16.24    14.47    10.99    11.66
11.98
   YBADJ    IDLE23         11.94    11.54    10.78     9.70     8.32
6.69

   YBADJ    IDLE24          7.09     3.68     0.17    -3.35    -6.77
-9.99
   YBADJ    IDLE24        -12.90   -15.42   -14.27   -11.41   -12.70   -
13.61
   YBADJ    IDLE24        -14.10   -14.16   -13.79   -13.00   -11.82   -
10.28
   YBADJ    IDLE24         -7.09    -3.68    -0.17     3.35     6.77
9.99
   YBADJ    IDLE24         12.90    15.42    14.27    11.41    12.70
13.61
   YBADJ    IDLE24         14.10    14.16    13.79    13.00    11.82
10.28
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-8.42
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15.52
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13.77
   YBADJ    IDLE25         -10.49    -6.90    -3.09     0.81     4.68
8.42
   YBADJ    IDLE25          11.89    15.01    14.47    12.21    14.08
15.52
   YBADJ    IDLE25          16.49    16.96    16.91    16.35    15.29
13.77

   YBADJ    IDLE26          13.95    10.21     6.16     1.93    -2.36
-6.59
   YBADJ    IDLE26         -10.61   -14.31   -14.37   -12.72   -15.18   -
17.18
   YBADJ    IDLE26         -18.66   -19.57   -19.89   -19.60   -18.71   -
17.26
   YBADJ    IDLE26         -13.95   -10.21    -6.16    -1.93     2.36
6.59
   YBADJ    IDLE26          10.61    14.31    14.37    12.72    15.18
17.18
   YBADJ    IDLE26          18.66    19.57    19.89    19.60    18.71
17.26

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-5.05
   YBADJ    IDLE27          -9.66   -13.98   -14.67   -13.64   -16.69   -
19.24
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20.85
   YBADJ    IDLE27         -17.43   -13.48    -9.12    -4.49     0.29
5.05
   YBADJ    IDLE27           9.66    13.98    14.67    13.64    16.69
19.24
   YBADJ    IDLE27          21.20    22.51    23.14    23.07    22.30
20.85

   YBADJ    IDLE28          20.80    16.73    12.16     7.21     2.05
-3.18
   YBADJ    IDLE28          -8.31   -13.19   -14.47   -14.03   -17.66   -
20.76
   YBADJ    IDLE28         -23.22   -24.98   -25.98   -26.19   -25.60   -
24.24
   YBADJ    IDLE28         -20.80   -16.73   -12.16    -7.21    -2.05
3.18
   YBADJ    IDLE28           8.31    13.19    14.47    14.03    17.66
20.76
   YBADJ    IDLE28          23.22    24.98    25.98    26.19    25.60
24.24
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-1.11
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22.48
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28.03
   YBADJ    IDLE29         -24.57   -20.36   -15.54   -10.24    -4.63
1.11
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22.48
   YBADJ    IDLE29          25.51    27.76    29.16    29.68    29.30
28.03

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0.26
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24.20
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31.12
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-0.26
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24.20
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31.12

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2.31
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25.73
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34.71
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-2.31
   YBADJ    IDLE31           4.45    11.08    14.17    15.56    20.96
25.73
   YBADJ    IDLE31          29.72    32.81    34.90    35.93    35.86
34.71

   YBADJ    IDLE32          34.85    30.13    24.51    18.13    11.21
3.95
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27.89
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38.50
   YBADJ    IDLE32         -34.85   -30.13   -24.51   -18.13   -11.21
-3.95
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27.89
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38.50

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5.18
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29.64
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41.49
   YBADJ    IDLE33         -37.74   -32.84   -26.95   -20.23   -12.90
-5.18
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29.64
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41.49

   YBADJ    IDLE34          41.68    36.62    30.44    23.35    15.54
7.26
   YBADJ    IDLE34          -1.24    -9.70   -14.68   -17.92   -25.11   -
31.55
   YBADJ    IDLE34         -37.02   -41.37   -44.47   -46.21   -46.55   -
45.47
   YBADJ    IDLE34         -41.68   -36.62   -30.44   -23.35   -15.54
-7.26
   YBADJ    IDLE34           1.24     9.70    14.67    17.92    25.11
31.55
   YBADJ    IDLE34          37.02    41.37    44.47    46.21    46.55
45.47

   YBADJ    IDLE35          44.79    39.55    33.11    25.67    17.44
8.69
   YBADJ    IDLE35          -0.33    -9.34   -14.88   -18.67   -26.40   -
33.32
   YBADJ    IDLE35         -39.23   -43.95   -47.34   -49.28   -49.73   -
48.67
   YBADJ    IDLE35         -44.79   -39.55   -33.11   -25.67   -17.44
-8.69
   YBADJ    IDLE35           0.33     9.34    14.87    18.67    26.40
33.32
   YBADJ    IDLE35          39.23    43.95    47.34    49.28    49.73
48.67

   YBADJ    IDLE36         -68.15   -63.39   -56.70   -48.30   -38.42   -
27.37
   YBADJ    IDLE36         -15.50    -3.15    12.49    29.03    40.19
50.13
   YBADJ    IDLE36          58.55    65.18    69.84    72.38    72.71
70.84
   YBADJ    IDLE36          68.15    63.39    56.70    48.30    38.42
27.37
   YBADJ    IDLE36          15.50     3.15   -12.49   -29.03   -40.19   -
50.13
   YBADJ    IDLE36         -58.55   -65.18   -69.84   -72.38   -72.71   -
70.84

   YBADJ    IDLE37         -64.65   -60.09   -53.70   -45.67   -36.26   -
25.75
   YBADJ    IDLE37         -14.46    -2.73    12.29    28.21    38.77
48.16
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   YBADJ    IDLE37          56.09    62.31    66.63    68.94    69.14
67.25
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25.75
   YBADJ    IDLE37          14.46     2.73   -12.29   -28.21   -38.77   -
48.16
   YBADJ    IDLE37         -56.09   -62.31   -66.63   -68.94   -69.14   -
67.25

   YBADJ    IDLE38         -61.29   -56.87   -50.71   -43.01   -34.01   -
23.97
   YBADJ    IDLE38         -13.21    -2.04    12.39    27.72    37.71
46.55
   YBADJ    IDLE38          53.98    59.77    63.75    65.78    65.82
63.86
   YBADJ    IDLE38          61.29    56.87    50.71    43.01    34.01
23.97
   YBADJ    IDLE38          13.21     2.04   -12.39   -27.72   -37.71   -
46.55
   YBADJ    IDLE38         -53.98   -59.77   -63.75   -65.78   -65.82   -
63.86

   YBADJ    IDLE39         -58.27   -54.00   -48.08   -40.71   -32.10   -
22.51
   YBADJ    IDLE39         -12.24    -1.60    12.29    27.08    36.56
44.92
   YBADJ    IDLE39          51.92    57.34    61.02    62.85    62.76
60.77
   YBADJ    IDLE39          58.27    54.00    48.08    40.71    32.10
22.51
   YBADJ    IDLE39          12.24     1.60   -12.29   -27.08   -36.56   -
44.92
   YBADJ    IDLE39         -51.92   -57.34   -61.02   -62.85   -62.76   -
60.77

   YBADJ    IDLE47         -26.42   -23.58   -20.01   -15.84   -11.18
-6.19
   YBADJ    IDLE47          -1.01     4.21    12.49    21.67    25.70
28.94
   YBADJ    IDLE47          31.31    32.73    33.15    32.56    30.99
28.47
   YBADJ    IDLE47          26.42    23.58    20.01    15.84    11.18
6.19
   YBADJ    IDLE47           1.01    -4.21   -12.49   -21.67   -25.70   -
28.94
   YBADJ    IDLE47         -31.31   -32.73   -33.15   -32.56   -30.99   -
28.47

   YBADJ    IDLE48         -23.18   -20.48   -17.16   -13.32    -9.07
-4.54
   YBADJ    IDLE48           0.12     4.78    12.49    21.10    24.57
27.30
   YBADJ    IDLE48          29.20    30.21    30.30    29.47    27.75
25.18
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| YBADJ | IDLE48 | 23.18 | 20.48 | 17.16 | 13.32 | 9.07 | 4.54 |
| YBADJ | IDLE48 | -0.12 | -4.78 | -12.49 | -21.10 | -24.57 | -27.30 |
| YBADJ | IDLE48 | -29.20 | -30.21 | -30.30 | -29.47 | -27.75 | -25.18 |
| YBADJ | IDLE49 | -19.88 | -17.37 | -14.33 | -10.85 | -7.04 | -3.02 |
| YBADJ | IDLE49 | 1.09 | 5.17 | 12.29 | 20.31 | 23.23 | 25.43 |
| YBADJ | IDLE49 | 26.86 | 27.48 | 27.26 | 26.22 | 24.37 | 21.79 |
| YBADJ | IDLE49 | 19.88 | 17.37 | 14.33 | 10.85 | 7.04 | 3.02 |
| YBADJ | IDLE49 | -1.09 | -5.17 | -12.29 | -20.31 | -23.23 | -25.43 |
| YBADJ | IDLE49 | -26.86 | -27.48 | -27.26 | -26.22 | -24.37 | -21.79 |
| YBADJ | IDLE50 | -16.31 | -13.93 | -11.12 | -7.97 | -4.58 | -1.05 |
| YBADJ | IDLE50 | 2.50 | 5.99 | 12.49 | 19.89 | 22.19 | 23.81 |
| YBADJ | IDLE50 | 24.71 | 24.86 | 24.25 | 22.91 | 20.87 | 18.20 |
| YBADJ | IDLE50 | 16.31 | 13.93 | 11.12 | 7.97 | 4.58 | 1.05 |
| YBADJ | IDLE50 | -2.50 | -5.99 | -12.49 | -19.89 | -22.19 | -23.81 |
| YBADJ | IDLE50 | -24.71 | -24.86 | -24.25 | -22.91 | -20.87 | -18.20 |
| YBADJ | IDLE51 | -12.97 | -10.74 | -8.18 | -5.37 | -2.40 | 0.64 |
| YBADJ | IDLE51 | 3.66 | 6.58 | 12.49 | 19.30 | 21.03 | 22.11 |
| YBADJ | IDLE51 | 22.53 | 22.26 | 21.32 | 19.73 | 17.53 | 14.81 |
| YBADJ | IDLE51 | 12.97 | 10.74 | 8.18 | 5.37 | 2.40 | -0.64 |
| YBADJ | IDLE51 | -3.66 | -6.58 | -12.49 | -19.30 | -21.03 | -22.11 |
| YBADJ | IDLE51 | -22.53 | -22.26 | -21.32 | -19.73 | -17.53 | -14.81 |
| YBADJ | IDLE52 | -9.32 | -7.24 | -4.94 | -2.48 | 0.05 | 2.57 |
| YBADJ | IDLE52 | 5.02 | 7.32 | 12.59 | 18.76 | 19.86 | 20.36 |
| YBADJ | IDLE52 | 20.24 | 19.50 | 18.17 | 16.29 | 13.92 | 11.12 |
| YBADJ | IDLE52 | 9.32 | 7.24 | 4.94 | 2.48 | -0.05 | -2.57 |

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   YBADJ    IDLE52          -5.02    -7.32   -12.59   -18.76   -19.86   -
20.36
   YBADJ    IDLE52         -20.24   -19.50   -18.17   -16.29   -13.92   -
11.12

   YBADJ    IDLE53          -5.90    -3.99    -1.96     0.13     2.21
4.23
   YBADJ    IDLE53           6.12     7.82    12.49    18.05    18.57
18.52
   YBADJ    IDLE53          17.92    16.76    15.10    12.98    10.46
7.63
   YBADJ    IDLE53           5.90     3.99     1.96    -0.13    -2.21
-4.23
   YBADJ    IDLE53          -6.12    -7.82   -12.49   -18.05   -18.57   -
18.52
   YBADJ    IDLE53         -17.92   -16.76   -15.10   -12.98   -10.46
-7.63

   YBADJ    IDLE54          -2.45    -0.68     1.11     2.86     4.53
6.06
   YBADJ    IDLE54           7.41     8.53    12.59    17.54    17.47
16.87
   YBADJ    IDLE54          15.75    14.15    12.13     9.73     7.04
4.14
   YBADJ    IDLE54           2.45     0.68    -1.11    -2.86    -4.53
-6.06
   YBADJ    IDLE54          -7.41    -8.53   -12.59   -17.54   -17.47   -
16.87
   YBADJ    IDLE54         -15.75   -14.15   -12.13    -9.73    -7.04
-4.14

   YBADJ    IDLE55           1.35     2.91     4.38     5.72     6.88
7.83
   YBADJ    IDLE55           8.55     9.01    12.39    16.67    15.95
14.75
   YBADJ    IDLE55          13.10    11.04     8.66     6.01     3.18
0.25
   YBADJ    IDLE55          -1.35    -2.91    -4.38    -5.72    -6.88
-7.83
   YBADJ    IDLE55          -8.55    -9.01   -12.39   -16.67   -15.95   -
14.75
   YBADJ    IDLE55         -13.10   -11.04    -8.66    -6.01    -3.18
-0.25

   YBADJ    IDLE56           4.43     5.88     7.15     8.21     9.02
9.55
   YBADJ    IDLE56           9.80     9.74    12.59    16.33    15.08
13.38
   YBADJ    IDLE56          11.26     8.81     6.08     3.17     0.17
-2.84
   YBADJ    IDLE56          -4.43    -5.88    -7.15    -8.21    -9.02
-9.55
   YBADJ    IDLE56          -9.80    -9.74   -12.59   -16.33   -15.08   -
13.38
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2.84

   YBADJ    IDLE40         -54.42   -50.31   -44.66   -37.67   -29.52   -
20.48
   YBADJ    IDLE40         -10.82    -0.83    12.39    26.51    35.32
43.06
   YBADJ    IDLE40          49.50    54.43    57.70    59.22    58.95
56.88
   YBADJ    IDLE40          54.42    50.31    44.66    37.67    29.52
20.48
   YBADJ    IDLE40          10.82     0.83   -12.39   -26.51   -35.32   -
43.06
   YBADJ    IDLE40         -49.50   -54.43   -57.70   -59.22   -58.95   -
56.88

   YBADJ    IDLE41           7.95     9.22    10.21    10.90    11.25
11.26
   YBADJ    IDLE41          10.93    10.27    12.49    15.61    13.76
11.49
   YBADJ    IDLE41           8.88     5.99     2.92    -0.23    -3.38
-6.43
   YBADJ    IDLE41          -7.95    -9.22   -10.21   -10.90   -11.25   -
11.26
   YBADJ    IDLE41         -10.93   -10.27   -12.49   -15.61   -13.76   -
11.49
   YBADJ    IDLE41          -8.88    -5.99    -2.92     0.23     3.38
6.43

   YBADJ    IDLE42          11.52    12.66    13.42    13.78    13.71
13.23
   YBADJ    IDLE42          12.34    11.09    12.69    15.18    12.72
9.87
   YBADJ    IDLE42           6.72     3.37    -0.09    -3.54    -6.88   -
10.02
   YBADJ    IDLE42         -11.52   -12.66   -13.42   -13.78   -13.71   -
13.23
   YBADJ    IDLE42         -12.34   -11.09   -12.69   -15.18   -12.72
-9.87
   YBADJ    IDLE42          -6.72    -3.37     0.09     3.54     6.88
10.02

   YBADJ    IDLE43          14.92    15.87    16.35    16.32    15.80
14.80
   YBADJ    IDLE43          13.35    11.49    12.49    14.38    11.34
7.95
   YBADJ    IDLE43           4.33     0.57    -3.21    -6.89   -10.36   -
13.51
   YBADJ    IDLE43         -14.92   -15.87   -16.34   -16.32   -15.80   -
14.80
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-7.95
   YBADJ    IDLE43          -4.33    -0.57     3.21     6.89    10.36
13.51
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| YBADJ | IDLE44 | 18.37 | 19.19 | 19.42 | 19.06 | 18.12 | 16.63 |
| YBADJ | IDLE44 | 14.64 | 12.20 | 12.59 | 13.87 | 10.24 | 6.30 |
| YBADJ | IDLE44 | 2.16 | -2.04 | -6.18 | -10.13 | -13.77 | -17.00 |
| YBADJ | IDLE44 | -18.37 | -19.19 | -19.42 | -19.06 | -18.12 | -16.63 |
| YBADJ | IDLE44 | -14.64 | -12.20 | -12.59 | -13.87 | -10.24 | -6.30 |
| YBADJ | IDLE44 | -2.16 | 2.04 | 6.18 | 10.13 | 13.77 | 17.00 |
| YBADJ | IDLE45 | 21.86 | 22.46 | 22.38 | 21.62 | 20.20 | 18.17 |
| YBADJ | IDLE45 | 15.58 | 12.53 | 12.29 | 12.95 | 8.73 | 4.24 |
| YBADJ | IDLE45 | -0.38 | -4.98 | -9.44 | -13.61 | -17.36 | -20.59 |
| YBADJ | IDLE45 | -21.86 | -22.46 | -22.38 | -21.62 | -20.20 | -18.17 |
| YBADJ | IDLE45 | -15.58 | -12.53 | -12.29 | -12.95 | -8.73 | -4.24 |
| YBADJ | IDLE45 | 0.38 | 4.98 | 9.44 | 13.61 | 17.36 | 20.59 |
| YBADJ | IDLE46 | 25.23 | 25.71 | 25.41 | 24.34 | 22.53 | 20.04 |
| YBADJ | IDLE46 | 16.93 | 13.31 | 12.49 | 12.56 | 7.76 | 2.72 |
| YBADJ | IDLE46 | -2.40 | -7.45 | -12.27 | -16.72 | -20.67 | -23.98 |
| YBADJ | IDLE46 | -25.23 | -25.71 | -25.41 | -24.34 | -22.53 | -20.04 |
| YBADJ | IDLE46 | -16.93 | -13.31 | -12.49 | -12.56 | -7.76 | -2.72 |
| YBADJ | IDLE46 | 2.40 | 7.45 | 12.27 | 16.72 | 20.67 | 23.98 |
| YBADJ | IDLE57 | 29.00 | 29.34 | 28.79 | 27.37 | 25.12 | 22.10 |
| YBADJ | IDLE57 | 18.42 | 14.17 | 12.69 | 12.10 | 6.65 | 1.00 |
| YBADJ | IDLE57 | -4.69 | -10.23 | -15.46 | -20.22 | -24.36 | -27.77 |
| YBADJ | IDLE57 | -29.00 | -29.34 | -28.79 | -27.37 | -25.12 | -22.10 |
| YBADJ | IDLE57 | -18.42 | -14.17 | -12.69 | -12.10 | -6.65 | -1.00 |
| YBADJ | IDLE57 | 4.69 | 10.23 | 15.46 | 20.22 | 24.36 | 27.77 |

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23.48
   YBADJ    IDLE58          19.28    14.51    12.49    11.37     5.41
-0.72
   YBADJ    IDLE58          -6.83   -12.72   -18.23   -23.19   -27.44   -
30.86
   YBADJ    IDLE58         -32.00   -32.18   -31.37   -29.61   -26.95   -
23.48
   YBADJ    IDLE58         -19.28   -14.51   -12.49   -11.37    -5.41
0.72
   YBADJ    IDLE58           6.83    12.72    18.23    23.19    27.44
30.86

   YBADJ    IDLE59          35.59    35.65    34.63    32.55    29.49
25.53
   YBADJ    IDLE59          20.79    15.43    12.79    11.04     4.46
-2.26
   YBADJ    IDLE59          -8.90   -15.28   -21.19   -26.46   -30.93   -
34.45
   YBADJ    IDLE59         -35.59   -35.65   -34.63   -32.55   -29.49   -
25.53
   YBADJ    IDLE59         -20.79   -15.43   -12.79   -11.04    -4.46
2.26
   YBADJ    IDLE59           8.90    15.28    21.19    26.46    30.93
34.45

   YBADJ    IDLE60          39.26    39.10    37.75    35.26    31.69
27.16
   YBADJ    IDLE60          21.81    15.79    12.49    10.09     2.89
-4.41
   YBADJ    IDLE60         -11.56   -18.37   -24.62   -30.12   -34.70   -
38.23
   YBADJ    IDLE60         -39.26   -39.10   -37.75   -35.26   -31.69   -
27.16
   YBADJ    IDLE60         -21.81   -15.79   -12.49   -10.09    -2.89
4.41
   YBADJ    IDLE60          11.56    18.37    24.62    30.12    34.70
38.23

   YBADJ    IDLE61         -51.23   -47.32   -41.97   -35.34   -27.64   -
19.10
   YBADJ    IDLE61          -9.97    -0.55    12.09    25.64    33.91
41.16
   YBADJ    IDLE61          47.15    51.71    54.70    56.03    55.66
53.59
   YBADJ    IDLE61          51.23    47.32    41.97    35.34    27.64
19.10
   YBADJ    IDLE61           9.97     0.55   -12.09   -25.64   -33.91   -
41.16
   YBADJ    IDLE61         -47.15   -51.71   -54.70   -56.03   -55.66   -
53.59

   YBADJ    IDLE62          42.15    41.81    40.19    37.36    33.38
28.40
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-6.16
   YBADJ    IDLE62         -13.71   -20.85   -27.36   -33.03   -37.70   -
41.22
   YBADJ    IDLE62         -42.15   -41.81   -40.19   -37.36   -33.38   -
28.40
   YBADJ    IDLE62         -22.55   -16.01   -12.19    -9.27    -1.58
6.16
   YBADJ    IDLE62          13.71    20.85    27.36    33.03    37.70
41.22

   YBADJ    IDLE63          46.10    45.59    43.70    40.48    36.02
30.48
   YBADJ    IDLE63          24.00    16.80    12.28     8.68     0.31
-8.07
   YBADJ    IDLE63         -16.20   -23.84   -30.76   -36.74   -41.61   -
45.21
   YBADJ    IDLE63         -46.10   -45.59   -43.70   -40.48   -36.02   -
30.48
   YBADJ    IDLE63         -24.00   -16.80   -12.29    -8.68    -0.31
8.07
   YBADJ    IDLE63          16.20    23.84    30.76    36.74    41.61
45.21

   YBADJ    IDLE64          49.21    48.52    46.36    42.79    37.92
31.90
   YBADJ    IDLE64          24.91    17.16    12.08     7.93    -0.97
-9.84
   YBADJ    IDLE64         -18.41   -26.42   -33.62   -39.81   -44.78   -
48.40
   YBADJ    IDLE64         -49.21   -48.52   -46.36   -42.79   -37.92   -
31.90
   YBADJ    IDLE64         -24.91   -17.16   -12.09    -7.93     0.97
9.84
   YBADJ    IDLE64          18.41    26.42    33.62    39.81    44.78
48.40

   YBADJ    IDLE65         -47.43   -43.62   -38.48   -32.18   -24.89   -
16.85
   YBADJ    IDLE65          -8.30     0.50    12.49    25.37    32.99
39.61
   YBADJ    IDLE65          45.02    49.07    51.62    52.61    51.99
49.80
   YBADJ    IDLE65          47.43    43.62    38.48    32.18    24.89
16.85
   YBADJ    IDLE65           8.30    -0.50   -12.49   -25.37   -32.99   -
39.61
   YBADJ    IDLE65         -45.02   -49.07   -51.62   -52.61   -51.99   -
49.80

   YBADJ    IDLE66         -43.78   -40.12   -35.24   -29.29   -22.45   -
14.92
   YBADJ    IDLE66          -6.95     1.24    12.59    24.83    31.83
37.85
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   YBADJ    IDLE66          42.73    46.30    48.47    49.17    48.38
46.11
   YBADJ    IDLE66          43.78    40.12    35.24    29.29    22.45
14.92
   YBADJ    IDLE66           6.95    -1.24   -12.59   -24.83   -31.83   -
37.85
   YBADJ    IDLE66         -42.73   -46.30   -48.47   -49.17   -48.38   -
46.11

   YBADJ    IDLE67         -40.77   -37.28   -32.66   -27.05   -20.61   -
13.55
   YBADJ    IDLE67          -6.08     1.58    12.39    24.10    30.58
36.13
   YBADJ    IDLE67          40.59    43.81    45.70    46.20    45.30
43.02
   YBADJ    IDLE67          40.77    37.28    32.66    27.05    20.61
13.55
   YBADJ    IDLE67           6.08    -1.58   -12.39   -24.10   -30.58   -
36.13
   YBADJ    IDLE67         -40.59   -43.81   -45.70   -46.20   -45.30   -
43.02

   YBADJ    IDLE68         -37.02   -33.69   -29.33   -24.08   -18.10   -
11.57
   YBADJ    IDLE68          -4.69     2.34    12.49    23.54    29.38
34.32
   YBADJ    IDLE68          38.23    40.97    42.47    42.67    41.58
39.23
   YBADJ    IDLE68          37.02    33.69    29.33    24.08    18.10
11.57
   YBADJ    IDLE68           4.69    -2.34   -12.49   -23.54   -29.38   -
34.32
   YBADJ    IDLE68         -38.23   -40.97   -42.47   -42.67   -41.58   -
39.23

   YBADJ    IDLE69         -33.58   -30.38   -26.27   -21.35   -15.79
-9.74
   YBADJ    IDLE69          -3.40     3.04    12.59    23.03    28.28
32.67
   YBADJ    IDLE69          36.07    38.37    39.50    39.44    38.17
35.75
   YBADJ    IDLE69          33.58    30.38    26.27    21.35    15.79
9.74
   YBADJ    IDLE69           3.40    -3.04   -12.59   -23.03   -28.28   -
32.67
   YBADJ    IDLE69         -36.07   -38.37   -39.50   -39.44   -38.17   -
35.75

   YBADJ    IDLE70         -30.19   -27.21   -23.39   -18.87   -13.77
-8.26
   YBADJ    IDLE70          -2.49     3.35    12.29    22.13    26.81
30.67
   YBADJ    IDLE70          33.59    35.50    36.33    36.06    34.68
32.26
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8.26
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30.67
   YBADJ    IDLE70         -33.59   -35.50   -36.33   -36.06   -34.68   -
32.26

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   PROFFILE KFUL_V9_ADJU\KFUL_v9.PFL
   SURFDATA 3166 2012 KFUL
   UAIRDATA 3190 2012 KFUL
   PROFBASE 29.0 METERS
ME FINISHED
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** AERMOD Output Pathway
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   RECTABLE 1 1ST
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   PLOTFILE 1 IDLE1 1ST "Downey HRA Op.AD\01H1G001.PLT" 32
   PLOTFILE 1 IDLE10 1ST "Downey HRA Op.AD\01H1G002.PLT" 33
   PLOTFILE 1 IDLE11 1ST "Downey HRA Op.AD\01H1G003.PLT" 34
   PLOTFILE 1 IDLE12 1ST "Downey HRA Op.AD\01H1G004.PLT" 35
   PLOTFILE 1 IDLE13 1ST "Downey HRA Op.AD\01H1G005.PLT" 36
   PLOTFILE 1 IDLE14 1ST "Downey HRA Op.AD\01H1G006.PLT" 37
   PLOTFILE 1 IDLE15 1ST "Downey HRA Op.AD\01H1G007.PLT" 38
   PLOTFILE 1 IDLE16 1ST "Downey HRA Op.AD\01H1G008.PLT" 39
   PLOTFILE 1 IDLE17 1ST "Downey HRA Op.AD\01H1G009.PLT" 40
   PLOTFILE 1 IDLE18 1ST "Downey HRA Op.AD\01H1G010.PLT" 41
   PLOTFILE 1 IDLE19 1ST "Downey HRA Op.AD\01H1G011.PLT" 42
   PLOTFILE 1 IDLE2 1ST "Downey HRA Op.AD\01H1G012.PLT" 43
   PLOTFILE 1 IDLE20 1ST "Downey HRA Op.AD\01H1G013.PLT" 44
   PLOTFILE 1 IDLE21 1ST "Downey HRA Op.AD\01H1G014.PLT" 45
   PLOTFILE 1 IDLE22 1ST "Downey HRA Op.AD\01H1G015.PLT" 46
   PLOTFILE 1 IDLE23 1ST "Downey HRA Op.AD\01H1G016.PLT" 47
   PLOTFILE 1 IDLE24 1ST "Downey HRA Op.AD\01H1G017.PLT" 48
   PLOTFILE 1 IDLE25 1ST "Downey HRA Op.AD\01H1G018.PLT" 49
   PLOTFILE 1 IDLE26 1ST "Downey HRA Op.AD\01H1G019.PLT" 50
   PLOTFILE 1 IDLE27 1ST "Downey HRA Op.AD\01H1G020.PLT" 51
   PLOTFILE 1 IDLE28 1ST "Downey HRA Op.AD\01H1G021.PLT" 52
   PLOTFILE 1 IDLE29 1ST "Downey HRA Op.AD\01H1G022.PLT" 53
   PLOTFILE 1 IDLE3 1ST "Downey HRA Op.AD\01H1G023.PLT" 54
   PLOTFILE 1 IDLE30 1ST "Downey HRA Op.AD\01H1G024.PLT" 55
   PLOTFILE 1 IDLE31 1ST "Downey HRA Op.AD\01H1G025.PLT" 56
   PLOTFILE 1 IDLE32 1ST "Downey HRA Op.AD\01H1G026.PLT" 57
   PLOTFILE 1 IDLE33 1ST "Downey HRA Op.AD\01H1G027.PLT" 58
   PLOTFILE 1 IDLE34 1ST "Downey HRA Op.AD\01H1G028.PLT" 59
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PLOTFILE 1 IDLE35 1ST "Downey HRA Op.AD\01H1G029.PLT" 60
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PLOTFILE 1 IDLE37 1ST "Downey HRA Op.AD\01H1G031.PLT" 62
PLOTFILE 1 IDLE38 1ST "Downey HRA Op.AD\01H1G032.PLT" 63
PLOTFILE 1 IDLE39 1ST "Downey HRA Op.AD\01H1G033.PLT" 64
PLOTFILE 1 IDLE4 1ST "Downey HRA Op.AD\01H1G034.PLT" 65
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PLOTFILE 1 IDLE46 1ST "Downey HRA Op.AD\01H1G041.PLT" 72
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| REC | GRP | NETID | X | Y | RISK_SUM | SCENARIO | INH_RISK | SOIL_RISK | DERMAL_F | MMILK_RIS | WATER_RI | FISH_RISK | CROP_RISK | BEEF_RISK | DAIRY_RIS | PIG_RISK | CHICKEN_F | EGG_RISK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ALL | | 396002.2 | 3753559 | 3.22E-07 | 30YrCance | 3.22E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 2 | ALL | | 396052.2 | 3753559 | 3.40E-07 | 30YrCance | 3.40E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 3 | ALL | | 396102.2 | 3753559 | 3.60E-07 | 30YrCance | 3.60E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 4 | ALL | | 396152.2 | 3753559 | 3.82E-07 | 30YrCance | 3.82E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 5 | ALL | | 396202.2 | 3753559 | 4.06E-07 | 30YrCance | 4.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 6 | ALL | | 396252.2 | 3753559 | 4.33E-07 | 30YrCance | 4.33E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 7 | ALL | | 396302.2 | 3753559 | 4.64E-07 | 30YrCance | 4.64E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 8 | ALL | | 396352.2 | 3753559 | 5.00E-07 | 30YrCance | 5.00E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 9 | ALL | | 396402.2 | 3753559 | 5.41E-07 | 30YrCance | 5.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 10 | ALL | | 396452.2 | 3753559 | 5.91E-07 | 30YrCance | 5.91E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 11 | ALL | | 396502.2 | 3753559 | 6.54E-07 | 30YrCance | 6.54E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 12 | ALL | | 396552.2 | 3753559 | 7.41E-07 | 30YrCance | 7.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 13 | ALL | | 396802.2 | 3753559 | 4.26E-06 | 30YrCance | 4.26E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 14 | ALL | | 396852.2 | 3753559 | 3.36E-06 | 30YrCance | 3.36E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 15 | ALL | | 396902.2 | 3753559 | 3.18E-06 | 30YrCance | 3.18E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 16 | ALL | | 396952.2 | 3753559 | 3.09E-06 | 30YrCance | 3.09E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 17 | ALL | | 397002.2 | 3753559 | 3.02E-06 | 30YrCance | 3.02E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 18 | ALL | | 396002.2 | 3753609 | 3.35E-07 | 30YrCance | 3.35E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | ALL | | 396052.2 | 3753609 | 3.56E-07 | 30YrCance | 3.56E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 20 | ALL | | 396102.2 | 3753609 | 3.78E-07 | 30YrCance | 3.78E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 21 | ALL | | 396152.2 | 3753609 | 4.01E-07 | 30YrCance | 4.01E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 22 | ALL | | 396202.2 | 3753609 | 4.28E-07 | 30YrCance | 4.28E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 23 | ALL | | 396252.2 | 3753609 | 4.57E-07 | 30YrCance | 4.57E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 24 | ALL | | 396302.2 | 3753609 | 4.91E-07 | 30YrCance | 4.91E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 25 | ALL | | 396352.2 | 3753609 | 5.29E-07 | 30YrCance | 5.29E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 26 | ALL | | 396402.2 | 3753609 | 5.74E-07 | 30YrCance | 5.74E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 27 | ALL | | 396452.2 | 3753609 | 6.29E-07 | 30YrCance | 6.29E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 28 | ALL | | 396502.2 | 3753609 | 6.98E-07 | 30YrCance | 6.98E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | ALL | | 396552.2 | 3753609 | 7.93E-07 | 30YrCance | 7.93E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 30 | ALL | | 396802.2 | 3753609 | 3.58E-06 | 30YrCance | 3.58E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 31 | ALL | | 396852.2 | 3753609 | 2.20E-06 | 30YrCance | 2.20E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 32 | ALL | | 396902.2 | 3753609 | 1.91E-06 | 30YrCance | 1.91E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 33 | ALL | | 396952.2 | 3753609 | 1.80E-06 | 30YrCance | 1.80E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 34 | ALL | | 397002.2 | 3753609 | 1.74E-06 | 30YrCance | 1.74E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 35 | ALL | | 396002.2 | 3753659 | 3.50E-07 | 30YrCance | 3.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 36 | ALL | | 396052.2 | 3753659 | 3.72E-07 | 30YrCance | 3.72E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 37 | ALL | | 396102.2 | 3753659 | 3.96E-07 | 30YrCance | 3.96E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 38 | ALL | | 396152.2 | 3753659 | 4.22E-07 | 30YrCance | 4.22E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 39 | ALL | | 396202.2 | 3753659 | 4.51E-07 | 30YrCance | 4.51E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 40 | ALL | | 396252.2 | 3753659 | 4.83E-07 | 30YrCance | 4.83E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 41 | ALL | | 396302.2 | 3753659 | 5.19E-07 | 30YrCance | 5.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 42 | ALL | | 396352.2 | 3753659 | 5.60E-07 | 30YrCance | 5.60E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 43 | ALL | | 396402.2 | 3753659 | 6.09E-07 | 30YrCance | 6.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 44 | ALL | | 396452.2 | 3753659 | 6.68E-07 | 30YrCance | 6.68E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | ALL | 396502.2 | 3753659 | 7.41E-07 | 30YrCance | 7.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 46 | ALL | 396552.2 | 3753659 | 8.41E-07 | 30YrCance | 8.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 47 | ALL | 396802.2 | 3753659 | 3.53E-06 | 30YrCance | 3.53E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 48 | ALL | 396852.2 | 3753659 | 1.99E-06 | 30YrCance | 1.99E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 49 | ALL | 396902.2 | 3753659 | 1.63E-06 | 30YrCance | 1.63E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 50 | ALL | 396952.2 | 3753659 | 1.48E-06 | 30YrCance | 1.48E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 51 | ALL | 397002.2 | 3753659 | 1.40E-06 | 30YrCance | 1.40E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 52 | ALL | 396002.2 | 3753709 | 3.65E-07 | 30YrCance | 3.65E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 53 | ALL | 396052.2 | 3753709 | 3.89E-07 | 30YrCance | 3.89E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 54 | ALL | 396102.2 | 3753709 | 4.15E-07 | 30YrCance | 4.15E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 55 | ALL | 396152.2 | 3753709 | 4.43E-07 | 30YrCance | 4.43E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 56 | ALL | 396202.2 | 3753709 | 4.75E-07 | 30YrCance | 4.75E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 57 | ALL | 396252.2 | 3753709 | 5.09E-07 | 30YrCance | 5.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 58 | ALL | 396302.2 | 3753709 | 5.49E-07 | 30YrCance | 5.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 59 | ALL | 396352.2 | 3753709 | 5.93E-07 | 30YrCance | 5.93E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 60 | ALL | 396402.2 | 3753709 | 6.45E-07 | 30YrCance | 6.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 61 | ALL | 396452.2 | 3753709 | 7.07E-07 | 30YrCance | 7.07E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 62 | ALL | 396502.2 | 3753709 | 7.84E-07 | 30YrCance | 7.84E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 63 | ALL | 396552.2 | 3753709 | 8.88E-07 | 30YrCance | 8.88E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 64 | ALL | 396802.2 | 3753709 | 3.57E-06 | 30YrCance | 3.57E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 65 | ALL | 396852.2 | 3753709 | 1.94E-06 | 30YrCance | 1.94E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 66 | ALL | 396902.2 | 3753709 | 1.54E-06 | 30YrCance | 1.54E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 67 | ALL | 396952.2 | 3753709 | 1.36E-06 | 30YrCance | 1.36E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 68 | ALL | 397002.2 | 3753709 | 1.27E-06 | 30YrCance | 1.27E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 69 | ALL | 396002.2 | 3753759 | 3.82E-07 | 30YrCance | 3.82E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 70 | ALL | 396052.2 | 3753759 | 4.07E-07 | 30YrCance | 4.07E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 71 | ALL | 396102.2 | 3753759 | 4.36E-07 | 30YrCance | 4.36E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 72 | ALL | 396152.2 | 3753759 | 4.67E-07 | 30YrCance | 4.67E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 73 | ALL | 396202.2 | 3753759 | 5.01E-07 | 30YrCance | 5.01E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 74 | ALL | 396252.2 | 3753759 | 5.39E-07 | 30YrCance | 5.39E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 75 | ALL | 396302.2 | 3753759 | 5.81E-07 | 30YrCance | 5.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 76 | ALL | 396352.2 | 3753759 | 6.28E-07 | 30YrCance | 6.28E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 77 | ALL | 396402.2 | 3753759 | 6.83E-07 | 30YrCance | 6.83E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 78 | ALL | 396452.2 | 3753759 | 7.48E-07 | 30YrCance | 7.48E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 79 | ALL | 396502.2 | 3753759 | 8.29E-07 | 30YrCance | 8.29E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 80 | ALL | 396552.2 | 3753759 | 9.36E-07 | 30YrCance | 9.36E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 81 | ALL | 396802.2 | 3753759 | 3.63E-06 | 30YrCance | 3.63E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 82 | ALL | 396852.2 | 3753759 | 1.95E-06 | 30YrCance | 1.95E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 83 | ALL | 396902.2 | 3753759 | 1.52E-06 | 30YrCance | 1.52E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 84 | ALL | 396952.2 | 3753759 | 1.33E-06 | 30YrCance | 1.33E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 85 | ALL | 397002.2 | 3753759 | 1.22E-06 | 30YrCance | 1.22E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 86 | ALL | 396002.2 | 3753809 | 3.99E-07 | 30YrCance | 3.99E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 87 | ALL | 396052.2 | 3753809 | 4.27E-07 | 30YrCance | 4.27E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 88 | ALL | 396102.2 | 3753809 | 4.57E-07 | 30YrCance | 4.57E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 89 | ALL | 396152.2 | 3753809 | 4.92E-07 | 30YrCance | 4.92E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 90 | ALL | 396202.2 | 3753809 | 5.29E-07 | 30YrCance | 5.29E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 91 | ALL | 396252.2 | 3753809 | 5.70E-07 | 30YrCance | 5.70E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 92 | ALL | 396302.2 | 3753809 | 6.15E-07 | 30YrCance | 6.15E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 93 | ALL | 396352.2 | 3753809 | 6.65E-07 | 30YrCance | 6.65E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 94 | ALL | 396402.2 | 3753809 | 7.24E-07 | 30YrCance | 7.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 95 | ALL | 396452.2 | 3753809 | 7.93E-07 | 30YrCance | 7.93E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 96 | ALL | 396502.2 | 3753809 | 8.77E-07 | 30YrCance | 8.77E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 97 | ALL | 396552.2 | 3753809 | 9.86E-07 | 30YrCance | 9.86E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 98 | ALL | 396802.2 | 3753809 | 3.72E-06 | 30YrCance | 3.72E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 99 | ALL | 396852.2 | 3753809 | 1.98E-06 | 30YrCance | 1.98E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 100 | ALL | 396902.2 | 3753809 | 1.53E-06 | 30YrCance | 1.53E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 101 | ALL | 396952.2 | 3753809 | 1.33E-06 | 30YrCance | 1.33E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 102 | ALL | 397002.2 | 3753809 | 1.21E-06 | 30YrCance | 1.21E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 103 | ALL | 396002.2 | 3753859 | 4.17E-07 | 30YrCance | 4.17E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 104 | ALL | 396052.2 | 3753859 | 4.47E-07 | 30YrCance | 4.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 105 | ALL | 396102.2 | 3753859 | 4.81E-07 | 30YrCance | 4.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 106 | ALL | 396152.2 | 3753859 | 5.18E-07 | 30YrCance | 5.18E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 107 | ALL | 396202.2 | 3753859 | 5.58E-07 | 30YrCance | 5.58E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 108 | ALL | 396252.2 | 3753859 | 6.04E-07 | 30YrCance | 6.04E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 109 | ALL | 396302.2 | 3753859 | 6.53E-07 | 30YrCance | 6.53E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 110 | ALL | 396352.2 | 3753859 | 7.06E-07 | 30YrCance | 7.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 111 | ALL | 396402.2 | 3753859 | 7.70E-07 | 30YrCance | 7.70E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 112 | ALL | 396452.2 | 3753859 | 8.43E-07 | 30YrCance | 8.43E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 113 | ALL | 396502.2 | 3753859 | 9.30E-07 | 30YrCance | 9.30E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 114 | ALL | 396552.2 | 3753859 | 1.04E-06 | 30YrCance | 1.04E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 115 | ALL | 396002.2 | 3753909 | 4.36E-07 | 30YrCance | 4.36E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 116 | ALL | 396052.2 | 3753909 | 4.69E-07 | 30YrCance | 4.69E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 117 | ALL | 396102.2 | 3753909 | 5.06E-07 | 30YrCance | 5.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 118 | ALL | 396152.2 | 3753909 | 5.46E-07 | 30YrCance | 5.46E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 119 | ALL | 396202.2 | 3753909 | 5.91E-07 | 30YrCance | 5.91E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 120 | ALL | 396252.2 | 3753909 | 6.39E-07 | 30YrCance | 6.39E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 121 | ALL | 396302.2 | 3753909 | 6.93E-07 | 30YrCance | 6.93E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 122 | ALL | 396352.2 | 3753909 | 7.53E-07 | 30YrCance | 7.53E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 123 | ALL | 396402.2 | 3753909 | 8.20E-07 | 30YrCance | 8.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 124 | ALL | 396452.2 | 3753909 | 8.98E-07 | 30YrCance | 8.98E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 125 | ALL | 396502.2 | 3753909 | 9.90E-07 | 30YrCance | 9.90E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 126 | ALL | 396552.2 | 3753909 | 1.11E-06 | 30YrCance | 1.11E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 127 | ALL | 396002.2 | 3753959 | 4.55E-07 | 30YrCance | 4.55E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 128 | ALL | 396052.2 | 3753959 | 4.92E-07 | 30YrCance | 4.92E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 129 | ALL | 396102.2 | 3753959 | 5.32E-07 | 30YrCance | 5.32E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 130 | ALL | 396152.2 | 3753959 | 5.77E-07 | 30YrCance | 5.77E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 131 | ALL | 396202.2 | 3753959 | 6.26E-07 | 30YrCance | 6.26E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 132 | ALL | 396252.2 | 3753959 | 6.79E-07 | 30YrCance | 6.79E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 133 | ALL | 396302.2 | 3753959 | 7.38E-07 | 30YrCance | 7.38E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 134 | ALL | 396352.2 | 3753959 | 8.04E-07 | 30YrCance | 8.04E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 135 | ALL | 396402.2 | 3753959 | 8.77E-07 | 30YrCance | 8.77E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 136 | ALL | 396452.2 | 3753959 | 9.59E-07 | 30YrCance | 9.59E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 137 | ALL | 396502.2 | 3753959 | 1.06E-06 | 30YrCance | 1.06E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 138 | ALL | 396552.2 | 3753959 | 1.18E-06 | 30YrCance | 1.18E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 139 | ALL | 396002.2 | 3754009 | 4.75E-07 | 30YrCance | 4.75E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 140 | ALL | 396052.2 | 3754009 | 5.16E-07 | 30YrCance | 5.16E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 141 | ALL | 396102.2 | 3754009 | 5.60E-07 | 30YrCance | 5.60E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 142 | ALL | 396152.2 | 3754009 | 6.10E-07 | 30YrCance | 6.10E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 143 | ALL | 396202.2 | 3754009 | 6.65E-07 | 30YrCance | 6.65E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 144 | ALL | 396252.2 | 3754009 | 7.23E-07 | 30YrCance | 7.23E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 145 | ALL | 396302.2 | 3754009 | 7.88E-07 | 30YrCance | 7.88E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 146 | ALL | 396352.2 | 3754009 | 8.61E-07 | 30YrCance | 8.61E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 147 | ALL | 396402.2 | 3754009 | 9.42E-07 | 30YrCance | 9.42E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 148 | ALL | 396452.2 | 3754009 | 1.03E-06 | 30YrCance | 1.03E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 149 | ALL | 396502.2 | 3754009 | 1.14E-06 | 30YrCance | 1.14E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 150 | ALL | 396552.2 | 3754009 | 1.27E-06 | 30YrCance | 1.27E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 151 | ALL | 396002.2 | 3754059 | 4.96E-07 | 30YrCance | 4.96E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 152 | ALL | 396052.2 | 3754059 | 5.41E-07 | 30YrCance | 5.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 153 | ALL | 396102.2 | 3754059 | 5.89E-07 | 30YrCance | 5.89E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 154 | ALL | 396152.2 | 3754059 | 6.45E-07 | 30YrCance | 6.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 155 | ALL | 396202.2 | 3754059 | 7.06E-07 | 30YrCance | 7.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 156 | ALL | 396252.2 | 3754059 | 7.72E-07 | 30YrCance | 7.72E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 157 | ALL | 396302.2 | 3754059 | 8.45E-07 | 30YrCance | 8.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 158 | ALL | 396352.2 | 3754059 | 9.27E-07 | 30YrCance | 9.27E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 159 | ALL | 396402.2 | 3754059 | 1.02E-06 | 30YrCance | 1.02E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 160 | ALL | 396452.2 | 3754059 | 1.12E-06 | 30YrCance | 1.12E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 161 | ALL | 396502.2 | 3754059 | 1.24E-06 | 30YrCance | 1.24E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 162 | ALL | 396552.2 | 3754059 | 1.38E-06 | 30YrCance | 1.38E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 163 | ALL | 396002.2 | 3754109 | 5.16E-07 | 30YrCance | 5.16E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 164 | ALL | 396052.2 | 3754109 | 5.66E-07 | 30YrCance | 5.66E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 165 | ALL | 396102.2 | 3754109 | 6.21E-07 | 30YrCance | 6.21E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 166 | ALL | 396152.2 | 3754109 | 6.82E-07 | 30YrCance | 6.82E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 167 | ALL | 396202.2 | 3754109 | 7.50E-07 | 30YrCance | 7.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 168 | ALL | 396252.2 | 3754109 | 8.25E-07 | 30YrCance | 8.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 169 | ALL | 396302.2 | 3754109 | 9.09E-07 | 30YrCance | 9.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 170 | ALL | 396352.2 | 3754109 | 1.00E-06 | 30YrCance | 1.00E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 171 | ALL | 396402.2 | 3754109 | 1.11E-06 | 30YrCance | 1.11E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 172 | ALL | 396452.2 | 3754109 | 1.22E-06 | 30YrCance | 1.22E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 173 | ALL | 396502.2 | 3754109 | 1.36E-06 | 30YrCance | 1.36E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 174 | ALL | 396552.2 | 3754109 | 1.51E-06 | 30YrCance | 1.51E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 175 | ALL | 396002.2 | 3754159 | 5.36E-07 | 30YrCance | 5.36E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 176 | ALL | 396052.2 | 3754159 | 5.90E-07 | 30YrCance | 5.90E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 177 | ALL | 396102.2 | 3754159 | 6.52E-07 | 30YrCance | 6.52E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 178 | ALL | 396152.2 | 3754159 | 7.21E-07 | 30YrCance | 7.21E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 179 | ALL | 396202.2 | 3754159 | 7.99E-07 | 30YrCance | 7.99E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 180 | ALL | 396252.2 | 3754159 | 8.85E-07 | 30YrCance | 8.85E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 181 | ALL | 396302.2 | 3754159 | 9.81E-07 | 30YrCance | 9.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 182 | ALL | 396352.2 | 3754159 | 1.09E-06 | 30YrCance | 1.09E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 183 | ALL | 396402.2 | 3754159 | 1.21E-06 | 30YrCance | 1.21E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 184 | ALL | 396452.2 | 3754159 | 1.35E-06 | 30YrCance | 1.35E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 185 | ALL | 396502.2 | 3754159 | 1.51E-06 | 30YrCance | 1.51E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 186 | ALL | 396552.2 | 3754159 | 1.69E-06 | 30YrCance | 1.69E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 187 | ALL | 396002.2 | 3754209 | 5.53E-07 | 30YrCance | 5.53E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 188 | ALL | 396052.2 | 3754209 | 6.13E-07 | 30YrCance | 6.13E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 189 | ALL | 396102.2 | 3754209 | 6.81E-07 | 30YrCance | 6.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 190 | ALL | 396152.2 | 3754209 | 7.60E-07 | 30YrCance | 7.60E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 191 | ALL | 396202.2 | 3754209 | 8.49E-07 | 30YrCance | 8.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 192 | ALL | 396252.2 | 3754209 | 9.49E-07 | 30YrCance | 9.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 193 | ALL | 396302.2 | 3754209 | 1.06E-06 | 30YrCance | 1.06E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 194 | ALL | 396352.2 | 3754209 | 1.19E-06 | 30YrCance | 1.19E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 195 | ALL | 396402.2 | 3754209 | 1.34E-06 | 30YrCance | 1.34E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 196 | ALL | 396452.2 | 3754209 | 1.51E-06 | 30YrCance | 1.51E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 197 | ALL | 396502.2 | 3754209 | 1.71E-06 | 30YrCance | 1.71E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 198 | ALL | 396552.2 | 3754209 | 1.94E-06 | 30YrCance | 1.94E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 199 | ALL | 396002.2 | 3754259 | 5.67E-07 | 30YrCance | 5.67E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 200 | ALL | 396052.2 | 3754259 | 6.33E-07 | 30YrCance | 6.33E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 201 | ALL | 396102.2 | 3754259 | 7.09E-07 | 30YrCance | 7.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 202 | ALL | 396152.2 | 3754259 | 7.96E-07 | 30YrCance | 7.96E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 203 | ALL | 396202.2 | 3754259 | 8.99E-07 | 30YrCance | 8.99E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 204 | ALL | 396252.2 | 3754259 | 1.01E-06 | 30YrCance | 1.01E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 205 | ALL | 396302.2 | 3754259 | 1.15E-06 | 30YrCance | 1.15E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 206 | ALL | 396352.2 | 3754259 | 1.31E-06 | 30YrCance | 1.31E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 207 | ALL | 396402.2 | 3754259 | 1.49E-06 | 30YrCance | 1.49E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 208 | ALL | 396452.2 | 3754259 | 1.72E-06 | 30YrCance | 1.72E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 209 | ALL | 396502.2 | 3754259 | 1.99E-06 | 30YrCance | 1.99E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 210 | ALL | 396552.2 | 3754259 | 2.30E-06 | 30YrCance | 2.30E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 211 | ALL | 396002.2 | 3754309 | 5.77E-07 | 30YrCance | 5.77E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 212 | ALL | 396052.2 | 3754309 | 6.47E-07 | 30YrCance | 6.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 213 | ALL | 396102.2 | 3754309 | 7.28E-07 | 30YrCance | 7.28E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 214 | ALL | 396152.2 | 3754309 | 8.25E-07 | 30YrCance | 8.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 215 | ALL | 396202.2 | 3754309 | 9.39E-07 | 30YrCance | 9.39E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 216 | ALL | 396252.2 | 3754309 | 1.08E-06 | 30YrCance | 1.08E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 217 | ALL | 396302.2 | 3754309 | 1.24E-06 | 30YrCance | 1.24E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 218 | ALL | 396352.2 | 3754309 | 1.43E-06 | 30YrCance | 1.43E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 219 | ALL | 396402.2 | 3754309 | 1.68E-06 | 30YrCance | 1.68E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 220 | ALL | 396452.2 | 3754309 | 1.98E-06 | 30YrCance | 1.98E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 221 | ALL | 396502.2 | 3754309 | 2.39E-06 | 30YrCance | 2.39E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 222 | ALL | 396552.2 | 3754309 | 2.90E-06 | 30YrCance | 2.90E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 223 | ALL | 397033.1 | 3753307 | 7.26E-07 | 30YrCance | 7.26E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 224 | ALL | 397083.1 | 3753307 | 7.28E-07 | 30YrCance | 7.28E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 225 | ALL | 397133.1 | 3753307 | 7.27E-07 | 30YrCance | 7.27E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 226 | ALL | 397333.1 | 3753307 | 7.03E-07 | 30YrCance | 7.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 227 | ALL | 397383.1 | 3753307 | 6.93E-07 | 30YrCance | 6.93E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 228 | ALL | 397433.1 | 3753307 | 6.81E-07 | 30YrCance | 6.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 229 | ALL | 397483.1 | 3753307 | 6.65E-07 | 30YrCance | 6.65E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 230 | ALL | 397533.1 | 3753307 | 6.46E-07 | 30YrCance | 6.46E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 231 | ALL | 397583.1 | 3753307 | 6.23E-07 | 30YrCance | 6.23E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 232 | ALL | 397633.1 | 3753307 | 5.95E-07 | 30YrCance | 5.95E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 233 | ALL | 397683.1 | 3753307 | 5.60E-07 | 30YrCance | 5.60E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 234 | ALL | 397033.1 | 3753357 | 8.85E-07 | 30YrCance | 8.85E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 235 | ALL | 397083.1 | 3753357 | 8.85E-07 | 30YrCance | 8.85E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 236 | ALL | 397133.1 | 3753357 | 8.83E-07 | 30YrCance | 8.83E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 237 | ALL | 397333.1 | 3753357 | 8.56E-07 | 30YrCance | 8.56E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 238 | ALL | 397383.1 | 3753357 | 8.45E-07 | 30YrCance | 8.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 239 | ALL | 397433.1 | 3753357 | 8.31E-07 | 30YrCance | 8.31E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 240 | ALL | 397483.1 | 3753357 | 8.13E-07 | 30YrCance | 8.13E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 241 | ALL | 397533.1 | 3753357 | 7.91E-07 | 30YrCance | 7.91E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 242 | ALL | 397583.1 | 3753357 | 7.62E-07 | 30YrCance | 7.62E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 243 | ALL | 397633.1 | 3753357 | 7.26E-07 | 30YrCance | 7.26E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 244 | ALL | 397683.1 | 3753357 | 6.78E-07 | 30YrCance | 6.78E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 245 | ALL | 397733.1 | 3753357 | 6.19E-07 | 30YrCance | 6.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 246 | ALL | 397033.1 | 3753407 | 1.15E-06 | 30YrCance | 1.15E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 247 | ALL | 397083.1 | 3753407 | 1.15E-06 | 30YrCance | 1.15E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 248 | ALL | 397133.1 | 3753407 | 1.14E-06 | 30YrCance | 1.14E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 249 | ALL | 397333.1 | 3753407 | 1.11E-06 | 30YrCance | 1.11E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 250 | ALL | 397383.1 | 3753407 | 1.10E-06 | 30YrCance | 1.10E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 251 | ALL | 397433.1 | 3753407 | 1.09E-06 | 30YrCance | 1.09E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 252 | ALL | 397483.1 | 3753407 | 1.07E-06 | 30YrCance | 1.07E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 253 | ALL | 397533.1 | 3753407 | 1.05E-06 | 30YrCance | 1.05E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 254 | ALL | 397583.1 | 3753407 | 1.01E-06 | 30YrCance | 1.01E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 255 | ALL | 397633.1 | 3753407 | 9.64E-07 | 30YrCance | 9.64E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 256 | ALL | 397683.1 | 3753407 | 8.92E-07 | 30YrCance | 8.92E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 257 | ALL | 397733.1 | 3753407 | 7.90E-07 | 30YrCance | 7.90E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 258 | ALL | 397033.1 | 3753457 | 1.72E-06 | 30YrCance | 1.72E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 259 | ALL | 397083.1 | 3753457 | 1.71E-06 | 30YrCance | 1.71E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 260 | ALL | 397133.1 | 3753457 | 1.69E-06 | 30YrCance | 1.69E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 261 | ALL | 397333.1 | 3753457 | 1.67E-06 | 30YrCance | 1.67E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 262 | ALL | 397383.1 | 3753457 | 1.67E-06 | 30YrCance | 1.67E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 263 | ALL | 397433.1 | 3753457 | 1.67E-06 | 30YrCance | 1.67E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 264 | ALL | 397483.1 | 3753457 | 1.66E-06 | 30YrCance | 1.66E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 265 | ALL | 397533.1 | 3753457 | 1.64E-06 | 30YrCance | 1.64E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 266 | ALL | 397583.1 | 3753457 | 1.60E-06 | 30YrCance | 1.60E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 267 | ALL | 397633.1 | 3753457 | 1.55E-06 | 30YrCance | 1.55E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 268 | ALL | 397683.1 | 3753457 | 1.44E-06 | 30YrCance | 1.44E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 269 | ALL | 397733.1 | 3753457 | 1.22E-06 | 30YrCance | 1.22E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 270 | ALL | 397783.1 | 3753457 | 8.94E-07 | 30YrCance | 8.94E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 271 | ALL | 397033.1 | 3753557 | 3.05E-06 | 30YrCance | 3.05E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 272 | ALL | 397083.1 | 3753557 | 2.95E-06 | 30YrCance | 2.95E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 273 | ALL | 397133.1 | 3753557 | 2.83E-06 | 30YrCance | 2.83E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 274 | ALL | 397213.5 | 3753581 | 2.00E-06 | 30YrCance | 2.00E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 275 | ALL | 397283.1 | 3753557 | 2.71E-06 | 30YrCance | 2.71E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 276 | ALL | 397333.1 | 3753557 | 2.68E-06 | 30YrCance | 2.68E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 277 | ALL | 397383.1 | 3753557 | 2.64E-06 | 30YrCance | 2.64E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 278 | ALL | 397433.1 | 3753557 | 2.68E-06 | 30YrCance | 2.68E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 279 | ALL | 397483.1 | 3753557 | 2.66E-06 | 30YrCance | 2.66E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 280 | ALL | 397533.1 | 3753557 | 2.61E-06 | 30YrCance | 2.61E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 281 | ALL | 397583.1 | 3753557 | 2.52E-06 | 30YrCance | 2.52E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 282 | ALL | 397633.1 | 3753557 | 2.44E-06 | 30YrCance | 2.44E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 283 | ALL | 397683.1 | 3753557 | 2.28E-06 | 30YrCance | 2.28E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 284 | ALL | 397733.1 | 3753557 | 1.88E-06 | 30YrCance | 1.88E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 285 | ALL | 397033.1 | 3753607 | 1.72E-06 | 30YrCance | 1.72E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 286 | ALL | 397083.1 | 3753607 | 1.68E-06 | 30YrCance | 1.68E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 287 | ALL | 397133.1 | 3753607 | 1.64E-06 | 30YrCance | 1.64E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 288 | ALL | 397210.9 | 3753621 | 1.46E-06 | 30YrCance | 1.46E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 289 | ALL | 397283.1 | 3753607 | 1.55E-06 | 30YrCance | 1.55E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 290 | ALL | 397333.1 | 3753607 | 1.55E-06 | 30YrCance | 1.55E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 291 | ALL | 397383.1 | 3753607 | 1.52E-06 | 30YrCance | 1.52E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 292 | ALL | 397433.1 | 3753607 | 1.50E-06 | 30YrCance | 1.50E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 293 | ALL | 397483.1 | 3753607 | 1.47E-06 | 30YrCance | 1.47E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 294 | ALL | 397533.1 | 3753607 | 1.43E-06 | 30YrCance | 1.43E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 295 | ALL | 397583.1 | 3753607 | 1.38E-06 | 30YrCance | 1.38E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 296 | ALL | 397633.1 | 3753607 | 1.32E-06 | 30YrCance | 1.32E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 297 | ALL | 397683.1 | 3753607 | 1.22E-06 | 30YrCance | 1.22E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 298 | ALL | 397733.1 | 3753607 | 1.06E-06 | 30YrCance | 1.06E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 299 | ALL | 397033.1 | 3753657 | 1.37E-06 | 30YrCance | 1.37E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 300 | ALL | 397083.1 | 3753657 | 1.33E-06 | 30YrCance | 1.33E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 301 | ALL | 397133.1 | 3753657 | 1.29E-06 | 30YrCance | 1.29E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 302 | ALL | 397207 | 3753665 | 1.22E-06 | 30YrCance | 1.22E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 303 | ALL | 397283.1 | 3753657 | 1.21E-06 | 30YrCance | 1.21E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 304 | ALL | 397333.1 | 3753657 | 1.19E-06 | 30YrCance | 1.19E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 305 | ALL | 397383.1 | 3753657 | 1.17E-06 | 30YrCance | 1.17E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 306 | ALL | 397433.1 | 3753657 | 1.14E-06 | 30YrCance | 1.14E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 307 | ALL | 397483.1 | 3753657 | 1.11E-06 | 30YrCance | 1.11E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 308 | ALL | 397533.1 | 3753657 | 1.08E-06 | 30YrCance | 1.08E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 309 | ALL | 397583.1 | 3753657 | 1.04E-06 | 30YrCance | 1.04E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 310 | ALL | 397633.1 | 3753657 | 9.89E-07 | 30YrCance | 9.89E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 311 | ALL | 397683.1 | 3753657 | 9.22E-07 | 30YrCance | 9.22E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 312 | ALL | 397733.1 | 3753657 | 8.36E-07 | 30YrCance | 8.36E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 313 | ALL | 397033.1 | 3753707 | 1.23E-06 | 30YrCance | 1.23E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 314 | ALL | 397083.1 | 3753707 | 1.18E-06 | 30YrCance | 1.18E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 315 | ALL | 397133.1 | 3753707 | 1.14E-06 | 30YrCance | 1.14E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 316 | ALL | 397205.7 | 3753729 | 1.05E-06 | 30YrCance | 1.05E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 317 | ALL | 397283.1 | 3753707 | 1.05E-06 | 30YrCance | 1.05E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 318 | ALL | 397333.1 | 3753707 | 1.03E-06 | 30YrCance | 1.03E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 319 | ALL | 397383.1 | 3753707 | 1.00E-06 | 30YrCance | 1.00E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 320 | ALL | 397433.1 | 3753707 | 9.80E-07 | 30YrCance | 9.80E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 321 | ALL | 397483.1 | 3753707 | 9.53E-07 | 30YrCance | 9.53E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 322 | ALL | 397533.1 | 3753707 | 9.23E-07 | 30YrCance | 9.23E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 323 | ALL | 397583.1 | 3753707 | 8.88E-07 | 30YrCance | 8.88E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 324 | ALL | 397633.1 | 3753707 | 8.47E-07 | 30YrCance | 8.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 325 | ALL | 397683.1 | 3753707 | 7.98E-07 | 30YrCance | 7.98E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 326 | ALL | 397733.1 | 3753707 | 7.41E-07 | 30YrCance | 7.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 327 | ALL | 397783.1 | 3753707 | 6.78E-07 | 30YrCance | 6.78E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 328 | ALL | 397033.1 | 3753757 | 1.17E-06 | 30YrCance | 1.17E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 329 | ALL | 397083.1 | 3753757 | 1.12E-06 | 30YrCance | 1.12E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 330 | ALL | 397133.1 | 3753757 | 1.07E-06 | 30YrCance | 1.07E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 331 | ALL | 397283.1 | 3753757 | 9.74E-07 | 30YrCance | 9.74E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 332 | ALL | 397333.1 | 3753757 | 9.48E-07 | 30YrCance | 9.48E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 333 | ALL | 397383.1 | 3753757 | 9.24E-07 | 30YrCance | 9.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 334 | ALL | 397433.1 | 3753757 | 8.99E-07 | 30YrCance | 8.99E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 335 | ALL | 397483.1 | 3753757 | 8.73E-07 | 30YrCance | 8.73E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 336 | ALL | 397533.1 | 3753757 | 8.45E-07 | 30YrCance | 8.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 337 | ALL | 397583.1 | 3753757 | 8.14E-07 | 30YrCance | 8.14E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 338 | ALL | 397633.1 | 3753757 | 7.80E-07 | 30YrCance | 7.80E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 339 | ALL | 397683.1 | 3753757 | 7.41E-07 | 30YrCance | 7.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 340 | ALL | 397733.1 | 3753757 | 6.98E-07 | 30YrCance | 6.98E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 341 | ALL | 397783.1 | 3753757 | 6.52E-07 | 30YrCance | 6.52E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 342 | ALL | 397033.1 | 3753807 | 1.16E-06 | 30YrCance | 1.16E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 343 | ALL | 397083.1 | 3753807 | 1.09E-06 | 30YrCance | 1.09E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 344 | ALL | 397133.1 | 3753807 | 1.04E-06 | 30YrCance | 1.04E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 345 | ALL | 397283.1 | 3753807 | 9.37E-07 | 30YrCance | 9.37E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 346 | ALL | 397333.1 | 3753807 | 9.10E-07 | 30YrCance | 9.10E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 347 | ALL | 397383.1 | 3753807 | 8.84E-07 | 30YrCance | 8.84E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 348 | ALL | 397433.1 | 3753807 | 8.59E-07 | 30YrCance | 8.59E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 349 | ALL | 397483.1 | 3753807 | 8.34E-07 | 30YrCance | 8.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 350 | ALL | 397533.1 | 3753807 | 8.08E-07 | 30YrCance | 8.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 351 | ALL | 397583.1 | 3753807 | 7.79E-07 | 30YrCance | 7.79E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 352 | ALL | 397633.1 | 3753807 | 7.49E-07 | 30YrCance | 7.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 353 | ALL | 397683.1 | 3753807 | 7.17E-07 | 30YrCance | 7.17E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 354 | ALL | 397733.1 | 3753807 | 6.81E-07 | 30YrCance | 6.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 355 | ALL | 397783.1 | 3753807 | 6.44E-07 | 30YrCance | 6.44E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 356 | ALL | 397283.1 | 3753857 | 9.26E-07 | 30YrCance | 9.26E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 357 | ALL | 397333.1 | 3753857 | 8.97E-07 | 30YrCance | 8.97E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 358 | ALL | 397383.1 | 3753857 | 8.71E-07 | 30YrCance | 8.71E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 359 | ALL | 397433.1 | 3753857 | 8.46E-07 | 30YrCance | 8.46E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 360 | ALL | 397483.1 | 3753857 | 8.21E-07 | 30YrCance | 8.21E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 361 | ALL | 397533.1 | 3753857 | 7.96E-07 | 30YrCance | 7.96E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 362 | ALL | 397583.1 | 3753857 | 7.70E-07 | 30YrCance | 7.70E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 363 | ALL | 397633.1 | 3753857 | 7.43E-07 | 30YrCance | 7.43E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 364 | ALL | 397683.1 | 3753857 | 7.13E-07 | 30YrCance | 7.13E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 365 | ALL | 397733.1 | 3753857 | 6.83E-07 | 30YrCance | 6.83E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 366 | ALL | 397783.1 | 3753857 | 6.50E-07 | 30YrCance | 6.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 367 | ALL | 396001.3 | 3753290 | 2.57E-07 | 30YrCance | 2.57E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 368 | ALL | 396051.3 | 3753290 | 2.68E-07 | 30YrCance | 2.68E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 369 | ALL | 396101.3 | 3753290 | 2.81E-07 | 30YrCance | 2.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 370 | ALL | 396151.3 | 3753290 | 2.94E-07 | 30YrCance | 2.94E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 371 | ALL | 396201.3 | 3753290 | 3.08E-07 | 30YrCance | 3.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 372 | ALL | 396251.3 | 3753290 | 3.24E-07 | 30YrCance | 3.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 373 | ALL | 396301.3 | 3753290 | 3.41E-07 | 30YrCance | 3.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 374 | ALL | 396351.3 | 3753290 | 3.59E-07 | 30YrCance | 3.59E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 375 | ALL | 396401.3 | 3753290 | 3.79E-07 | 30YrCance | 3.79E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 376 | ALL | 396451.3 | 3753290 | 4.02E-07 | 30YrCance | 4.02E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 377 | ALL | 396501.3 | 3753290 | 4.27E-07 | 30YrCance | 4.27E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 378 | ALL | 396551.3 | 3753290 | 4.55E-07 | 30YrCance | 4.55E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 379 | ALL | 396601.3 | 3753290 | 4.85E-07 | 30YrCance | 4.85E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 380 | ALL | 396651.3 | 3753290 | 5.19E-07 | 30YrCance | 5.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 381 | ALL | 396701.3 | 3753290 | 5.54E-07 | 30YrCance | 5.54E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 382 | ALL | 396751.3 | 3753290 | 5.88E-07 | 30YrCance | 5.88E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 383 | ALL | 396001.3 | 3753340 | 2.68E-07 | 30YrCance | 2.68E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 384 | ALL | 396051.3 | 3753340 | 2.80E-07 | 30YrCance | 2.80E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 385 | ALL | 396101.3 | 3753340 | 2.94E-07 | 30YrCance | 2.94E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 386 | ALL | 396151.3 | 3753340 | 3.08E-07 | 30YrCance | 3.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 387 | ALL | 396201.3 | 3753340 | 3.24E-07 | 30YrCance | 3.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 388 | ALL | 396251.3 | 3753340 | 3.42E-07 | 30YrCance | 3.42E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 389 | ALL | 396301.3 | 3753340 | 3.61E-07 | 30YrCance | 3.61E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 390 | ALL | 396351.3 | 3753340 | 3.82E-07 | 30YrCance | 3.82E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 391 | ALL | 396401.3 | 3753340 | 4.06E-07 | 30YrCance | 4.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 392 | ALL | 396451.3 | 3753340 | 4.32E-07 | 30YrCance | 4.32E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 393 | ALL | 396501.3 | 3753340 | 4.63E-07 | 30YrCance | 4.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 394 | ALL | 396551.3 | 3753340 | 4.98E-07 | 30YrCance | 4.98E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 395 | ALL | 396601.3 | 3753340 | 5.39E-07 | 30YrCance | 5.39E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 396 | ALL | 396651.3 | 3753340 | 5.86E-07 | 30YrCance | 5.86E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 397 | ALL | 396701.3 | 3753340 | 6.38E-07 | 30YrCance | 6.38E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 398 | ALL | 396751.3 | 3753340 | 6.90E-07 | 30YrCance | 6.90E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 399 | ALL | 396001.3 | 3753390 | 2.79E-07 | 30YrCance | 2.79E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 400 | ALL | 396051.3 | 3753390 | 2.93E-07 | 30YrCance | 2.93E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 401 | ALL | 396101.3 | 3753390 | 3.08E-07 | 30YrCance | 3.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 402 | ALL | 396151.3 | 3753390 | 3.24E-07 | 30YrCance | 3.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 403 | ALL | 396201.3 | 3753390 | 3.41E-07 | 30YrCance | 3.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 404 | ALL | 396251.3 | 3753390 | 3.61E-07 | 30YrCance | 3.61E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 405 | ALL | 396301.3 | 3753390 | 3.82E-07 | 30YrCance | 3.82E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 406 | ALL | 396351.3 | 3753390 | 4.07E-07 | 30YrCance | 4.07E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 407 | ALL | 396401.3 | 3753390 | 4.34E-07 | 30YrCance | 4.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 408 | ALL | 396451.3 | 3753390 | 4.65E-07 | 30YrCance | 4.65E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 409 | ALL | 396501.3 | 3753390 | 5.03E-07 | 30YrCance | 5.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 410 | ALL | 396551.3 | 3753390 | 5.48E-07 | 30YrCance | 5.48E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 411 | ALL | 396601.3 | 3753390 | 6.03E-07 | 30YrCance | 6.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 412 | ALL | 396651.3 | 3753390 | 6.72E-07 | 30YrCance | 6.72E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 413 | ALL | 396701.3 | 3753390 | 7.55E-07 | 30YrCance | 7.55E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 414 | ALL | 396751.3 | 3753390 | 8.46E-07 | 30YrCance | 8.46E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 415 | ALL | 396001.3 | 3753440 | 2.91E-07 | 30YrCance | 2.91E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 416 | ALL | 396051.3 | 3753440 | 3.06E-07 | 30YrCance | 3.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 417 | ALL | 396101.3 | 3753440 | 3.22E-07 | 30YrCance | 3.22E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 418 | ALL | 396151.3 | 3753440 | 3.40E-07 | 30YrCance | 3.40E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 419 | ALL | 396201.3 | 3753440 | 3.59E-07 | 30YrCance | 3.59E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 420 | ALL | 396251.3 | 3753440 | 3.81E-07 | 30YrCance | 3.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 421 | ALL | 396301.3 | 3753440 | 4.05E-07 | 30YrCance | 4.05E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 422 | ALL | 396351.3 | 3753440 | 4.33E-07 | 30YrCance | 4.33E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 423 | ALL | 396401.3 | 3753440 | 4.64E-07 | 30YrCance | 4.64E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 424 | ALL | 396451.3 | 3753440 | 5.01E-07 | 30YrCance | 5.01E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 425 | ALL | 396501.3 | 3753440 | 5.46E-07 | 30YrCance | 5.46E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 426 | ALL | 396551.3 | 3753440 | 6.03E-07 | 30YrCance | 6.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 427 | ALL | 396601.3 | 3753440 | 6.78E-07 | 30YrCance | 6.78E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 428 | ALL | 396651.3 | 3753440 | 7.81E-07 | 30YrCance | 7.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 429 | ALL | 396701.3 | 3753440 | 9.30E-07 | 30YrCance | 9.30E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 430 | ALL | 396751.3 | 3753440 | 1.13E-06 | 30YrCance | 1.13E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 431 | ALL | 396001.3 | 3753490 | 3.03E-07 | 30YrCance | 3.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 432 | ALL | 396051.3 | 3753490 | 3.20E-07 | 30YrCance | 3.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 433 | ALL | 396101.3 | 3753490 | 3.38E-07 | 30YrCance | 3.38E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 434 | ALL | 396151.3 | 3753490 | 3.57E-07 | 30YrCance | 3.57E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 435 | ALL | 396201.3 | 3753490 | 3.78E-07 | 30YrCance | 3.78E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 436 | ALL | 396251.3 | 3753490 | 4.02E-07 | 30YrCance | 4.02E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 437 | ALL | 396301.3 | 3753490 | 4.29E-07 | 30YrCance | 4.29E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 438 | ALL | 396351.3 | 3753490 | 4.60E-07 | 30YrCance | 4.60E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 439 | ALL | 396401.3 | 3753490 | 4.96E-07 | 30YrCance | 4.96E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 440 | ALL | 396451.3 | 3753490 | 5.38E-07 | 30YrCance | 5.38E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 441 | ALL | 396501.3 | 3753490 | 5.91E-07 | 30YrCance | 5.91E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 442 | ALL | 396551.3 | 3753490 | 6.61E-07 | 30YrCance | 6.61E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 443 | ALL | 396601.3 | 3753490 | 7.59E-07 | 30YrCance | 7.59E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 444 | ALL | 396651.3 | 3753490 | 9.11E-07 | 30YrCance | 9.11E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 445 | ALL | 396701.3 | 3753490 | 1.19E-06 | 30YrCance | 1.19E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 446 | ALL | 396751.3 | 3753490 | 1.87E-06 | 30YrCance | 1.87E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 447 | ALL | 396935.3 | 3754882 | 4.68E-06 | 30YrCance | 4.68E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 448 | ALL | 396985.3 | 3754882 | 5.45E-06 | 30YrCance | 5.45E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 449 | ALL | 397535.3 | 3754882 | 2.69E-06 | 30YrCance | 2.69E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 450 | ALL | 396835.3 | 3754932 | 2.75E-06 | 30YrCance | 2.75E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 451 | ALL | 396885.3 | 3754932 | 3.04E-06 | 30YrCance | 3.04E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 452 | ALL | 396935.3 | 3754932 | 3.35E-06 | 30YrCance | 3.35E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 453 | ALL | 396985.3 | 3754932 | 3.71E-06 | 30YrCance | 3.71E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 454 | ALL | 397035.3 | 3754932 | 4.16E-06 | 30YrCance | 4.16E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 455 | ALL | 397235.3 | 3754932 | 7.71E-06 | 30YrCance | 7.71E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 456 | ALL | 397285.3 | 3754932 | 6.14E-06 | 30YrCance | 6.14E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 457 | ALL | 397335.3 | 3754932 | 4.58E-06 | 30YrCance | 4.58E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 458 | ALL | 397485.3 | 3754932 | 2.54E-06 | 30YrCance | 2.54E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 459 | ALL | 397535.3 | 3754932 | 2.20E-06 | 30YrCance | 2.20E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 460 | ALL | 396835.3 | 3754982 | 2.22E-06 | 30YrCance | 2.22E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 461 | ALL | 396885.3 | 3754982 | 2.40E-06 | 30YrCance | 2.40E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 462 | ALL | 396935.3 | 3754982 | 2.59E-06 | 30YrCance | 2.59E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 463 | ALL | 396985.3 | 3754982 | 2.80E-06 | 30YrCance | 2.80E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 464 | ALL | 397035.3 | 3754982 | 3.03E-06 | 30YrCance | 3.03E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 465 | ALL | 397185.3 | 3754982 | 3.83E-06 | 30YrCance | 3.83E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 466 | ALL | 397235.3 | 3754982 | 3.93E-06 | 30YrCance | 3.93E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 467 | ALL | 397285.3 | 3754982 | 3.64E-06 | 30YrCance | 3.64E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 468 | ALL | 397335.3 | 3754982 | 3.16E-06 | 30YrCance | 3.16E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 469 | ALL | 397435.3 | 3754982 | 2.36E-06 | 30YrCance | 2.36E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 470 | ALL | 397485.3 | 3754982 | 2.07E-06 | 30YrCance | 2.07E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 471 | ALL | 397535.3 | 3754982 | 1.84E-06 | 30YrCance | 1.84E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 472 | ALL | 397585.3 | 3754982 | 1.64E-06 | 30YrCance | 1.64E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 473 | ALL | 396835.3 | 3755032 | 1.85E-06 | 30YrCance | 1.85E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 474 | ALL | 396885.3 | 3755032 | 1.97E-06 | 30YrCance | 1.97E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 475 | ALL | 396935.3 | 3755032 | 2.09E-06 | 30YrCance | 2.09E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 476 | ALL | 397085.3 | 3755032 | 2.48E-06 | 30YrCance | 2.48E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 477 | ALL | 397135.3 | 3755032 | 2.60E-06 | 30YrCance | 2.60E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 478 | ALL | 397185.3 | 3755032 | 2.69E-06 | 30YrCance | 2.69E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 479 | ALL | 397235.3 | 3755032 | 2.69E-06 | 30YrCance | 2.69E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 480 | ALL | 397285.3 | 3755032 | 2.58E-06 | 30YrCance | 2.58E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 481 | ALL | 397335.3 | 3755032 | 2.37E-06 | 30YrCance | 2.37E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 482 | ALL | 397385.3 | 3755032 | 2.14E-06 | 30YrCance | 2.14E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 483 | ALL | 397435.3 | 3755032 | 1.92E-06 | 30YrCance | 1.92E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 484 | ALL | 397485.3 | 3755032 | 1.73E-06 | 30YrCance | 1.73E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 485 | ALL | 397535.3 | 3755032 | 1.57E-06 | 30YrCance | 1.57E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 486 | ALL | 397585.3 | 3755032 | 1.42E-06 | 30YrCance | 1.42E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 487 | ALL | 396835.3 | 3755082 | 1.57E-06 | 30YrCance | 1.57E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 488 | ALL | 396885.3 | 3755082 | 1.65E-06 | 30YrCance | 1.65E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 489 | ALL | 396985.3 | 3755082 | 1.82E-06 | 30YrCance | 1.82E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 490 | ALL | 397035.3 | 3755082 | 1.90E-06 | 30YrCance | 1.90E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 491 | ALL | 397085.3 | 3755082 | 1.98E-06 | 30YrCance | 1.98E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 492 | ALL | 397135.3 | 3755082 | 2.03E-06 | 30YrCance | 2.03E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 493 | ALL | 397185.3 | 3755082 | 2.07E-06 | 30YrCance | 2.07E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 494 | ALL | 397235.3 | 3755082 | 2.06E-06 | 30YrCance | 2.06E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 495 | ALL | 397285.3 | 3755082 | 1.99E-06 | 30YrCance | 1.99E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 496 | ALL | 397335.3 | 3755082 | 1.88E-06 | 30YrCance | 1.88E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 497 | ALL | 397385.3 | 3755082 | 1.75E-06 | 30YrCance | 1.75E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 498 | ALL | 397435.3 | 3755082 | 1.61E-06 | 30YrCance | 1.61E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 499 | ALL | 397485.3 | 3755082 | 1.48E-06 | 30YrCance | 1.48E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 500 | ALL | 397535.3 | 3755082 | 1.36E-06 | 30YrCance | 1.36E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 501 | ALL | 397585.3 | 3755082 | 1.25E-06 | 30YrCance | 1.25E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 502 | ALL | 397635.3 | 3755082 | 1.15E-06 | 30YrCance | 1.15E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 503 | ALL | 396935.3 | 3755132 | 1.47E-06 | 30YrCance | 1.47E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 504 | ALL | 396985.3 | 3755132 | 1.53E-06 | 30YrCance | 1.53E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 505 | ALL | 397035.3 | 3755132 | 1.58E-06 | 30YrCance | 1.58E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 506 | ALL | 397085.3 | 3755132 | 1.63E-06 | 30YrCance | 1.63E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 507 | ALL | 397135.3 | 3755132 | 1.66E-06 | 30YrCance | 1.66E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 508 | ALL | 397185.3 | 3755132 | 1.67E-06 | 30YrCance | 1.67E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 509 | ALL | 397235.3 | 3755132 | 1.66E-06 | 30YrCance | 1.66E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 510 | ALL | 397285.3 | 3755132 | 1.62E-06 | 30YrCance | 1.62E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 511 | ALL | 397335.3 | 3755132 | 1.55E-06 | 30YrCance | 1.55E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 512 | ALL | 397385.3 | 3755132 | 1.47E-06 | 30YrCance | 1.47E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 513 | ALL | 397435.3 | 3755132 | 1.37E-06 | 30YrCance | 1.37E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 514 | ALL | 397485.3 | 3755132 | 1.28E-06 | 30YrCance | 1.28E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 515 | ALL | 397535.3 | 3755132 | 1.19E-06 | 30YrCance | 1.19E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 516 | ALL | 397585.3 | 3755132 | 1.10E-06 | 30YrCance | 1.10E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 517 | ALL | 397635.3 | 3755132 | 1.02E-06 | 30YrCance | 1.02E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 518 | ALL | 396835.3 | 3755182 | 1.18E-06 | 30YrCance | 1.18E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 519 | ALL | 396885.3 | 3755182 | 1.22E-06 | 30YrCance | 1.22E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 520 | ALL | 396935.3 | 3755182 | 1.26E-06 | 30YrCance | 1.26E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 521 | ALL | 396985.3 | 3755182 | 1.31E-06 | 30YrCance | 1.31E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 522 | ALL | 397035.3 | 3755182 | 1.34E-06 | 30YrCance | 1.34E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 523 | ALL | 397085.3 | 3755182 | 1.37E-06 | 30YrCance | 1.37E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 524 | ALL | 397135.3 | 3755182 | 1.39E-06 | 30YrCance | 1.39E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 525 | ALL | 397185.3 | 3755182 | 1.40E-06 | 30YrCance | 1.40E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 526 | ALL | 397235.3 | 3755182 | 1.39E-06 | 30YrCance | 1.39E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 527 | ALL | 397285.3 | 3755182 | 1.36E-06 | 30YrCance | 1.36E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 528 | ALL | 397335.3 | 3755182 | 1.31E-06 | 30YrCance | 1.31E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 529 | ALL | 397385.3 | 3755182 | 1.26E-06 | 30YrCance | 1.26E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 530 | ALL | 397435.3 | 3755182 | 1.19E-06 | 30YrCance | 1.19E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 531 | ALL | 397485.3 | 3755182 | 1.12E-06 | 30YrCance | 1.12E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 532 | ALL | 397535.3 | 3755182 | 1.05E-06 | 30YrCance | 1.05E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 533 | ALL | 397585.3 | 3755182 | 9.83E-07 | 30YrCance | 9.83E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 534 | ALL | 396885.3 | 3755232 | 1.07E-06 | 30YrCance | 1.07E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 535 | ALL | 396935.3 | 3755232 | 1.10E-06 | 30YrCance | 1.10E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 536 | ALL | 396985.3 | 3755232 | 1.13E-06 | 30YrCance | 1.13E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 537 | ALL | 397035.3 | 3755232 | 1.16E-06 | 30YrCance | 1.16E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 538 | ALL | 397085.3 | 3755232 | 1.18E-06 | 30YrCance | 1.18E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 539 | ALL | 397135.3 | 3755232 | 1.19E-06 | 30YrCance | 1.19E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 540 | ALL | 397185.3 | 3755232 | 1.19E-06 | 30YrCance | 1.19E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 541 | ALL | 397235.3 | 3755232 | 1.18E-06 | 30YrCance | 1.18E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 542 | ALL | 397285.3 | 3755232 | 1.16E-06 | 30YrCance | 1.16E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 543 | ALL | 397335.3 | 3755232 | 1.13E-06 | 30YrCance | 1.13E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 544 | ALL | 397385.3 | 3755232 | 1.09E-06 | 30YrCance | 1.09E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 545 | ALL | 397435.3 | 3755232 | 1.04E-06 | 30YrCance | 1.04E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 546 | ALL | 397485.3 | 3755232 | 9.90E-07 | 30YrCance | 9.90E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 547 | ALL | 397535.3 | 3755232 | 9.36E-07 | 30YrCance | 9.36E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 548 | ALL | 396885.3 | 3755282 | 9.43E-07 | 30YrCance | 9.43E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 549 | ALL | 396935.3 | 3755282 | 9.69E-07 | 30YrCance | 9.69E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 550 | ALL | 396985.3 | 3755282 | 9.91E-07 | 30YrCance | 9.91E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 551 | ALL | 397035.3 | 3755282 | 1.01E-06 | 30YrCance | 1.01E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 552 | ALL | 397085.3 | 3755282 | 1.03E-06 | 30YrCance | 1.03E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 553 | ALL | 397135.3 | 3755282 | 1.03E-06 | 30YrCance | 1.03E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 554 | ALL | 397185.3 | 3755282 | 1.04E-06 | 30YrCance | 1.04E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 555 | ALL | 397235.3 | 3755282 | 1.03E-06 | 30YrCance | 1.03E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 556 | ALL | 397285.3 | 3755282 | 1.01E-06 | 30YrCance | 1.01E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 557 | ALL | 397335.3 | 3755282 | 9.90E-07 | 30YrCance | 9.90E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 558 | ALL | 397385.3 | 3755282 | 9.61E-07 | 30YrCance | 9.61E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 559 | ALL | 397435.3 | 3755282 | 9.24E-07 | 30YrCance | 9.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 560 | ALL | 396935.3 | 3755332 | 8.58E-07 | 30YrCance | 8.58E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 561 | ALL | 396985.3 | 3755332 | 8.77E-07 | 30YrCance | 8.77E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 562 | ALL | 397035.3 | 3755332 | 8.91E-07 | 30YrCance | 8.91E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 563 | ALL | 397085.3 | 3755332 | 9.03E-07 | 30YrCance | 9.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 564 | ALL | 397135.3 | 3755332 | 9.09E-07 | 30YrCance | 9.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 565 | ALL | 397185.3 | 3755332 | 9.11E-07 | 30YrCance | 9.11E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 566 | ALL | 397235.3 | 3755332 | 9.05E-07 | 30YrCance | 9.05E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 567 | ALL | 397285.3 | 3755332 | 8.95E-07 | 30YrCance | 8.95E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 568 | ALL | 397335.3 | 3755332 | 8.78E-07 | 30YrCance | 8.78E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 569 | ALL | 397385.3 | 3755332 | 8.53E-07 | 30YrCance | 8.53E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 570 | ALL | 396985.3 | 3755382 | 7.82E-07 | 30YrCance | 7.82E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 571 | ALL | 397035.3 | 3755382 | 7.94E-07 | 30YrCance | 7.94E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 572 | ALL | 397085.3 | 3755382 | 8.03E-07 | 30YrCance | 8.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 573 | ALL | 397135.3 | 3755382 | 8.08E-07 | 30YrCance | 8.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 574 | ALL | 397185.3 | 3755382 | 8.10E-07 | 30YrCance | 8.10E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 575 | ALL | 397235.3 | 3755382 | 8.06E-07 | 30YrCance | 8.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 576 | ALL | 397285.3 | 3755382 | 7.98E-07 | 30YrCance | 7.98E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 577 | ALL | 397035.3 | 3755432 | 7.13E-07 | 30YrCance | 7.13E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 578 | ALL | 397085.3 | 3755432 | 7.19E-07 | 30YrCance | 7.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 579 | ALL | 397135.3 | 3755432 | 7.24E-07 | 30YrCance | 7.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 580 | ALL | 397185.3 | 3755432 | 7.24E-07 | 30YrCance | 7.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 581 | ALL | 397235.3 | 3755432 | 7.22E-07 | 30YrCance | 7.22E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 582 | ALL | 397035.3 | 3755482 | 6.44E-07 | 30YrCance | 6.44E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 583 | ALL | 397085.3 | 3755482 | 6.50E-07 | 30YrCance | 6.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 584 | ALL | 397135.3 | 3755482 | 6.54E-07 | 30YrCance | 6.54E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 585 | ALL | 397567.7 | 3754188 | 1.12E-06 | 30YrCance | 1.12E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 586 | ALL | 397617.7 | 3754188 | 1.12E-06 | 30YrCance | 1.12E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 587 | ALL | 397667.7 | 3754188 | 1.12E-06 | 30YrCance | 1.12E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 588 | ALL | 397717.7 | 3754188 | 1.11E-06 | 30YrCance | 1.11E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 589 | ALL | 397767.7 | 3754188 | 1.10E-06 | 30YrCance | 1.10E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 590 | ALL | 397817.7 | 3754188 | 1.06E-06 | 30YrCance | 1.06E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 591 | ALL | 397567.7 | 3754238 | 1.25E-06 | 30YrCance | 1.25E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 592 | ALL | 397617.7 | 3754238 | 1.27E-06 | 30YrCance | 1.27E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 593 | ALL | 397667.7 | 3754238 | 1.29E-06 | 30YrCance | 1.29E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 594 | ALL | 397717.7 | 3754238 | 1.31E-06 | 30YrCance | 1.31E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 595 | ALL | 397767.7 | 3754238 | 1.31E-06 | 30YrCance | 1.31E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 596 | ALL | 397817.7 | 3754238 | 1.28E-06 | 30YrCance | 1.28E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 597 ALL | 397567.7 | 3754288 | 1.43E-06 | 30YrCance | 1.43E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 598 ALL | 397617.7 | 3754288 | 1.48E-06 | 30YrCance | 1.48E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 599 ALL | 397667.7 | 3754288 | 1.54E-06 | 30YrCance | 1.54E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 600 ALL | 397717.7 | 3754288 | 1.60E-06 | 30YrCance | 1.60E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 601 ALL | 397756.8 | 3754272 | 1.51E-06 | 30YrCance | 1.51E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 602 ALL | 397567.7 | 3754338 | 1.66E-06 | 30YrCance | 1.66E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 603 ALL | 397617.7 | 3754338 | 1.76E-06 | 30YrCance | 1.76E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 604 ALL | 397667.7 | 3754338 | 1.90E-06 | 30YrCance | 1.90E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 605 ALL | 397598.6 | 3754379 | 2.01E-06 | 30YrCance | 2.01E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 606 ALL | 396986 | 3754854 | 7.40E-06 | 30YrCance | 7.40E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

HARP2 - HRACalc (dated 19044) 9/16/2020 2:53:19 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
**********
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: Cancer
Calculation Method: Derived

**********
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 30

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 14
16<30 Years Bin: 14
16 to 70 Years Bin: 0

**********
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: True
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

**********
INHALATION

Daily breathing rate: RMP

**Worker Adjustment Factors**
Worker adjustment factors enabled: NO

**Fraction at time at home**
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

**********
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Warm

**********
HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137
Fraction protected: 0.137
Fraction root: 0.137

**********
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment.  Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to: C:\Users\dlarocca\Desktop\Air Quality Work\HARP2\Downey Op\DOWNEY OPERATIONAL HRA\hra\30yr3tricancerCancerRisk.csv
Cancer risk total by receptor saved to: C:\Users\dlarocca\Desktop\Air Quality Work\HARP2\Downey Op\DOWNEY OPERATIONAL HRA\hra\30yr3tricancerCancerRiskSumByRec.csv
HRA ran successfully

*HARP - HRACalc v19044 9/16/2020 10:29:08 AM - Cancer Risk - Input File: C:\Users\dlarocca\Desktop\Air Quality Work\HARP2\Downey Op\DOWNEY OPERATIONAL HRA\hra\5yrStudenticancerHRAInput.hra

| REC | GRP | NETID | X | Y | RISK_SUM | SCENARIO | INH_RISK | SOIL_RISK | DERMAL_F | MMILK_RIS | WATER_RI | FISH_RISK | CROP_RISK | BEEF_RISK | DAIRY_RIS | PIG_RISK | CHICKEN_F | EGG_RISK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ALL | | 396002.2 | 3753559 | 5.93E-08 | 5YrCancerI | 5.93E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 2 | ALL | | 396052.2 | 3753559 | 6.27E-08 | 5YrCancerI | 6.27E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 3 | ALL | | 396102.2 | 3753559 | 6.64E-08 | 5YrCancerI | 6.64E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 4 | ALL | | 396152.2 | 3753559 | 7.04E-08 | 5YrCancerI | 7.04E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 5 | ALL | | 396202.2 | 3753559 | 7.49E-08 | 5YrCancerI | 7.49E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 6 | ALL | | 396252.2 | 3753559 | 7.99E-08 | 5YrCancerI | 7.99E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 7 | ALL | | 396302.2 | 3753559 | 8.56E-08 | 5YrCancerI | 8.56E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 8 | ALL | | 396352.2 | 3753559 | 9.21E-08 | 5YrCancerI | 9.21E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 9 | ALL | | 396402.2 | 3753559 | 9.97E-08 | 5YrCancerI | 9.97E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 10 | ALL | | 396452.2 | 3753559 | 1.09E-07 | 5YrCancerI | 1.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 11 | ALL | | 396502.2 | 3753559 | 1.21E-07 | 5YrCancerI | 1.21E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 12 | ALL | | 396552.2 | 3753559 | 1.37E-07 | 5YrCancerI | 1.37E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 13 | ALL | | 396802.2 | 3753559 | 7.85E-07 | 5YrCancerI | 7.85E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 14 | ALL | | 396852.2 | 3753559 | 6.20E-07 | 5YrCancerI | 6.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 15 | ALL | | 396902.2 | 3753559 | 5.86E-07 | 5YrCancerI | 5.86E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 16 | ALL | | 396952.2 | 3753559 | 5.70E-07 | 5YrCancerI | 5.70E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 17 | ALL | | 397002.2 | 3753559 | 5.57E-07 | 5YrCancerI | 5.57E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 18 | ALL | | 396002.2 | 3753609 | 6.18E-08 | 5YrCancerI | 6.18E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | ALL | | 396052.2 | 3753609 | 6.56E-08 | 5YrCancerI | 6.56E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 20 | ALL | | 396102.2 | 3753609 | 6.96E-08 | 5YrCancerI | 6.96E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 21 | ALL | | 396152.2 | 3753609 | 7.40E-08 | 5YrCancerI | 7.40E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 22 | ALL | | 396202.2 | 3753609 | 7.89E-08 | 5YrCancerI | 7.89E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 23 | ALL | | 396252.2 | 3753609 | 8.43E-08 | 5YrCancerI | 8.43E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 24 | ALL | | 396302.2 | 3753609 | 9.05E-08 | 5YrCancerI | 9.05E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 25 | ALL | | 396352.2 | 3753609 | 9.76E-08 | 5YrCancerI | 9.76E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 26 | ALL | | 396402.2 | 3753609 | 1.06E-07 | 5YrCancerI | 1.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 27 | ALL | | 396452.2 | 3753609 | 1.16E-07 | 5YrCancerI | 1.16E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 28 | ALL | | 396502.2 | 3753609 | 1.29E-07 | 5YrCancerI | 1.29E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | ALL | | 396552.2 | 3753609 | 1.46E-07 | 5YrCancerI | 1.46E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 30 | ALL | | 396802.2 | 3753609 | 6.60E-07 | 5YrCancerI | 6.60E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 31 | ALL | | 396852.2 | 3753609 | 4.05E-07 | 5YrCancerI | 4.05E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 32 | ALL | | 396902.2 | 3753609 | 3.53E-07 | 5YrCancerI | 3.53E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 33 | ALL | | 396952.2 | 3753609 | 3.32E-07 | 5YrCancerI | 3.32E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 34 | ALL | | 397002.2 | 3753609 | 3.20E-07 | 5YrCancerI | 3.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 35 | ALL | | 396002.2 | 3753659 | 6.45E-08 | 5YrCancerI | 6.45E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 36 | ALL | | 396052.2 | 3753659 | 6.85E-08 | 5YrCancerI | 6.85E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 37 | ALL | | 396102.2 | 3753659 | 7.29E-08 | 5YrCancerI | 7.29E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 38 | ALL | | 396152.2 | 3753659 | 7.78E-08 | 5YrCancerI | 7.78E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 39 | ALL | | 396202.2 | 3753659 | 8.31E-08 | 5YrCancerI | 8.31E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 40 | ALL | | 396252.2 | 3753659 | 8.90E-08 | 5YrCancerI | 8.90E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 41 | ALL | | 396302.2 | 3753659 | 9.57E-08 | 5YrCancerI | 9.57E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 42 | ALL | | 396352.2 | 3753659 | 1.03E-07 | 5YrCancerI | 1.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 43 | ALL | | 396402.2 | 3753659 | 1.12E-07 | 5YrCancerI | 1.12E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 44 | ALL | | 396452.2 | 3753659 | 1.23E-07 | 5YrCancerI | 1.23E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | ALL | 396502.2 | 3753659 | 1.37E-07 | 5YrCancerI | 1.37E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 46 | ALL | 396552.2 | 3753659 | 1.55E-07 | 5YrCancerI | 1.55E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 47 | ALL | 396802.2 | 3753659 | 6.51E-07 | 5YrCancerI | 6.51E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 48 | ALL | 396852.2 | 3753659 | 3.66E-07 | 5YrCancerI | 3.66E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 49 | ALL | 396902.2 | 3753659 | 3.00E-07 | 5YrCancerI | 3.00E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 50 | ALL | 396952.2 | 3753659 | 2.73E-07 | 5YrCancerI | 2.73E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 51 | ALL | 397002.2 | 3753659 | 2.58E-07 | 5YrCancerI | 2.58E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 52 | ALL | 396002.2 | 3753709 | 6.74E-08 | 5YrCancerI | 6.74E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 53 | ALL | 396052.2 | 3753709 | 7.17E-08 | 5YrCancerI | 7.17E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 54 | ALL | 396102.2 | 3753709 | 7.65E-08 | 5YrCancerI | 7.65E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 55 | ALL | 396152.2 | 3753709 | 8.17E-08 | 5YrCancerI | 8.17E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 56 | ALL | 396202.2 | 3753709 | 8.75E-08 | 5YrCancerI | 8.75E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 57 | ALL | 396252.2 | 3753709 | 9.39E-08 | 5YrCancerI | 9.39E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 58 | ALL | 396302.2 | 3753709 | 1.01E-07 | 5YrCancerI | 1.01E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 59 | ALL | 396352.2 | 3753709 | 1.09E-07 | 5YrCancerI | 1.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 60 | ALL | 396402.2 | 3753709 | 1.19E-07 | 5YrCancerI | 1.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 61 | ALL | 396452.2 | 3753709 | 1.30E-07 | 5YrCancerI | 1.30E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 62 | ALL | 396502.2 | 3753709 | 1.45E-07 | 5YrCancerI | 1.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 63 | ALL | 396552.2 | 3753709 | 1.64E-07 | 5YrCancerI | 1.64E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 64 | ALL | 396802.2 | 3753709 | 6.58E-07 | 5YrCancerI | 6.58E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 65 | ALL | 396852.2 | 3753709 | 3.58E-07 | 5YrCancerI | 3.58E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 66 | ALL | 396902.2 | 3753709 | 2.84E-07 | 5YrCancerI | 2.84E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 67 | ALL | 396952.2 | 3753709 | 2.52E-07 | 5YrCancerI | 2.52E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 68 | ALL | 397002.2 | 3753709 | 2.34E-07 | 5YrCancerI | 2.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 69 | ALL | 396002.2 | 3753759 | 7.04E-08 | 5YrCancerI | 7.04E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 70 | ALL | 396052.2 | 3753759 | 7.51E-08 | 5YrCancerI | 7.51E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 71 | ALL | 396102.2 | 3753759 | 8.03E-08 | 5YrCancerI | 8.03E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 72 | ALL | 396152.2 | 3753759 | 8.61E-08 | 5YrCancerI | 8.61E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 73 | ALL | 396202.2 | 3753759 | 9.23E-08 | 5YrCancerI | 9.23E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 74 | ALL | 396252.2 | 3753759 | 9.93E-08 | 5YrCancerI | 9.93E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 75 | ALL | 396302.2 | 3753759 | 1.07E-07 | 5YrCancerI | 1.07E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 76 | ALL | 396352.2 | 3753759 | 1.16E-07 | 5YrCancerI | 1.16E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 77 | ALL | 396402.2 | 3753759 | 1.26E-07 | 5YrCancerI | 1.26E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 78 | ALL | 396452.2 | 3753759 | 1.38E-07 | 5YrCancerI | 1.38E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 79 | ALL | 396502.2 | 3753759 | 1.53E-07 | 5YrCancerI | 1.53E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 80 | ALL | 396552.2 | 3753759 | 1.73E-07 | 5YrCancerI | 1.73E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 81 | ALL | 396802.2 | 3753759 | 6.70E-07 | 5YrCancerI | 6.70E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 82 | ALL | 396852.2 | 3753759 | 3.59E-07 | 5YrCancerI | 3.59E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 83 | ALL | 396902.2 | 3753759 | 2.80E-07 | 5YrCancerI | 2.80E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 84 | ALL | 396952.2 | 3753759 | 2.45E-07 | 5YrCancerI | 2.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 85 | ALL | 397002.2 | 3753759 | 2.25E-07 | 5YrCancerI | 2.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 86 | ALL | 396002.2 | 3753809 | 7.35E-08 | 5YrCancerI | 7.35E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 87 | ALL | 396052.2 | 3753809 | 7.87E-08 | 5YrCancerI | 7.87E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 88 | ALL | 396102.2 | 3753809 | 8.43E-08 | 5YrCancerI | 8.43E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 89 | ALL | 396152.2 | 3753809 | 9.06E-08 | 5YrCancerI | 9.06E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 90 | ALL | 396202.2 | 3753809 | 9.74E-08 | 5YrCancerI | 9.74E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 91 | ALL | 396252.2 | 3753809 | 1.05E-07 | 5YrCancerI | 1.05E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 92 | ALL | 396302.2 | 3753809 | 1.13E-07 | 5YrCancerI | 1.13E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 93 | ALL | 396352.2 | 3753809 | 1.23E-07 | 5YrCancerI | 1.23E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 94 | ALL | 396402.2 | 3753809 | 1.34E-07 | 5YrCancerI | 1.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 95 | ALL | 396452.2 | 3753809 | 1.46E-07 | 5YrCancerI | 1.46E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 96 | ALL | 396502.2 | 3753809 | 1.62E-07 | 5YrCancerI | 1.62E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 97 | ALL | 396552.2 | 3753809 | 1.82E-07 | 5YrCancerI | 1.82E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 98 | ALL | 396802.2 | 3753809 | 6.85E-07 | 5YrCancerI | 6.85E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 99 | ALL | 396852.2 | 3753809 | 3.65E-07 | 5YrCancerI | 3.65E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 100 | ALL | 396902.2 | 3753809 | 2.83E-07 | 5YrCancerI | 2.83E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 101 | ALL | 396952.2 | 3753809 | 2.45E-07 | 5YrCancerI | 2.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 102 | ALL | 397002.2 | 3753809 | 2.23E-07 | 5YrCancerI | 2.23E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 103 | ALL | 396002.2 | 3753859 | 7.68E-08 | 5YrCancerI | 7.68E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 104 | ALL | 396052.2 | 3753859 | 8.25E-08 | 5YrCancerI | 8.25E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 105 | ALL | 396102.2 | 3753859 | 8.87E-08 | 5YrCancerI | 8.87E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 106 | ALL | 396152.2 | 3753859 | 9.55E-08 | 5YrCancerI | 9.55E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 107 | ALL | 396202.2 | 3753859 | 1.03E-07 | 5YrCancerI | 1.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 108 | ALL | 396252.2 | 3753859 | 1.11E-07 | 5YrCancerI | 1.11E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 109 | ALL | 396302.2 | 3753859 | 1.20E-07 | 5YrCancerI | 1.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 110 | ALL | 396352.2 | 3753859 | 1.30E-07 | 5YrCancerI | 1.30E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 111 | ALL | 396402.2 | 3753859 | 1.42E-07 | 5YrCancerI | 1.42E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 112 | ALL | 396452.2 | 3753859 | 1.55E-07 | 5YrCancerI | 1.55E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 113 | ALL | 396502.2 | 3753859 | 1.71E-07 | 5YrCancerI | 1.71E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 114 | ALL | 396552.2 | 3753859 | 1.92E-07 | 5YrCancerI | 1.92E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 115 | ALL | 396002.2 | 3753909 | 8.03E-08 | 5YrCancerI | 8.03E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 116 | ALL | 396052.2 | 3753909 | 8.65E-08 | 5YrCancerI | 8.65E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 117 | ALL | 396102.2 | 3753909 | 9.33E-08 | 5YrCancerI | 9.33E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 118 | ALL | 396152.2 | 3753909 | 1.01E-07 | 5YrCancerI | 1.01E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 119 | ALL | 396202.2 | 3753909 | 1.09E-07 | 5YrCancerI | 1.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 120 | ALL | 396252.2 | 3753909 | 1.18E-07 | 5YrCancerI | 1.18E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 121 | ALL | 396302.2 | 3753909 | 1.28E-07 | 5YrCancerI | 1.28E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 122 | ALL | 396352.2 | 3753909 | 1.39E-07 | 5YrCancerI | 1.39E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 123 | ALL | 396402.2 | 3753909 | 1.51E-07 | 5YrCancerI | 1.51E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 124 | ALL | 396452.2 | 3753909 | 1.66E-07 | 5YrCancerI | 1.66E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 125 | ALL | 396502.2 | 3753909 | 1.83E-07 | 5YrCancerI | 1.83E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 126 | ALL | 396552.2 | 3753909 | 2.04E-07 | 5YrCancerI | 2.04E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 127 | ALL | 396002.2 | 3753959 | 8.39E-08 | 5YrCancerI | 8.39E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 128 | ALL | 396052.2 | 3753959 | 9.07E-08 | 5YrCancerI | 9.07E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 129 | ALL | 396102.2 | 3753959 | 9.82E-08 | 5YrCancerI | 9.82E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 130 | ALL | 396152.2 | 3753959 | 1.06E-07 | 5YrCancerI | 1.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 131 | ALL | 396202.2 | 3753959 | 1.15E-07 | 5YrCancerI | 1.15E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 132 | ALL | 396252.2 | 3753959 | 1.25E-07 | 5YrCancerI | 1.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 133 | ALL | 396302.2 | 3753959 | 1.36E-07 | 5YrCancerI | 1.36E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 134 | ALL | 396352.2 | 3753959 | 1.48E-07 | 5YrCancerI | 1.48E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 135 | ALL | 396402.2 | 3753959 | 1.62E-07 | 5YrCancerI | 1.62E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 136 | ALL | 396452.2 | 3753959 | 1.77E-07 | 5YrCancerI | 1.77E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 137 | ALL | 396502.2 | 3753959 | 1.95E-07 | 5YrCancerI | 1.95E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 138 | ALL | 396552.2 | 3753959 | 2.18E-07 | 5YrCancerI | 2.18E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 139 | ALL | 396002.2 | 3754009 | 8.77E-08 | 5YrCancerI | 8.77E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 140 | ALL | 396052.2 | 3754009 | 9.50E-08 | 5YrCancerI | 9.50E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 141 | ALL | 396102.2 | 3754009 | 1.03E-07 | 5YrCancerI | 1.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 142 | ALL | 396152.2 | 3754009 | 1.12E-07 | 5YrCancerI | 1.12E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 143 | ALL | 396202.2 | 3754009 | 1.23E-07 | 5YrCancerI | 1.23E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 144 | ALL | 396252.2 | 3754009 | 1.33E-07 | 5YrCancerI | 1.33E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 145 | ALL | 396302.2 | 3754009 | 1.45E-07 | 5YrCancerI | 1.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 146 | ALL | 396352.2 | 3754009 | 1.59E-07 | 5YrCancerI | 1.59E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 147 | ALL | 396402.2 | 3754009 | 1.74E-07 | 5YrCancerI | 1.74E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 148 | ALL | 396452.2 | 3754009 | 1.90E-07 | 5YrCancerI | 1.90E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 149 | ALL | 396502.2 | 3754009 | 2.10E-07 | 5YrCancerI | 2.10E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 150 | ALL | 396552.2 | 3754009 | 2.34E-07 | 5YrCancerI | 2.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 151 | ALL | 396002.2 | 3754059 | 9.15E-08 | 5YrCancerI | 9.15E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 152 | ALL | 396052.2 | 3754059 | 9.97E-08 | 5YrCancerI | 9.97E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 153 | ALL | 396102.2 | 3754059 | 1.09E-07 | 5YrCancerI | 1.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 154 | ALL | 396152.2 | 3754059 | 1.19E-07 | 5YrCancerI | 1.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 155 | ALL | 396202.2 | 3754059 | 1.30E-07 | 5YrCancerI | 1.30E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 156 | ALL | 396252.2 | 3754059 | 1.42E-07 | 5YrCancerI | 1.42E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 157 | ALL | 396302.2 | 3754059 | 1.56E-07 | 5YrCancerI | 1.56E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 158 | ALL | 396352.2 | 3754059 | 1.71E-07 | 5YrCancerI | 1.71E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 159 | ALL | 396402.2 | 3754059 | 1.88E-07 | 5YrCancerI | 1.88E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 160 | ALL | 396452.2 | 3754059 | 2.06E-07 | 5YrCancerI | 2.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 161 | ALL | 396502.2 | 3754059 | 2.28E-07 | 5YrCancerI | 2.28E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 162 | ALL | 396552.2 | 3754059 | 2.54E-07 | 5YrCancerI | 2.54E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 163 | ALL | 396002.2 | 3754109 | 9.52E-08 | 5YrCancerI | 9.52E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 164 | ALL | 396052.2 | 3754109 | 1.04E-07 | 5YrCancerI | 1.04E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 165 | ALL | 396102.2 | 3754109 | 1.14E-07 | 5YrCancerI | 1.14E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 166 | ALL | 396152.2 | 3754109 | 1.26E-07 | 5YrCancerI | 1.26E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 167 | ALL | 396202.2 | 3754109 | 1.38E-07 | 5YrCancerI | 1.38E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 168 | ALL | 396252.2 | 3754109 | 1.52E-07 | 5YrCancerI | 1.52E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 169 | ALL | 396302.2 | 3754109 | 1.68E-07 | 5YrCancerI | 1.68E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 170 | ALL | 396352.2 | 3754109 | 1.85E-07 | 5YrCancerI | 1.85E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 171 | ALL | 396402.2 | 3754109 | 2.04E-07 | 5YrCancerI | 2.04E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 172 | ALL | 396452.2 | 3754109 | 2.25E-07 | 5YrCancerI | 2.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 173 | ALL | 396502.2 | 3754109 | 2.50E-07 | 5YrCancerI | 2.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 174 | ALL | 396552.2 | 3754109 | 2.78E-07 | 5YrCancerI | 2.78E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 175 | ALL | 396002.2 | 3754159 | 9.88E-08 | 5YrCancerI | 9.88E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 176 | ALL | 396052.2 | 3754159 | 1.09E-07 | 5YrCancerI | 1.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 177 | ALL | 396102.2 | 3754159 | 1.20E-07 | 5YrCancerI | 1.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 178 | ALL | 396152.2 | 3754159 | 1.33E-07 | 5YrCancerI | 1.33E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 179 | ALL | 396202.2 | 3754159 | 1.47E-07 | 5YrCancerI | 1.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 180 | ALL | 396252.2 | 3754159 | 1.63E-07 | 5YrCancerI | 1.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 181 | ALL | 396302.2 | 3754159 | 1.81E-07 | 5YrCancerI | 1.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 182 | ALL | 396352.2 | 3754159 | 2.01E-07 | 5YrCancerI | 2.01E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 183 | ALL | 396402.2 | 3754159 | 2.23E-07 | 5YrCancerI | 2.23E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 184 | ALL | 396452.2 | 3754159 | 2.48E-07 | 5YrCancerI | 2.48E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 185 | ALL | 396502.2 | 3754159 | 2.78E-07 | 5YrCancerI | 2.78E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 186 | ALL | 396552.2 | 3754159 | 3.11E-07 | 5YrCancerI | 3.11E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 187 | ALL | 396002.2 | 3754209 | 1.02E-07 | 5YrCancerI | 1.02E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 188 | ALL | 396052.2 | 3754209 | 1.13E-07 | 5YrCancerI | 1.13E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 189 | ALL | 396102.2 | 3754209 | 1.26E-07 | 5YrCancerI | 1.26E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 190 | ALL | 396152.2 | 3754209 | 1.40E-07 | 5YrCancerI | 1.40E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 191 | ALL | 396202.2 | 3754209 | 1.57E-07 | 5YrCancerI | 1.57E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 192 | ALL | 396252.2 | 3754209 | 1.75E-07 | 5YrCancerI | 1.75E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 193 | ALL | 396302.2 | 3754209 | 1.96E-07 | 5YrCancerI | 1.96E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 194 | ALL | 396352.2 | 3754209 | 2.20E-07 | 5YrCancerI | 2.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 195 | ALL | 396402.2 | 3754209 | 2.47E-07 | 5YrCancerI | 2.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 196 | ALL | 396452.2 | 3754209 | 2.78E-07 | 5YrCancerI | 2.78E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 197 | ALL | 396502.2 | 3754209 | 3.15E-07 | 5YrCancerI | 3.15E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 198 | ALL | 396552.2 | 3754209 | 3.57E-07 | 5YrCancerI | 3.57E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 199 | ALL | 396002.2 | 3754259 | 1.05E-07 | 5YrCancerI | 1.05E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 200 | ALL | 396052.2 | 3754259 | 1.17E-07 | 5YrCancerI | 1.17E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 201 | ALL | 396102.2 | 3754259 | 1.31E-07 | 5YrCancerI | 1.31E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 202 | ALL | 396152.2 | 3754259 | 1.47E-07 | 5YrCancerI | 1.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 203 | ALL | 396202.2 | 3754259 | 1.66E-07 | 5YrCancerI | 1.66E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 204 | ALL | 396252.2 | 3754259 | 1.87E-07 | 5YrCancerI | 1.87E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 205 | ALL | 396302.2 | 3754259 | 2.12E-07 | 5YrCancerI | 2.12E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 206 | ALL | 396352.2 | 3754259 | 2.41E-07 | 5YrCancerI | 2.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 207 | ALL | 396402.2 | 3754259 | 2.75E-07 | 5YrCancerI | 2.75E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 208 | ALL | 396452.2 | 3754259 | 3.16E-07 | 5YrCancerI | 3.16E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 209 | ALL | 396502.2 | 3754259 | 3.67E-07 | 5YrCancerI | 3.67E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 210 | ALL | 396552.2 | 3754259 | 4.24E-07 | 5YrCancerI | 4.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 211 | ALL | 396002.2 | 3754309 | 1.06E-07 | 5YrCancerI | 1.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 212 | ALL | 396052.2 | 3754309 | 1.19E-07 | 5YrCancerI | 1.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 213 | ALL | 396102.2 | 3754309 | 1.34E-07 | 5YrCancerI | 1.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 214 | ALL | 396152.2 | 3754309 | 1.52E-07 | 5YrCancerI | 1.52E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 215 | ALL | 396202.2 | 3754309 | 1.73E-07 | 5YrCancerI | 1.73E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 216 | ALL | 396252.2 | 3754309 | 1.99E-07 | 5YrCancerI | 1.99E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 217 | ALL | 396302.2 | 3754309 | 2.28E-07 | 5YrCancerI | 2.28E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 218 | ALL | 396352.2 | 3754309 | 2.64E-07 | 5YrCancerI | 2.64E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 219 | ALL | 396402.2 | 3754309 | 3.09E-07 | 5YrCancerI | 3.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 220 | ALL | 396452.2 | 3754309 | 3.65E-07 | 5YrCancerI | 3.65E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 221 | ALL | 396502.2 | 3754309 | 4.40E-07 | 5YrCancerI | 4.40E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 222 | ALL | 396552.2 | 3754309 | 5.34E-07 | 5YrCancerI | 5.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 223 | ALL | 397033.1 | 3753307 | 1.34E-07 | 5YrCancerI | 1.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 224 | ALL | 397083.1 | 3753307 | 1.34E-07 | 5YrCancerI | 1.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 225 | ALL | 397133.1 | 3753307 | 1.34E-07 | 5YrCancerI | 1.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 226 | ALL | 397333.1 | 3753307 | 1.30E-07 | 5YrCancerI | 1.30E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 227 | ALL | 397383.1 | 3753307 | 1.28E-07 | 5YrCancerI | 1.28E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 228 | ALL | 397433.1 | 3753307 | 1.25E-07 | 5YrCancerI | 1.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 229 | ALL | 397483.1 | 3753307 | 1.23E-07 | 5YrCancerI | 1.23E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 230 | ALL | 397533.1 | 3753307 | 1.19E-07 | 5YrCancerI | 1.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 231 | ALL | 397583.1 | 3753307 | 1.15E-07 | 5YrCancerI | 1.15E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 232 | ALL | 397633.1 | 3753307 | 1.10E-07 | 5YrCancerI | 1.10E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 233 | ALL | 397683.1 | 3753307 | 1.03E-07 | 5YrCancerI | 1.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 234 | ALL | 397033.1 | 3753357 | 1.63E-07 | 5YrCancerI | 1.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 235 | ALL | 397083.1 | 3753357 | 1.63E-07 | 5YrCancerI | 1.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 236 | ALL | 397133.1 | 3753357 | 1.63E-07 | 5YrCancerI | 1.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 237 | ALL | 397333.1 | 3753357 | 1.58E-07 | 5YrCancerI | 1.58E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 238 | ALL | 397383.1 | 3753357 | 1.56E-07 | 5YrCancerI | 1.56E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 239 | ALL | 397433.1 | 3753357 | 1.53E-07 | 5YrCancerI | 1.53E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 240 | ALL | 397483.1 | 3753357 | 1.50E-07 | 5YrCancerI | 1.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 241 | ALL | 397533.1 | 3753357 | 1.46E-07 | 5YrCancerI | 1.46E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 242 | ALL | 397583.1 | 3753357 | 1.41E-07 | 5YrCancerI | 1.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 243 | ALL | 397633.1 | 3753357 | 1.34E-07 | 5YrCancerI | 1.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 244 | ALL | 397683.1 | 3753357 | 1.25E-07 | 5YrCancerI | 1.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 245 | ALL | 397733.1 | 3753357 | 1.14E-07 | 5YrCancerI | 1.14E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 246 | ALL | 397033.1 | 3753407 | 2.12E-07 | 5YrCancerI | 2.12E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 247 | ALL | 397083.1 | 3753407 | 2.11E-07 | 5YrCancerI | 2.11E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 248 | ALL | 397133.1 | 3753407 | 2.10E-07 | 5YrCancerI | 2.10E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 249 | ALL | 397333.1 | 3753407 | 2.05E-07 | 5YrCancerI | 2.05E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 250 | ALL | 397383.1 | 3753407 | 2.03E-07 | 5YrCancerI | 2.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 251 | ALL | 397433.1 | 3753407 | 2.00E-07 | 5YrCancerI | 2.00E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 252 | ALL | 397483.1 | 3753407 | 1.97E-07 | 5YrCancerI | 1.97E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 253 | ALL | 397533.1 | 3753407 | 1.93E-07 | 5YrCancerI | 1.93E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 254 | ALL | 397583.1 | 3753407 | 1.86E-07 | 5YrCancerI | 1.86E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 255 | ALL | 397633.1 | 3753407 | 1.78E-07 | 5YrCancerI | 1.78E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 256 | ALL | 397683.1 | 3753407 | 1.64E-07 | 5YrCancerI | 1.64E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 257 | ALL | 397733.1 | 3753407 | 1.46E-07 | 5YrCancerI | 1.46E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 258 | ALL | 397033.1 | 3753457 | 3.17E-07 | 5YrCancerI | 3.17E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 259 | ALL | 397083.1 | 3753457 | 3.15E-07 | 5YrCancerI | 3.15E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 260 | ALL | 397133.1 | 3753457 | 3.12E-07 | 5YrCancerI | 3.12E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 261 | ALL | 397333.1 | 3753457 | 3.08E-07 | 5YrCancerI | 3.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 262 | ALL | 397383.1 | 3753457 | 3.08E-07 | 5YrCancerI | 3.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 263 | ALL | 397433.1 | 3753457 | 3.08E-07 | 5YrCancerI | 3.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 264 | ALL | 397483.1 | 3753457 | 3.06E-07 | 5YrCancerI | 3.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 265 | ALL | 397533.1 | 3753457 | 3.03E-07 | 5YrCancerI | 3.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 266 | ALL | 397583.1 | 3753457 | 2.96E-07 | 5YrCancerI | 2.96E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 267 | ALL | 397633.1 | 3753457 | 2.85E-07 | 5YrCancerI | 2.85E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 268 | ALL | 397683.1 | 3753457 | 2.66E-07 | 5YrCancerI | 2.66E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 269 | ALL | 397733.1 | 3753457 | 2.26E-07 | 5YrCancerI | 2.26E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 270 | ALL | 397783.1 | 3753457 | 1.65E-07 | 5YrCancerI | 1.65E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 271 | ALL | 397033.1 | 3753557 | 5.63E-07 | 5YrCancerI | 5.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 272 | ALL | 397083.1 | 3753557 | 5.44E-07 | 5YrCancerI | 5.44E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 273 | ALL | 397133.1 | 3753557 | 5.21E-07 | 5YrCancerI | 5.21E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 274 | ALL | 397213.5 | 3753581 | 3.69E-07 | 5YrCancerI | 3.69E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 275 | ALL | 397283.1 | 3753557 | 5.00E-07 | 5YrCancerI | 5.00E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 276 | ALL | 397333.1 | 3753557 | 4.94E-07 | 5YrCancerI | 4.94E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 277 | ALL | 397383.1 | 3753557 | 4.87E-07 | 5YrCancerI | 4.87E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 278 | ALL | 397433.1 | 3753557 | 4.93E-07 | 5YrCancerI | 4.93E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 279 | ALL | 397483.1 | 3753557 | 4.90E-07 | 5YrCancerI | 4.90E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 280 | ALL | 397533.1 | 3753557 | 4.81E-07 | 5YrCancerI | 4.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 281 | ALL | 397583.1 | 3753557 | 4.65E-07 | 5YrCancerI | 4.65E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 282 | ALL | 397633.1 | 3753557 | 4.50E-07 | 5YrCancerI | 4.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 283 | ALL | 397683.1 | 3753557 | 4.20E-07 | 5YrCancerI | 4.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 284 | ALL | 397733.1 | 3753557 | 3.47E-07 | 5YrCancerI | 3.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 285 | ALL | 397033.1 | 3753607 | 3.17E-07 | 5YrCancerI | 3.17E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 286 | ALL | 397083.1 | 3753607 | 3.10E-07 | 5YrCancerI | 3.10E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 287 | ALL | 397133.1 | 3753607 | 3.03E-07 | 5YrCancerI | 3.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 288 | ALL | 397210.9 | 3753621 | 2.70E-07 | 5YrCancerI | 2.70E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 289 | ALL | 397283.1 | 3753607 | 2.86E-07 | 5YrCancerI | 2.86E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 290 | ALL | 397333.1 | 3753607 | 2.85E-07 | 5YrCancerI | 2.85E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 291 | ALL | 397383.1 | 3753607 | 2.80E-07 | 5YrCancerI | 2.80E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 292 | ALL | 397433.1 | 3753607 | 2.76E-07 | 5YrCancerI | 2.76E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 293 | ALL | 397483.1 | 3753607 | 2.71E-07 | 5YrCancerI | 2.71E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 294 | ALL | 397533.1 | 3753607 | 2.64E-07 | 5YrCancerI | 2.64E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 295 | ALL | 397583.1 | 3753607 | 2.55E-07 | 5YrCancerI | 2.55E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 296 | ALL | 397633.1 | 3753607 | 2.42E-07 | 5YrCancerI | 2.42E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 297 | ALL | 397683.1 | 3753607 | 2.24E-07 | 5YrCancerI | 2.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 298 | ALL | 397733.1 | 3753607 | 1.95E-07 | 5YrCancerI | 1.95E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 299 | ALL | 397033.1 | 3753657 | 2.53E-07 | 5YrCancerI | 2.53E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 300 | ALL | 397083.1 | 3753657 | 2.45E-07 | 5YrCancerI | 2.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 301 | ALL | 397133.1 | 3753657 | 2.39E-07 | 5YrCancerI | 2.39E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 302 | ALL | 397207 | 3753665 | 2.25E-07 | 5YrCancerI | 2.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 303 | ALL | 397283.1 | 3753657 | 2.23E-07 | 5YrCancerI | 2.23E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 304 | ALL | 397333.1 | 3753657 | 2.20E-07 | 5YrCancerI | 2.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 305 | ALL | 397383.1 | 3753657 | 2.15E-07 | 5YrCancerI | 2.15E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 306 | ALL | 397433.1 | 3753657 | 2.10E-07 | 5YrCancerI | 2.10E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 307 | ALL | 397483.1 | 3753657 | 2.05E-07 | 5YrCancerI | 2.05E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 308 | ALL | 397533.1 | 3753657 | 1.99E-07 | 5YrCancerI | 1.99E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 309 | ALL | 397583.1 | 3753657 | 1.92E-07 | 5YrCancerI | 1.92E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 310 | ALL | 397633.1 | 3753657 | 1.82E-07 | 5YrCancerI | 1.82E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 311 | ALL | 397683.1 | 3753657 | 1.70E-07 | 5YrCancerI | 1.70E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 312 | ALL | 397733.1 | 3753657 | 1.54E-07 | 5YrCancerI | 1.54E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 313 | ALL | 397033.1 | 3753707 | 2.27E-07 | 5YrCancerI | 2.27E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 314 | ALL | 397083.1 | 3753707 | 2.18E-07 | 5YrCancerI | 2.18E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 315 | ALL | 397133.1 | 3753707 | 2.10E-07 | 5YrCancerI | 2.10E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 316 | ALL | 397205.7 | 3753729 | 1.94E-07 | 5YrCancerI | 1.94E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 317 | ALL | 397283.1 | 3753707 | 1.94E-07 | 5YrCancerI | 1.94E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 318 | ALL | 397333.1 | 3753707 | 1.90E-07 | 5YrCancerI | 1.90E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 319 | ALL | 397383.1 | 3753707 | 1.85E-07 | 5YrCancerI | 1.85E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 320 | ALL | 397433.1 | 3753707 | 1.81E-07 | 5YrCancerI | 1.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 321 | ALL | 397483.1 | 3753707 | 1.76E-07 | 5YrCancerI | 1.76E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 322 | ALL | 397533.1 | 3753707 | 1.70E-07 | 5YrCancerI | 1.70E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 323 | ALL | 397583.1 | 3753707 | 1.64E-07 | 5YrCancerI | 1.64E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 324 | ALL | 397633.1 | 3753707 | 1.56E-07 | 5YrCancerI | 1.56E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 325 | ALL | 397683.1 | 3753707 | 1.47E-07 | 5YrCancerI | 1.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 326 | ALL | 397733.1 | 3753707 | 1.37E-07 | 5YrCancerI | 1.37E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 327 | ALL | 397783.1 | 3753707 | 1.25E-07 | 5YrCancerI | 1.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 328 | ALL | 397033.1 | 3753757 | 2.16E-07 | 5YrCancerI | 2.16E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 329 | ALL | 397083.1 | 3753757 | 2.06E-07 | 5YrCancerI | 2.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 330 | ALL | 397133.1 | 3753757 | 1.97E-07 | 5YrCancerI | 1.97E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 331 | ALL | 397283.1 | 3753757 | 1.80E-07 | 5YrCancerI | 1.80E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 332 | ALL | 397333.1 | 3753757 | 1.75E-07 | 5YrCancerI | 1.75E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 333 | ALL | 397383.1 | 3753757 | 1.70E-07 | 5YrCancerI | 1.70E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 334 | ALL | 397433.1 | 3753757 | 1.66E-07 | 5YrCancerI | 1.66E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 335 | ALL | 397483.1 | 3753757 | 1.61E-07 | 5YrCancerI | 1.61E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 336 | ALL | 397533.1 | 3753757 | 1.56E-07 | 5YrCancerI | 1.56E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 337 | ALL | 397583.1 | 3753757 | 1.50E-07 | 5YrCancerI | 1.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 338 | ALL | 397633.1 | 3753757 | 1.44E-07 | 5YrCancerI | 1.44E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 339 | ALL | 397683.1 | 3753757 | 1.37E-07 | 5YrCancerI | 1.37E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 340 | ALL | 397733.1 | 3753757 | 1.29E-07 | 5YrCancerI | 1.29E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 341 | ALL | 397783.1 | 3753757 | 1.20E-07 | 5YrCancerI | 1.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 342 | ALL | 397033.1 | 3753807 | 2.13E-07 | 5YrCancerI | 2.13E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 343 | ALL | 397083.1 | 3753807 | 2.01E-07 | 5YrCancerI | 2.01E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 344 | ALL | 397133.1 | 3753807 | 1.92E-07 | 5YrCancerI | 1.92E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 345 | ALL | 397283.1 | 3753807 | 1.73E-07 | 5YrCancerI | 1.73E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 346 | ALL | 397333.1 | 3753807 | 1.68E-07 | 5YrCancerI | 1.68E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 347 | ALL | 397383.1 | 3753807 | 1.63E-07 | 5YrCancerI | 1.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 348 | ALL | 397433.1 | 3753807 | 1.58E-07 | 5YrCancerI | 1.58E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 349 | ALL | 397483.1 | 3753807 | 1.54E-07 | 5YrCancerI | 1.54E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 350 | ALL | 397533.1 | 3753807 | 1.49E-07 | 5YrCancerI | 1.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 351 | ALL | 397583.1 | 3753807 | 1.44E-07 | 5YrCancerI | 1.44E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 352 | ALL | 397633.1 | 3753807 | 1.38E-07 | 5YrCancerI | 1.38E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 353 | ALL | 397683.1 | 3753807 | 1.32E-07 | 5YrCancerI | 1.32E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 354 | ALL | 397733.1 | 3753807 | 1.26E-07 | 5YrCancerI | 1.26E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 355 | ALL | 397783.1 | 3753807 | 1.19E-07 | 5YrCancerI | 1.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 356 | ALL | 397283.1 | 3753857 | 1.71E-07 | 5YrCancerI | 1.71E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 357 | ALL | 397333.1 | 3753857 | 1.65E-07 | 5YrCancerI | 1.65E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 358 | ALL | 397383.1 | 3753857 | 1.61E-07 | 5YrCancerI | 1.61E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 359 | ALL | 397433.1 | 3753857 | 1.56E-07 | 5YrCancerI | 1.56E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 360 | ALL | 397483.1 | 3753857 | 1.51E-07 | 5YrCancerI | 1.51E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 361 | ALL | 397533.1 | 3753857 | 1.47E-07 | 5YrCancerI | 1.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 362 | ALL | 397583.1 | 3753857 | 1.42E-07 | 5YrCancerI | 1.42E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 363 | ALL | 397633.1 | 3753857 | 1.37E-07 | 5YrCancerI | 1.37E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 364 | ALL | 397683.1 | 3753857 | 1.32E-07 | 5YrCancerI | 1.32E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 365 | ALL | 397733.1 | 3753857 | 1.26E-07 | 5YrCancerI | 1.26E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 366 | ALL | 397783.1 | 3753857 | 1.20E-07 | 5YrCancerI | 1.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 367 | ALL | 396001.3 | 3753290 | 4.73E-08 | 5YrCancerI | 4.73E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 368 | ALL | 396051.3 | 3753290 | 4.95E-08 | 5YrCancerI | 4.95E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 369 | ALL | 396101.3 | 3753290 | 5.17E-08 | 5YrCancerI | 5.17E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 370 | ALL | 396151.3 | 3753290 | 5.42E-08 | 5YrCancerI | 5.42E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 371 | ALL | 396201.3 | 3753290 | 5.68E-08 | 5YrCancerI | 5.68E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 372 | ALL | 396251.3 | 3753290 | 5.97E-08 | 5YrCancerI | 5.97E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 373 | ALL | 396301.3 | 3753290 | 6.28E-08 | 5YrCancerI | 6.28E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 374 | ALL | 396351.3 | 3753290 | 6.62E-08 | 5YrCancerI | 6.62E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 375 | ALL | 396401.3 | 3753290 | 6.99E-08 | 5YrCancerI | 6.99E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 376 | ALL | 396451.3 | 3753290 | 7.40E-08 | 5YrCancerI | 7.40E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 377 | ALL | 396501.3 | 3753290 | 7.86E-08 | 5YrCancerI | 7.86E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 378 | ALL | 396551.3 | 3753290 | 8.38E-08 | 5YrCancerI | 8.38E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 379 | ALL | 396601.3 | 3753290 | 8.95E-08 | 5YrCancerI | 8.95E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 380 | ALL | 396651.3 | 3753290 | 9.57E-08 | 5YrCancerI | 9.57E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 381 | ALL | 396701.3 | 3753290 | 1.02E-07 | 5YrCancerI | 1.02E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 382 | ALL | 396751.3 | 3753290 | 1.08E-07 | 5YrCancerI | 1.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 383 | ALL | 396001.3 | 3753340 | 4.93E-08 | 5YrCancerI | 4.93E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 384 | ALL | 396051.3 | 3753340 | 5.17E-08 | 5YrCancerI | 5.17E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 385 | ALL | 396101.3 | 3753340 | 5.42E-08 | 5YrCancerI | 5.42E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 386 | ALL | 396151.3 | 3753340 | 5.69E-08 | 5YrCancerI | 5.69E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 387 | ALL | 396201.3 | 3753340 | 5.98E-08 | 5YrCancerI | 5.98E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 388 | ALL | 396251.3 | 3753340 | 6.30E-08 | 5YrCancerI | 6.30E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 389 | ALL | 396301.3 | 3753340 | 6.65E-08 | 5YrCancerI | 6.65E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 390 | ALL | 396351.3 | 3753340 | 7.04E-08 | 5YrCancerI | 7.04E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 391 | ALL | 396401.3 | 3753340 | 7.48E-08 | 5YrCancerI | 7.48E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 392 | ALL | 396451.3 | 3753340 | 7.97E-08 | 5YrCancerI | 7.97E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 393 | ALL | 396501.3 | 3753340 | 8.53E-08 | 5YrCancerI | 8.53E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 394 | ALL | 396551.3 | 3753340 | 9.19E-08 | 5YrCancerI | 9.19E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 395 | ALL | 396601.3 | 3753340 | 9.94E-08 | 5YrCancerI | 9.94E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 396 | ALL | 396651.3 | 3753340 | 1.08E-07 | 5YrCancerI | 1.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 397 | ALL | 396701.3 | 3753340 | 1.18E-07 | 5YrCancerI | 1.18E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 398 | ALL | 396751.3 | 3753340 | 1.27E-07 | 5YrCancerI | 1.27E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 399 | ALL | 396001.3 | 3753390 | 5.14E-08 | 5YrCancerI | 5.14E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 400 | ALL | 396051.3 | 3753390 | 5.40E-08 | 5YrCancerI | 5.40E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 401 | ALL | 396101.3 | 3753390 | 5.67E-08 | 5YrCancerI | 5.67E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 402 | ALL | 396151.3 | 3753390 | 5.97E-08 | 5YrCancerI | 5.97E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 403 | ALL | 396201.3 | 3753390 | 6.29E-08 | 5YrCancerI | 6.29E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 404 | ALL | 396251.3 | 3753390 | 6.65E-08 | 5YrCancerI | 6.65E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 405 | ALL | 396301.3 | 3753390 | 7.05E-08 | 5YrCancerI | 7.05E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 406 | ALL | 396351.3 | 3753390 | 7.50E-08 | 5YrCancerI | 7.50E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 407 | ALL | 396401.3 | 3753390 | 8.00E-08 | 5YrCancerI | 8.00E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 408 | ALL | 396451.3 | 3753390 | 8.58E-08 | 5YrCancerI | 8.58E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 409 | ALL | 396501.3 | 3753390 | 9.27E-08 | 5YrCancerI | 9.27E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 410 | ALL | 396551.3 | 3753390 | 1.01E-07 | 5YrCancerI | 1.01E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 411 | ALL | 396601.3 | 3753390 | 1.11E-07 | 5YrCancerI | 1.11E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 412 | ALL | 396651.3 | 3753390 | 1.24E-07 | 5YrCancerI | 1.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 413 | ALL | 396701.3 | 3753390 | 1.39E-07 | 5YrCancerI | 1.39E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 414 | ALL | 396751.3 | 3753390 | 1.56E-07 | 5YrCancerI | 1.56E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 415 | ALL | 396001.3 | 3753440 | 5.37E-08 | 5YrCancerI | 5.37E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 416 | ALL | 396051.3 | 3753440 | 5.64E-08 | 5YrCancerI | 5.64E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 417 | ALL | 396101.3 | 3753440 | 5.94E-08 | 5YrCancerI | 5.94E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 418 | ALL | 396151.3 | 3753440 | 6.27E-08 | 5YrCancerI | 6.27E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 419 | ALL | 396201.3 | 3753440 | 6.63E-08 | 5YrCancerI | 6.63E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 420 | ALL | 396251.3 | 3753440 | 7.02E-08 | 5YrCancerI | 7.02E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 421 | ALL | 396301.3 | 3753440 | 7.47E-08 | 5YrCancerI | 7.47E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 422 | ALL | 396351.3 | 3753440 | 7.98E-08 | 5YrCancerI | 7.98E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 423 | ALL | 396401.3 | 3753440 | 8.56E-08 | 5YrCancerI | 8.56E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 424 | ALL | 396451.3 | 3753440 | 9.24E-08 | 5YrCancerI | 9.24E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 425 | ALL | 396501.3 | 3753440 | 1.01E-07 | 5YrCancerI | 1.01E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 426 | ALL | 396551.3 | 3753440 | 1.11E-07 | 5YrCancerI | 1.11E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 427 | ALL | 396601.3 | 3753440 | 1.25E-07 | 5YrCancerI | 1.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 428 | ALL | 396651.3 | 3753440 | 1.44E-07 | 5YrCancerI | 1.44E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 429 | ALL | 396701.3 | 3753440 | 1.71E-07 | 5YrCancerI | 1.71E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 430 | ALL | 396751.3 | 3753440 | 2.08E-07 | 5YrCancerI | 2.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 431 | ALL | 396001.3 | 3753490 | 5.59E-08 | 5YrCancerI | 5.59E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 432 | ALL | 396051.3 | 3753490 | 5.90E-08 | 5YrCancerI | 5.90E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 433 | ALL | 396101.3 | 3753490 | 6.22E-08 | 5YrCancerI | 6.22E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 434 | ALL | 396151.3 | 3753490 | 6.58E-08 | 5YrCancerI | 6.58E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 435 | ALL | 396201.3 | 3753490 | 6.98E-08 | 5YrCancerI | 6.98E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 436 | ALL | 396251.3 | 3753490 | 7.42E-08 | 5YrCancerI | 7.42E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 437 | ALL | 396301.3 | 3753490 | 7.91E-08 | 5YrCancerI | 7.91E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 438 | ALL | 396351.3 | 3753490 | 8.48E-08 | 5YrCancerI | 8.48E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 439 | ALL | 396401.3 | 3753490 | 9.14E-08 | 5YrCancerI | 9.14E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 440 | ALL | 396451.3 | 3753490 | 9.92E-08 | 5YrCancerI | 9.92E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 441 | ALL | 396501.3 | 3753490 | 1.09E-07 | 5YrCancerI | 1.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 442 | ALL | 396551.3 | 3753490 | 1.22E-07 | 5YrCancerI | 1.22E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 443 | ALL | 396601.3 | 3753490 | 1.40E-07 | 5YrCancerI | 1.40E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 444 | ALL | 396651.3 | 3753490 | 1.68E-07 | 5YrCancerI | 1.68E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 445 | ALL | 396701.3 | 3753490 | 2.20E-07 | 5YrCancerI | 2.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 446 | ALL | 396751.3 | 3753490 | 3.45E-07 | 5YrCancerI | 3.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 447 | ALL | 396935.3 | 3754882 | 8.63E-07 | 5YrCancerI | 8.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 448 | ALL | 396985.3 | 3754882 | 1.00E-06 | 5YrCancerI | 1.00E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 449 | ALL | 397535.3 | 3754882 | 4.96E-07 | 5YrCancerI | 4.96E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 450 | ALL | 396835.3 | 3754932 | 5.08E-07 | 5YrCancerI | 5.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 451 | ALL | 396885.3 | 3754932 | 5.60E-07 | 5YrCancerI | 5.60E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 452 | ALL | 396935.3 | 3754932 | 6.18E-07 | 5YrCancerI | 6.18E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 453 | ALL | 396985.3 | 3754932 | 6.85E-07 | 5YrCancerI | 6.85E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 454 | ALL | 397035.3 | 3754932 | 7.66E-07 | 5YrCancerI | 7.66E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 455 | ALL | 397235.3 | 3754932 | 1.42E-06 | 5YrCancerI | 1.42E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 456 | ALL | 397285.3 | 3754932 | 1.13E-06 | 5YrCancerI | 1.13E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 457 | ALL | 397335.3 | 3754932 | 8.45E-07 | 5YrCancerI | 8.45E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 458 | ALL | 397485.3 | 3754932 | 4.68E-07 | 5YrCancerI | 4.68E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 459 | ALL | 397535.3 | 3754932 | 4.05E-07 | 5YrCancerI | 4.05E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 460 | ALL | 396835.3 | 3754982 | 4.10E-07 | 5YrCancerI | 4.10E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 461 | ALL | 396885.3 | 3754982 | 4.43E-07 | 5YrCancerI | 4.43E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 462 | ALL | 396935.3 | 3754982 | 4.78E-07 | 5YrCancerI | 4.78E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 463 | ALL | 396985.3 | 3754982 | 5.16E-07 | 5YrCancerI | 5.16E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 464 | ALL | 397035.3 | 3754982 | 5.58E-07 | 5YrCancerI | 5.58E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 465 | ALL | 397185.3 | 3754982 | 7.07E-07 | 5YrCancerI | 7.07E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 466 | ALL | 397235.3 | 3754982 | 7.24E-07 | 5YrCancerI | 7.24E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 467 | ALL | 397285.3 | 3754982 | 6.72E-07 | 5YrCancerI | 6.72E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 468 | ALL | 397335.3 | 3754982 | 5.83E-07 | 5YrCancerI | 5.83E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 469 | ALL | 397435.3 | 3754982 | 4.35E-07 | 5YrCancerI | 4.35E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 470 | ALL | 397485.3 | 3754982 | 3.82E-07 | 5YrCancerI | 3.82E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 471 | ALL | 397535.3 | 3754982 | 3.39E-07 | 5YrCancerI | 3.39E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 472 | ALL | 397585.3 | 3754982 | 3.03E-07 | 5YrCancerI | 3.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 473 | ALL | 396835.3 | 3755032 | 3.40E-07 | 5YrCancerI | 3.40E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 474 | ALL | 396885.3 | 3755032 | 3.63E-07 | 5YrCancerI | 3.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 475 | ALL | 396935.3 | 3755032 | 3.86E-07 | 5YrCancerI | 3.86E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 476 | ALL | 397085.3 | 3755032 | 4.57E-07 | 5YrCancerI | 4.57E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 477 | ALL | 397135.3 | 3755032 | 4.80E-07 | 5YrCancerI | 4.80E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 478 | ALL | 397185.3 | 3755032 | 4.96E-07 | 5YrCancerI | 4.96E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 479 | ALL | 397235.3 | 3755032 | 4.97E-07 | 5YrCancerI | 4.97E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 480 | ALL | 397285.3 | 3755032 | 4.76E-07 | 5YrCancerI | 4.76E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 481 | ALL | 397335.3 | 3755032 | 4.38E-07 | 5YrCancerI | 4.38E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 482 | ALL | 397385.3 | 3755032 | 3.95E-07 | 5YrCancerI | 3.95E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 483 | ALL | 397435.3 | 3755032 | 3.55E-07 | 5YrCancerI | 3.55E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 484 | ALL | 397485.3 | 3755032 | 3.20E-07 | 5YrCancerI | 3.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 485 | ALL | 397535.3 | 3755032 | 2.89E-07 | 5YrCancerI | 2.89E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 486 | ALL | 397585.3 | 3755032 | 2.62E-07 | 5YrCancerI | 2.62E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 487 | ALL | 396835.3 | 3755082 | 2.89E-07 | 5YrCancerI | 2.89E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 488 | ALL | 396885.3 | 3755082 | 3.05E-07 | 5YrCancerI | 3.05E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 489 | ALL | 396985.3 | 3755082 | 3.36E-07 | 5YrCancerI | 3.36E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 490 | ALL | 397035.3 | 3755082 | 3.51E-07 | 5YrCancerI | 3.51E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 491 | ALL | 397085.3 | 3755082 | 3.64E-07 | 5YrCancerI | 3.64E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 492 | ALL | 397135.3 | 3755082 | 3.75E-07 | 5YrCancerI | 3.75E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 493 | ALL | 397185.3 | 3755082 | 3.81E-07 | 5YrCancerI | 3.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 494 | ALL | 397235.3 | 3755082 | 3.79E-07 | 5YrCancerI | 3.79E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 495 | ALL | 397285.3 | 3755082 | 3.68E-07 | 5YrCancerI | 3.68E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 496 | ALL | 397335.3 | 3755082 | 3.47E-07 | 5YrCancerI | 3.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 497 | ALL | 397385.3 | 3755082 | 3.23E-07 | 5YrCancerI | 3.23E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 498 | ALL | 397435.3 | 3755082 | 2.97E-07 | 5YrCancerI | 2.97E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 499 | ALL | 397485.3 | 3755082 | 2.72E-07 | 5YrCancerI | 2.72E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 500 | ALL | 397535.3 | 3755082 | 2.50E-07 | 5YrCancerI | 2.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 501 | ALL | 397585.3 | 3755082 | 2.30E-07 | 5YrCancerI | 2.30E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 502 | ALL | 397635.3 | 3755082 | 2.12E-07 | 5YrCancerI | 2.12E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 503 | ALL | 396935.3 | 3755132 | 2.71E-07 | 5YrCancerI | 2.71E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 504 | ALL | 396985.3 | 3755132 | 2.82E-07 | 5YrCancerI | 2.82E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 505 | ALL | 397035.3 | 3755132 | 2.92E-07 | 5YrCancerI | 2.92E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 506 | ALL | 397085.3 | 3755132 | 3.00E-07 | 5YrCancerI | 3.00E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 507 | ALL | 397135.3 | 3755132 | 3.06E-07 | 5YrCancerI | 3.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 508 | ALL | 397185.3 | 3755132 | 3.08E-07 | 5YrCancerI | 3.08E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 509 | ALL | 397235.3 | 3755132 | 3.06E-07 | 5YrCancerI | 3.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 510 | ALL | 397285.3 | 3755132 | 2.99E-07 | 5YrCancerI | 2.99E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 511 | ALL | 397335.3 | 3755132 | 2.86E-07 | 5YrCancerI | 2.86E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 512 | ALL | 397385.3 | 3755132 | 2.70E-07 | 5YrCancerI | 2.70E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 513 | ALL | 397435.3 | 3755132 | 2.53E-07 | 5YrCancerI | 2.53E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 514 | ALL | 397485.3 | 3755132 | 2.36E-07 | 5YrCancerI | 2.36E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 515 | ALL | 397535.3 | 3755132 | 2.19E-07 | 5YrCancerI | 2.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 516 | ALL | 397585.3 | 3755132 | 2.03E-07 | 5YrCancerI | 2.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 517 | ALL | 397635.3 | 3755132 | 1.88E-07 | 5YrCancerI | 1.88E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 518 | ALL | 396835.3 | 3755182 | 2.17E-07 | 5YrCancerI | 2.17E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 519 | ALL | 396885.3 | 3755182 | 2.25E-07 | 5YrCancerI | 2.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 520 | ALL | 396935.3 | 3755182 | 2.33E-07 | 5YrCancerI | 2.33E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 521 | ALL | 396985.3 | 3755182 | 2.41E-07 | 5YrCancerI | 2.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 522 | ALL | 397035.3 | 3755182 | 2.47E-07 | 5YrCancerI | 2.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 523 | ALL | 397085.3 | 3755182 | 2.53E-07 | 5YrCancerI | 2.53E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 524 | ALL | 397135.3 | 3755182 | 2.56E-07 | 5YrCancerI | 2.56E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 525 | ALL | 397185.3 | 3755182 | 2.57E-07 | 5YrCancerI | 2.57E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 526 | ALL | 397235.3 | 3755182 | 2.55E-07 | 5YrCancerI | 2.55E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 527 | ALL | 397285.3 | 3755182 | 2.50E-07 | 5YrCancerI | 2.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 528 | ALL | 397335.3 | 3755182 | 2.42E-07 | 5YrCancerI | 2.42E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 529 | ALL | 397385.3 | 3755182 | 2.31E-07 | 5YrCancerI | 2.31E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 530 | ALL | 397435.3 | 3755182 | 2.19E-07 | 5YrCancerI | 2.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 531 | ALL | 397485.3 | 3755182 | 2.06E-07 | 5YrCancerI | 2.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 532 | ALL | 397535.3 | 3755182 | 1.93E-07 | 5YrCancerI | 1.93E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 533 | ALL | 397585.3 | 3755182 | 1.81E-07 | 5YrCancerI | 1.81E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 534 | ALL | 396885.3 | 3755232 | 1.97E-07 | 5YrCancerI | 1.97E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 535 | ALL | 396935.3 | 3755232 | 2.03E-07 | 5YrCancerI | 2.03E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 536 | ALL | 396985.3 | 3755232 | 2.09E-07 | 5YrCancerI | 2.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 537 | ALL | 397035.3 | 3755232 | 2.13E-07 | 5YrCancerI | 2.13E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 538 | ALL | 397085.3 | 3755232 | 2.17E-07 | 5YrCancerI | 2.17E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 539 | ALL | 397135.3 | 3755232 | 2.19E-07 | 5YrCancerI | 2.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 540 | ALL | 397185.3 | 3755232 | 2.20E-07 | 5YrCancerI | 2.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 541 | ALL | 397235.3 | 3755232 | 2.18E-07 | 5YrCancerI | 2.18E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 542 | ALL | 397285.3 | 3755232 | 2.14E-07 | 5YrCancerI | 2.14E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 543 | ALL | 397335.3 | 3755232 | 2.09E-07 | 5YrCancerI | 2.09E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 544 | ALL | 397385.3 | 3755232 | 2.01E-07 | 5YrCancerI | 2.01E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 545 | ALL | 397435.3 | 3755232 | 1.92E-07 | 5YrCancerI | 1.92E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 546 | ALL | 397485.3 | 3755232 | 1.83E-07 | 5YrCancerI | 1.83E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 547 | ALL | 397535.3 | 3755232 | 1.73E-07 | 5YrCancerI | 1.73E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 548 | ALL | 396885.3 | 3755282 | 1.74E-07 | 5YrCancerI | 1.74E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 549 | ALL | 396935.3 | 3755282 | 1.79E-07 | 5YrCancerI | 1.79E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 550 | ALL | 396985.3 | 3755282 | 1.83E-07 | 5YrCancerI | 1.83E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 551 | ALL | 397035.3 | 3755282 | 1.86E-07 | 5YrCancerI | 1.86E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 552 | ALL | 397085.3 | 3755282 | 1.89E-07 | 5YrCancerI | 1.89E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 553 | ALL | 397135.3 | 3755282 | 1.91E-07 | 5YrCancerI | 1.91E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 554 | ALL | 397185.3 | 3755282 | 1.91E-07 | 5YrCancerI | 1.91E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 555 | ALL | 397235.3 | 3755282 | 1.90E-07 | 5YrCancerI | 1.90E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 556 | ALL | 397285.3 | 3755282 | 1.87E-07 | 5YrCancerI | 1.87E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 557 | ALL | 397335.3 | 3755282 | 1.82E-07 | 5YrCancerI | 1.82E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 558 | ALL | 397385.3 | 3755282 | 1.77E-07 | 5YrCancerI | 1.77E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 559 | ALL | 397435.3 | 3755282 | 1.70E-07 | 5YrCancerI | 1.70E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 560 | ALL | 396935.3 | 3755332 | 1.58E-07 | 5YrCancerI | 1.58E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 561 | ALL | 396985.3 | 3755332 | 1.62E-07 | 5YrCancerI | 1.62E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 562 | ALL | 397035.3 | 3755332 | 1.64E-07 | 5YrCancerI | 1.64E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 563 | ALL | 397085.3 | 3755332 | 1.66E-07 | 5YrCancerI | 1.66E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 564 | ALL | 397135.3 | 3755332 | 1.68E-07 | 5YrCancerI | 1.68E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 565 | ALL | 397185.3 | 3755332 | 1.68E-07 | 5YrCancerI | 1.68E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 566 | ALL | 397235.3 | 3755332 | 1.67E-07 | 5YrCancerI | 1.67E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 567 | ALL | 397285.3 | 3755332 | 1.65E-07 | 5YrCancerI | 1.65E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 568 | ALL | 397335.3 | 3755332 | 1.62E-07 | 5YrCancerI | 1.62E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 569 | ALL | 397385.3 | 3755332 | 1.57E-07 | 5YrCancerI | 1.57E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 570 | ALL | 396985.3 | 3755382 | 1.44E-07 | 5YrCancerI | 1.44E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 571 | ALL | 397035.3 | 3755382 | 1.46E-07 | 5YrCancerI | 1.46E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 572 | ALL | 397085.3 | 3755382 | 1.48E-07 | 5YrCancerI | 1.48E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 573 | ALL | 397135.3 | 3755382 | 1.49E-07 | 5YrCancerI | 1.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 574 | ALL | 397185.3 | 3755382 | 1.49E-07 | 5YrCancerI | 1.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 575 | ALL | 397235.3 | 3755382 | 1.49E-07 | 5YrCancerI | 1.49E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 576 | ALL | 397285.3 | 3755382 | 1.47E-07 | 5YrCancerI | 1.47E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 577 | ALL | 397035.3 | 3755432 | 1.31E-07 | 5YrCancerI | 1.31E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 578 | ALL | 397085.3 | 3755432 | 1.33E-07 | 5YrCancerI | 1.33E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 579 | ALL | 397135.3 | 3755432 | 1.34E-07 | 5YrCancerI | 1.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 580 | ALL | 397185.3 | 3755432 | 1.34E-07 | 5YrCancerI | 1.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 581 | ALL | 397235.3 | 3755432 | 1.33E-07 | 5YrCancerI | 1.33E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 582 | ALL | 397035.3 | 3755482 | 1.19E-07 | 5YrCancerI | 1.19E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 583 | ALL | 397085.3 | 3755482 | 1.20E-07 | 5YrCancerI | 1.20E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 584 | ALL | 397135.3 | 3755482 | 1.21E-07 | 5YrCancerI | 1.21E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 585 | ALL | 397567.7 | 3754188 | 2.06E-07 | 5YrCancerI | 2.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 586 | ALL | 397617.7 | 3754188 | 2.06E-07 | 5YrCancerI | 2.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 587 | ALL | 397667.7 | 3754188 | 2.06E-07 | 5YrCancerI | 2.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 588 | ALL | 397717.7 | 3754188 | 2.05E-07 | 5YrCancerI | 2.05E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 589 | ALL | 397767.7 | 3754188 | 2.02E-07 | 5YrCancerI | 2.02E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 590 | ALL | 397817.7 | 3754188 | 1.96E-07 | 5YrCancerI | 1.96E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 591 | ALL | 397567.7 | 3754238 | 2.31E-07 | 5YrCancerI | 2.31E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 592 | ALL | 397617.7 | 3754238 | 2.34E-07 | 5YrCancerI | 2.34E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 593 | ALL | 397667.7 | 3754238 | 2.38E-07 | 5YrCancerI | 2.38E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 594 | ALL | 397717.7 | 3754238 | 2.41E-07 | 5YrCancerI | 2.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 595 | ALL | 397767.7 | 3754238 | 2.41E-07 | 5YrCancerI | 2.41E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 596 | ALL | 397817.7 | 3754238 | 2.36E-07 | 5YrCancerI | 2.36E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

HARP2 - HRACalc (dated 19044) 9/16/2020 10:29:08 AM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
**********
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: Cancer
Calculation Method: Derived

**********
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 5
Total Exposure Duration: 5

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 0
2<9 Years Bin: 4
2<16 Years Bin: 1
16<30 Years Bin: 0
16 to 70 Years Bin: 0

**********
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: True
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

**********
INHALATION

Daily breathing rate: RMP

**Worker Adjustment Factors**
Worker adjustment factors enabled: NO

**Fraction at time at home**
3rd Trimester to 16 years: OFF
16 years to 70 years: ON

**********
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Warm

**********
HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137
Fraction protected: 0.137
Fraction root: 0.137

**********
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment.  Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to: C:\Users\dlarocca\Desktop\Air Quality Work\HARP2\Downey Op\DOWNEY OPERATIONAL HRA\hra\5yrStudenticancerCancerRisk.csv
Cancer risk total by receptor saved to: C:\Users\dlarocca\Desktop\Air Quality Work\HARP2\Downey Op\DOWNEY OPERATIONAL HRA\hra\5yrStudenticancerCancerRiskSumByRec.csv
HRA ran successfully

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 597 | ALL | 397567.7 | 3754288 | 2.63E-07 | 5YrCancerI | 2.63E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 598 | ALL | 397617.7 | 3754288 | 2.73E-07 | 5YrCancerI | 2.73E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 599 | ALL | 397667.7 | 3754288 | 2.83E-07 | 5YrCancerI | 2.83E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 600 | ALL | 397717.7 | 3754288 | 2.95E-07 | 5YrCancerI | 2.95E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 601 | ALL | 397756.8 | 3754272 | 2.79E-07 | 5YrCancerI | 2.79E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 602 | ALL | 397567.7 | 3754338 | 3.06E-07 | 5YrCancerI | 3.06E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 603 | ALL | 397617.7 | 3754338 | 3.25E-07 | 5YrCancerI | 3.25E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 604 | ALL | 397667.7 | 3754338 | 3.50E-07 | 5YrCancerI | 3.50E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 605 | ALL | 397598.6 | 3754379 | 3.71E-07 | 5YrCancerI | 3.71E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 606 | ALL | 396986 | 3754854 | 1.36E-06 | 5YrCancerI | 1.36E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

*HARP - HRACalc v19044 9/16/2020 11:46:52 AM - Chronic Risk - Input File: C:\Users\dlarocca\Desktop\Air Quality Work\HARP2\Downey Op\DOWNEY OPERATIONAL HRA\hra\ChronicnoncancerHRAInput.hra

| REC | GRP | NETID | X | Y | SCENARIO | CV | CNS | IMMUN | KIDNEY | GILV | REPRO/DE | RESP | SKIN | EYE | BONE/TEE | ENDO | BLOOD | ODOR | GENERAL | MAXHI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ALL | | 396002.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.47E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.47E-05 |
| 2 | ALL | | 396052.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.96E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.96E-05 |
| 3 | ALL | | 396102.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.49E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.49E-05 |
| 4 | ALL | | 396152.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-04 |
| 5 | ALL | | 396202.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-04 |
| 6 | ALL | | 396252.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-04 |
| 7 | ALL | | 396302.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.22E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.22E-04 |
| 8 | ALL | | 396352.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.32E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.32E-04 |
| 9 | ALL | | 396402.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.43E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.43E-04 |
| 10 | ALL | | 396452.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.56E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.56E-04 |
| 11 | ALL | | 396502.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-04 |
| 12 | ALL | | 396552.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.95E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.95E-04 |
| 13 | ALL | | 396802.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.12E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.12E-03 |
| 14 | ALL | | 396852.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.86E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.86E-04 |
| 15 | ALL | | 396902.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.38E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.38E-04 |
| 16 | ALL | | 396952.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.15E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.15E-04 |
| 17 | ALL | | 397002.2 | 3753559 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.96E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.96E-04 |
| 18 | ALL | | 396002.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.84E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.84E-05 |
| 19 | ALL | | 396052.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.37E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.37E-05 |
| 20 | ALL | | 396102.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.95E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.95E-05 |
| 21 | ALL | | 396152.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E-04 |
| 22 | ALL | | 396202.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.13E-04 |
| 23 | ALL | | 396252.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.20E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.20E-04 |
| 24 | ALL | | 396302.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.29E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.29E-04 |
| 25 | ALL | | 396352.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.39E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.39E-04 |
| 26 | ALL | | 396402.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.51E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.51E-04 |
| 27 | ALL | | 396452.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.66E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.66E-04 |
| 28 | ALL | | 396502.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.84E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.84E-04 |
| 29 | ALL | | 396552.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.09E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.09E-04 |
| 30 | ALL | | 396802.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.43E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.43E-04 |
| 31 | ALL | | 396852.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.79E-04 |
| 32 | ALL | | 396902.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.04E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.04E-04 |
| 33 | ALL | | 396952.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.74E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.74E-04 |
| 34 | ALL | | 397002.2 | 3753609 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.58E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.58E-04 |
| 35 | ALL | | 396002.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.22E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.22E-05 |
| 36 | ALL | | 396052.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.80E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.80E-05 |
| 37 | ALL | | 396102.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.04E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.04E-04 |
| 38 | ALL | | 396152.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.11E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.11E-04 |
| 39 | ALL | | 396202.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.19E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.19E-04 |
| 40 | ALL | | 396252.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.27E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.27E-04 |
| 41 | ALL | | 396302.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.37E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.37E-04 |
| 42 | ALL | | 396352.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.48E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.48E-04 |
| 43 | ALL | | 396402.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.60E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.60E-04 |
| 44 | ALL | | 396452.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.76E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.76E-04 |
| 45 | ALL | | 396502.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.95E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.95E-04 |
| 46 | ALL | | 396552.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.22E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.22E-04 |
| 47 | ALL | | 396802.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.30E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.30E-04 |
| 48 | ALL | | 396852.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.23E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.23E-04 |
| 49 | ALL | | 396902.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.29E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.29E-04 |
| 50 | ALL | | 396952.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.90E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.90E-04 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | ALL | 397002.2 | 3753659 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.69E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.69E-04 |
| 52 | ALL | 396002.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.63E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.63E-05 |
| 53 | ALL | 396052.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.02E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.02E-04 |
| 54 | ALL | 396102.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.09E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.09E-04 |
| 55 | ALL | 396152.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.17E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.17E-04 |
| 56 | ALL | 396202.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.25E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.25E-04 |
| 57 | ALL | 396252.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.34E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.34E-04 |
| 58 | ALL | 396302.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.45E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.45E-04 |
| 59 | ALL | 396352.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.56E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.56E-04 |
| 60 | ALL | 396402.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-04 |
| 61 | ALL | 396452.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-04 |
| 62 | ALL | 396502.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.07E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.07E-04 |
| 63 | ALL | 396552.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.34E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.34E-04 |
| 64 | ALL | 396802.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.40E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.40E-04 |
| 65 | ALL | 396852.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.11E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.11E-04 |
| 66 | ALL | 396902.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.05E-04 |
| 67 | ALL | 396952.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.59E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.59E-04 |
| 68 | ALL | 397002.2 | 3753709 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.34E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.34E-04 |
| 69 | ALL | 396002.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-04 |
| 70 | ALL | 396052.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-04 |
| 71 | ALL | 396102.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.15E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.15E-04 |
| 72 | ALL | 396152.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.23E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.23E-04 |
| 73 | ALL | 396202.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.32E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.32E-04 |
| 74 | ALL | 396252.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.42E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.42E-04 |
| 75 | ALL | 396302.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-04 |
| 76 | ALL | 396352.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.65E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.65E-04 |
| 77 | ALL | 396402.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.80E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.80E-04 |
| 78 | ALL | 396452.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.97E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.97E-04 |
| 79 | ALL | 396502.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E-04 |
| 80 | ALL | 396552.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.47E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.47E-04 |
| 81 | ALL | 396802.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.57E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.57E-04 |
| 82 | ALL | 396852.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.13E-04 |
| 83 | ALL | 396902.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.00E-04 |
| 84 | ALL | 396952.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.50E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.50E-04 |
| 85 | ALL | 397002.2 | 3753759 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.21E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.21E-04 |
| 86 | ALL | 396002.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.05E-04 |
| 87 | ALL | 396052.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.12E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.12E-04 |
| 88 | ALL | 396102.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-04 |
| 89 | ALL | 396152.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.30E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.30E-04 |
| 90 | ALL | 396202.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.39E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.39E-04 |
| 91 | ALL | 396252.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.50E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.50E-04 |
| 92 | ALL | 396302.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.62E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.62E-04 |
| 93 | ALL | 396352.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.75E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.75E-04 |
| 94 | ALL | 396402.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 |
| 95 | ALL | 396452.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.09E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.09E-04 |
| 96 | ALL | 396502.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.31E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.31E-04 |
| 97 | ALL | 396552.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.60E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.60E-04 |
| 98 | ALL | 396802.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.79E-04 |
| 99 | ALL | 396852.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.21E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.21E-04 |
| 100 | ALL | 396902.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.04E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.04E-04 |
| 101 | ALL | 396952.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.50E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.50E-04 |
| 102 | ALL | 397002.2 | 3753809 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.19E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.19E-04 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103 | ALL | 396002.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.10E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.10E-04 |
| 104 | ALL | 396052.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.18E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.18E-04 |
| 105 | ALL | 396102.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.27E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.27E-04 |
| 106 | ALL | 396152.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.36E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.36E-04 |
| 107 | ALL | 396202.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.47E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.47E-04 |
| 108 | ALL | 396252.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.59E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.59E-04 |
| 109 | ALL | 396302.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-04 |
| 110 | ALL | 396352.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-04 |
| 111 | ALL | 396402.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-04 |
| 112 | ALL | 396452.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.22E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.22E-04 |
| 113 | ALL | 396502.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.45E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.45E-04 |
| 114 | ALL | 396552.2 | 3753859 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.75E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.75E-04 |
| 115 | ALL | 396002.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.15E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.15E-04 |
| 116 | ALL | 396052.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.24E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.24E-04 |
| 117 | ALL | 396102.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.33E-04 |
| 118 | ALL | 396152.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.44E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.44E-04 |
| 119 | ALL | 396202.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.56E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.56E-04 |
| 120 | ALL | 396252.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.68E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.68E-04 |
| 121 | ALL | 396302.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.82E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.82E-04 |
| 122 | ALL | 396352.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-04 |
| 123 | ALL | 396402.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.16E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.16E-04 |
| 124 | ALL | 396452.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.37E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.37E-04 |
| 125 | ALL | 396502.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.61E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.61E-04 |
| 126 | ALL | 396552.2 | 3753909 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.91E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.91E-04 |
| 127 | ALL | 396002.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.20E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.20E-04 |
| 128 | ALL | 396052.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.30E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.30E-04 |
| 129 | ALL | 396102.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.40E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.40E-04 |
| 130 | ALL | 396152.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.52E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.52E-04 |
| 131 | ALL | 396202.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.65E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.65E-04 |
| 132 | ALL | 396252.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 |
| 133 | ALL | 396302.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.94E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.94E-04 |
| 134 | ALL | 396352.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.12E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.12E-04 |
| 135 | ALL | 396402.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.31E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.31E-04 |
| 136 | ALL | 396452.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.53E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.53E-04 |
| 137 | ALL | 396502.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.79E-04 |
| 138 | ALL | 396552.2 | 3753959 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.11E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.11E-04 |
| 139 | ALL | 396002.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.25E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.25E-04 |
| 140 | ALL | 396052.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.36E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.36E-04 |
| 141 | ALL | 396102.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.48E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.48E-04 |
| 142 | ALL | 396152.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.61E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.61E-04 |
| 143 | ALL | 396202.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.75E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.75E-04 |
| 144 | ALL | 396252.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 |
| 145 | ALL | 396302.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.08E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.08E-04 |
| 146 | ALL | 396352.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.27E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.27E-04 |
| 147 | ALL | 396402.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.48E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.48E-04 |
| 148 | ALL | 396452.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.72E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.72E-04 |
| 149 | ALL | 396502.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.00E-04 |
| 150 | ALL | 396552.2 | 3754009 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.34E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.34E-04 |
| 151 | ALL | 396002.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.31E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.31E-04 |
| 152 | ALL | 396052.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.42E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.42E-04 |
| 153 | ALL | 396102.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-04 |
| 154 | ALL | 396152.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-04 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 155 | ALL | 396202.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-04 |
| 156 | ALL | 396252.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-04 |
| 157 | ALL | 396302.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 |
| 158 | ALL | 396352.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.44E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.44E-04 |
| 159 | ALL | 396402.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.68E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.68E-04 |
| 160 | ALL | 396452.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.95E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.95E-04 |
| 161 | ALL | 396502.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.26E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.26E-04 |
| 162 | ALL | 396552.2 | 3754059 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.63E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.63E-04 |
| 163 | ALL | 396002.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.36E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.36E-04 |
| 164 | ALL | 396052.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.49E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.49E-04 |
| 165 | ALL | 396102.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.64E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.64E-04 |
| 166 | ALL | 396152.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.80E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.80E-04 |
| 167 | ALL | 396202.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-04 |
| 168 | ALL | 396252.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.17E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.17E-04 |
| 169 | ALL | 396302.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.39E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.39E-04 |
| 170 | ALL | 396352.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.64E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.64E-04 |
| 171 | ALL | 396402.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.91E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.91E-04 |
| 172 | ALL | 396452.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.22E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.22E-04 |
| 173 | ALL | 396502.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.57E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.57E-04 |
| 174 | ALL | 396552.2 | 3754109 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.98E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.98E-04 |
| 175 | ALL | 396002.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.41E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.41E-04 |
| 176 | ALL | 396052.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-04 |
| 177 | ALL | 396102.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-04 |
| 178 | ALL | 396152.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.90E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.90E-04 |
| 179 | ALL | 396202.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-04 |
| 180 | ALL | 396252.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.33E-04 |
| 181 | ALL | 396302.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.59E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.59E-04 |
| 182 | ALL | 396352.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.87E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.87E-04 |
| 183 | ALL | 396402.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.19E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.19E-04 |
| 184 | ALL | 396452.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.55E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.55E-04 |
| 185 | ALL | 396502.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.97E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.97E-04 |
| 186 | ALL | 396552.2 | 3754159 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.45E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.45E-04 |
| 187 | ALL | 396002.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E-04 |
| 188 | ALL | 396052.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.62E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.62E-04 |
| 189 | ALL | 396102.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.80E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.80E-04 |
| 190 | ALL | 396152.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E-04 |
| 191 | ALL | 396202.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.24E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.24E-04 |
| 192 | ALL | 396252.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.50E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.50E-04 |
| 193 | ALL | 396302.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.79E-04 |
| 194 | ALL | 396352.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.14E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.14E-04 |
| 195 | ALL | 396402.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.52E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.52E-04 |
| 196 | ALL | 396452.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.97E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.97E-04 |
| 197 | ALL | 396502.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.50E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.50E-04 |
| 198 | ALL | 396552.2 | 3754209 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.10E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.10E-04 |
| 199 | ALL | 396002.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.49E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.49E-04 |
| 200 | ALL | 396052.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.67E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.67E-04 |
| 201 | ALL | 396102.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.87E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.87E-04 |
| 202 | ALL | 396152.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-04 |
| 203 | ALL | 396202.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.37E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.37E-04 |
| 204 | ALL | 396252.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.67E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.67E-04 |
| 205 | ALL | 396302.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.03E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.03E-04 |
| 206 | ALL | 396352.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.44E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.44E-04 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 207 | ALL | 396402.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.93E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.93E-04 |
| 208 | ALL | 396452.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.52E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.52E-04 |
| 209 | ALL | 396502.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.24E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.24E-04 |
| 210 | ALL | 396552.2 | 3754259 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.07E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.07E-04 |
| 211 | ALL | 396002.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.52E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.52E-04 |
| 212 | ALL | 396052.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-04 |
| 213 | ALL | 396102.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.92E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.92E-04 |
| 214 | ALL | 396152.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.17E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.17E-04 |
| 215 | ALL | 396202.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.47E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.47E-04 |
| 216 | ALL | 396252.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.84E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.84E-04 |
| 217 | ALL | 396302.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.26E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.26E-04 |
| 218 | ALL | 396352.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.78E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.78E-04 |
| 219 | ALL | 396402.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.42E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.42E-04 |
| 220 | ALL | 396452.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.22E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.22E-04 |
| 221 | ALL | 396502.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.29E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.29E-04 |
| 222 | ALL | 396552.2 | 3754309 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.63E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.63E-04 |
| 223 | ALL | 397033.1 | 3753307 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 |
| 224 | ALL | 397083.1 | 3753307 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.92E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.92E-04 |
| 225 | ALL | 397133.1 | 3753307 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 |
| 226 | ALL | 397333.1 | 3753307 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.85E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.85E-04 |
| 227 | ALL | 397383.1 | 3753307 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.83E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.83E-04 |
| 228 | ALL | 397433.1 | 3753307 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 |
| 229 | ALL | 397483.1 | 3753307 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.75E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.75E-04 |
| 230 | ALL | 397533.1 | 3753307 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-04 |
| 231 | ALL | 397583.1 | 3753307 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.64E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.64E-04 |
| 232 | ALL | 397633.1 | 3753307 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.57E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.57E-04 |
| 233 | ALL | 397683.1 | 3753307 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.48E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.48E-04 |
| 234 | ALL | 397033.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.33E-04 |
| 235 | ALL | 397083.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.33E-04 |
| 236 | ALL | 397133.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.33E-04 |
| 237 | ALL | 397333.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.25E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.25E-04 |
| 238 | ALL | 397383.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 |
| 239 | ALL | 397433.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E-04 |
| 240 | ALL | 397483.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.14E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.14E-04 |
| 241 | ALL | 397533.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.08E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.08E-04 |
| 242 | ALL | 397583.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.01E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.01E-04 |
| 243 | ALL | 397633.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 |
| 244 | ALL | 397683.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 |
| 245 | ALL | 397733.1 | 3753357 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.63E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.63E-04 |
| 246 | ALL | 397033.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.03E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.03E-04 |
| 247 | ALL | 397083.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.02E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.02E-04 |
| 248 | ALL | 397133.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.01E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.01E-04 |
| 249 | ALL | 397333.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.93E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.93E-04 |
| 250 | ALL | 397383.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.90E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.90E-04 |
| 251 | ALL | 397433.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.86E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.86E-04 |
| 252 | ALL | 397483.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.82E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.82E-04 |
| 253 | ALL | 397533.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.75E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.75E-04 |
| 254 | ALL | 397583.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.66E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.66E-04 |
| 255 | ALL | 397633.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.54E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.54E-04 |
| 256 | ALL | 397683.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.35E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.35E-04 |
| 257 | ALL | 397733.1 | 3753407 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.08E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.08E-04 |
| 258 | ALL | 397033.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.53E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.53E-04 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 259 | ALL | 397083.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.50E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.50E-04 |
| 260 | ALL | 397133.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.45E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.45E-04 |
| 261 | ALL | 397333.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.41E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.41E-04 |
| 262 | ALL | 397383.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.40E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.40E-04 |
| 263 | ALL | 397433.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.40E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.40E-04 |
| 264 | ALL | 397483.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.38E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.38E-04 |
| 265 | ALL | 397533.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.33E-04 |
| 266 | ALL | 397583.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.23E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.23E-04 |
| 267 | ALL | 397633.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.08E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.08E-04 |
| 268 | ALL | 397683.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.79E-04 |
| 269 | ALL | 397733.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.23E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.23E-04 |
| 270 | ALL | 397783.1 | 3753457 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.35E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.35E-04 |
| 271 | ALL | 397033.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.05E-04 |
| 272 | ALL | 397083.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.78E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.78E-04 |
| 273 | ALL | 397133.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.45E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.45E-04 |
| 274 | ALL | 397213.5 | 3753581 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.27E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.27E-04 |
| 275 | ALL | 397283.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.15E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.15E-04 |
| 276 | ALL | 397333.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.06E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.06E-04 |
| 277 | ALL | 397383.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.95E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.95E-04 |
| 278 | ALL | 397433.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.05E-04 |
| 279 | ALL | 397483.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.01E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.01E-04 |
| 280 | ALL | 397533.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.87E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.87E-04 |
| 281 | ALL | 397583.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.65E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.65E-04 |
| 282 | ALL | 397633.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.43E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.43E-04 |
| 283 | ALL | 397683.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.00E-04 |
| 284 | ALL | 397733.1 | 3753557 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.96E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.96E-04 |
| 285 | ALL | 397033.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.54E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.54E-04 |
| 286 | ALL | 397083.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.43E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.43E-04 |
| 287 | ALL | 397133.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.33E-04 |
| 288 | ALL | 397210.9 | 3753621 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.86E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.86E-04 |
| 289 | ALL | 397283.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.09E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.09E-04 |
| 290 | ALL | 397333.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.07E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.07E-04 |
| 291 | ALL | 397383.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.00E-04 |
| 292 | ALL | 397433.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.94E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.94E-04 |
| 293 | ALL | 397483.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.87E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.87E-04 |
| 294 | ALL | 397533.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.77E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.77E-04 |
| 295 | ALL | 397583.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.64E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.64E-04 |
| 296 | ALL | 397633.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.46E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.46E-04 |
| 297 | ALL | 397683.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.20E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.20E-04 |
| 298 | ALL | 397733.1 | 3753607 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.79E-04 |
| 299 | ALL | 397033.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.62E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.62E-04 |
| 300 | ALL | 397083.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.50E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.50E-04 |
| 301 | ALL | 397133.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.41E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.41E-04 |
| 302 | ALL | 397207 | 3753665 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.21E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.21E-04 |
| 303 | ALL | 397283.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.18E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.18E-04 |
| 304 | ALL | 397333.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.14E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.14E-04 |
| 305 | ALL | 397383.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.07E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.07E-04 |
| 306 | ALL | 397433.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.01E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.01E-04 |
| 307 | ALL | 397483.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.93E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.93E-04 |
| 308 | ALL | 397533.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.85E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.85E-04 |
| 309 | ALL | 397583.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.74E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.74E-04 |
| 310 | ALL | 397633.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.60E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.60E-04 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 311 | ALL | 397683.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-04 |
| 312 | ALL | 397733.1 | 3753657 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.20E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.20E-04 |
| 313 | ALL | 397033.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.24E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.24E-04 |
| 314 | ALL | 397083.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.11E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.11E-04 |
| 315 | ALL | 397133.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.01E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.01E-04 |
| 316 | ALL | 397205.7 | 3753729 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.78E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.78E-04 |
| 317 | ALL | 397283.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.77E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.77E-04 |
| 318 | ALL | 397333.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.71E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.71E-04 |
| 319 | ALL | 397383.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.65E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.65E-04 |
| 320 | ALL | 397433.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.58E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.58E-04 |
| 321 | ALL | 397483.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.51E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.51E-04 |
| 322 | ALL | 397533.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-04 |
| 323 | ALL | 397583.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.34E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.34E-04 |
| 324 | ALL | 397633.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 |
| 325 | ALL | 397683.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-04 |
| 326 | ALL | 397733.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.95E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.95E-04 |
| 327 | ALL | 397783.1 | 3753707 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 |
| 328 | ALL | 397033.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.09E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.09E-04 |
| 329 | ALL | 397083.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.94E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.94E-04 |
| 330 | ALL | 397133.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.82E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.82E-04 |
| 331 | ALL | 397283.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.57E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.57E-04 |
| 332 | ALL | 397333.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.50E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.50E-04 |
| 333 | ALL | 397383.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-04 |
| 334 | ALL | 397433.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.37E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.37E-04 |
| 335 | ALL | 397483.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.30E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.30E-04 |
| 336 | ALL | 397533.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 |
| 337 | ALL | 397583.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.14E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.14E-04 |
| 338 | ALL | 397633.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.05E-04 |
| 339 | ALL | 397683.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.95E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.95E-04 |
| 340 | ALL | 397733.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.84E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.84E-04 |
| 341 | ALL | 397783.1 | 3753757 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-04 |
| 342 | ALL | 397033.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.05E-04 |
| 343 | ALL | 397083.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.88E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.88E-04 |
| 344 | ALL | 397133.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.75E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.75E-04 |
| 345 | ALL | 397283.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.47E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.47E-04 |
| 346 | ALL | 397333.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.40E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.40E-04 |
| 347 | ALL | 397383.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.33E-04 |
| 348 | ALL | 397433.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.26E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.26E-04 |
| 349 | ALL | 397483.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.20E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.20E-04 |
| 350 | ALL | 397533.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.13E-04 |
| 351 | ALL | 397583.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.05E-04 |
| 352 | ALL | 397633.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.97E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.97E-04 |
| 353 | ALL | 397683.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.89E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.89E-04 |
| 354 | ALL | 397733.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 |
| 355 | ALL | 397783.1 | 3753807 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-04 |
| 356 | ALL | 397283.1 | 3753857 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.44E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.44E-04 |
| 357 | ALL | 397333.1 | 3753857 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.36E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.36E-04 |
| 358 | ALL | 397383.1 | 3753857 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.29E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.29E-04 |
| 359 | ALL | 397433.1 | 3753857 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 |
| 360 | ALL | 397483.1 | 3753857 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.16E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.16E-04 |
| 361 | ALL | 397533.1 | 3753857 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-04 |
| 362 | ALL | 397583.1 | 3753857 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-04 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 363 | ALL | 397633.1 | 3753857 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.96E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.96E-04 |
| 364 | ALL | 397683.1 | 3753857 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.88E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.88E-04 |
| 365 | ALL | 397733.1 | 3753857 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.80E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.80E-04 |
| 366 | ALL | 397783.1 | 3753857 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-04 |
| 367 | ALL | 396001.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.76E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.76E-05 |
| 368 | ALL | 396051.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.07E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.07E-05 |
| 369 | ALL | 396101.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.39E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.39E-05 |
| 370 | ALL | 396151.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.74E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.74E-05 |
| 371 | ALL | 396201.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.12E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.12E-05 |
| 372 | ALL | 396251.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.53E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.53E-05 |
| 373 | ALL | 396301.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.97E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.97E-05 |
| 374 | ALL | 396351.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.46E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.46E-05 |
| 375 | ALL | 396401.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.99E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.99E-05 |
| 376 | ALL | 396451.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E-04 |
| 377 | ALL | 396501.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.12E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.12E-04 |
| 378 | ALL | 396551.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.20E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.20E-04 |
| 379 | ALL | 396601.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.28E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.28E-04 |
| 380 | ALL | 396651.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.37E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.37E-04 |
| 381 | ALL | 396701.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E-04 |
| 382 | ALL | 396751.3 | 3753290 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-04 |
| 383 | ALL | 396001.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.05E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.05E-05 |
| 384 | ALL | 396051.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.38E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.38E-05 |
| 385 | ALL | 396101.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.74E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.74E-05 |
| 386 | ALL | 396151.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.13E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.13E-05 |
| 387 | ALL | 396201.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.54E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.54E-05 |
| 388 | ALL | 396251.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.00E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.00E-05 |
| 389 | ALL | 396301.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.51E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.51E-05 |
| 390 | ALL | 396351.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-04 |
| 391 | ALL | 396401.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-04 |
| 392 | ALL | 396451.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-04 |
| 393 | ALL | 396501.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.22E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.22E-04 |
| 394 | ALL | 396551.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.31E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.31E-04 |
| 395 | ALL | 396601.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.42E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.42E-04 |
| 396 | ALL | 396651.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.54E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.54E-04 |
| 397 | ALL | 396701.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.68E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.68E-04 |
| 398 | ALL | 396751.3 | 3753340 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.82E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.82E-04 |
| 399 | ALL | 396001.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.35E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.35E-05 |
| 400 | ALL | 396051.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.71E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.71E-05 |
| 401 | ALL | 396101.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.11E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.11E-05 |
| 402 | ALL | 396151.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.53E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.53E-05 |
| 403 | ALL | 396201.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.00E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.00E-05 |
| 404 | ALL | 396251.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.51E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.51E-05 |
| 405 | ALL | 396301.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-04 |
| 406 | ALL | 396351.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-04 |
| 407 | ALL | 396401.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-04 |
| 408 | ALL | 396451.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.23E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.23E-04 |
| 409 | ALL | 396501.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.32E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.32E-04 |
| 410 | ALL | 396551.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.44E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.44E-04 |
| 411 | ALL | 396601.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.59E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.59E-04 |
| 412 | ALL | 396651.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.77E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.77E-04 |
| 413 | ALL | 396701.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.99E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.99E-04 |
| 414 | ALL | 396751.3 | 3753390 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-04 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 415 | ALL | 396001.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.67E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.67E-05 |
| 416 | ALL | 396051.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.06E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.06E-05 |
| 417 | ALL | 396101.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.49E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.49E-05 |
| 418 | ALL | 396151.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.96E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.96E-05 |
| 419 | ALL | 396201.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.47E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.47E-05 |
| 420 | ALL | 396251.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.00E-04 |
| 421 | ALL | 396301.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-04 |
| 422 | ALL | 396351.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-04 |
| 423 | ALL | 396401.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.22E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.22E-04 |
| 424 | ALL | 396451.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.32E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.32E-04 |
| 425 | ALL | 396501.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.44E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.44E-04 |
| 426 | ALL | 396551.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.59E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.59E-04 |
| 427 | ALL | 396601.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-04 |
| 428 | ALL | 396651.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.06E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.06E-04 |
| 429 | ALL | 396701.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.45E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.45E-04 |
| 430 | ALL | 396751.3 | 3753440 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.97E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.97E-04 |
| 431 | ALL | 396001.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.99E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.99E-05 |
| 432 | ALL | 396051.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.43E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.43E-05 |
| 433 | ALL | 396101.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.89E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.89E-05 |
| 434 | ALL | 396151.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.41E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.41E-05 |
| 435 | ALL | 396201.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.97E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.97E-05 |
| 436 | ALL | 396251.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E-04 |
| 437 | ALL | 396301.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.13E-04 |
| 438 | ALL | 396351.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-04 |
| 439 | ALL | 396401.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.31E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.31E-04 |
| 440 | ALL | 396451.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.42E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.42E-04 |
| 441 | ALL | 396501.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.56E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.56E-04 |
| 442 | ALL | 396551.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.74E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.74E-04 |
| 443 | ALL | 396601.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E-04 |
| 444 | ALL | 396651.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.40E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.40E-04 |
| 445 | ALL | 396701.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.15E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.15E-04 |
| 446 | ALL | 396751.3 | 3753490 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.93E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.93E-04 |
| 447 | ALL | 396935.3 | 3754882 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.23E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.23E-03 |
| 448 | ALL | 396985.3 | 3754882 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.43E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.43E-03 |
| 449 | ALL | 397535.3 | 3754882 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.09E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.09E-04 |
| 450 | ALL | 396835.3 | 3754932 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.26E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.26E-04 |
| 451 | ALL | 396885.3 | 3754932 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.01E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.01E-04 |
| 452 | ALL | 396935.3 | 3754932 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.83E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.83E-04 |
| 453 | ALL | 396985.3 | 3754932 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.78E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.78E-04 |
| 454 | ALL | 397035.3 | 3754932 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.09E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.09E-03 |
| 455 | ALL | 397235.3 | 3754932 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-03 |
| 456 | ALL | 397285.3 | 3754932 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.62E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.62E-03 |
| 457 | ALL | 397335.3 | 3754932 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-03 |
| 458 | ALL | 397485.3 | 3754932 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.68E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.68E-04 |
| 459 | ALL | 397535.3 | 3754932 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.78E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.78E-04 |
| 460 | ALL | 396835.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.85E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.85E-04 |
| 461 | ALL | 396885.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.33E-04 |
| 462 | ALL | 396935.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.84E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.84E-04 |
| 463 | ALL | 396985.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.37E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.37E-04 |
| 464 | ALL | 397035.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.97E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.97E-04 |
| 465 | ALL | 397185.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-03 |
| 466 | ALL | 397235.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.04E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.04E-03 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 467 | ALL | 397285.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.60E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.60E-04 |
| 468 | ALL | 397335.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.33E-04 |
| 469 | ALL | 397435.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.21E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.21E-04 |
| 470 | ALL | 397485.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.46E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.46E-04 |
| 471 | ALL | 397535.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.84E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.84E-04 |
| 472 | ALL | 397585.3 | 3754982 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.33E-04 |
| 473 | ALL | 396835.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.86E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.86E-04 |
| 474 | ALL | 396885.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.18E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.18E-04 |
| 475 | ALL | 396935.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.51E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.51E-04 |
| 476 | ALL | 397085.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.54E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.54E-04 |
| 477 | ALL | 397135.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.86E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.86E-04 |
| 478 | ALL | 397185.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.08E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.08E-04 |
| 479 | ALL | 397235.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.10E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.10E-04 |
| 480 | ALL | 397285.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.80E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.80E-04 |
| 481 | ALL | 397335.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.26E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.26E-04 |
| 482 | ALL | 397385.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.64E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.64E-04 |
| 483 | ALL | 397435.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.07E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.07E-04 |
| 484 | ALL | 397485.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.57E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.57E-04 |
| 485 | ALL | 397535.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.13E-04 |
| 486 | ALL | 397585.3 | 3755032 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.74E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.74E-04 |
| 487 | ALL | 396835.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.13E-04 |
| 488 | ALL | 396885.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.35E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.35E-04 |
| 489 | ALL | 396985.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.80E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.80E-04 |
| 490 | ALL | 397035.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.01E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.01E-04 |
| 491 | ALL | 397085.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.21E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.21E-04 |
| 492 | ALL | 397135.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.36E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.36E-04 |
| 493 | ALL | 397185.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.44E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.44E-04 |
| 494 | ALL | 397235.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.42E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.42E-04 |
| 495 | ALL | 397285.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.26E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.26E-04 |
| 496 | ALL | 397335.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.97E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.97E-04 |
| 497 | ALL | 397385.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.61E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.61E-04 |
| 498 | ALL | 397435.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.24E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.24E-04 |
| 499 | ALL | 397485.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.89E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.89E-04 |
| 500 | ALL | 397535.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.57E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.57E-04 |
| 501 | ALL | 397585.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.28E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.28E-04 |
| 502 | ALL | 397635.3 | 3755082 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.03E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.03E-04 |
| 503 | ALL | 396935.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.87E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.87E-04 |
| 504 | ALL | 396985.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.03E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.03E-04 |
| 505 | ALL | 397035.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.17E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.17E-04 |
| 506 | ALL | 397085.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.28E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.28E-04 |
| 507 | ALL | 397135.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.37E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.37E-04 |
| 508 | ALL | 397185.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.40E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.40E-04 |
| 509 | ALL | 397235.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.37E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.37E-04 |
| 510 | ALL | 397285.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.27E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.27E-04 |
| 511 | ALL | 397335.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.09E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.09E-04 |
| 512 | ALL | 397385.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.86E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.86E-04 |
| 513 | ALL | 397435.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.62E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.62E-04 |
| 514 | ALL | 397485.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.37E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.37E-04 |
| 515 | ALL | 397535.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.13E-04 |
| 516 | ALL | 397585.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.90E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.90E-04 |
| 517 | ALL | 397635.3 | 3755132 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.69E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.69E-04 |
| 518 | ALL | 396835.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.10E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.10E-04 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 519 | ALL | 396885.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.22E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.22E-04 |
| 520 | ALL | 396935.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.33E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.33E-04 |
| 521 | ALL | 396985.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.44E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.44E-04 |
| 522 | ALL | 397035.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.54E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.54E-04 |
| 523 | ALL | 397085.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.61E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.61E-04 |
| 524 | ALL | 397135.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.66E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.66E-04 |
| 525 | ALL | 397185.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.68E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.68E-04 |
| 526 | ALL | 397235.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.65E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.65E-04 |
| 527 | ALL | 397285.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.58E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.58E-04 |
| 528 | ALL | 397335.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.46E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.46E-04 |
| 529 | ALL | 397385.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.31E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.31E-04 |
| 530 | ALL | 397435.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.13E-04 |
| 531 | ALL | 397485.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.95E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.95E-04 |
| 532 | ALL | 397535.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.77E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.77E-04 |
| 533 | ALL | 397585.3 | 3755182 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.59E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.59E-04 |
| 534 | ALL | 396885.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.82E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.82E-04 |
| 535 | ALL | 396935.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.90E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.90E-04 |
| 536 | ALL | 396985.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.98E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.98E-04 |
| 537 | ALL | 397035.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.05E-04 |
| 538 | ALL | 397085.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.10E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.10E-04 |
| 539 | ALL | 397135.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.13E-04 |
| 540 | ALL | 397185.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.14E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.14E-04 |
| 541 | ALL | 397235.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.12E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.12E-04 |
| 542 | ALL | 397285.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.06E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.06E-04 |
| 543 | ALL | 397335.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.98E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.98E-04 |
| 544 | ALL | 397385.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.87E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.87E-04 |
| 545 | ALL | 397435.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.75E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.75E-04 |
| 546 | ALL | 397485.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.61E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.61E-04 |
| 547 | ALL | 397535.3 | 3755232 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.47E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.47E-04 |
| 548 | ALL | 396885.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.49E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.49E-04 |
| 549 | ALL | 396935.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.55E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.55E-04 |
| 550 | ALL | 396985.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.61E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.61E-04 |
| 551 | ALL | 397035.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.66E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.66E-04 |
| 552 | ALL | 397085.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.70E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.70E-04 |
| 553 | ALL | 397135.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.72E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.72E-04 |
| 554 | ALL | 397185.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.73E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.73E-04 |
| 555 | ALL | 397235.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.71E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.71E-04 |
| 556 | ALL | 397285.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.67E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.67E-04 |
| 557 | ALL | 397335.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.61E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.61E-04 |
| 558 | ALL | 397385.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.53E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.53E-04 |
| 559 | ALL | 397435.3 | 3755282 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-04 |
| 560 | ALL | 396935.3 | 3755332 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.26E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.26E-04 |
| 561 | ALL | 396985.3 | 3755332 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.31E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.31E-04 |
| 562 | ALL | 397035.3 | 3755332 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.35E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.35E-04 |
| 563 | ALL | 397085.3 | 3755332 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.38E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.38E-04 |
| 564 | ALL | 397135.3 | 3755332 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.39E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.39E-04 |
| 565 | ALL | 397185.3 | 3755332 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.40E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.40E-04 |
| 566 | ALL | 397235.3 | 3755332 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.38E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.38E-04 |
| 567 | ALL | 397285.3 | 3755332 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.36E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.36E-04 |
| 568 | ALL | 397335.3 | 3755332 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.31E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.31E-04 |
| 569 | ALL | 397385.3 | 3755332 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.25E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.25E-04 |
| 570 | ALL | 396985.3 | 3755382 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.06E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.06E-04 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 571 | ALL | 397035.3 | 3755382 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.09E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.09E-04 |
| 572 | ALL | 397085.3 | 3755382 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.12E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.12E-04 |
| 573 | ALL | 397135.3 | 3755382 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.13E-04 |
| 574 | ALL | 397185.3 | 3755382 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.13E-04 |
| 575 | ALL | 397235.3 | 3755382 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.12E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.12E-04 |
| 576 | ALL | 397285.3 | 3755382 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-04 |
| 577 | ALL | 397035.3 | 3755432 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.88E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.88E-04 |
| 578 | ALL | 397085.3 | 3755432 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.90E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.90E-04 |
| 579 | ALL | 397135.3 | 3755432 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 |
| 580 | ALL | 397185.3 | 3755432 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-04 |
| 581 | ALL | 397235.3 | 3755432 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.90E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.90E-04 |
| 582 | ALL | 397035.3 | 3755482 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-04 |
| 583 | ALL | 397085.3 | 3755482 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-04 |
| 584 | ALL | 397135.3 | 3755482 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.72E-04 |
| 585 | ALL | 397567.7 | 3754188 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.95E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.95E-04 |
| 586 | ALL | 397617.7 | 3754188 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.95E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.95E-04 |
| 587 | ALL | 397667.7 | 3754188 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.95E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.95E-04 |
| 588 | ALL | 397717.7 | 3754188 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.93E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.93E-04 |
| 589 | ALL | 397767.7 | 3754188 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.89E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.89E-04 |
| 590 | ALL | 397817.7 | 3754188 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.80E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.80E-04 |
| 591 | ALL | 397567.7 | 3754238 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.30E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.30E-04 |
| 592 | ALL | 397617.7 | 3754238 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.35E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.35E-04 |
| 593 | ALL | 397667.7 | 3754238 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.40E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.40E-04 |
| 594 | ALL | 397717.7 | 3754238 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.44E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.44E-04 |
| 595 | ALL | 397767.7 | 3754238 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.45E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.45E-04 |
| 596 | ALL | 397817.7 | 3754238 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.38E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.38E-04 |
| 597 | ALL | 397567.7 | 3754288 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.76E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.76E-04 |
| 598 | ALL | 397617.7 | 3754288 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.89E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.89E-04 |
| 599 | ALL | 397667.7 | 3754288 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.05E-04 |
| 600 | ALL | 397717.7 | 3754288 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.21E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.21E-04 |
| 601 | ALL | 397756.8 | 3754272 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.99E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.99E-04 |
| 602 | ALL | 397567.7 | 3754338 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.38E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.38E-04 |
| 603 | ALL | 397617.7 | 3754338 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.65E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.65E-04 |
| 604 | ALL | 397667.7 | 3754338 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.00E-04 |
| 605 | ALL | 397598.6 | 3754379 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.30E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.30E-04 |
| 606 | ALL | 396986 | 3754854 | NonCancer | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.95E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.95E-03 |

HARP2 - HRACalc (dated 19044) 9/16/2020 11:46:52 AM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
**********
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: NCChronic
Calculation Method: Derived

**********
EXPOSURE DURATION PARAMETERS FOR CANCER
**Exposure duration are only adjusted for cancer assessments**

**********
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: False
Dermal: False
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

**********
INHALATION

Daily breathing rate: LongTerm24HR

**Worker Adjustment Factors**
Worker adjustment factors enabled: NO

**Fraction at time at home**
NOTE: Exposure duration (i.e., start age, end age, ED, & FAH) are only adjusted for cancer assessments.

**********
TIER 2 SETTINGS
Tier2 not used.

**********

```
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to:
C:\Users\dlarocca\Desktop\Air Quality Work\HARP2\Downey Op\DOWNEY
OPERATIONAL HRA\hra\ChronicnoncancerNCChronicRisk.csv
Chronic risk total by receptor saved to: C:\Users\dlarocca\Desktop\Air
Quality Work\HARP2\Downey Op\DOWNEY OPERATIONAL
HRA\hra\ChronicnoncancerNCChronicRiskSumByRec.csv
HRA ran successfully
```

# Appendix C

## Transportation Impact Analysis

DRAFT

# Transportation Impact Analysis
# 12021 Woodruff Avenue Industrial Building Project
# City of Downey

*Prepared for:*


**City of Downey**
11111 Brookshire Avenue
Downey, California 90241
*Contact: Alfonso S. Hernandez*


*Prepared by:*


DUDEK
605 Third Street
Encinitas, California 92024
*Contact: Dennis Pascua*
*Transportation Services Manager*


OCTOBER 2020

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# 1 Introduction

## 1.1 Purpose and Scope of the TIA

The purpose of this Transportation Impact Analysis (TIA) is to identify transportation impacts associated with the proposed 12021 Woodruff Avenue Industrial Building Project (proposed project) in the City of Downey (City), in Los Angeles County (County). This TIA has been prepared consistent with the requirements set forth in CEQA Guidelines Section 15064.3(b), the City's General Plan Circulation Element, the Los Angeles County Congestion Management Program (CMP), and Caltrans.

**The objectives of this TIA are to:**

- Document existing roadway, pedestrian, bicycle, transit, and traffic conditions, including intersection levels of service in the study area;
- Estimate trip generation, distribution, and assignment characteristics for the proposed project;
- Provide a Vehicle Miles Traveled (VMT) analysis per Senate Bill (SB) 743 and the updated California Environmental Quality Act (CEQA) Guidelines;
- Determine traffic levels of service (LOS) for study area intersections under the following scenarios:
  - Existing Conditions
  - Existing plus Ambient Growth plus Cumulative Projects (traffic from cumulative projects and ambient growth)
  - Existing plus Ambient Growth plus Cumulative Projects plus Project
- Identify CEQA-required mitigation measures for significant transportation impacts and/or other improvements needed to meet LOS standards (if any); and,
- Provide findings and recommendations based on the traffic analysis of the proposed project.

Figure 1 shows the project location and study area intersections. As shown in Figure 1, the study area is comprised of the following 5 intersections and two project driveways:

**Intersections**

1. Woodruff Avenue/Washburn Road
2. Woodruff Avenue/Stewart and Gray Road
3. Stewart and Gray Road/Firestone Boulevard
4. Interstate 605 (I-605) southbound ramps/Firestone Boulevard
5. I-605 northbound ramps – Hoxie Avenue/Firestone Boulevard

**Project Driveways**

- Driveway 1 (North)/Woodruff Avenue
- Driveway 2 (South)/Woodruff Avenue

## 1.2 Project Description and Location

The project includes the demolition of an existing, 74,662-square-foot industrial building and construction of an approximately 44,162-square-foot tilt-up industrial building for truck terminal use. The proposed industrial building would include approximately 36,142 square feet of warehouse space and 8,020 square feet of office space.

The new industrial building is intended to be used as a trucking terminal for distribution and logistics purposes. On-site activities will include storage of and/or consolidation of manufactured goods before the distribution to retail locations or other warehouses. Other than truck parking and storage, all activities will occur within the industrial building. The office space is intended to be used for office uses ancillary to the warehouse operation. Figure 2 illustrates the project's site plan, and the project's driveway access. The project is expected to be operational in the year 2022.

The project would contain the required number of parking stalls including 56 parking spaces for passenger vehicles (52 standard, 2 accessible parking, and 2 van accessible parking), 76 spaces for cargo containers, and 70 loading docks.

Regional access to the project site is primarily served by I-605, I-5, and I-105, while I-710 is located west of the City. The project is accessible via three major streets: Florence Avenue, Firestone Boulevard, and Imperial Highway. Local access to the project is provided via Woodruff Avenue, Stewart and Gray Road, and Washburn Road. The project access driveway at the northern edge of the site would provide full-access for passenger cars and inbound only (right-in/left-in) access for trucks. The project access driveway at the southern edge of the site would provide full access for passenger cars and outbound only (right-out/left-out) access for trucks.




SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

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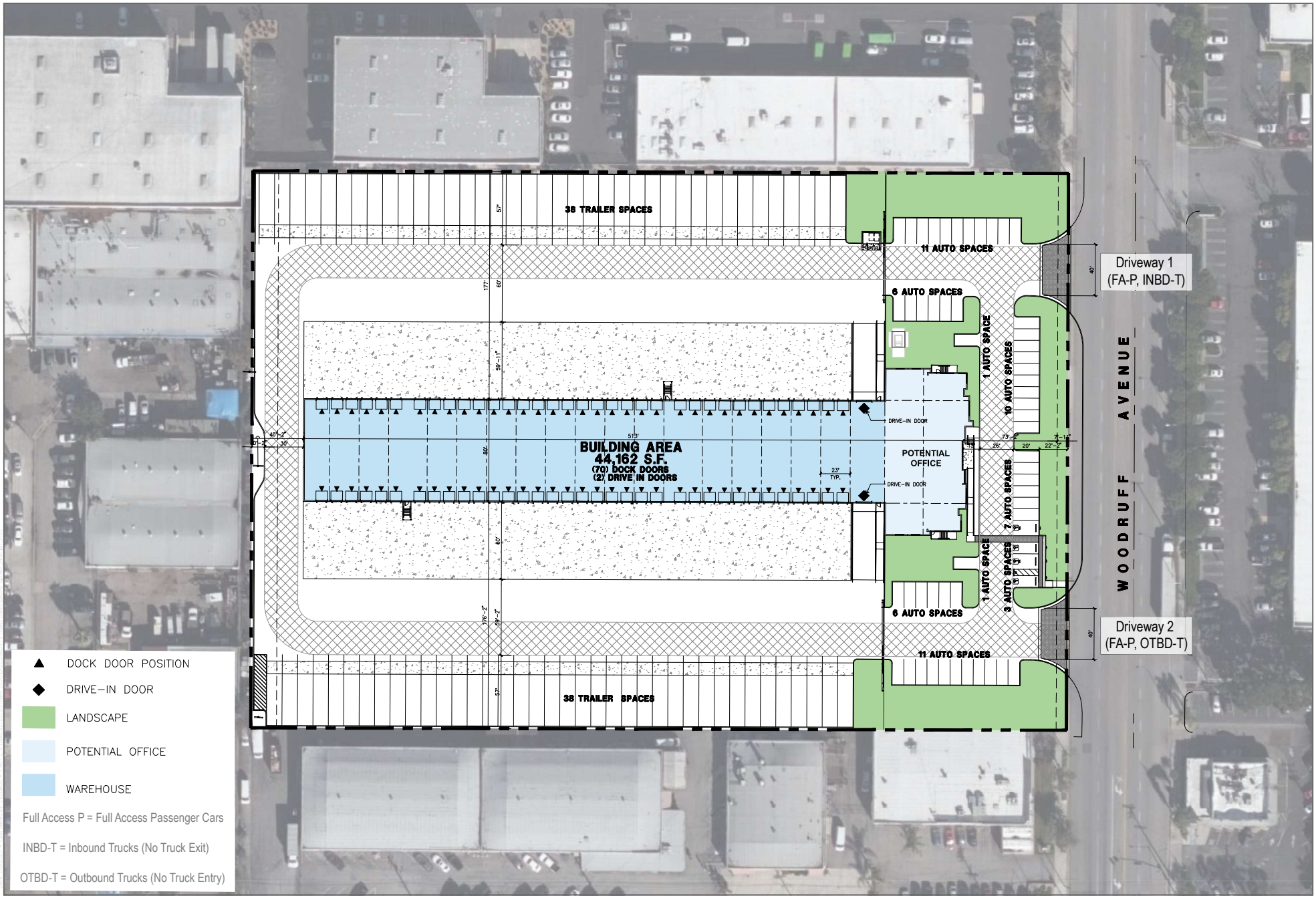
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**FIGURE 1**

Study Area

12021 Woodruff Avenue Industrial Building Project

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SOURCE: Bing Maps 2020; Open Street Map 2019; HPA Architecture 2020

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**FIGURE 2**

Site Plan

12021 Woodruff Avenue Industrial Building Project

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# 1.3 Analysis Methodology

## 1.3.1 Vehicle Miles Traveled (VMT) Analysis for CEQA

On September 27, 2013, Senate Bill (SB) 743 was signed into law, which created a process to change the way that transportation impacts are analyzed under California Environmental Quality Act (CEQA). SB 743 required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service (LOS) for evaluating transportation impacts. Under the new transportation guidelines, LOS, or vehicle delay, will no longer be considered an environmental impact under CEQA. OPR recommended Vehicle Miles Traveled (VMT) as the most appropriate measure of project transportation impacts for land use projects and land use plans. The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018.

Under the new guidelines, VMT has been adopted as the most appropriate measure of transportation impacts under CEQA. The OPR's regulatory text indicates that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by July 1, 2020. The City of Downey has not adopted VMT specific TIA guidelines as of October 2020. Therefore, the OPR guidance provided in the Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018 have been used for VMT analysis in the TIA. All other details of applicable screening and VMT analysis methodology has been provided in Section 4 of the TIA.

The Updated CEQA Guidelines state that "generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts" and define VMT as "the amount and distance of automobile travel attributable to a project." It should be noted that "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT). Other relevant considerations may include the effects of the project on transit and non-motorized travel.

## 1.3.2 Level of Service for General Plan Consistency

Level of service (LOS) is a tool used to describe the operating characteristics of the street system in terms of the level of congestion or delay experienced by vehicles with service levels range from A through F, with each level defined by a range of V/C ratios, as shown in Table 1.

**Table 1. Levels of Service Description**

| Level of Service | Definition |
|---|---|
| A | Free Flow/Insignificant Delays: No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. |
| B | Stable Operation/Minimal Delays: An occasional approach phase is fully utilized. Many drivers feel somewhat restricted within platoons of vehicles. |
| C | Stable Operation/Acceptable Delays: Major approach phases fully utilized. Most drivers feel somewhat restricted. |
| D | Approaching Unstable/Tolerable Delays: Drivers may have to wait through more than one red signal indication. Queues may develop but dissipate rapidly, without excessive delays. |

Table 1. Levels of Service Description

| Level of Service | Definition |
|---|---|
| E | Unstable Operation/Significant Delays: Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection. |
| F | Forced Flow/Excessive Delays: Represents jammed conditions. Intersection operates below capacity with low volumes. Queues may block upstream intersections. |

**Source**: HCM 6 (TRB 2016).

The study area intersections are analyzed in the TIA for the scenarios described below.

**Existing Condition**

The TIA includes a description of existing traffic conditions in the site vicinity, including existing intersections and freeway ramp intersections weekday AM and PM peak hour traffic volumes, and traffic operations. The existing condition is representative of the year 2020. it should be noted that some traffic counts were collected in July 2020 during the COVID-19 pandemic and were subsequently adjusted using historical traffic count data as described further in Section 6.

**Existing plus Project Condition**

This condition includes analysis of traffic operations under existing conditions with project-related traffic, added to the existing AM and PM peak hour intersection traffic volumes.

**Existing plus Ambient Growth plus Cumulative Projects Condition**

This condition includes the time that the proposed project is completed and were estimated by increasing the existing traffic counts by an ambient growth rate and adding traffic generated by other cumulative projects in the study area. Ambient growth rates were obtained from the Los Angeles County Congestion Management Program (Metro 2010) for the Downey Regional Statistical Area, and since the project would be operational in the year 2022, a total ambient growth of 0.24% per year and therefore 0.48% for 2 years was applied to existing traffic to estimate Existing plus Ambient Growth plus Cumulative Projects Conditions.

**Existing plus Ambient Growth plus Cumulative Projects plus Project Condition**

This condition includes analysis of traffic operations under the Existing plus Ambient Growth plus Cumulative Projects (described above) condition with project-related traffic added to the AM and PM peak hour traffic volumes.

#### 1.3.2.1 Intersections

The Intersection Capacity Utilization (ICU) methodology was used to assess level of service for signalized intersections within the study area that are not under Caltrans jurisdiction. The ICU method determines the volume-to-capacity (V/C) ratio on a critical lane basis and determines LOS associated with each critical V/C ratio pairings at a signalized intersection. The Traffix program was utilized to determine intersection LOS for all signalized intersections within the City's jurisdiction.

The Highway Capacity Manual, 6th Edition (HCM 6) methodology (TRB 2016) was used to assess level of service for intersections within Caltrans' jurisdiction and for unsignalized intersections within the study area. The HCM and ICU analysis methodologies describe the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions). For HCM LOS is based on the corresponding control delay experienced per vehicle for unsignalized intersections, while for ICU LOS is based on the volume-to-capacity ratio of signalized intersections. The Synchro 10 LOS software was used to determine intersection LOS for unsignalized and Caltrans intersections and is consistent with the HCM 6 methodology. The Traffix program was utilized to determine unsignalized intersection LOS. Table 2 shows both the LOS values by delay ranges for unsignalized and Caltrans Intersection under HCM methodology, and volume-to-capacity ratio ranges for signalized intersections under the ICU methodology.

**Table 2. Levels of Service for Intersections using HCM Methodology**

| Level of Service | Unsignalized and Caltrans Intersections Control Delay (in seconds per vehicle) | Signalized Intersections V/C Ratio or ICU |
|---|---|---|
| A | < 10.0 | 0.00 – 0.60 |
| B | > 10.0 to < 15.0 | 0.61 – 0.70 |
| C | > 15.0 to < 25.0 | 0.71 – 0.80 |
| D | > 25.0 to < 35.0 | 0.81 – 0.90 |
| E | > 35.0 to < 50.0 | 0.91 – 1.00 |
| F | > 50.0 | > 1.00 |

**Notes:** V/C = volume-to-capacity; ICU = Intersection Capacity Utilization.
**Sources:** HCM 6 (TRB 2016) and ICU methodology.

### 1.3.2.2 General Plan Consistency Requirements

#### City of Downey General Plan Circulation Element

This analysis uses the LOS threshold provided in the Downey Vision 2025 Circulation Element of the current General Plan for the intersections located within the City of Downey. The Circulation Element defines acceptable LOS as "A," "B," "C," or "D," along with the following applicable policy and program:

- Policy 2.1.1. Maintain a street system that provides safe and efficient movement of people and goods.
  - Program 2.1.1.1. Maintain intersections and street segments at acceptable service levels and not worsen those intersections and street segments currently operating at unacceptable levels.

For the purposes of this analysis, an intersection would be found inconsistent with the City's Circulation Element if project traffic causes an intersection to go from an acceptable LOS to a deficient LOS. For intersections already operating at an unacceptable LOS, any increase in the volume-to-capacity ratio for intersections would be found inconsistent with the City's Circulation Element.

### 1.3.2.3 Caltrans Transportation Impact Study Guide

Caltrans released the Transportation Impact Study Guide (TISG) in May 2020 (Caltrans 2020), replacing the 2002 Guide for the Preparation of Traffic Impact Studies. Per the 2020 TISG, consistent with SB 743, Caltrans' primary review focus is VMT, replacing LOS as the metric used to evaluate transportation impacts in CEQA analyses. Caltrans

recommends use of the OPR recommended thresholds for land use projects and recommends following the guidance on methods of VMT assessment found in OPR's Technical Advisory (OPR 2018).

In addition to VMT, the 2020 TISG states that it may request a targeted operational and safety analysis to address a specific geometric or operational issue related to the State Highway System and connections with the State Highway System. Caltrans also notes that a future update of the TISG will include the basis for requesting transportation impact analysis not based on VMT and define elements to be included in non-VMT analysis.

## 1.4 Improvements for Level of Service Findings

As part of the final acceptance of the TIA, the City would review and approve any required improvements and/or fair share contributions necessary to improve the transportation-related deficiencies caused by the proposed development. These improvements would be included as part of the conditions of approval and should be in addition to any improvements required by any other departments. Fair share contributions identified in the TIA and subsequently listed in the conditions of approval shall be required before a building permit will be issued. Improvements required in the TIA and subsequently listed in the conditions of approval shall be completed prior to occupancy.

# 2 Existing Conditions

This section describes existing conditions within the study area. Characteristics are provided for the existing roadway, transit, bike and pedestrian facilities, peak hour intersection traffic volumes and traffic operations.

## 2.1 Roadway System

Regional access to the City of Downey is primarily provided via I-605, I-5, and I-105, while I-710 is located west of the City and accessible via three major streets: Florence Avenue, Firestone Boulevard, and Imperial Highway. Additionally, Firestone Boulevard serves as a primary connection point between Downey and the jurisdictions south of downtown Los Angeles. Figure 3 illustrates the Circulation Plan included in the City of Downey Circulation Element, and Figure 4 illustrates the truck routes in the City.

Characteristics of the existing street system within the study area are described below.

**Firestone Boulevard** is generally a north-south 6-lane divided roadway between Old River School Road and I-605, and 4-lane divided roadway east of I-605. The posted speed limit within the study area is 40 mph. There are paved sidewalks along either side of the roadway, and parking is generally not permitted along either side of the roadway. Firestone Boulevard is designated as a Major Arterial per the Circulation Element as shown in Figure 3 and is a designated as a "thru route" truck route as shown in Figure 4.

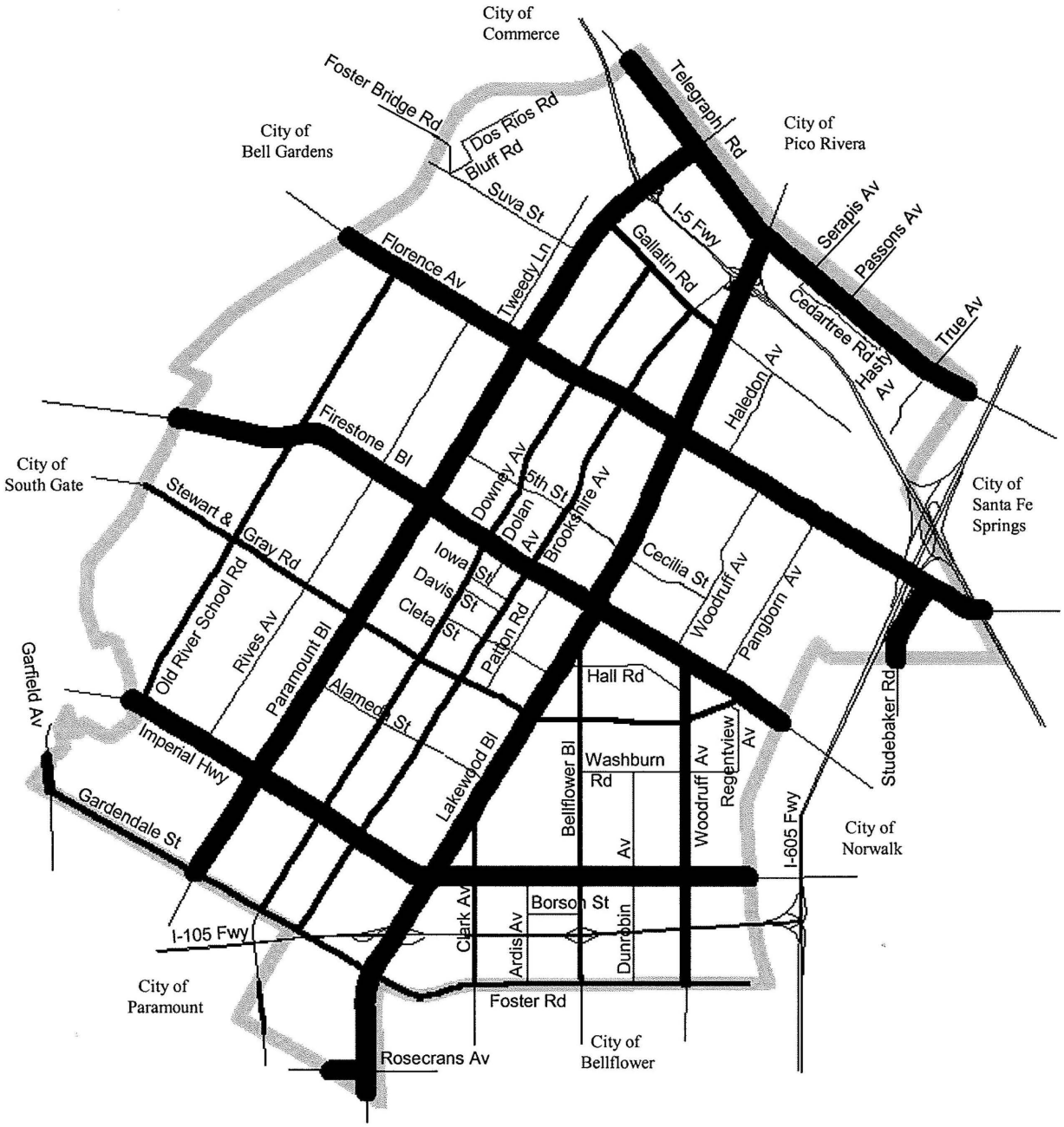
**Stewart and Gray Road** is generally an east-west 4-lane undivided roadway. The posted speed limit within the study area is 40 mph. There are generally paved sidewalks along either side of the roadway, and parking is not permitted along either side of the roadway. Stewart and Gray Road is designated as a Secondary Arterial per the Circulation Element as shown in Figure 3 and is a designated as a "thru route" truck route as shown in Figure 4.

**Woodruff Avenue** is generally a north-south 4-lane undivided roadway. The posted speed limit within the study area is 40 mph. There are paved sidewalks along either side of the roadway, and parking is generally permitted along either side of the roadway. Woodruff Avenue is designated as a Primary Arterial per the Circulation Element as shown in Figure 3 and is a designated as a truck route within the City as shown in Figure 4.

**Washburn Road** is generally an east-west 2-lane undivided roadway. The posted speed limit within the study area is 30 mph. There are paved sidewalks along either side of the roadway, and parking is generally permitted along either side of the roadway. Washburn Road is designated as a Collector per the Circulation Element as shown in Figure 3 and is a designated as a truck route within the City as shown in Figure 4.

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# FIGURE 2.1-1
# CIRCULATION PLAN




**LEGEND**

- **Major Arterial**
- **Primary Arterial**
- **Secondary Arterial**
- **Collector**

**SCALE**
**1 INCH = 0.78 MILE**

**North**

ADOPTED 1-25-2005



SOURCE: City of Downey, Circulation Element, 2005

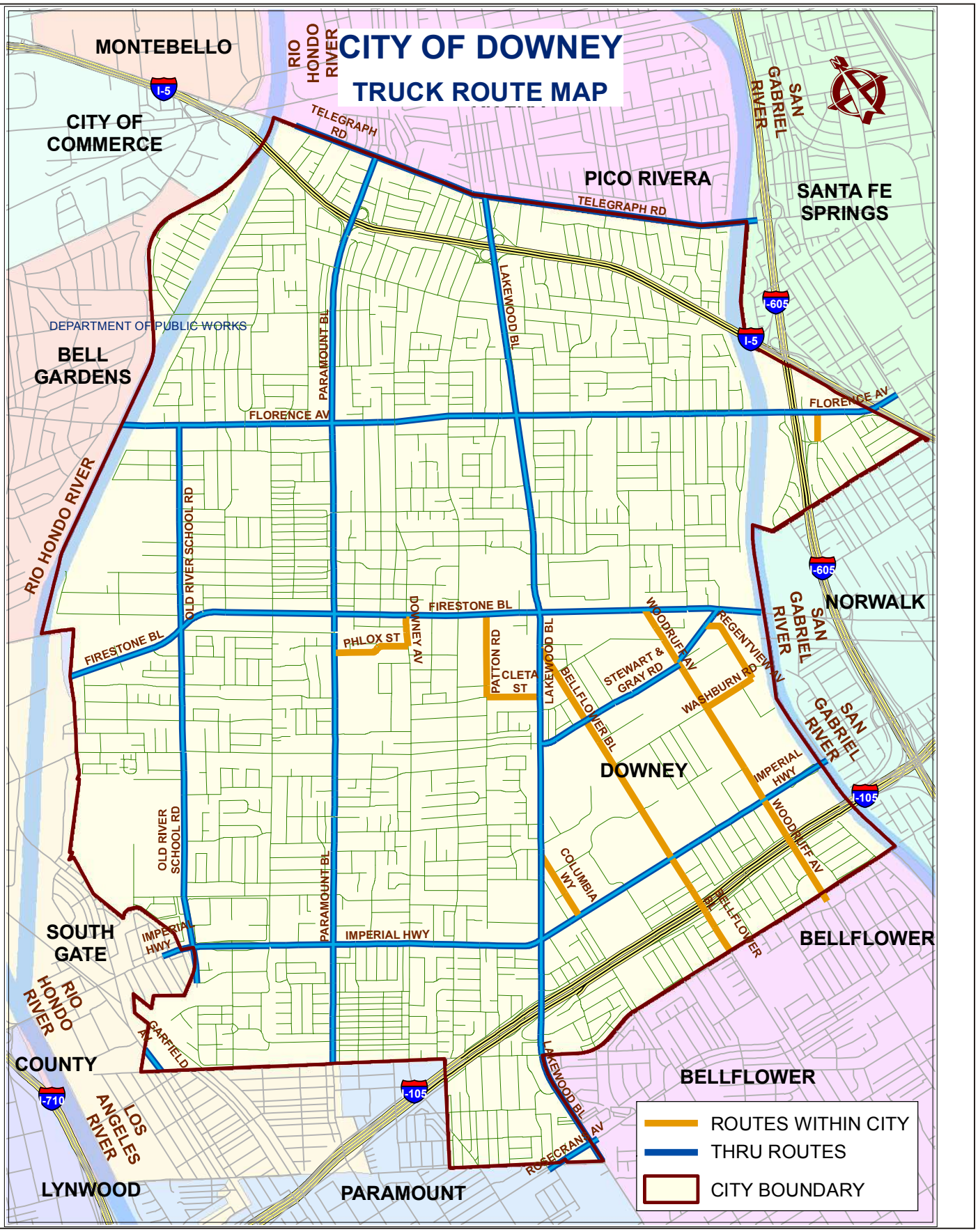
**FIGURE 3**

City of Downey Circulation Plan

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12021 Woodruff Avenue Industrial Building Project

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SOURCE: City of Downey 2018

**FIGURE 4**

City of Downey Truck Route Map

12021 Woodruff Avenue Industrial Building Project

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## 2.2 Transit System

Currently, the City of Downey is served by the Los Angeles County Metropolitan Transportation Authority (Metro). Metrolink service in the City is provided via the Green Line at the Lakewood Boulevard Station, located approximately 1.5 miles southwest of the project site, as well as the Norwalk Station, located approximately 1 mile southeast of the project site (Metro 2018).

Additionally, the following Metro bus lines are located within 0.5 miles of the project site:

- Line 115 operates between Playa Del Rey and the Norwalk Metrolink Station with a peak service frequency of 15 minutes. Line 115 primarily operates along Firestone Boulevard within the City of Downey (Metro 2020a).
- Line 127 operates between Compton Station/MLK Jr. Transit Center and the Downey Deport Transit Center with a peak service frequency of 60 minutes. Line 127 primarily operates along Bellflower Boulevard within the City of Downey (Metro 2020b).

The nearest bus stops are located at Bellflower Boulevard/Washburn Road intersection, serving Line 127, and Firestone Boulevard/Stewart and Gray Road intersection, serving Line 115. Development of the project would not conflict with the existing bus routes or bus stops. Figure 5 depicts the City of Downey Transit and Bicycle Facilities within the study area.

## 2.3 Pedestrian and Bicycle Facilities

There are currently no designated bicycle facilities within the City of Downey, aside from the San Gabriel River Trail, as shown in Figure 5. The Southern California Regional Bikeway Shapefile (RBS) identifies potential bicycle routes within the City, also identified in Figure 5. Additionally, the Downey Bike Master Plan Implementation Phase 1 Downtown/Transit project under Capital Improvement Program (CIP) 19-14 would include installation of Class II bicycle facilities on nine roadway segments, bicycle parking facilities, and way-finding signs (City of Downey 2020b).

Woodruff Avenue, which runs adjacent to the eastern boundary of the project site, is generally built with paved sidewalks and pedestrian facilities along both sides of the street. Additionally, the Woodruff Avenue Pavement Rehabilitation project under CIP 14-14 would not only include rehabilitation of asphalt pavement on the roadway but would also include miscellaneous repairs of existing concrete sidewalks, curb and gutter, driveway approaches, and Americans with Disabilities Act-compliant curb access ramps. Development of the project would not conflict with the existing pedestrian or bicycle facilities and would include frontage improvements to pedestrian facilities around the project site.

## 2.4 Existing Traffic Volumes

Weekday AM and PM peak hour traffic counts were collected for the study area intersections for pre-pandemic and existing conditions. The peak hour traffic counts were adjusted to reflect the existing conditions as described in detail in Section 6. Raw traffic count worksheets are provided in Appendix A.

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SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020; Metro 2019; SCAG 2020

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0 625 1,250 Feet

**FIGURE 5**

Transit and Bicycle Facilities

12021 Woodruff Avenue Industrial Building Project

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# 3 Project Traffic

This section documents the trip generation, distribution, and assignment of project traffic in the study area.

## 3.1 Trip Generation

As shown in Table 3, trip generation rates were obtained from the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition (ITE 2017) and 9th Edition (ITE 2012) for land use category Intermodal Truck Terminal (ITE Code 30), and employee trip generation rate for Manufacturing use. Additionally, passenger car equivalent (PCE) factors were applied to the trip generation estimates to account for truck traffic. The City of Fontana Truck Trip Generation Study Truck Terminal and the SCAQMD Warehouse Truck Trip Study Data Results and Usage Trip report were utilized to derive the vehicle split for each land use. Trip generation for the existing on-site operational activities were estimated and existing trip credit was used to calculate project's net trip generation. The trip generation rates, vehicle splits, and the resulting trip generation estimates for the project are summarized in Table 4.

**Table 3. Project Trip Generation for 12021 Woodruff Avenue Industrial Building Project**

| Land Use | ITE Code | Size/Units | | Daily | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | *In* | *Out* | *Total* | *In* | *Out* | *Total* |
| ***Trip Rates[1, 2]*** | | | | | | | | | | |
| Intermodal Truck Terminal | 30 | Acres | | 81.90 | — | — | — | — | — | — |
| Intermodal Truck Terminal | 30 | TSF | | — | 0.93 | 1.04 | 1.97 | 0.97 | 0.90 | 1.87 |
| Manufacturing | 140 | Employees | | 2.47 | 0.27 | 0.10 | 0.37 | 0.13 | 0.20 | 0.33 |
| ***Trip Generation*** | | | | | | | | | | |
| Woodruff Truck Terminal | 30 | 6.310 | Acres | 517 | 19 | 27 | 46 | 18 | 24 | 41 |
| Woodruff Truck Terminal | 30 | 44.162 | TSF | 0 | 41 | 46 | 87 | 43 | 40 | 83 |
| Existing Site | 140 | 200 | Employees | 494 | 55 | 19 | 74 | 26 | 40 | 66 |
| ***Existing Site Trip Generation (W/PCE)*** | | | | | | | | | | |
| ***Vehicle Mix[3]*** | | ***Percent[3]*** | | | | | | | | |
| Passenger Vehicles | | 69.0% | | 341 | 38 | 13 | 51 | 18 | 28 | 46 |
| Two-Axle Trucks | | 6.8% | | 34 | 4 | 1 | 5 | 2 | 3 | 5 |
| Three-Axle Trucks | | 5.5% | | 27 | 3 | 1 | 4 | 1 | 2 | 3 |
| Four+-Axle Trucks | | 18.7% | | 92 | 10 | 4 | 14 | 5 | 8 | 13 |
| | | ***PCE Factor[4]*** | | | | | | | | |
| Passenger Vehicles | | 1.0 | | 341 | 38 | 13 | 51 | 18 | 28 | 46 |
| Two-Axle Trucks | | 2.0 | | 67 | 7 | 3 | 10 | 4 | 5 | 9 |
| Three-Axle Trucks | | 2.0 | | 54 | 6 | 2 | 8 | 3 | 4 | 7 |
| Four+-Axle Trucks | | 3.0 | | 277 | 31 | 11 | 42 | 14 | 23 | 37 |
| *Existing Site Trip Generation W/PCE* | | | | *740* | *82* | *29* | *111* | *39* | *60* | *99* |

**Table 3. Project Trip Generation for 12021 Woodruff Avenue Industrial Building Project**

| Land Use | ITE Code | Size/Units | Daily | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | *In* | *Out* | *Total* | *In* | *Out* | *Total* |
| *Project Trip Generation (W/PCE)* | | | | | | | | | |
| *Vehicle Mix*[5] | | *Percent*[5] | | | | | | | |
| Passenger Vehicles | | 46.0% | 238 | 19 | 21 | 40 | 20 | 18 | 38 |
| Two-Axle Trucks | | 6.1% | 32 | 2 | 3 | 5 | 3 | 2 | 5 |
| Three-Axle Trucks | | 13.9% | 72 | 6 | 6 | 12 | 6 | 6 | 11 |
| Four+-Axle Trucks | | 34.0% | 176 | 14 | 16 | 30 | 15 | 13 | 28 |
| | | *PCE Factor*[4] | | | | | | | |
| Passenger Vehicles | | 1.0 | 238 | 19 | 21 | 40 | 20 | 18 | 37 |
| Two-Axle Trucks | | 2.0 | 63 | 5 | 6 | 11 | 5 | 5 | 10 |
| Three-Axle Trucks | | 2.0 | 144 | 11 | 13 | 24 | 12 | 11 | 23 |
| Four+-Axle Trucks | | 3.0 | 527 | 42 | 47 | 89 | 44 | 40 | 84 |
| *Project Trip Generation W/PCE* | | | *972* | *77* | *87* | *164* | *80* | *74* | *154* |
| **Total Net Project Trip Generation (Project - Existing)** | | | **232** | **-5** | **58** | **53** | **41** | **14** | **55** |

**Notes:** ITE = Institute of Transportation Engineers; TSF = Thousand Square Feet; PCE = passenger car equivalent.

1 TRB 2017.

2 For Intermodal Truck Terminal, Daily Trip Rate was obtained from Trip Generation, 9th edition (ITE 2012).

3 Vehicle Mix and Percent from SCAQMD, Warehouse Truck Trip Study Data Results and Usage(SCAQMD 2014).

4 PCE factors are assumed to be 1.0 for passenger vehicles, 2.0 for medium trucks, and 3.0 for heavy trucks.

5 Vehicle Mix and Percent from Fontana Truck Trip Generation Study (City of Fontana 2003).

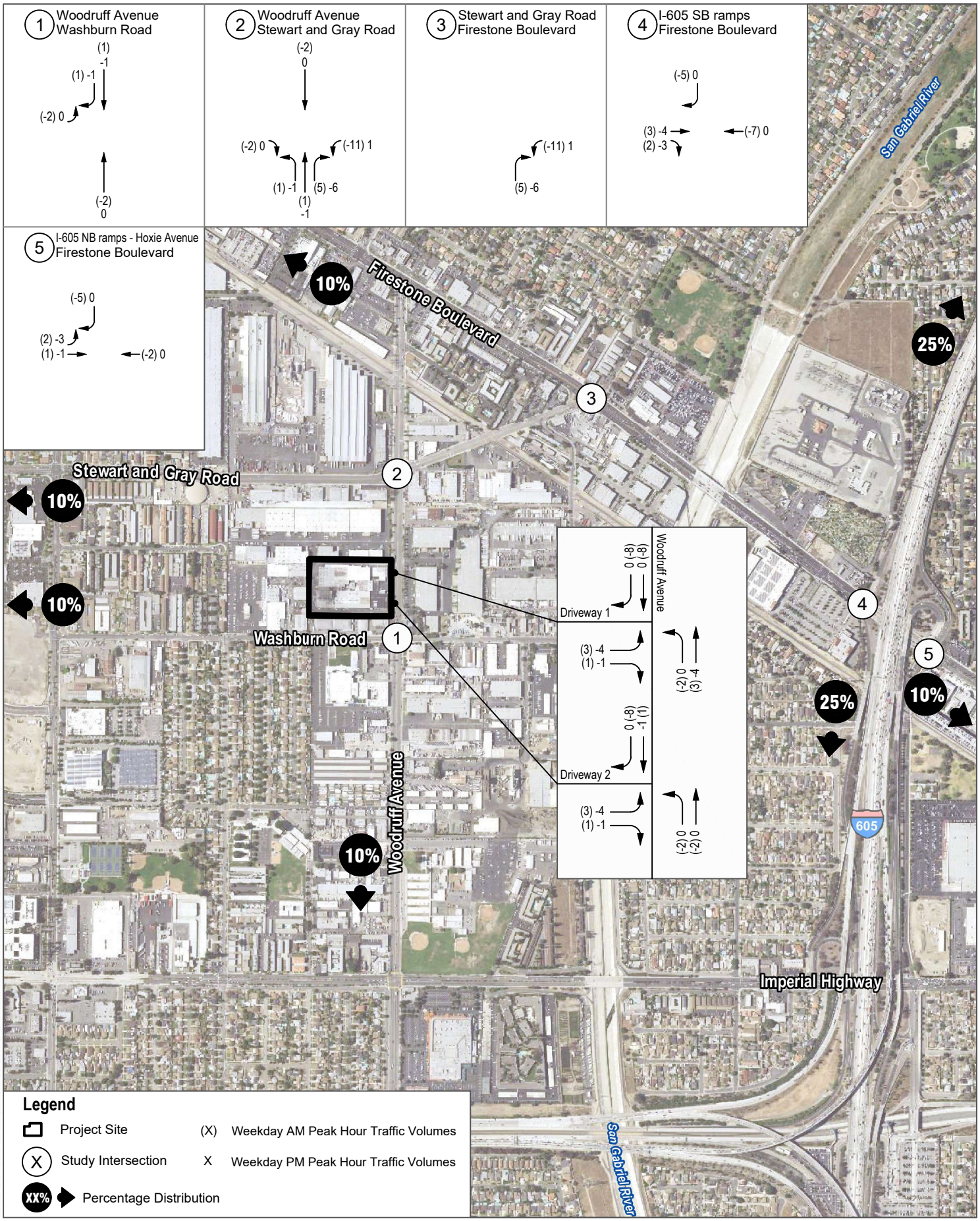
As shown in Table 3, after adjusting for the passenger car equivalent (PCE) factor, and using the vehicle mix and percentage splits, the project would generate approximately 232 net daily trips, 53 AM peak hour net trips (-5 inbound and 58 outbound), and 55 PM peak hour trips (41 inbound and 14 outbound).

## 3.2 Trip Distribution and Assignment

Project trip distribution percentages were based on logical travel paths to commute corridors and existing truck routes in the study area. Since the project is a truck terminal, the majority of project traffic would travel to and from I-605 and along truck route corridors.

Project traffic will utilize the two project driveways along Woodruff Avenue, both of which are full access for passenger vehicles. All truck inbound access will occur at the north project driveway, while all outbound truck access with occur at the south project driveway. Approximately 50% of passenger vehicle traffic is expected to travel along I-605 (25% north and 25% south), and 80% of truck traffic is expected to travel along I-215 (40% north and 40% south). Approximately 5% to 10% of passenger vehicle and/or truck traffic would travel along Firestone Boulevard, Stewart and Gray Road, Woodruff Avenue, or Washburn Road.

Project trips were assigned to the study area intersections by applying the above-referenced project trip generation estimates to the trip distribution percentages at each study area intersection. The project trip distribution and trip assignment for passenger vehicles is shown in Figure 6, while the project trip distribution and trip assignment for trucks (PCE-adjusted) is shown in Figure 7. The total project trip assignment is shown in Figure 8.




SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

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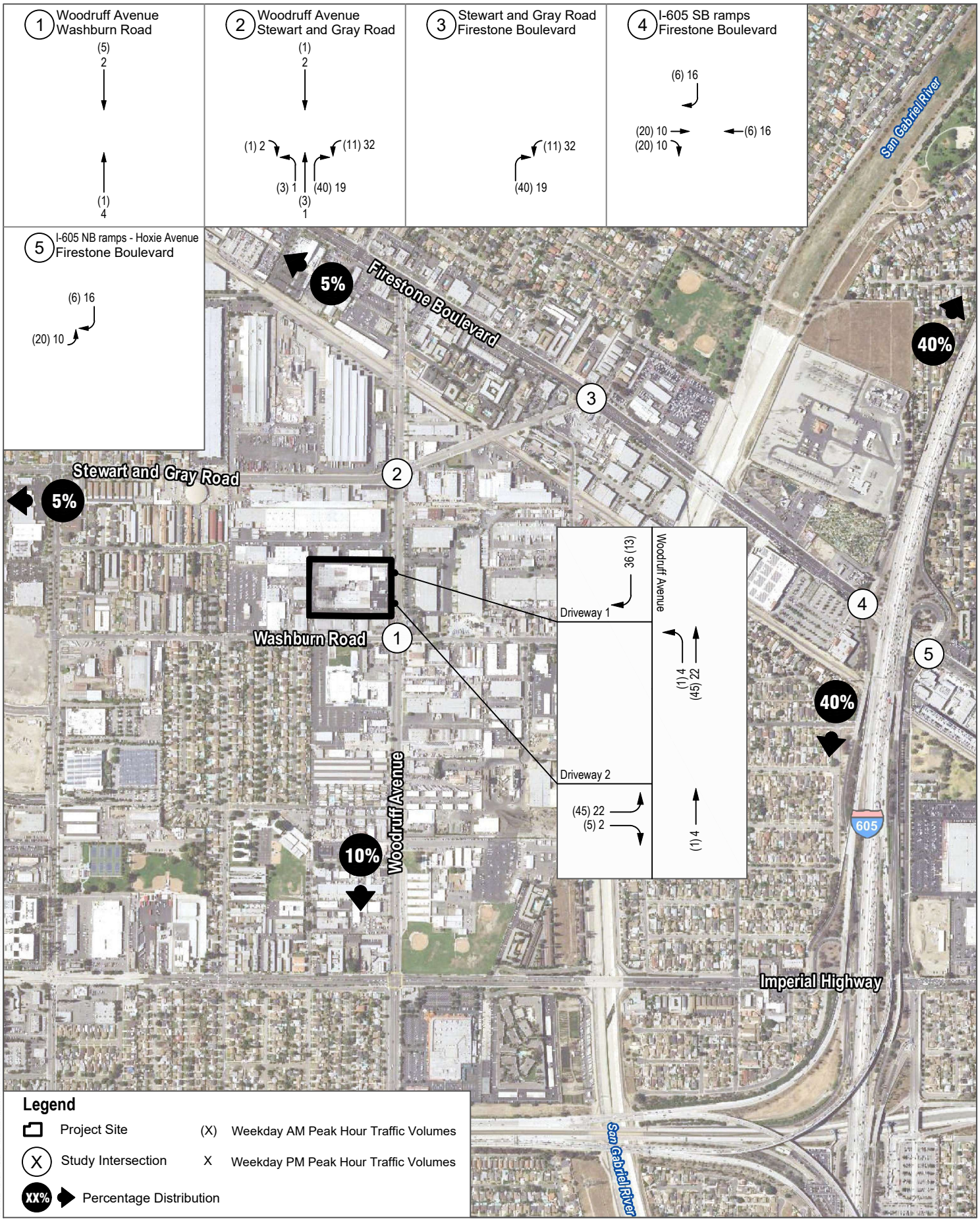
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**FIGURE 6**

Project Trip Distribution & Assignment - Passenger Vehicles

12021 Woodruff Avenue Industrial Building Project

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SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

**FIGURE 7**

Project Trip Distribution & Assignment - Trucks (PCE)

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SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

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**FIGURE 8**

Total Project Trip Assignment

12021 Woodruff Avenue Industrial Building Project

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# 4 Vehicle Miles Traveled Analysis

CEQA Guidelines Section 15064.3(b) focuses on VMT for determining the significance of transportation impacts. As shown in the analysis below, the project's impact due to conflict or inconsistency with Section 15064.3(b) would be less than significant.

The CEQA Guidelines state that "generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts" and define VMT as "the amount and distance of automobile travel attributable to a project." It should be noted that "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT). Other relevant considerations may include the effects of the project on transit and non-motorized travel. The OPR Technical Advisory (OPR 2018) provides guidance and tools to properly carry out the principles within SB 743 and how to evaluate transportation impacts in CEQA. The OPR Technical Advisory was utilized within this analysis as the primary source of analysis of VMT and transportation-related impacts.

## 4.1 Screening Criteria for VMT Analysis

The OPR Technical Advisory suggests that agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing. The following represents the criteria applicable to the project for screening out further study.

- **Screening Threshold for Small Projects (110 daily trips or less):** As shown previously in Table 3, the project would generate approximately 232 net daily trips, 53 AM peak hour net trips (-5 inbound and 58 outbound), and 55 PM peak hour trips (41 inbound and 14 outbound). Since the project generates more than 110 trips per day, it cannot be assumed to cause a less-than-significant transportation impact.
- **Presumption of Less-Than- Significant Impact for Affordable Residential Development:** The project does not propose affordable residential units and is not a residential development.
- **Map- Based Screening for Residential and Office Projects:** This criterion applies to residential and office projects and currently, the City does not have VMT maps that can be utilized used to identify areas with low VMT for projects.
- **Presumption of Less-Than-Significant Impact Near High Quality Transit Corridor[1]:** As shown previously in Figure 5, City of Downey Transit and Bicycle Facilities, Metro Bus Line 115 operates with a service frequency of 15- minutes, between Playa Del Rey and the Norwalk Metrolink Station. Since the project is within 0.5 miles of a high-quality transit corridor (i.e., a fixed route bus service with service intervals no longer than 15 minutes during peak commute hours) it can be presumed to have a less-than-significant impact. Additionally, the Norwalk Metrolink station is located approximately 1 mile southeast of the project site.

[1] A Transit Priority Area is defined as a 0.5-mile area around an existing major transit stop or an existing stop along a high quality transit quality corridor per definition below:
California Public Resources Code, Section 21064.3 - 'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.
California Public Resources Code, Section 21155 - For purposes of this section, a 'high-quality transit corridor' means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

Furthermore, the presumption of less than significant does not apply if the project:

- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization; or
- Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The project does not include more parking than required by the City of Downey, as discussed previously in Section 1. Additionally, the project use (except for the western most portion of the project site which is designated as a Parking Buffer) is consistent with the City of Downey General Plan Land use designation of General Manufacturing. Furthermore, the project does not involve a residential component. Therefore, the above items would not apply to the project, and the project can be screened out under the proximity to high quality transit corridor screening criteria.

The project's employees would have access to a high-quality transit corridor, and the project would not provide more parking for use than required by the jurisdiction. A project-level detailed VMT analysis would not be required, and the project would not be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b); therefore, the impact would be less than significant. In addition, in an abundance of caution and to further minimize an already less-than-significant impact related to VMT, the project would implement a transportation demand management plan, as described in project design feature (PDF) TRA-1:

PDF-TRA-1 **Transportation Demand Management Plan:** Prior to issuance of a Business License, the tenant shall prepare a Transportation Demand Management plan to discourage single-occupancy vehicle trips made by employees, and encourage them to use alternative modes of transportation such as carpooling, taking transit, walking, and biking to/from the site. Examples of trip reduction measures may include, but are not limited to:

- Transit passes
- Car-sharing programs
- Telecommuting and alternative work schedules
- Ride sharing programs

Furthermore, the project is intended to be used as a trucking terminal for distribution and logistics purposes. On-site activities will include storage of and/or consolidation of manufactured goods before the distribution to retail locations or other warehouses. Thus, the project will serve as an intermediary land use between the Ports of Los Angeles and Long Beach and the next/final destination (warehouses) of the products shipped through the trucks-trailers using the project.

As discussed previously, there are four freeways that provide direct access to the City of Downey: I-710, I-605, I-5, and I-105. I-710 is located west of the City and accessible via three major streets: Florence Avenue, Firestone Boulevard, and Imperial Highway. Figure 4 illustrates the truck routes in the City. Firestone Boulevard, Woodruff Avenue, Stewart and Gray Road, and Bellflower Boulevard are designated truck routes that connect the City with neighboring jurisdictions. The City of Downey is located approximately 14 miles and 12 miles northeast of the Ports of Los Angeles and Long Beach, respectively. The proximity to freeway and ports would reduce the project's trips on other roadways and facilitate tractor trailer traffic destined for pick-up/drop-off of containers. The Ports of Los Angeles and Long Beach are the two largest container ports in the United States. The growth of the ports has been steady, and from its most recent cargo forecast it is forecast to double in the next two decades, according to its most recent forecast. The ports' growth would have a significant impact on local economy and directly or indirectly provides for more jobs in the region. Therefore, the City would benefit from developing the site as a use which that benefits from its proximity to the ports.

# 5 Project Access, Queuing and Safety Considerations

## 5.1 Project Access

As discussed previously in Section 1, access to the project site would be provided via two driveways along Woodruff Avenue. Both driveways would be unsignalized and would be approximately 40-feet wide:

- Driveway 1 (North) via Woodruff Avenue: Full access for passenger cars and inbound only (right-in/left-in) for trucks (no truck exit)
- Driveway 2 (South) via Woodruff Avenue: Full access for passenger cars and outbound only (right-out/left-out) for trucks (no truck entry)

Both driveways would lead to passenger vehicle parking lots on the northeast and southeast corners of the project site. The parking lots would be connected by a north-south through-lane, which provides additional passenger vehicle parking spaces along the eastern boundary of the site. On the west side of both parking lots would be a gated driveway leading to truck courts, truck parking stalls, and loading docks. The project would include 56 parking spaces for passenger vehicles (52 standard, 2 accessible parking, and 2 van accessible parking), 76 spaces for cargo containers, and 70 loading docks.

The driveways were analyzed were analyzed as two-way stop-controlled intersections per HCM methodology. The LOS at the project access driveways is summarized in Table 4 for Existing plus Ambient Growth plus Cumulative Projects plus Project scenario.

**Table 4. Project Access Level of Service**

| Scenario | Peak Hour | Driveway 1/Woodruff Avenue/ | | Driveway 2/Woodruff Avenue/ | |
|---|---|---|---|---|---|
| | | *Delay*[1] | *LOS*[2] | *Delay*[1] | *LOS*[2] |
| Existing plus Ambient Growth plus Cumulative Projects plus Project | AM | 18.6 | C | 10.1 | B |
| | PM | 23.9 | C | 20.0 | C |

**Notes:**
1 Delay in seconds per vehicle
2 Level of Service (LOS)

As shown in Table 4, all project access driveways are forecast to operate at satisfactory LOS, at LOS D or better, during both peak hours under all project analysis scenarios. The detailed LOS worksheets for all project access intersections are included in Appendix B.

# 5.2 Queuing Analysis

## 5.2.1 Project Access Driveways

A queuing analysis using the SimTraffic 10 software was prepared for all project driveways to assess the adequacy of off-site storage lanes along Woodruff Avenue into the project site under Existing plus Ambient Growth plus Cumulative Projects with and without the Project conditions. The intersection of Woodruff Avenue/Washburn Road was analyzed since the intersection is near the project driveways and the southbound left-turn lane flows into the two-way left-turn lane (TWLTL). Queuing worksheets are provided in Appendix C.

As shown in Table 5, none of the calculated 95th percentile (design) queues for the Existing plus Ambient Growth plus Cumulative Projects or the Existing plus Ambient Growth plus Cumulative Projects plus Project conditions, exceed storage capacities within the existing left-turn pockets or TWLTL along Woodruff Avenue into the project site. There is adequate storage capacity within the project site such that vehicles can queue on-site as needed.

## 5.2.2 Caltrans Off-Ramps

Due to the potential for the proposed project to add traffic to Caltrans facilities within the study area, the following Caltrans freeway off-ramps were analyzed for queuing impacts under Existing plus Ambient Growth plus Cumulative Projects with and without the Project conditions:

- I-605 southbound ramps/Firestone Boulevard
- I-605 northbound ramps - Hoxie Avenue/Firestone Boulevard

As shown in Table 6, peak 95th percentile queues are expected to exceed the storage pocket lengths in the following intersections and lanes:

- PM Peak Hour: I-605 southbound ramps/Firestone Boulevard (southbound left-turn lane)
    - This lane extends from the intersection to the freeway mainline, and it is expected that forecasted queues would extend past the gore point and into the mainline.
- AM and PM Peak Hour: I-605 northbound ramps - Hoxie Avenue/Firestone Boulevard (southbound right-turn lane)
    - This is a storage lane and adjacent lanes possess queues that are not forecast to extend to the freeway mainline.

However, when comparing the Existing plus Ambient Growth plus Cumulative Projects scenario with the addition of project traffic, the forecasted queues will either not change or will be slightly reduced from the baseline condition. For the I-605 southbound ramp, approximately 45 -feet of queue will be reduced with the addition of the project, approximately two vehicle car lengths. For the I-605 northbound ramps, forecasted queues are expected to remain the same with the addition of the project. Therefore, the project will not create a significant impact to the Caltrans freeway off-ramps, and hazards due to geometric design features will be less than significant.

## Table 5. Existing plus Ambient Growth plus Cumulative Projects plus Project Driveway and Project Access Queuing Summary

| Intersection | Movement | Pocket Length[1] | Existing plus Ambient Growth plus Cumulative Projects | | | | Existing plus Ambient Growth plus Cumulative Project plus Project | | | | Improvement Warranted |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | *AM Peak Hour* | | *PM Peak Hour* | | *AM Peak Hour* | | *PM Peak Hour* | | |
| | | | *95th Percentile Queue[2]* | *Exceeds Turn Pocket Length?* | *95th Percentile Queue[2]* | *Exceeds Turn Pocket Length?* | *95th Percentile Queue[2]* | *Exceeds Turn Pocket Length?* | *95th Percentile Queue[2]* | *Exceeds Turn Pocket Length?* | |
| Woodruff Avenue/Washburn Road | SBL | 125 | 90 | No | 61 | No | 82 | No | 56 | No | No |
| | SBT[3] | 175 | 143 | No | 132 | No | 143 | No | 139 | No | No |
| | SBTR[3] | 175 | 152 | No | 141 | No | 154 | No | 150 | No | No |
| Woodruff Avenue/North Project Driveway | EBLR[4] | 150 | — | — | — | — | 18 | No | 0 | No | No |
| | NBL[5] | 50 | — | — | — | — | 0 | No | 12 | No | No |
| | SBTR[6] | 200 | — | — | — | — | 0 | No | 0 | No | No |
| Woodruff Avenue/South Project Driveway | EBLR[4] | 150 | — | — | — | — | 79 | No | 48 | No | No |
| | NBL[5] | 200 | — | — | — | — | 0 | No | 0 | No | No |
| | SBTR[6] | 125 | — | — | — | — | 48 | No | 45 | No | No |

**Source**: Appendix C.

**Notes:** SBL = southbound left lane; SBT – southbound through lane; SBTR = southbound through-right lane; EBLR = eastbound left-right lane; NBL = northbound left lane.

1 Measured in feet.

2 Based on 95th percentile (design) queue length in SimTraffic 10.

3 Length measured to approximate distance of south project driveway.

4 Length measured according to the distance as shown on the site plan from the driveway entrance to truck parking gate.

5 Length measured as available left-turn pocket or two-way left-turn lane.

6 Length measured as distance to nearest upstream driveway.

## Table 6. Existing plus Ambient Growth plus Cumulative Projects plus Project Caltrans Off-Ramp Queuing Summary

| Intersection | Movement | Pocket Length[1] | Existing plus Ambient Growth plus Cumulative Projects | | | | Existing plus Ambient Growth plus Cumulative Project plus Project | | | | Improvement Warranted |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | *AM Peak Hour* | | *PM Peak Hour* | | *AM Peak Hour* | | *PM Peak Hour* | | |
| | | | *95th Percentile Queue[2]* | *Exceeds Turn Pocket Length?* | *95th Percentile Queue[2]* | *Exceeds Turn Pocket Length?* | *95th Percentile Queue[2]* | *Exceeds Turn Pocket Length?* | *95th Percentile Queue[2]* | *Exceeds Turn Pocket Length?* | |
| I-605 southbound ramps/Firestone Boulevard | SBL[3] | 825 | 160 | No | 1,216 | **Yes** | 388 | No | 1,171 | **Yes** | No |
| | SBR | 275 | 229 | No | 241 | No | 254 | No | 237 | No | No |
| | SBR | 275 | 209 | No | 100 | No | 225 | No | 140 | No | No |
| I-605 northbound ramps - Hoxie Avenue/Firestone Boulevard | SBL | 275 | 60 | No | 210 | No | 69 | No | 208 | No | No |
| | SBLT[3] | 2,950 | 2,137 | No | 1,281 | No | 2,288 | No | 2,307 | No | No |
| | SBT[3] | 2,950 | 1,985 | No | 1,672 | No | 1,930 | No | 2,187 | No | No |
| | SBR[4] | 210 | 235 | **Yes** | 270 | **Yes** | 235 | **Yes** | 235 | **Yes** | No |

**Source**: Appendix C.

**Notes:** SBL = southbound left lane; SBR – southbound right lane; SBLT = southbound through-left lane; SBT = southbound through lane.

1 Measured in feet.

2 Based on 95th percentile (design) queue length in SimTraffic 10.

3 Primary off-ramp lane; approximate length measured from freeway mainline. Length measured from stop bar to gore line at mainline.

4 While queue exceeds storage lane, the total length of the off-ramp is greater than the queue, therefore queue would not impact the mainline lanes.

**XX** – Queue exceeds storage length; **XX** - Queue exceeds storage length and impacts the freeway mainline.

## 5.3 Pedestrian and Bicycle Access

There are adequate pedestrian facilities in the vicinity of the proposed project, and the frontage along the project site boundary along Woodruff Avenue will be maintained to ensure pedestrian access. The project would include a new concrete walkway to provide pedestrian access from Woodruff Avenue to the office component of the project. The area of the walkway traversing the parking lot would consist of decorative pavers.

Consistent with a plant palette approved by the City, a variety of trees, shrubs, and vegetated groundcovers would be planted throughout all required setbacks, including the eastern portion of the project site fronting Woodruff Avenue.

The project would not conflict with the existing or proposed bicycle facilities in its vicinity.

## 5.4 Truck Access

As the proposed project is a truck terminal, it is expected to generate heavy truck traffic. Sufficient curb radii are provided for both ingress to and egress from the project site along Woodruff Avenue. All internal drive aisles at the project driveways will be able to accommodate the type of trucks that will frequent the site. Furthermore, the restriction of inbound only truck traffic to the northern project driveway, and outbound only truck traffic to the southern project driveway, will maintain separation from opposing vehicle movements.

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# 6 Existing Traffic Operations

The existing traffic controls and geometrics at the study area intersections is shown in Figure 9. This section details the existing traffic volumes and the existing intersection operations within the study area.

## 6.1 Traffic Volumes

Due to the closures and relative abnormal traffic patterns caused by the Covid-19 pandemic, existing weekday peak hour turning movement counts at the study intersections were adjusted and balanced to reflect pre-pandemic conditions. Weekday peak hour counts were obtained in July 2020 for the following signalized intersections adjacent to the project site:

- Woodruff Avenue/Washburn Road
- Woodruff Avenue/Stewart and Gray Road

Historical traffic counts for the AM and PM peak hour conditions for the following signalized intersections collected during a typical weekday non-holiday period were obtained.:

- Woodruff Avenue/Stewart and Gray Road – Year 2015
- Firestone Boulevard/Stewart and Gray Road – Year 2016
- I-605 southbound ramps/Firestone Boulevard – Year 2016
- I-605 northbound ramps – Hoxie Avenue/Firestone Boulevard – Year 2016

By calculating the difference between existing traffic count and historical traffic count data for the Woodruff Avenue/Stewart and Gray Road intersection, it was determined that the July 2020 traffic volumes were substantially lower due to the Covid-19 pandemic conditions. Thus, traffic volumes collected in 2020 were adjusted and balanced by utilizing the historical traffic count data from nearby intersections to reflect the typical conditions of study area intersections. Additionally, a growth rate of 1% per year for 4 years based on the growth rates listed from the year 2015 to 2020 Downey Regional Statistical Area (RSA) as described in the Los Angeles County Congestion Management Program (Metro 2010) was applied to traffic volumes on all study area intersections.

This existing conditions analysis focuses on the weekday daily, AM (7:00 a.m. to 9:00 a.m.) and the PM (4:00 p.m. to 6:00 p.m.) peak periods. The peak periods represent the highest volume of traffic for the adjacent street system. The adjusted existing weekday AM and PM peak hour volumes are summarized in Figure 10.

Signal timing sheets for the Caltrans signalized intersections were also obtained and utilized within the analysis.

## 6.2 Intersection Operations

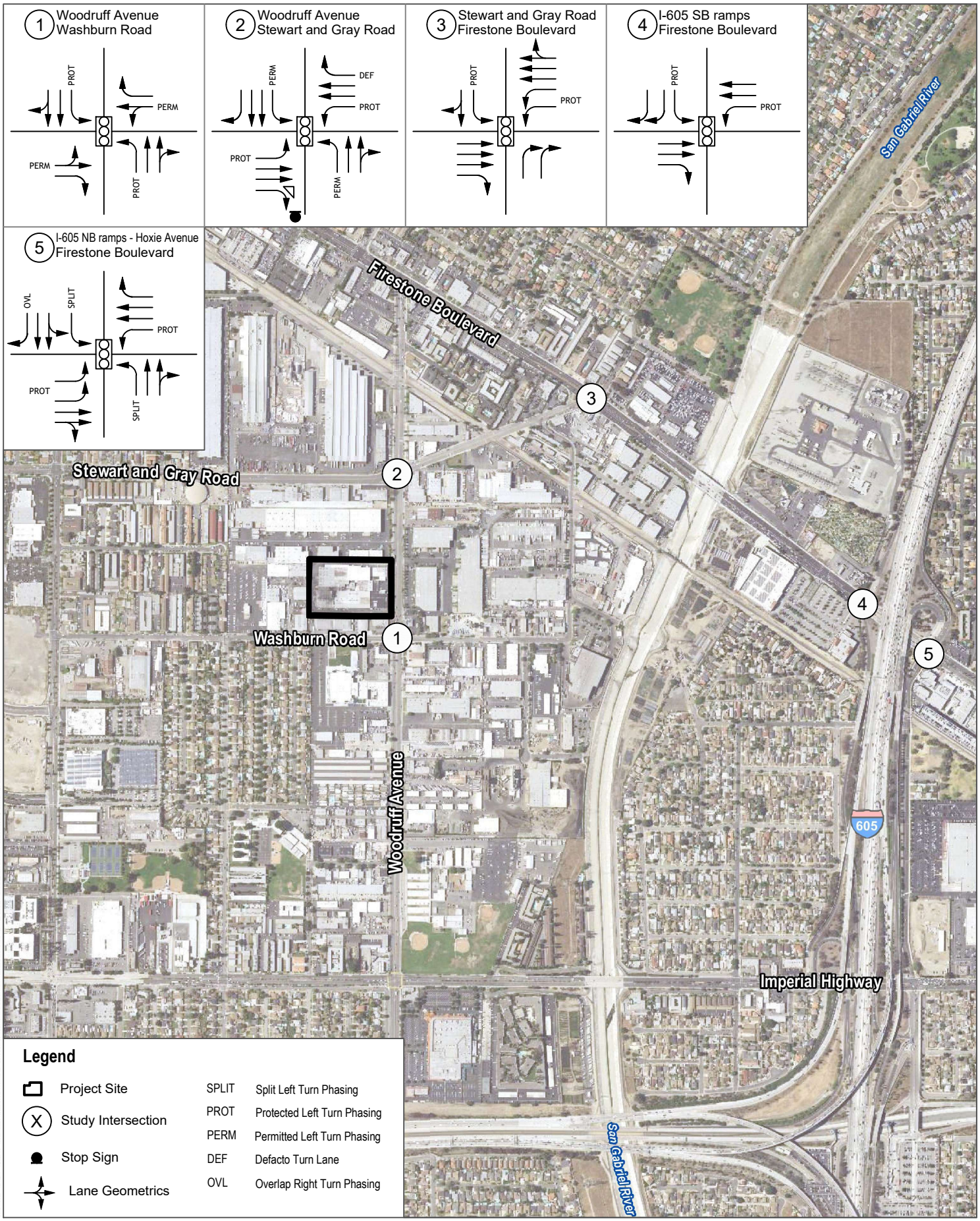
An intersection LOS analysis was prepared for the existing conditions using the HCM 6th Edition methodology via the Synchro LOS software for Caltrans intersections and using the ICU methodology for all other signalized intersections as described in Section 1.3. Table 7 shows the results of the existing conditions analysis. LOS worksheets are provided in Appendix B.

As shown in the table, all the study area intersections are currently operating at satisfactory levels of service (at LOS D or better) for the intersections within the City of Downey. The intersections of Firestone Boulevard with I-605 ramps operate under the jurisdiction of Caltrans and are outside of the City of Downey boundaries; therefore, as no LOS standards are currently available per the updated Caltrans TISG (May 2020) as discussed in Section 1.3, no inconsistencies can be concluded.

## Table 7. Existing Peak Hour Intersection Level of Service

| No. | Intersection | Jurisdiction | Control/ LOS Method | AM Peak | | PM Peak | |
|---|---|---|---|---|---|---|---|
| | | | | *Delay or V/C*[1] | *LOS* | *Delay or V/C*[1] | *LOS* |
| 1 | Woodruff Avenue/Washburn Road | City of Downey | Signal/ICU | 0.636 | B | 0.508 | A |
| 2 | Woodruff Avenue/Stewart and Gray Road | City of Downey | Signal/ICU | 0.601 | B | 0.594 | A |
| 3 | Stewart and Gray Road/Firestone Boulevard | City of Downey | Signal/ICU | 0.505 | A | 0.511 | A |
| 4 | I-605 SB ramps/Firestone Boulevard | Caltrans | Signal/HCM | 29.6 | C | 18.3 | B |
| 5 | I-605 NB ramps - Hoxie Avenue/Firestone Boulevard | Caltrans | Signal/HCM | 108.5 | F | 66.8 | E |

**Source:** Appendix B.
**Notes:** LOS = Level of Service; HCM = Highway Capacity Manual; ICU = Intersection Capacity Utilization.
1 Delay in seconds per vehicle; V/C = volume-to-capacity ratio.




SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

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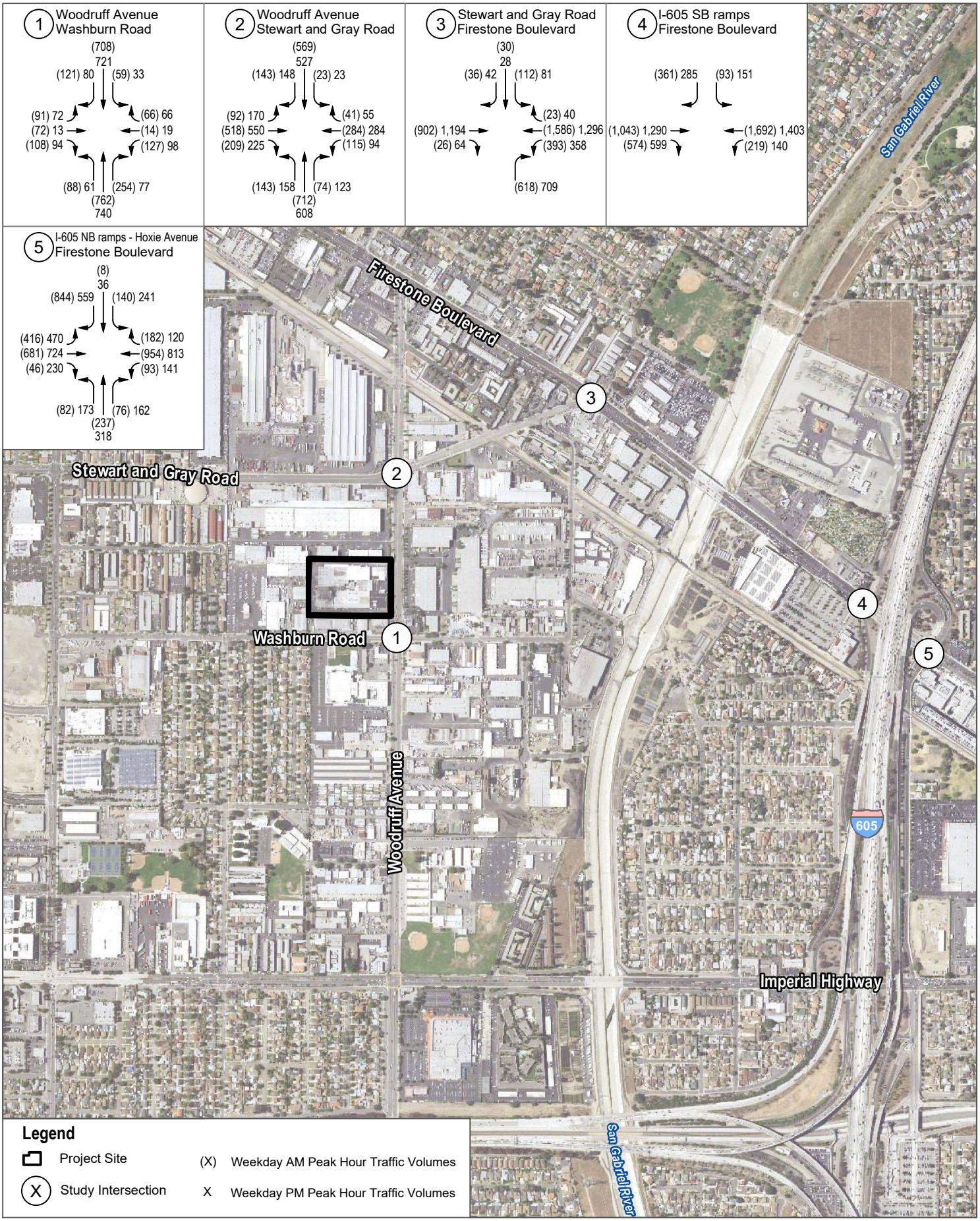
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**FIGURE 9**

Existing Intersection Controls and Geometrics

12021 Woodruff Avenue Industrial Building Project

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SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

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**FIGURE 10**

Existing Peak Hour Traffic Volumes

12021 Woodruff Avenue Industrial Building Project

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# 7 Existing plus Ambient Growth plus Cumulative Projects plus Project

This section includes analysis of traffic operation under Existing plus Ambient Growth plus Cumulative Projects plus Project conditions which represents the short-term horizon period when the proposed project is constructed and fully occupied.

## 7.1 Cumulative Projects

Cumulative projects are projects that are proposed and in the review process, but not yet fully approved; or, projects that have been approved, but not fully constructed or occupied. A list of cumulative projects was provided by the City of Downey and by the City of Norwalk. Based on review of the cumulative projects and locations, 8 cumulative projects were identified that would potentially add traffic to the study area. Figure 11 illustrates the locations of the cumulative project.

### 7.1.1 Cumulative Projects Trip Generation

Project trip generation estimates for the cumulative projects were derived using ITE Trip Generation, 10th Edition (2017) trip rates. As shown in Table 8, the cumulative projects are forecast to generate approximately 7,102 daily trips, 585 AM peak hour trips, and 523 PM peak hour trips.

**Table 8. Cumulative Project Trip Generation Summary**

| ID | Land Use | ITE Code | Size/Unit | | Daily | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *In* | *Out* | *Total* | *In* | *Out* | *Total* |
| 1 | Woodruff Industrial Building (12120 Woodruff Ave) | 110 | 19.536 | TSF | 97 | 12 | 2 | 14 | 2 | 11 | 13 |
| 2 | Senior Housing (12850 Woodruff Ave) | 252 | 62 | DU | 229 | 4 | 8 | 12 | 9 | 7 | 16 |
| 3 | Kaiser Medical Building (9333 Imperial Hwy) | 610 | 141.364 | TSF | 1,515 | 86 | 40 | 126 | 44 | 93 | 137 |
| 4 | Downey Oasis Condos (9553 Firestone Blvd) | 221 | 8 | DU | 44 | 1 | 2 | 3 | 2 | 2 | 4 |
| 5 | Marriot Springhill Suites Hotel (9066 Firestone Blvd) | 310 | 140 | Rms | 1,170 | 39 | 27 | 66 | 43 | 41 | 84 |
| 6 | Starbucks Drive Thru (9002 Firestone Blvd) | 937 | 2.000 | TSF | 1,641 | 91 | 87 | 178 | 43 | 43 | 86 |

**Table 8. Cumulative Project Trip Generation Summary**

| ID | Land Use | ITE Code | Size/Unit | | Daily | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *In* | *Out* | *Total* | *In* | *Out* | *Total* |
| 7 | Chick-fil-a (8818 Imperial Hwy) | 934 | 4.000 | TSF | 1,884 | 82 | 79 | 161 | 68 | 63 | 131 |
| 8 | Costco Carwash (12324 Hoxie Ave) | 948 | 3.675 | TSF | 522 | 13 | 13 | 26 | 26 | 26 | 52 |
| | | | | **Total** | **7,102** | **327** | **258** | **585** | **237** | **287** | **523** |

**Notes:** TSF = Thousand Square Feet; DU = Dwelling Unit; Rms = Rooms.

### 7.1.2 Cumulative Projects Trip Distribution and Assignment

The trips generated by the cumulative projects were distributed through the study area network using engineering judgment and logical commute corridors. Cumulative project trips were assigned based on distribution percentages on the roadway network. Figure 12 shows the cumulative projects traffic volumes for the peak hour conditions.




SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

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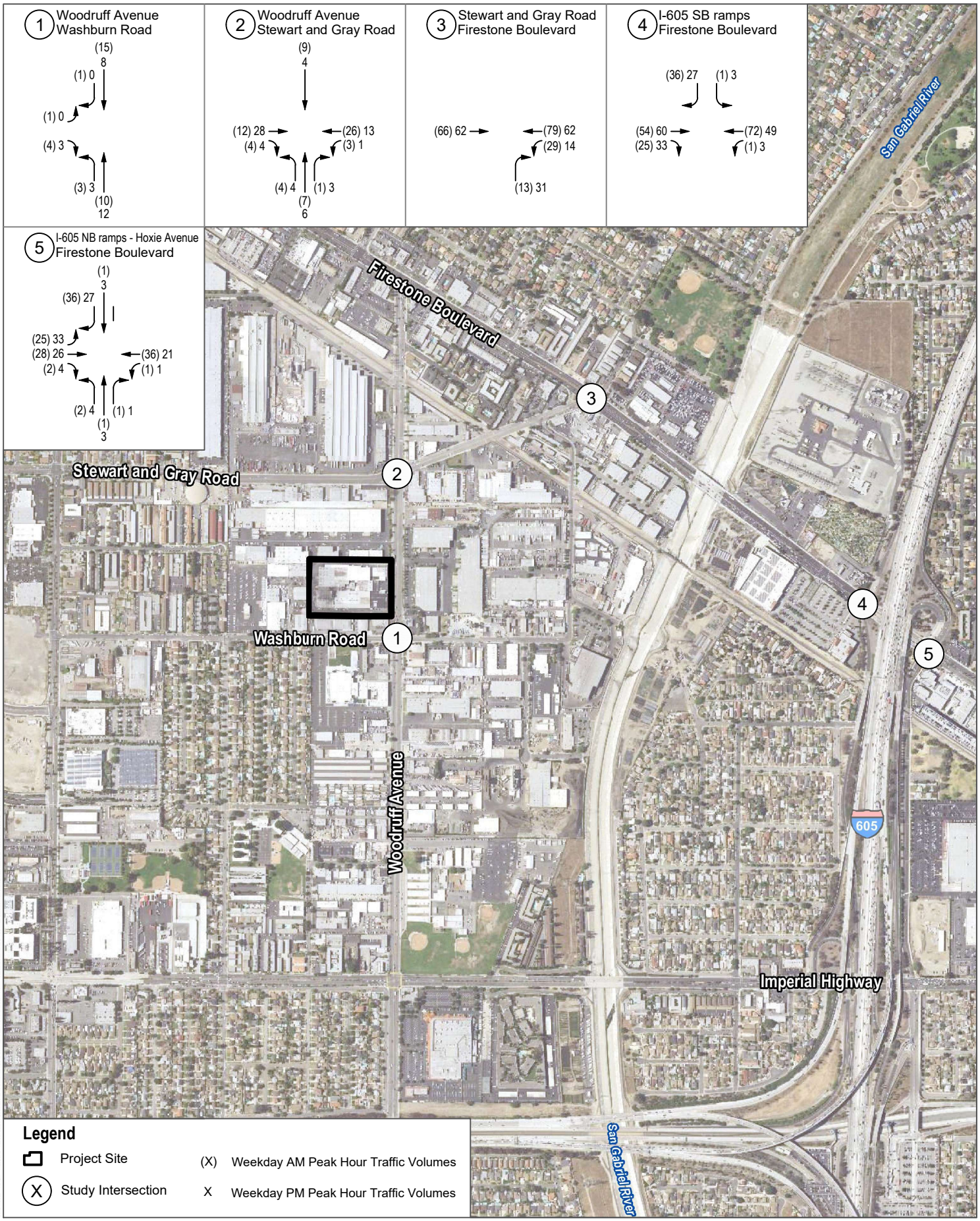
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**FIGURE 11**

Cumulative Project Locations

12021 Woodruff Avenue Industrial Building Project

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SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

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**FIGURE 12**

Cumulative Project Traffic Volumes

12021 Woodruff Avenue Industrial Building Project

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# 7.2 Existing plus Ambient Growth plus Cumulative Projects

## 7.2.1 Traffic Volumes

The Existing plus Ambient Growth plus Cumulative Projects analysis is representative of existing plus ambient growth plus cumulative project conditions. The traffic volumes for this scenario were estimated by increasing the existing traffic volumes by an ambient growth rate and adding traffic from approved/pending projects listed in Table 8 to existing traffic volumes. An ambient growth rate of 0.24% per year was derived from the growth rates listed in the Los Angeles County CMP for the Downey RSA Regional Statistical Area (year 2020 to 2025). The growth was applied based upon the projected opening year of the project being 2022; therefore, a total growth of 0.48% was added to the 2020 baseline existing traffic volumes to create the Existing plus Ambient Growth plus Cumulative Projects condition. Figure 13 illustrates the Existing plus Ambient Growth plus Cumulative Projects Peak Hour Traffic Volumes.

## 7.2.2 Intersection Operations

An intersection LOS analysis was prepared for the Existing plus Ambient Growth plus Cumulative Projects conditions using the HCM 6th Edition methodology via the Synchro LOS software for Caltrans intersections and using the ICU methodology for all other signalized intersections as described in Section 1.3. Table 9 shows the results of the Existing plus Ambient Growth plus Cumulative Projects analysis. LOS worksheets are provided in Appendix B.

As shown in the table, all the study area intersections will operate at satisfactory levels of service (at LOS D or better) for the intersections within the City of Downey. The intersections of Firestone Boulevard with I-605 ramps operate under the jurisdiction of Caltrans and are outside of the City of Downey boundaries; since LOS standards are currently available per the updated Caltrans TISG (May 2020) as discussed in Section 1.3, no inconsistencies can be concluded.

**Table 9. Existing plus Ambient Growth plus Cumulative Projects Peak Hour Intersection Level of Service**

| No. | Intersection | Jurisdiction | Control/ LOS Method | AM Peak | | PM Peak | |
|---|---|---|---|---|---|---|---|
| | | | | *Delay or V/C*[1] | *LOS* | *Delay or V/C*[1] | *LOS*[2] |
| 1 | Woodruff Avenue/Washburn Road | City of Downey | Signal/ICU | 0.642 | B | 0.514 | A |
| 2 | Woodruff Avenue/Stewart and Gray Road | City of Downey | Signal/ICU | 0.615 | B | 0.610 | B |
| 3 | Stewart and Gray Road/Firestone Boulevard | City of Downey | Signal/ICU | 0.524 | A | 0.531 | A |
| 4 | I-605 SB ramps/Firestone Boulevard | Caltrans | Signal/HCM | 31.0 | C | 19.5 | B |
| 5 | I-605 NB ramps - Hoxie Avenue/Firestone Boulevard | Caltrans | Signal/HCM | 120.8 | F | 73.6 | E |

**Source:** Appendix B.
**Notes:** LOS = Level of Service; HCM = Highway Capacity Manual; ICU = Intersection Capacity Utilization.
1 Delay in seconds per vehicle; V/C = volume-to-capacity ratio.

# 7.3 Existing plus Ambient Growth plus Cumulative Projects plus Project Traffic Operations

This section details the Existing plus Ambient Growth plus Cumulative Projects plus Project traffic volumes and the intersection operations within the study area.

## 7.3.1 Traffic Volumes

Project traffic volumes shown in Figure 5 were added to the Existing plus Ambient Growth plus Cumulative Projects traffic volumes shown in Figure 13 to derive the Existing plus Ambient Growth plus Cumulative Projects plus Project traffic condition. Figure 14 shows the Existing plus Ambient Growth plus Cumulative Projects plus Project traffic volumes.

## 7.3.2 Intersection Operations

An intersection LOS analysis was prepared for the Existing plus Ambient Growth plus Cumulative Projects plus Project conditions using the HCM 6th Edition methodology via the Synchro LOS software for Caltrans intersections and using the ICU methodology for all other signalized intersections as described in Section 1.3. Table 10 shows the comparison of the Existing plus Ambient Growth plus Cumulative Projects and the Existing plus Ambient Growth plus Cumulative Projects plus Project analysis. LOS worksheets are provided in Appendix B.

As shown in the table, all the study area intersections will operate at satisfactory levels of service (at LOS D or better) for the intersections within the City of Downey. The intersections of Firestone Boulevard with I-605 ramps operate under the jurisdiction of Caltrans and are outside of the City of Downey boundaries; since no LOS standards are currently available per the updated Caltrans TISG (May 2020) as discussed in Section 1.3, no inconsistencies can be concluded.

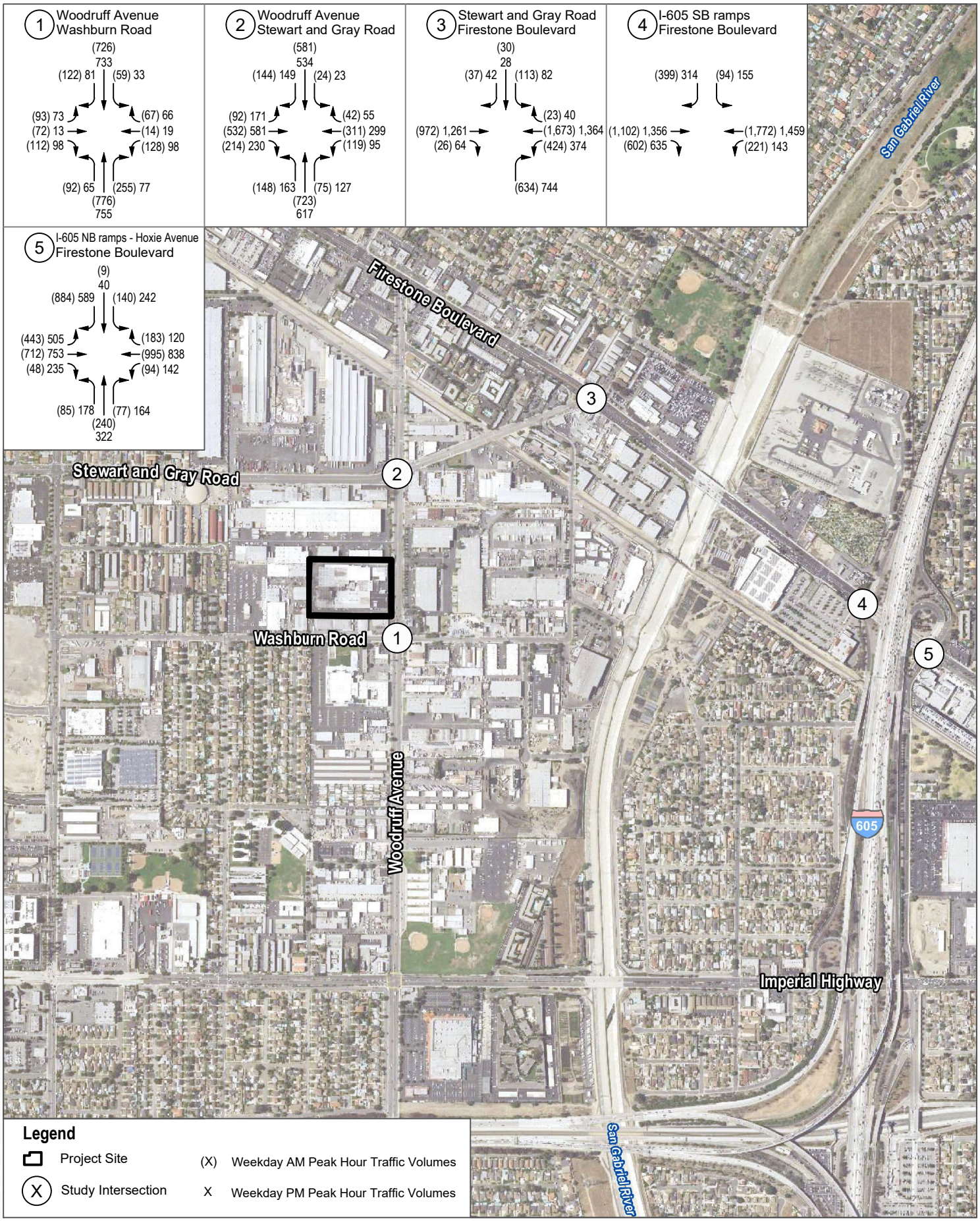
Since all study area intersections are forecast to operate at LOS D or better under the Existing plus Ambient Growth plus Cumulative Projects plus Project conditions, the project would not cause a substantial direct or cumulative effect to intersection operations or result in an inconsistency with the City of Downey General Plan LOS standards. As discussed in Section 1.3, the intersections of Firestone Boulevard with I-605 ramps operate under the jurisdiction of Caltrans and are outside of the City of Downey boundaries; therefore, as no LOS standards are currently available per the updated Caltrans TISG (May 2020), no inconsistencies can be determined.

## Table 10. Existing plus Ambient Growth plus Cumulative Projects plus Project Peak Hour Intersection Level of Service

| No. | Intersection | Jurisdiction | Control/ LOS Method | Existing plus Ambient Growth plus Cumulative Projects | | | | Existing plus Ambient Growth plus Cumulative Projects plus Project | | | | Change in Delay or V/C[1] | | Inconsistent with City LOS Standard? | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | *AM Peak* | | *PM Peak* | | *AM Peak* | | *PM Peak* | | | | | |
| | | | | *Delay or V/C[1]* | *LOS* | *Delay or V/C[1]* | *LOS* | *Delay or V/C[1]* | *LOS[2]* | *Delay or V/C[1]* | *LOS* | *AM* | *PM* | *AM* | *PM* |
| 1 | Woodruff Avenue/Washburn Road | City of Downey | Signal/ICU | 0.642 | B | 0.514 | A | 0.641 | B | 0.514 | A | -0.001 | 0.000 | No | No |
| 2 | Woodruff Avenue/Stewart and Gray Road | City of Downey | Signal/ICU | 0.615 | B | 0.610 | B | 0.620 | B | 0.631 | B | 0.005 | 0.021 | No | No |
| 3 | Stewart and Gray Road/Firestone Boulevard | City of Downey | Signal/ICU | 0.524 | A | 0.531 | A | 0.524 | A | 0.541 | A | 0.000 | 0.010 | No | No |
| 4 | I-605 SB ramps/Firestone Boulevard | Caltrans | Signal/HCM | 31.0 | C | 19.5 | B | 24.5 | C | 16.6 | B | -6.5 | -2.9 | No | No |
| 5 | I-605 NB ramps - Hoxie Avenue/Firestone Boulevard | Caltrans | Signal/HCM | 120.8 | F | 73.6 | E | 115.9 | F | 76.1 | E | -4.9 | 2.5 | N/A[2] | N/A[2] |

**Source:** Appendix B.
**Notes:** LOS = Level of Service; HCM = Highway Capacity Manual; ICU = Intersection Capacity Utilization.
1 Delay in seconds per vehicle; V/C = volume-to-capacity ratio.
2 Caltrans no longer has established LOS standards under the TISG released May 20, 2020.

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SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

**FIGURE 13**

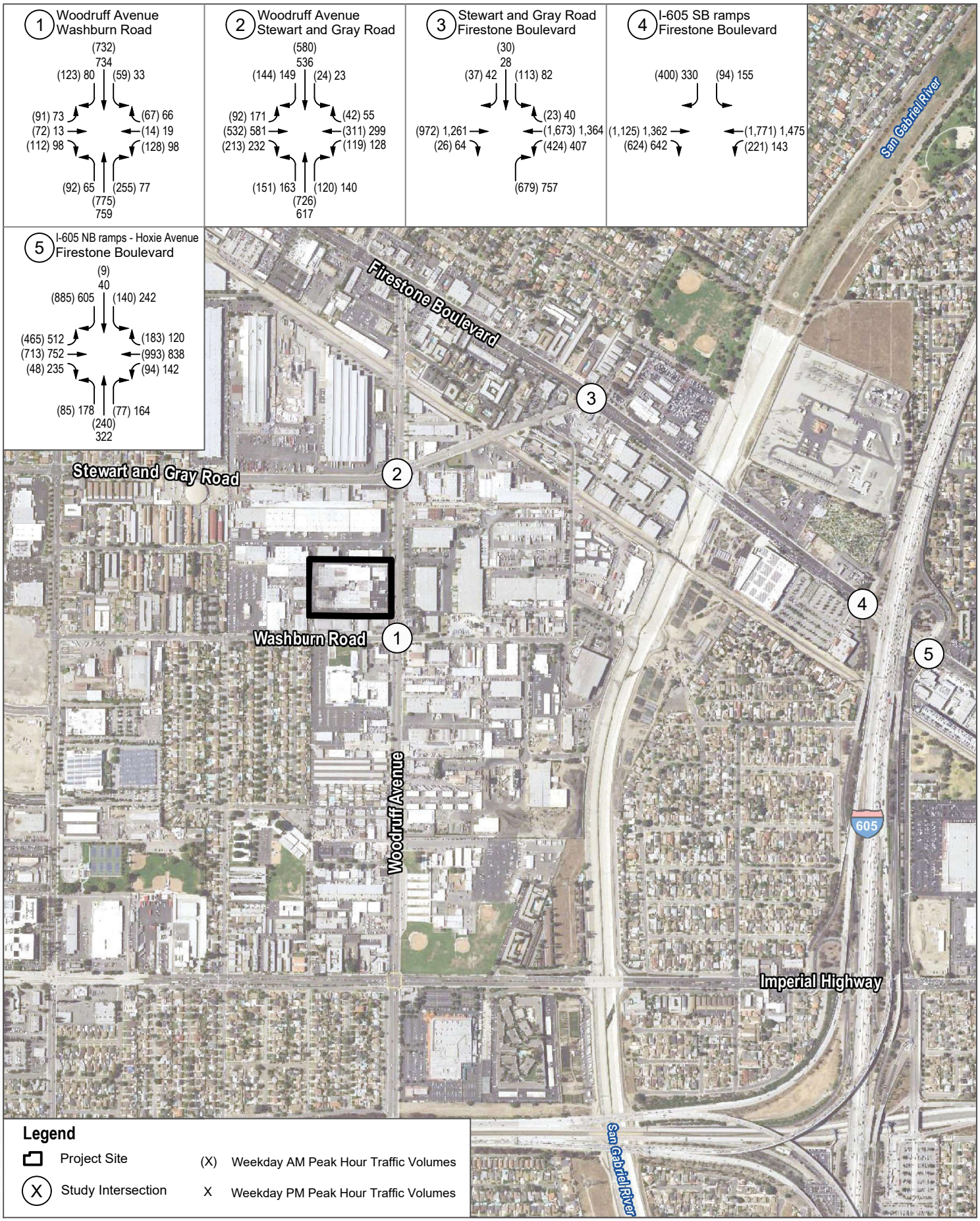
DUDEK

NOT TO SCALE

Existing plus Ambient Growth plus Cumulative Projects Peak Hour Traffic Volumes

12021 Woodruff Avenue Industrial Building Project

INTENTIONALLY LEFT BLANK




SOURCE: USDA NAIP 2016; Open Street Map 2019; USGS NHD 2020

**FIGURE 14**

DUDEK

Existing plus Ambient Growth plus Cumulative Projects plus Project Peak Hour Traffic Volumes

NOT TO SCALE

INTENTIONALLY LEFT BLANK

# 8 Project Impacts, Mitigation Measures, and Level of Service Improvements

## 8.1 Project Impacts per CEQA

### 8.1.1 VMT Analysis

As discussed in Section 4, the proposed project passes one of the OPR screening criteria, i.e., TPA Screening. A project-level detailed VMT analysis would not be required, and the project would not be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b); therefore, the impact would be less than significant. In addition, in an abundance of caution and to further minimize an already less-than-significant impact related to VMT, the project would implement a transportation demand management plan, as described in project design feature (PDF) TRA-1:

**PDF-TRA-1** **Transportation Demand Management Plan:** Prior to issuance of a Business License, the tenant shall prepare a Transportation Demand Management plan to discourage single-occupancy vehicle trips made by employees, and encourage them to use alternative modes of transportation such as carpooling, taking transit, walking, and biking to/from the site. Examples of trip reduction measures may include, but are not limited to:

- Transit passes
- Car-sharing programs
- Telecommuting and alternative work schedules
- Ride sharing programs

### 8.1.2 Access Analysis

**Queuing – Project Site Access**

The project site access driveways are forecast to operate at LOS C or better under Existing plus Ambient Growth plus Cumulative Projects plus Project conditions. Additionally, none of the calculated 95th percentile (design) queues for the Existing plus Ambient Growth plus Cumulative Projects or the Existing plus Ambient Growth plus Cumulative Projects plus Project conditions, respectively, exceed storage capacities within the existing left-turn pockets or TWLTL along Woodruff Avenue into the project site. There is adequate storage capacity within the project site such that vehicles can queue on-site as needed. No on-site or off-site queuing impacts are found.

**Queuing – Caltrans Facilities**

As discussed in Section 5.2.2, a queuing analysis was performed at the I-605/Firestone Boulevard off-ramps. When comparing the Existing plus Ambient Growth plus Cumulative Projects scenario with the addition of project traffic, the forecasted queues will either not change or will be slightly reduced from the baseline condition. For the I-605 southbound ramp, approximately 45-feet of queue will be reduced with the addition of the project, approximately two vehicle car lengths. For the I-605 northbound ramps, forecasted queues are expected to remain the same with

the addition of the project. Therefore, the project will not create a significant impact to the Caltrans freeway off-ramps, and hazards due to geometric design features will be less than significant.

**Pedestrian and Bicycle Access**

There are adequate pedestrian facilities in the vicinity of the proposed project, and the frontage along the project site boundary along Woodruff Avenue will be maintained to ensure pedestrian access. The project would include a new concrete walkway to provide pedestrian access from Woodruff Avenue to the office component of the project. The area of the walkway traversing the parking lot would consist of decorative pavers. The project would not conflict with the existing or proposed bicycle facilities in its vicinity.

No mitigation measures would be necessary for the proposed project.

# 8.2 Level of Service Findings

## 8.2.1 LOS Analysis

Under Existing plus Ambient Growth plus Cumulative Projects plus Project conditions, all study area intersections within the City of Downey continue to operate at LOS D or better. Per the City's applicable LOS consistency analysis, no substantial project-specific effect would occur in Existing plus Ambient Growth plus Cumulative Projects plus Project conditions. As discussed in Section 1.3, the intersections of Firestone Boulevard with I-605 ramps operate under the jurisdiction of Caltrans and are outside of the City of Downey boundaries; therefore, as no LOS standards are currently available per the updated Caltrans TISG (May 2020), no inconsistencies can be determined.

## 8.2.2 Improvement Measures

No inconsistencies with applicable plans can be concluded at the Caltrans study intersections regarding LOS; or for the City of Downey intersections. Therefore, in regards to project related deficiencies, no improvement measures recommended.

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# Appendix A

## Traffic Counts

# INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

| DATE: | LOCATION: | Downey | PROJECT #: | SC2606 |
|---|---|---|---|---|
| Thu, Jul 9, 20 | NORTH & SOUTH: | Woodruff | LOCATION #: | 1 |
| | EAST & WEST: | Washburn | CONTROL: | SIGNAL |

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

| | | NORTHBOUND (Woodruff) | | | SOUTHBOUND (Woodruff) | | | EASTBOUND (Washburn) | | | WESTBOUND (Washburn) | | | | U-TURNS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LANES: | NL 1 | NT 2 | NR 0 | SL 1 | ST 2 | SR 0 | EL 0 | ET 2 | ER 0 | WL 0 | WT 1 | WR 1 | TOTAL | NB 0 | SB 0 | EB 0 | WB 0 | TTL |
| AM | 7:00 AM | 5 | 56 | 19 | 5 | 27 | 1 | 6 | 5 | 14 | 8 | 4 | 3 | 153 | 0 | 0 | 0 | 0 | 0 |
| | 7:15 AM | 4 | 55 | 21 | 6 | 36 | 6 | 10 | 2 | 13 | 12 | 1 | 1 | 167 | 0 | 0 | 0 | 0 | 0 |
| | 7:30 AM | 8 | 62 | 17 | 6 | 43 | 9 | 14 | 3 | 12 | 9 | 0 | 4 | 187 | 0 | 0 | 0 | 0 | 0 |
| | 7:45 AM | 11 | 79 | 31 | 6 | 56 | 12 | 8 | 8 | 10 | 14 | 2 | 5 | 242 | 0 | 0 | 0 | 0 | 0 |
| | 8:00 AM | 4 | 74 | 22 | 4 | 56 | 8 | 8 | 8 | 13 | 11 | 0 | 7 | 215 | 0 | 0 | 0 | 0 | 0 |
| | 8:15 AM | 12 | 52 | 24 | 4 | 45 | 8 | 10 | 7 | 11 | 11 | 2 | 10 | 196 | 0 | 0 | 0 | 0 | 0 |
| | 8:30 AM | 5 | 71 | 15 | 4 | 60 | 9 | 7 | 3 | 5 | 10 | 1 | 2 | 192 | 0 | 0 | 0 | 0 | 0 |
| | 8:45 AM | 5 | 67 | 11 | 6 | 46 | 2 | 9 | 2 | 8 | 11 | 2 | 3 | 172 | 0 | 0 | 0 | 0 | 0 |
| | VOLUMES | 54 | 516 | 160 | 41 | 369 | 55 | 72 | 38 | 86 | 86 | 12 | 35 | 1,524 | 0 | 0 | 0 | 0 | 0 |
| | APPROACH % | 7% | 71% | 22% | 9% | 79% | 12% | 37% | 19% | 44% | 65% | 9% | 26% | | | | | | |
| | APP/DEPART | 730 | / | 623 | 465 | / | 541 | 196 | / | 239 | 133 | / | 121 | 0 | | | | | |
| | BEGIN PEAK HR | | 7:45 AM | | | | | | | | | | | | | | | | |
| | VOLUMES | 32 | 276 | 92 | 18 | 217 | 37 | 33 | 26 | 39 | 46 | 5 | 24 | 845 | | | | | |
| | APPROACH % | 8% | 69% | 23% | 7% | 80% | 14% | 34% | 27% | 40% | 61% | 7% | 32% | | | | | | |
| | PEAK HR FACTOR | | 0.826 | | | 0.919 | | | 0.845 | | | 0.815 | | 0.873 | | | | | |
| | APP/DEPART | 400 | / | 333 | 272 | / | 302 | 98 | / | 136 | 75 | / | 74 | 0 | | | | | |
| PM | 4:00 PM | 6 | 120 | 15 | 4 | 107 | 18 | 12 | 2 | 14 | 27 | 4 | 7 | 336 | 0 | 0 | 0 | 0 | 0 |
| | 4:15 PM | 14 | 113 | 20 | 8 | 101 | 15 | 10 | 2 | 10 | 15 | 5 | 10 | 323 | 0 | 0 | 0 | 0 | 0 |
| | 4:30 PM | 5 | 113 | 13 | 4 | 129 | 11 | 15 | 1 | 20 | 23 | 3 | 7 | 344 | 0 | 0 | 0 | 0 | 0 |
| | 4:45 PM | 11 | 124 | 7 | 3 | 115 | 11 | 12 | 3 | 11 | 9 | 1 | 8 | 315 | 0 | 0 | 0 | 0 | 0 |
| | 5:00 PM | 9 | 120 | 9 | 6 | 114 | 14 | 9 | 2 | 19 | 15 | 3 | 17 | 337 | 0 | 0 | 0 | 0 | 0 |
| | 5:15 PM | 12 | 110 | 7 | 7 | 121 | 10 | 7 | 2 | 15 | 17 | 4 | 4 | 316 | 0 | 0 | 0 | 0 | 0 |
| | 5:30 PM | 18 | 82 | 11 | 4 | 115 | 11 | 13 | 2 | 13 | 10 | 4 | 9 | 292 | 1 | 0 | 0 | 0 | 1 |
| | 5:45 PM | 13 | 88 | 11 | 4 | 105 | 6 | 7 | 0 | 14 | 19 | 2 | 4 | 273 | 0 | 0 | 0 | 0 | 0 |
| | VOLUMES | 88 | 870 | 93 | 40 | 907 | 96 | 85 | 14 | 116 | 135 | 26 | 66 | 2,536 | 1 | 0 | 0 | 0 | 1 |
| | APPROACH % | 8% | 83% | 9% | 4% | 87% | 9% | 40% | 7% | 54% | 59% | 11% | 29% | | | | | | |
| | APP/DEPART | 1,051 | / | 1,021 | 1,043 | / | 1,159 | 215 | / | 147 | 227 | / | 209 | 0 | | | | | |
| | BEGIN PEAK HR | | 4:15 PM | | | | | | | | | | | | | | | | |
| | VOLUMES | 39 | 470 | 49 | 21 | 459 | 51 | 46 | 8 | 60 | 62 | 12 | 42 | 1,319 | | | | | |
| | APPROACH % | 7% | 84% | 9% | 4% | 86% | 10% | 40% | 7% | 53% | 53% | 10% | 36% | | | | | | |
| | PEAK HR FACTOR | | 0.949 | | | 0.922 | | | 0.792 | | | 0.829 | | 0.959 | | | | | |
| | APP/DEPART | 558 | / | 558 | 531 | / | 581 | 114 | / | 78 | 116 | / | 102 | 0 | | | | | |




| | | ALL PED AND BIKE | | | | | PEDESTRIAN CROSSINGS | | | | | BICYCLE CROSSINGS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N SIDE | S SIDE | E SIDE | W SIDE | TOTAL | N SIDE | S SIDE | E SIDE | W SIDE | TOTAL | NS | SS | ES | WS | TOTAL |
| AM | 7:00 AM | 0 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 1 | 0 | 1 |
| | 7:15 AM | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 |
| | 7:30 AM | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 |
| | 7:45 AM | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| | 8:00 AM | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| | 8:15 AM | 1 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 3 |
| | 8:30 AM | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 |
| | 8:45 AM | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| | TOTAL | 3 | 0 | 5 | 12 | 20 | 1 | 0 | 3 | 10 | 14 | 2 | 0 | 2 | 2 | 6 |
| PM | 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4:15 PM | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | 4:30 PM | 1 | 0 | 2 | 1 | 4 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 2 |
| | 4:45 PM | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| | 5:00 PM | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| | 5:15 PM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| | 5:30 PM | 1 | 1 | 2 | 1 | 5 | 0 | 1 | 2 | 1 | 4 | 1 | 0 | 0 | 0 | 1 |
| | 5:45 PM | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| | TOTAL | 4 | 1 | 5 | 5 | 15 | 1 | 1 | 3 | 4 | 9 | 3 | 0 | 2 | 1 | 6 |

# ITM Peak Hour Summary

Prepared by:

NDS

***Woodruff Ave and Stewart and Gray Rd , Downey***

Date: 1/21/2015

Day: Wednesday

Project #: Historical

City: Downey




| | |
|---|---|
| AM Peak Hour | 715 AM |
| NOON Peak Hour | |
| PM Peak Hour | 445 PM |

**Peak Hour Summary**

**Southbound Approach**

| Lanes | 1 | 2 | 1 | | |
|---|---|---|---|---|---|
| AM | 136 | 541 | 20 | 795 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 141 | 501 | 18 | 792 | PM |

Woodruff Ave

Stewart and Gray Rd

**Eastbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 484 | 0 | 561 |
| 1 | 87 | 0 | 162 |
| 2 | 442 | 0 | 429 |
| 1 | 199 | 0 | 214 |
| Lanes | AM | NOON | PM |

**CONTROL**

Signalized

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 31 | 0 | 52 | 0 |
| 212 | 0 | 270 | 2 |
| 86 | 0 | 89 | 1 |
| 525 | 0 | 543 | |
| AM | NOON | PM | |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

**Northbound Approach**

| | | | | | |
|---|---|---|---|---|---|
| AM | 826 | 136 | 677 | 63 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 804 | 150 | 578 | 96 | PM |
| | | 1 | 2 | 0 | Lanes |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 697 | 795 | AM |
| | 0 | 0 | NOON |
| | 660 | 792 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 484 | 0 | 561 | 329 | 0 | 411 |
| 728 | 0 | 805 | 525 | 0 | 543 |
| | | | AM | NOON | PM |

| | South Leg | |
|---|---|---|
| AM | 826 | 876 |
| NOON | 0 | 0 |
| PM | 804 | 824 |

## Total Volume Per Leg

| | North Leg | |
|---|---|---|
| | 1492 | AM |
| | 0 | NOON |
| | 1452 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 1212 | 0 | 1366 | 854 | 0 | 954 |
| | | | AM | NOON | PM |

| | South Leg |
|---|---|
| AM | 1702 |
| NOON | 0 |
| PM | 1628 |

# INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jul 9, 20

LOCATION: Downey
NORTH & SOUTH: Woodruff
EAST & WEST: Stewart & Gray

PROJECT #: SC2606
LOCATION #: 2
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

| | | NORTHBOUND Woodruff | | | SOUTHBOUND Woodruff | | | EASTBOUND Stewart & Gray | | | WESTBOUND Stewart & Gray | | | | U-TURNS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LANES: | NL 1 | NT 2 | NR 0 | SL 1 | ST 2 | SR 1 | EL 1 | ET 2 | ER 1 | WL 1 | WT 2 | WR 0 | TOTAL | NB 0 | SB 0 | EB 0 | WB 0 | TTL |
| AM | 7:00 AM | 9 | 35 | 8 | 1 | 24 | 7 | 5 | 56 | 9 | 9 | 33 | 7 | 203 | 0 | 0 | 0 | 0 | 0 |
| | 7:15 AM | 10 | 31 | 10 | 1 | 31 | 12 | 10 | 61 | 11 | 12 | 32 | 9 | 230 | 0 | 0 | 0 | 0 | 0 |
| | 7:30 AM | 15 | 36 | 14 | 4 | 41 | 11 | 11 | 85 | 22 | 14 | 39 | 5 | 297 | 0 | 0 | 0 | 0 | 0 |
| | 7:45 AM | 13 | 44 | 13 | 2 | 63 | 20 | 8 | 60 | 24 | 17 | 52 | 12 | 328 | 0 | 0 | 0 | 0 | 0 |
| | 8:00 AM | 16 | 53 | 15 | 2 | 39 | 16 | 8 | 59 | 16 | 8 | 41 | 8 | 281 | 0 | 0 | 0 | 0 | 0 |
| | 8:15 AM | 16 | 43 | 12 | 2 | 38 | 15 | 3 | 62 | 12 | 12 | 39 | 5 | 259 | 0 | 0 | 0 | 0 | 0 |
| | 8:30 AM | 10 | 49 | 24 | 0 | 35 | 20 | 17 | 60 | 22 | 14 | 44 | 9 | 304 | 0 | 0 | 0 | 0 | 0 |
| | 8:45 AM | 15 | 46 | 18 | 5 | 38 | 10 | 11 | 77 | 20 | 7 | 42 | 9 | 298 | 0 | 1 | 0 | 0 | 1 |
| | VOLUMES | 104 | 337 | 114 | 17 | 309 | 111 | 73 | 520 | 136 | 93 | 322 | 64 | 2,200 | 0 | 1 | 0 | 0 | 1 |
| | APPROACH % | 19% | 61% | 21% | 4% | 71% | 25% | 10% | 71% | 19% | 19% | 67% | 13% | | | | | | |
| | APP/DEPART | 555 | / | 475 | 437 | / | 538 | 729 | / | 650 | 479 | / | 537 | 0 | | | | | |
| | BEGIN PEAK HR | | 7:45 AM | | | | | | | | | | | | | | | | |
| | VOLUMES | 55 | 189 | 64 | 6 | 175 | 71 | 36 | 241 | 74 | 51 | 176 | 34 | 1,172 | | | | | |
| | APPROACH % | 18% | 61% | 21% | 2% | 69% | 28% | 10% | 69% | 21% | 20% | 67% | 13% | | | | | | |
| | PEAK HR FACTOR | | 0.917 | | | 0.741 | | | 0.886 | | | 0.806 | | 0.893 | | | | | |
| | APP/DEPART | 308 | / | 259 | 252 | / | 300 | 351 | / | 311 | 261 | / | 302 | 0 | | | | | |
| PM | 4:00 PM | 26 | 99 | 23 | 3 | 76 | 33 | 32 | 132 | 20 | 24 | 76 | 14 | 558 | 2 | 0 | 0 | 0 | 2 |
| | 4:15 PM | 28 | 79 | 24 | 3 | 76 | 35 | 32 | 101 | 30 | 13 | 77 | 13 | 511 | 0 | 0 | 0 | 0 | 0 |
| | 4:30 PM | 34 | 99 | 30 | 3 | 77 | 54 | 32 | 129 | 23 | 16 | 74 | 9 | 580 | 0 | 0 | 0 | 0 | 0 |
| | 4:45 PM | 23 | 93 | 27 | 4 | 81 | 37 | 35 | 87 | 29 | 17 | 84 | 13 | 530 | 0 | 0 | 0 | 0 | 0 |
| | 5:00 PM | 22 | 101 | 22 | 5 | 70 | 47 | 39 | 130 | 28 | 15 | 93 | 8 | 580 | 0 | 0 | 0 | 0 | 0 |
| | 5:15 PM | 24 | 81 | 17 | 3 | 88 | 25 | 32 | 109 | 22 | 13 | 99 | 17 | 530 | 0 | 0 | 0 | 0 | 0 |
| | 5:30 PM | 28 | 65 | 18 | 6 | 89 | 41 | 36 | 91 | 22 | 7 | 68 | 11 | 482 | 0 | 0 | 0 | 0 | 0 |
| | 5:45 PM | 21 | 75 | 17 | 4 | 74 | 33 | 36 | 106 | 23 | 13 | 73 | 8 | 483 | 0 | 0 | 0 | 0 | 0 |
| | VOLUMES | 206 | 692 | 178 | 31 | 631 | 305 | 274 | 885 | 197 | 118 | 644 | 93 | 4,254 | 2 | 0 | 0 | 0 | 2 |
| | APPROACH % | 19% | 64% | 17% | 3% | 65% | 32% | 20% | 65% | 15% | 14% | 75% | 11% | | | | | | |
| | APP/DEPART | 1,076 | / | 1,059 | 967 | / | 948 | 1,356 | / | 1,094 | 855 | / | 1,153 | 0 | | | | | |
| | BEGIN PEAK HR | | 4:30 PM | | | | | | | | | | | | | | | | |
| | VOLUMES | 103 | 374 | 96 | 15 | 316 | 163 | 138 | 455 | 102 | 61 | 350 | 47 | 2,220 | | | | | |
| | APPROACH % | 18% | 65% | 17% | 3% | 64% | 33% | 20% | 65% | 15% | 13% | 76% | 10% | | | | | | |
| | PEAK HR FACTOR | | 0.879 | | | 0.922 | | | 0.882 | | | 0.888 | | 0.957 | | | | | |
| | APP/DEPART | 573 | / | 559 | 494 | / | 479 | 695 | / | 566 | 458 | / | 616 | 0 | | | | | |




| | | ALL PED AND BIKE | | | | | PEDESTRIAN CROSSINGS | | | | | BICYCLE CROSSINGS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N SIDE | S SIDE | E SIDE | W SIDE | TOTAL | N SIDE | S SIDE | E SIDE | W SIDE | TOTAL | NS | SS | ES | WS | TOTAL |
| AM | 7:00 AM | 0 | 2 | 1 | 1 | 4 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 0 | 3 |
| | 7:15 AM | 1 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| | 7:30 AM | 2 | 1 | 2 | 5 | 10 | 1 | 0 | 2 | 4 | 7 | 1 | 1 | 0 | 1 | 3 |
| | 7:45 AM | 1 | 0 | 1 | 4 | 6 | 1 | 0 | 1 | 3 | 5 | 0 | 0 | 0 | 1 | 1 |
| | 8:00 AM | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 1 | 1 |
| | 8:15 AM | 3 | 0 | 3 | 1 | 7 | 3 | 0 | 2 | 0 | 5 | 0 | 0 | 1 | 1 | 2 |
| | 8:30 AM | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| | 8:45 AM | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL | 7 | 5 | 8 | 19 | 39 | 5 | 0 | 6 | 15 | 26 | 2 | 5 | 2 | 4 | 13 |
| PM | 4:00 PM | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| | 4:15 PM | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| | 4:30 PM | 2 | 0 | 2 | 1 | 5 | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 1 | 1 | 2 |
| | 4:45 PM | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 |
| | 5:00 PM | 2 | 2 | 0 | 3 | 7 | 1 | 0 | 0 | 3 | 4 | 1 | 2 | 0 | 0 | 3 |
| | 5:15 PM | 0 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 1 | 0 | 1 |
| | 5:30 PM | 0 | 1 | 2 | 1 | 4 | 0 | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 2 |
| | 5:45 PM | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL | 8 | 4 | 5 | 11 | 28 | 3 | 0 | 2 | 9 | 14 | 5 | 4 | 3 | 2 | 14 |

# ITM Peak Hour Summary

Prepared by:

NDS

***Stewart and Gray Rd and Firestone Blvd , Norwalk***

Date: 2/23/2016

Day: Tuesday

Project #: Historical

City: Norwalk




| | |
|---|---|
| AM Peak Hour | 700 AM |
| NOON Peak Hour | |
| PM Peak Hour | 445 PM |

**Peak Hour Summary**

**Southbound Approach**

Stewart and Gray Rd

| Lanes | 0.5 | 0.5 | 1 | | |
|---|---|---|---|---|---|
| AM | 35 | 29 | 108 | 22 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 40 | 27 | 78 | 43 | PM |

**Eastbound Approach**

Firestone Blvd

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 1558 | 0 | 1284 |
| 2 | 0 | 0 | 4 |
| 0.5 | 866 | 0 | 1142 |
| 0.5 | 25 | 0 | 61 |
| Lanes | AM | NOON | PM |

**CONTROL**

Signalized

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 22 | 0 | 38 | 0 |
| | 1523 | 0 | 1244 | 3 |
| | 377 | 0 | 344 | 2 |
| | 1567 | 0 | 1900 | |
| | AM | NOON | PM | |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | NONE | NONE |
| PM | 4:00 PM | 6:00 PM |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 431 | 0 | 0 | 593 AM |
| NOON | 0 | 0 | 0 | 0 NOON |
| PM | 432 | 0 | 1 | 680 PM |
| | | 0 | 2 | 0 Lanes |

## Total Ins & Outs

| | AM | NOON | PM |
|---|---|---|---|
| North Leg | 172 | 0 | 145 |
| | 22 | 0 | 43 |
| West Leg | 1558 | 0 | 1284 |
| | 891 | 0 | 1207 |
| East Leg | 1922 | 0 | 1626 |
| | 1567 | 0 | 1900 |
| South Leg | 431 | 0 | 432 |
| | 593 | 0 | 681 |

## Total Volume Per Leg

| | AM | NOON | PM |
|---|---|---|---|
| North Leg | 194 | 0 | 188 |
| West Leg | 2449 | 0 | 2491 |
| East Leg | 3489 | 0 | 3526 |
| South Leg | 1024 | 0 | 1113 |

# ITM Peak Hour Summary

Prepared by:

NDS

***I-605 SB On/Off Ramps and Firestone Blvd , Norwalk***

Date: 2/23/2016

Day: Tuesday

Project #: Historical

City: Norwalk




| | |
|---|---|
| AM Peak Hour | 715 AM |
| NOON Peak Hour | |
| PM Peak Hour | 500 PM |

## Peak Hour Summary

### Southbound Approach

I-605 SB On/Off Ramps

| Lanes | 2 | 0 | 1 | |
|---|---|---|---|---|
| AM | 346 | 1 | 89 | 0 AM |
| NOON | 0 | 0 | 0 | 0 NOON |
| PM | 274 | 0 | 145 | 0 PM |

### Eastbound Approach

Firestone Blvd

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 1970 | 0 | 1621 |
| 0 | 0 | 0 | 0 |
| 2 | 1001 | 0 | 1238 |
| 1 | 551 | 0 | 575 |
| Lanes | AM | NOON | PM |

### Westbound Approach

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 2 | 1624 | 0 | 1347 |
| 1 | 210 | 0 | 134 |
| | 1090 | 0 | 1383 |
| | AM | NOON | PM |

**CONTROL**

Signalized

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | NONE | NONE |
| PM | 4:00 PM | 6:00 PM |

### Northbound Approach

| | | | | |
|---|---|---|---|---|
| AM | 762 | 0 | 0 | 0 AM |
| NOON | 0 | 0 | 0 | 0 NOON |
| PM | 709 | 0 | 0 | 0 PM |
| | | 0 | 0 | 0 Lanes |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 436 | 0 | AM |
| | 0 | 0 | NOON |
| | 419 | 0 | PM |

| West Leg AM | West Leg NOON | West Leg PM | East Leg | East Leg AM | East Leg NOON | East Leg PM |
|---|---|---|---|---|---|---|
| 1970 | 0 | 1621 | | 1834 | 0 | 1481 |
| 1552 | 0 | 1813 | | 1090 | 0 | 1383 |

| | South Leg | |
|---|---|---|
| AM | 762 | 0 |
| NOON | 0 | 0 |
| PM | 709 | 0 |

## Total Volume Per Leg

| | North Leg | |
|---|---|---|
| | 436 | AM |
| | 0 | NOON |
| | 419 | PM |

| West Leg AM | West Leg NOON | West Leg PM | East Leg | East Leg AM | East Leg NOON | East Leg PM |
|---|---|---|---|---|---|---|
| 3522 | 0 | 3434 | | 2924 | 0 | 2864 |

| | South Leg |
|---|---|
| AM | 762 |
| NOON | 0 |
| PM | 709 |

# Intersection Turning Movement

Prepared by:

## National Data & Surveying Services

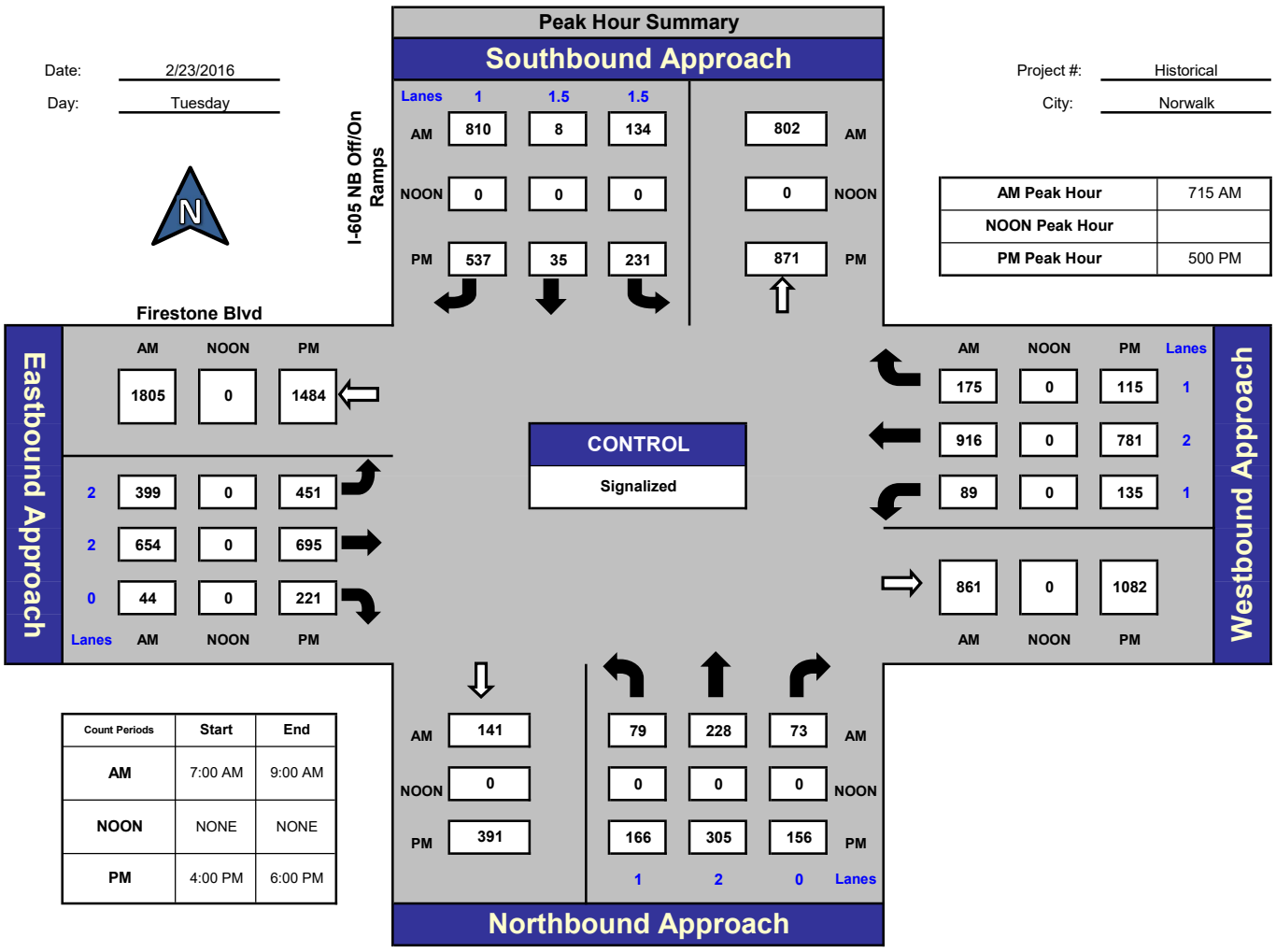
***I-605 NB Off/On Ramps and Firestone Blvd , Norwalk***

Date: 2/23/2016

Day: Tuesday

Project #: Historical

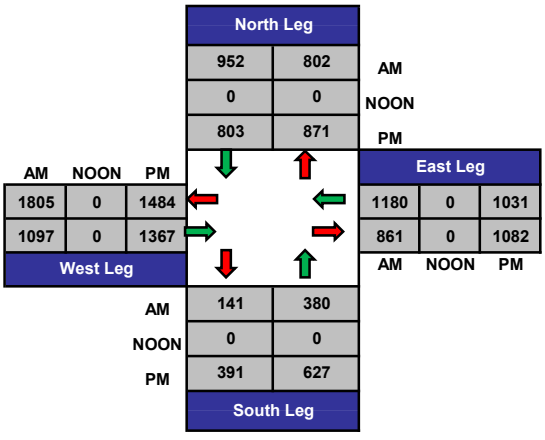
City: Norwalk



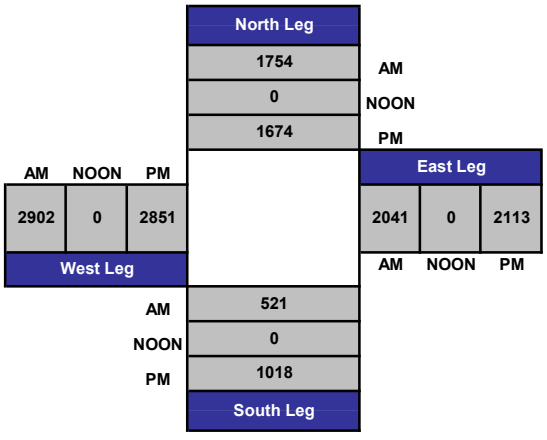

| AM Peak Hour | 715 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 500 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | NONE | NONE |
| PM | 4:00 PM | 6:00 PM |

## Total Ins & Outs




## Total Volume Per Leg



# Appendix B

## Intersection Level of Service Analysis Worksheets

12021 Woodruff Avenue Industrial Building Project
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Woodruff Avenue/Washburn Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.636 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 43 | Level Of Service: | B |

| Street Name: | Woodruff Avenue | | | | | | Washburn Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 0 1 | 0 | 0 1 | 0 1 | 0 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 88 | 762 | 254 | 59 | 708 | 121 | 91 | 72 | 108 | 127 | 14 | 66 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 88 | 762 | 254 | 59 | 708 | 121 | 91 | 72 | 108 | 127 | 14 | 66 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 88 | 762 | 254 | 59 | 708 | 121 | 91 | 72 | 108 | 127 | 14 | 66 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 88 | 762 | 254 | 59 | 708 | 121 | 91 | 72 | 108 | 127 | 14 | 66 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 88 | 762 | 254 | 59 | 708 | 121 | 91 | 72 | 108 | 127 | 14 | 66 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 88 | 762 | 254 | 59 | 708 | 121 | 91 | 72 | 108 | 127 | 14 | 66 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.50 | 0.50 | 1.00 | 1.71 | 0.29 | 0.56 | 0.44 | 1.00 | 0.90 | 0.10 | 1.00 |
| Final Sat.: | 1600 | 2400 | 800 | 1600 | 2733 | 467 | 893 | 707 | 1600 | 1441 | 159 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.32 | 0.32 | 0.04 | 0.26 | 0.26 | 0.06 | 0.10 | 0.07 | 0.08 | 0.09 | 0.04 |
| Crit Moves: | | **** | | | **** | | | **** | | | **** | |

12021 Woodruff Avenue Industrial Building Project
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Woodruff Avenue/Stewart and Gray Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.601 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 40 | Level Of Service: | B |

| Street Name: | Woodruff Avenue | | | | | | Stewart and Gray Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 143 | 712 | 74 | 23 | 569 | 143 | 92 | 518 | 209 | 115 | 284 | 41 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 143 | 712 | 74 | 23 | 569 | 143 | 92 | 518 | 209 | 115 | 284 | 41 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 143 | 712 | 74 | 23 | 569 | 143 | 92 | 518 | 209 | 115 | 284 | 41 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 143 | 712 | 74 | 23 | 569 | 143 | 92 | 518 | 209 | 115 | 284 | 41 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 143 | 712 | 74 | 23 | 569 | 143 | 92 | 518 | 209 | 115 | 284 | 41 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 143 | 712 | 74 | 23 | 569 | 143 | 92 | 518 | 209 | 115 | 284 | 41 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.81 | 0.19 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1600 | 2899 | 301 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.25 | 0.25 | 0.01 | 0.18 | 0.09 | 0.06 | 0.16 | 0.13 | 0.07 | 0.09 | 0.03 |
| Crit Moves: | **** | | | **** | | | **** | | | **** | | |

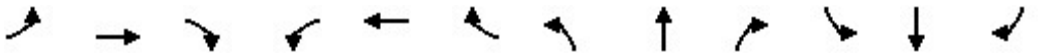
12021 Woodruff Avenue Industrial Building Project
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Stewart and Gray Road/Firestone Boulevard

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.505 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 49 | Level Of Service: | A |

| Street Name: | Stewart and Gray Road | | | | | | Firestone Boulevard | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Permitted | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 0 | 0 2 | 1 0 | 0 | 1 0 | 0 0 | 3 | 0 1 | 2 0 | 2 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 618 | 112 | 30 | 36 | 0 | 902 | 26 | 393 | 1586 | 23 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 618 | 112 | 30 | 36 | 0 | 902 | 26 | 393 | 1586 | 23 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 618 | 112 | 30 | 36 | 0 | 902 | 26 | 393 | 1586 | 23 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 0 | 618 | 112 | 30 | 36 | 0 | 902 | 26 | 393 | 1586 | 23 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 618 | 112 | 30 | 36 | 0 | 902 | 26 | 393 | 1586 | 23 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 618 | 112 | 30 | 36 | 0 | 902 | 26 | 393 | 1586 | 23 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 0.00 | 2.00 | 1.00 | 0.45 | 0.55 | 0.00 | 3.00 | 1.00 | 2.00 | 2.96 | 0.04 |
| Final Sat.: | 0 | 0 | 3200 | 1600 | 727 | 873 | 0 | 4800 | 1600 | 3200 | 4731 | 69 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.19 | 0.07 | 0.04 | 0.04 | 0.00 | 0.19 | 0.02 | 0.12 | 0.34 | 0.34 |
| Crit Moves: | **** | | | **** | | | | | | | **** | |



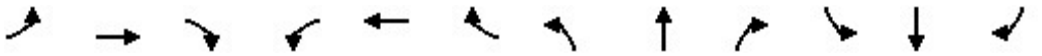
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 1043 | 574 | 219 | 1692 | 0 | 0 | 0 | 0 | 93 | 0 | 361 |
| Future Volume (veh/h) | 0 | 1043 | 574 | 219 | 1692 | 0 | 0 | 0 | 0 | 93 | 0 | 361 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 1.00 | | | | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | | | | No | |
| Adj Sat Flow, veh/h/ln | 0 | 1870 | 1870 | 1870 | 1870 | 0 | | | | 1870 | 0 | 1870 |
| Adj Flow Rate, veh/h | 0 | 1075 | 592 | 226 | 1744 | 0 | | | | 96 | 0 | 372 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | | | | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 0 | 2 |
| Cap, veh/h | 0 | 2081 | 896 | 167 | 2566 | 0 | | | | 281 | 0 | 441 |
| Arrive On Green | 0.00 | 0.59 | 0.59 | 0.09 | 0.72 | 0.00 | | | | 0.16 | 0.00 | 0.16 |
| Sat Flow, veh/h | 0 | 3647 | 1530 | 1781 | 3647 | 0 | | | | 1781 | 0 | 2790 |
| Grp Volume(v), veh/h | 0 | 1075 | 592 | 226 | 1744 | 0 | | | | 96 | 0 | 372 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1777 | 1530 | 1781 | 1777 | 0 | | | | 1781 | 0 | 1395 |
| Q Serve(g_s), s | 0.0 | 19.8 | 28.8 | 10.3 | 29.5 | 0.0 | | | | 5.3 | 0.0 | 14.3 |
| Cycle Q Clear(g_c), s | 0.0 | 19.8 | 28.8 | 10.3 | 29.5 | 0.0 | | | | 5.3 | 0.0 | 14.3 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 2081 | 896 | 167 | 2566 | 0 | | | | 281 | 0 | 441 |
| V/C Ratio(X) | 0.00 | 0.52 | 0.66 | 1.35 | 0.68 | 0.00 | | | | 0.34 | 0.00 | 0.84 |
| Avail Cap(c_a), veh/h | 0 | 2081 | 896 | 167 | 2566 | 0 | | | | 457 | 0 | 715 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 13.5 | 15.4 | 49.8 | 8.3 | 0.0 | | | | 41.2 | 0.0 | 45.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.9 | 3.8 | 193.7 | 1.5 | 0.0 | | | | 0.5 | 0.0 | 4.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 7.4 | 9.9 | 13.5 | 9.3 | 0.0 | | | | 2.4 | 0.0 | 5.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 14.5 | 19.2 | 243.6 | 9.8 | 0.0 | | | | 41.7 | 0.0 | 49.0 |
| LnGrp LOS | A | B | B | F | A | A | | | | D | A | D |
| Approach Vol, veh/h | | 1667 | | | 1970 | | | | | | 468 | |
| Approach Delay, s/veh | | 16.2 | | | 36.6 | | | | | | 47.5 | |
| Approach LOS | | B | | | D | | | | | | D | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 15.0 | 70.8 | | 24.2 | | 85.8 |
| Change Period (Y+Rc), s | * 4.7 | 6.4 | | 6.8 | | 6.4 |
| Max Green Setting (Gmax), s | * 10 | 53.6 | | 28.2 | | 53.6 |
| Max Q Clear Time (g_c+I1), s | 12.3 | 30.8 | | 16.3 | | 31.5 |
| Green Ext Time (p_c), s | 0.0 | 17.4 | | 1.1 | | 19.0 |

| Intersection Summary | | |
|---|---|---|
| HCM 6th Ctrl Delay | | 29.6 |
| HCM 6th LOS | | C |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 416 | 681 | 46 | 93 | 954 | 182 | 82 | 237 | 76 | 140 | 8 | 844 |
| Future Volume (veh/h) | 416 | 681 | 46 | 93 | 954 | 182 | 82 | 237 | 76 | 140 | 8 | 844 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.97 | 1.00 | | 0.95 | 1.00 | | 0.92 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 429 | 702 | 47 | 96 | 984 | 188 | 85 | 244 | 78 | 144 | 8 | 870 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 890 | 1768 | 118 | 113 | 1173 | 509 | 265 | 393 | 122 | 256 | 134 | 513 |
| Arrive On Green | 0.26 | 0.52 | 0.52 | 0.06 | 0.33 | 0.33 | 0.15 | 0.15 | 0.15 | 0.07 | 0.07 | 0.07 |
| Sat Flow, veh/h | 3456 | 3375 | 226 | 1781 | 3554 | 1541 | 1781 | 2637 | 817 | 3563 | 1870 | 1456 |
| Grp Volume(v), veh/h | 429 | 369 | 380 | 96 | 984 | 188 | 85 | 162 | 160 | 144 | 8 | 870 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1824 | 1781 | 1777 | 1541 | 1781 | 1777 | 1677 | 1781 | 1870 | 1456 |
| Q Serve(g_s), s | 11.6 | 13.7 | 13.8 | 5.9 | 28.2 | 10.2 | 4.7 | 9.4 | 9.9 | 4.3 | 0.4 | 7.9 |
| Cycle Q Clear(g_c), s | 11.6 | 13.7 | 13.8 | 5.9 | 28.2 | 10.2 | 4.7 | 9.4 | 9.9 | 4.3 | 0.4 | 7.9 |
| Prop In Lane | 1.00 | | 0.12 | 1.00 | | 1.00 | 1.00 | | 0.49 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 890 | 931 | 955 | 113 | 1173 | 509 | 265 | 265 | 250 | 256 | 134 | 513 |
| V/C Ratio(X) | 0.48 | 0.40 | 0.40 | 0.85 | 0.84 | 0.37 | 0.32 | 0.61 | 0.64 | 0.56 | 0.06 | 1.70 |
| Avail Cap(c_a), veh/h | 890 | 931 | 955 | 113 | 1228 | 532 | 534 | 533 | 503 | 256 | 134 | 513 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 34.6 | 15.7 | 15.7 | 51.0 | 34.1 | 28.1 | 41.8 | 43.8 | 44.1 | 49.4 | 47.6 | 37.1 |
| Incr Delay (d2), s/veh | 0.9 | 1.3 | 1.2 | 41.6 | 5.8 | 1.0 | 0.5 | 1.7 | 2.0 | 2.4 | 0.1 | 322.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.8 | 5.6 | 5.7 | 3.9 | 12.6 | 3.8 | 2.1 | 4.2 | 4.2 | 2.0 | 0.2 | 59.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 35.5 | 17.0 | 17.0 | 92.6 | 40.0 | 29.1 | 42.4 | 45.5 | 46.1 | 51.8 | 47.7 | 359.1 |
| LnGrp LOS | D | B | B | F | D | C | D | D | D | D | D | F |
| Approach Vol, veh/h | | 1178 | | | 1268 | | | 407 | | | 1022 | |
| Approach Delay, s/veh | | 23.7 | | | 42.3 | | | 45.1 | | | 313.4 | |
| Approach LOS | | C | | | D | | | D | | | F | |

| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 11.7 | 63.0 | | 13.3 | 33.0 | 41.7 | | 22.0 | | | | |
| Change Period (Y+Rc), s | * 4.7 | 5.4 | | 5.4 | * 4.7 | 5.4 | | 5.6 | | | | |
| Max Green Setting (Gmax), s | * 7 | 26.0 | | 7.9 | * 10 | 38.0 | | 33.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 7.9 | 15.8 | | 9.9 | 13.6 | 30.2 | | 11.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 5.1 | | 0.0 | 0.0 | 5.8 | | 1.7 | | | | |

| Intersection Summary | | |
|---|---|---|
| HCM 6th Ctrl Delay | | 108.5 |
| HCM 6th LOS | | F |

**Notes**

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

12021 Woodruff Avenue Industrial Building Project
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Woodruff Avenue/Washburn Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.508 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 34 | Level Of Service: | A |

| Street Name: | Woodruff Avenue | | | | | | Washburn Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 0 1 | 0 | 0 1 | 0 1 | 0 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 61 | 740 | 77 | 33 | 721 | 80 | 72 | 13 | 94 | 98 | 19 | 66 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 61 | 740 | 77 | 33 | 721 | 80 | 72 | 13 | 94 | 98 | 19 | 66 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 61 | 740 | 77 | 33 | 721 | 80 | 72 | 13 | 94 | 98 | 19 | 66 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 61 | 740 | 77 | 33 | 721 | 80 | 72 | 13 | 94 | 98 | 19 | 66 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 61 | 740 | 77 | 33 | 721 | 80 | 72 | 13 | 94 | 98 | 19 | 66 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 61 | 740 | 77 | 33 | 721 | 80 | 72 | 13 | 94 | 98 | 19 | 66 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.81 | 0.19 | 1.00 | 1.80 | 0.20 | 0.85 | 0.15 | 1.00 | 0.84 | 0.16 | 1.00 |
| Final Sat.: | 1600 | 2898 | 302 | 1600 | 2880 | 320 | 1355 | 245 | 1600 | 1340 | 260 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.26 | 0.26 | 0.02 | 0.25 | 0.25 | 0.05 | 0.05 | 0.06 | 0.06 | 0.07 | 0.04 |
| Crit Moves: | **** | | | **** | | | | | **** | **** | | |

12021 Woodruff Avenue Industrial Building Project
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Woodruff Avenue/Stewart and Gray Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.594 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 40 | Level Of Service: | A |

| Street Name: | Woodruff Avenue | | | | | | Stewart and Gray Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 158 | 608 | 123 | 23 | 527 | 148 | 170 | 550 | 225 | 94 | 284 | 55 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 158 | 608 | 123 | 23 | 527 | 148 | 170 | 550 | 225 | 94 | 284 | 55 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 158 | 608 | 123 | 23 | 527 | 148 | 170 | 550 | 225 | 94 | 284 | 55 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 158 | 608 | 123 | 23 | 527 | 148 | 170 | 550 | 225 | 94 | 284 | 55 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 158 | 608 | 123 | 23 | 527 | 148 | 170 | 550 | 225 | 94 | 284 | 55 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 158 | 608 | 123 | 23 | 527 | 148 | 170 | 550 | 225 | 94 | 284 | 55 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.66 | 0.34 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1600 | 2662 | 538 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.23 | 0.23 | 0.01 | 0.16 | 0.09 | 0.11 | 0.17 | 0.14 | 0.06 | 0.09 | 0.03 |
| Crit Moves: | **** | | | **** | | | **** | | | **** | | |

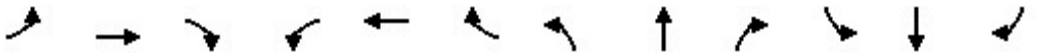
12021 Woodruff Avenue Industrial Building Project
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Stewart and Gray Road/Firestone Boulevard

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.511 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 34 | Level Of Service: | A |

| Street Name: | Stewart and Gray Road | | | | | | Firestone Boulevard | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Permitted | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 0 | 0 2 | 1 0 | 0 | 1 0 | 0 0 | 3 | 0 1 | 2 0 | 2 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 709 | 81 | 28 | 42 | 0 | 1194 | 64 | 358 | 1296 | 40 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 709 | 81 | 28 | 42 | 0 | 1194 | 64 | 358 | 1296 | 40 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 709 | 81 | 28 | 42 | 0 | 1194 | 64 | 358 | 1296 | 40 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 0 | 709 | 81 | 28 | 42 | 0 | 1194 | 64 | 358 | 1296 | 40 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 709 | 81 | 28 | 42 | 0 | 1194 | 64 | 358 | 1296 | 40 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 709 | 81 | 28 | 42 | 0 | 1194 | 64 | 358 | 1296 | 40 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 0.00 | 2.00 | 1.00 | 0.40 | 0.60 | 0.00 | 3.00 | 1.00 | 2.00 | 2.91 | 0.09 |
| Final Sat.: | 0 | 0 | 3200 | 1600 | 640 | 960 | 0 | 4800 | 1600 | 3200 | 4656 | 144 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.22 | 0.05 | 0.04 | 0.04 | 0.00 | 0.25 | 0.04 | 0.11 | 0.28 | 0.28 |
| Crit Moves: | **** | | | **** | | | | **** | | **** | | |



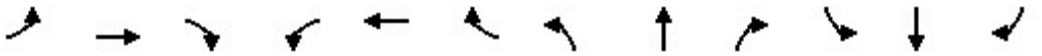
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 1290 | 599 | 140 | 1403 | 0 | 0 | 0 | 0 | 151 | 0 | 285 |
| Future Volume (veh/h) | 0 | 1290 | 599 | 140 | 1403 | 0 | 0 | 0 | 0 | 151 | 0 | 285 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 1.00 | | | | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | | | | No | |
| Adj Sat Flow, veh/h/ln | 0 | 1870 | 1870 | 1870 | 1870 | 0 | | | | 1870 | 0 | 1870 |
| Adj Flow Rate, veh/h | 0 | 1316 | 611 | 143 | 1432 | 0 | | | | 154 | 0 | 291 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | | | | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 0 | 2 |
| Cap, veh/h | 0 | 2182 | 940 | 167 | 2667 | 0 | | | | 231 | 0 | 361 |
| Arrive On Green | 0.00 | 0.61 | 0.61 | 0.09 | 0.75 | 0.00 | | | | 0.13 | 0.00 | 0.13 |
| Sat Flow, veh/h | 0 | 3647 | 1531 | 1781 | 3647 | 0 | | | | 1781 | 0 | 2790 |
| Grp Volume(v), veh/h | 0 | 1316 | 611 | 143 | 1432 | 0 | | | | 154 | 0 | 291 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1777 | 1531 | 1781 | 1777 | 0 | | | | 1781 | 0 | 1395 |
| Q Serve(g_s), s | 0.0 | 25.0 | 28.2 | 8.7 | 18.5 | 0.0 | | | | 9.1 | 0.0 | 11.2 |
| Cycle Q Clear(g_c), s | 0.0 | 25.0 | 28.2 | 8.7 | 18.5 | 0.0 | | | | 9.1 | 0.0 | 11.2 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 2182 | 940 | 167 | 2667 | 0 | | | | 231 | 0 | 361 |
| V/C Ratio(X) | 0.00 | 0.60 | 0.65 | 0.86 | 0.54 | 0.00 | | | | 0.67 | 0.00 | 0.81 |
| Avail Cap(c_a), veh/h | 0 | 2182 | 940 | 167 | 2667 | 0 | | | | 457 | 0 | 715 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 13.0 | 13.6 | 49.1 | 5.7 | 0.0 | | | | 45.6 | 0.0 | 46.5 |
| Incr Delay (d2), s/veh | 0.0 | 1.2 | 3.5 | 33.2 | 0.8 | 0.0 | | | | 2.5 | 0.0 | 3.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 9.2 | 9.5 | 5.3 | 5.4 | 0.0 | | | | 4.2 | 0.0 | 4.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 14.3 | 17.1 | 82.3 | 6.5 | 0.0 | | | | 48.1 | 0.0 | 49.7 |
| LnGrp LOS | A | B | B | F | A | A | | | | D | A | D |
| Approach Vol, veh/h | | 1927 | | | 1575 | | | | | | 445 | |
| Approach Delay, s/veh | | 15.2 | | | 13.4 | | | | | | 49.2 | |
| Approach LOS | | B | | | B | | | | | | D | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 15.0 | 74.0 | | 21.0 | | 89.0 |
| Change Period (Y+Rc), s | * 4.7 | 6.4 | | 6.8 | | 6.4 |
| Max Green Setting (Gmax), s | * 10 | 53.6 | | 28.2 | | 53.6 |
| Max Q Clear Time (g_c+I1), s | 10.7 | 30.2 | | 13.2 | | 20.5 |
| Green Ext Time (p_c), s | 0.0 | 19.7 | | 1.1 | | 22.5 |

| Intersection Summary | | |
|---|---|---|
| HCM 6th Ctrl Delay | | 18.3 |
| HCM 6th LOS | | B |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 470 | 724 | 230 | 141 | 813 | 120 | 173 | 318 | 162 | 241 | 36 | 559 |
| Future Volume (veh/h) | 470 | 724 | 230 | 141 | 813 | 120 | 173 | 318 | 162 | 241 | 36 | 559 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.97 | 1.00 | | 0.96 | 1.00 | | 0.92 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 495 | 762 | 242 | 148 | 856 | 126 | 182 | 335 | 171 | 254 | 38 | 588 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 777 | 1241 | 394 | 113 | 1100 | 477 | 360 | 457 | 228 | 256 | 134 | 461 |
| Arrive On Green | 0.22 | 0.47 | 0.47 | 0.06 | 0.31 | 0.31 | 0.20 | 0.20 | 0.20 | 0.07 | 0.07 | 0.07 |
| Sat Flow, veh/h | 3456 | 2636 | 837 | 1781 | 3554 | 1540 | 1781 | 2265 | 1128 | 3563 | 1870 | 1456 |
| Grp Volume(v), veh/h | 495 | 514 | 490 | 148 | 856 | 126 | 182 | 261 | 245 | 254 | 38 | 588 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1697 | 1781 | 1777 | 1540 | 1781 | 1777 | 1616 | 1781 | 1870 | 1456 |
| Q Serve(g_s), s | 14.3 | 23.7 | 23.7 | 7.0 | 24.1 | 6.8 | 10.0 | 15.1 | 15.7 | 7.8 | 2.1 | 7.9 |
| Cycle Q Clear(g_c), s | 14.3 | 23.7 | 23.7 | 7.0 | 24.1 | 6.8 | 10.0 | 15.1 | 15.7 | 7.8 | 2.1 | 7.9 |
| Prop In Lane | 1.00 | | 0.49 | 1.00 | | 1.00 | 1.00 | | 0.70 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 777 | 837 | 799 | 113 | 1100 | 477 | 360 | 359 | 326 | 256 | 134 | 461 |
| V/C Ratio(X) | 0.64 | 0.61 | 0.61 | 1.31 | 0.78 | 0.26 | 0.51 | 0.73 | 0.75 | 0.99 | 0.28 | 1.28 |
| Avail Cap(c_a), veh/h | 777 | 837 | 799 | 113 | 1228 | 532 | 534 | 533 | 485 | 256 | 134 | 461 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 38.6 | 21.7 | 21.7 | 51.5 | 34.5 | 28.6 | 39.0 | 41.1 | 41.3 | 51.0 | 48.4 | 38.9 |
| Incr Delay (d2), s/veh | 2.4 | 3.4 | 3.5 | 187.3 | 3.7 | 0.6 | 0.8 | 2.1 | 2.7 | 54.1 | 0.8 | 139.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.1 | 10.1 | 9.6 | 9.0 | 10.6 | 2.5 | 4.4 | 6.8 | 6.5 | 5.4 | 1.0 | 30.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 41.0 | 25.0 | 25.2 | 238.8 | 38.3 | 29.2 | 39.8 | 43.2 | 44.0 | 105.1 | 49.2 | 178.9 |
| LnGrp LOS | D | C | C | F | D | C | D | D | D | F | D | F |
| Approach Vol, veh/h | | 1499 | | | 1130 | | | 688 | | | 880 | |
| Approach Delay, s/veh | | 30.4 | | | 63.5 | | | 42.6 | | | 152.0 | |
| Approach LOS | | C | | | E | | | D | | | F | |

| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 11.7 | 57.2 | | 13.3 | 29.4 | 39.4 | | 27.8 | | | | |
| Change Period (Y+Rc), s | * 4.7 | 5.4 | | 5.4 | * 4.7 | 5.4 | | 5.6 | | | | |
| Max Green Setting (Gmax), s | * 7 | 26.0 | | 7.9 | * 10 | 38.0 | | 33.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.0 | 25.7 | | 9.9 | 16.3 | 26.1 | | 17.7 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.3 | | 0.0 | 0.0 | 7.3 | | 2.7 | | | | |

| Intersection Summary | | |
|---|---|---|
| HCM 6th Ctrl Delay | | 66.8 |
| HCM 6th LOS | | E |

**Notes**

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Woodruff Avenue/Washburn Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.642 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 44 | Level Of Service: | B |

| Street Name: | Woodruff Avenue | | | | | | Washburn Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 0 1 | 0 | 0 1 | 0 1 | 0 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 92 | 776 | 255 | 59 | 726 | 122 | 93 | 72 | 112 | 128 | 14 | 67 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 92 | 776 | 255 | 59 | 726 | 122 | 93 | 72 | 112 | 128 | 14 | 67 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 92 | 776 | 255 | 59 | 726 | 122 | 93 | 72 | 112 | 128 | 14 | 67 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 92 | 776 | 255 | 59 | 726 | 122 | 93 | 72 | 112 | 128 | 14 | 67 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 92 | 776 | 255 | 59 | 726 | 122 | 93 | 72 | 112 | 128 | 14 | 67 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 92 | 776 | 255 | 59 | 726 | 122 | 93 | 72 | 112 | 128 | 14 | 67 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.51 | 0.49 | 1.00 | 1.71 | 0.29 | 0.56 | 0.44 | 1.00 | 0.90 | 0.10 | 1.00 |
| Final Sat.: | 1600 | 2409 | 791 | 1600 | 2740 | 460 | 902 | 698 | 1600 | 1442 | 158 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.32 | 0.32 | 0.04 | 0.27 | 0.26 | 0.06 | 0.10 | 0.07 | 0.08 | 0.09 | 0.04 |
| Crit Moves: | | **** | | | **** | | | **** | | | **** | |

12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Woodruff Avenue/Stewart and Gray Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.615 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 41 | Level Of Service: | B |

| Street Name: | Woodruff Avenue | | | | | | Stewart and Gray Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 148 | 723 | 75 | 24 | 581 | 144 | 92 | 532 | 214 | 119 | 311 | 42 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 148 | 723 | 75 | 24 | 581 | 144 | 92 | 532 | 214 | 119 | 311 | 42 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 148 | 723 | 75 | 24 | 581 | 144 | 92 | 532 | 214 | 119 | 311 | 42 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 148 | 723 | 75 | 24 | 581 | 144 | 92 | 532 | 214 | 119 | 311 | 42 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 148 | 723 | 75 | 24 | 581 | 144 | 92 | 532 | 214 | 119 | 311 | 42 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 148 | 723 | 75 | 24 | 581 | 144 | 92 | 532 | 214 | 119 | 311 | 42 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.81 | 0.19 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1600 | 2899 | 301 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.25 | 0.25 | 0.02 | 0.18 | 0.09 | 0.06 | 0.17 | 0.13 | 0.07 | 0.10 | 0.03 |
| Crit Moves: | **** | | | **** | | | **** | | | **** | | |

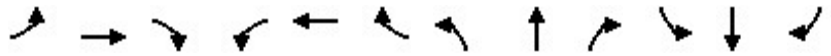
12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Stewart and Gray Road/Firestone Boulevard

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.524 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 54 | Level Of Service: | A |

| Street Name: | Stewart and Gray Road | | | | | | Firestone Boulevard | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Permitted | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 0 | 0 2 | 1 0 | 0 | 1 0 | 0 0 | 3 | 0 1 | 2 0 | 2 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 634 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 634 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 634 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 0 | 634 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 634 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 634 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 0.00 | 2.00 | 1.00 | 0.45 | 0.55 | 0.00 | 3.00 | 1.00 | 2.00 | 2.96 | 0.04 |
| Final Sat.: | 0 | 0 | 3200 | 1600 | 716 | 884 | 0 | 4800 | 1600 | 3200 | 4735 | 65 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.20 | 0.07 | 0.04 | 0.04 | 0.00 | 0.20 | 0.02 | 0.13 | 0.35 | 0.35 |
| Crit Moves: | **** | | | **** | | | | | | | **** | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↑↑ | ↱ | ↰ | ↑↑ | | | | | ↰ | | ↱↱ |
| Traffic Volume (veh/h) | 0 | 1102 | 602 | 221 | 1772 | 0 | 0 | 0 | 0 | 94 | 0 | 399 |
| Future Volume (veh/h) | 0 | 1102 | 602 | 221 | 1772 | 0 | 0 | 0 | 0 | 94 | 0 | 399 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 1.00 | | | | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | | | | No | |
| Adj Sat Flow, veh/h/ln | 0 | 1870 | 1870 | 1870 | 1870 | 0 | | | | 1870 | 0 | 1870 |
| Adj Flow Rate, veh/h | 0 | 1136 | 621 | 228 | 1827 | 0 | | | | 97 | 0 | 411 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | | | | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 0 | 2 |
| Cap, veh/h | 0 | 2031 | 874 | 167 | 2516 | 0 | | | | 306 | 0 | 480 |
| Arrive On Green | 0.00 | 0.57 | 0.57 | 0.09 | 0.71 | 0.00 | | | | 0.17 | 0.00 | 0.17 |
| Sat Flow, veh/h | 0 | 3647 | 1530 | 1781 | 3647 | 0 | | | | 1781 | 0 | 2790 |
| Grp Volume(v), veh/h | 0 | 1136 | 621 | 228 | 1827 | 0 | | | | 97 | 0 | 411 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1777 | 1530 | 1781 | 1777 | 0 | | | | 1781 | 0 | 1395 |
| Q Serve(g_s), s | 0.0 | 22.1 | 32.2 | 10.3 | 34.0 | 0.0 | | | | 5.2 | 0.0 | 15.7 |
| Cycle Q Clear(g_c), s | 0.0 | 22.1 | 32.2 | 10.3 | 34.0 | 0.0 | | | | 5.2 | 0.0 | 15.7 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 2031 | 874 | 167 | 2516 | 0 | | | | 306 | 0 | 480 |
| V/C Ratio(X) | 0.00 | 0.56 | 0.71 | 1.37 | 0.73 | 0.00 | | | | 0.32 | 0.00 | 0.86 |
| Avail Cap(c_a), veh/h | 0 | 2031 | 874 | 167 | 2516 | 0 | | | | 457 | 0 | 715 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 14.8 | 17.0 | 49.8 | 9.7 | 0.0 | | | | 39.9 | 0.0 | 44.2 |
| Incr Delay (d2), s/veh | 0.0 | 1.1 | 4.9 | 198.6 | 1.9 | 0.0 | | | | 0.4 | 0.0 | 5.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 8.5 | 11.4 | 13.7 | 11.2 | 0.0 | | | | 2.3 | 0.0 | 5.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 16.0 | 21.9 | 248.4 | 11.5 | 0.0 | | | | 40.3 | 0.0 | 50.1 |
| LnGrp LOS | A | B | C | F | B | A | | | | D | A | D |
| Approach Vol, veh/h | | 1757 | | | 2055 | | | | | | 508 | |
| Approach Delay, s/veh | | 18.0 | | | 37.8 | | | | | | 48.2 | |
| Approach LOS | | B | | | D | | | | | | D | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 15.0 | 69.3 | | 25.7 | | 84.3 |
| Change Period (Y+Rc), s* | 4.7 | 6.4 | | 6.8 | | 6.4 |
| Max Green Setting (Gmax), s | 10.3 | 53.6 | | 28.2 | | 53.6 |
| Max Q Clear Time (g_c+I1), s | 12.3 | 34.2 | | 17.7 | | 36.0 |
| Green Ext Time (p_c), s | 0.0 | 15.7 | | 1.2 | | 15.8 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 31.0 |
| HCM 6th LOS | C |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 443 | 712 | 48 | 94 | 995 | 183 | 85 | 240 | 77 | 140 | 9 | 884 |
| Future Volume (veh/h) | 443 | 712 | 48 | 94 | 995 | 183 | 85 | 240 | 77 | 140 | 9 | 884 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.97 | 1.00 | | 0.95 | 1.00 | | 0.92 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 457 | 734 | 49 | 97 | 1026 | 189 | 88 | 247 | 79 | 144 | 9 | 911 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 870 | 1765 | 118 | 113 | 1189 | 516 | 267 | 395 | 123 | 256 | 134 | 503 |
| Arrive On Green | 0.25 | 0.52 | 0.52 | 0.06 | 0.33 | 0.33 | 0.15 | 0.15 | 0.15 | 0.07 | 0.07 | 0.07 |
| Sat Flow, veh/h | 3456 | 3376 | 225 | 1781 | 3554 | 1542 | 1781 | 2636 | 817 | 3563 | 1870 | 1456 |
| Grp Volume(v), veh/h | 457 | 386 | 397 | 97 | 1026 | 189 | 88 | 164 | 162 | 144 | 9 | 911 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1824 | 1781 | 1777 | 1542 | 1781 | 1777 | 1677 | 1781 | 1870 | 1456 |
| Q Serve(g_s), s | 12.5 | 14.6 | 14.6 | 5.9 | 29.7 | 10.2 | 4.9 | 9.5 | 10.0 | 4.3 | 0.5 | 7.9 |
| Cycle Q Clear(g_c), s | 12.5 | 14.6 | 14.6 | 5.9 | 29.7 | 10.2 | 4.9 | 9.5 | 10.0 | 4.3 | 0.5 | 7.9 |
| Prop In Lane | 1.00 | | 0.12 | 1.00 | | 1.00 | 1.00 | | 0.49 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 870 | 929 | 953 | 113 | 1189 | 516 | 267 | 266 | 251 | 256 | 134 | 503 |
| V/C Ratio(X) | 0.53 | 0.42 | 0.42 | 0.86 | 0.86 | 0.37 | 0.33 | 0.62 | 0.64 | 0.56 | 0.07 | 1.81 |
| Avail Cap(c_a), veh/h | 870 | 929 | 953 | 113 | 1228 | 533 | 534 | 533 | 503 | 256 | 134 | 503 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 35.5 | 16.0 | 16.0 | 51.0 | 34.2 | 27.7 | 41.8 | 43.8 | 44.0 | 49.4 | 47.6 | 37.5 |
| Incr Delay (d2), s/veh | 1.1 | 1.4 | 1.3 | 43.6 | 7.0 | 0.9 | 0.5 | 1.7 | 2.1 | 2.4 | 0.2 | 372.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.3 | 5.9 | 6.1 | 4.0 | 13.4 | 3.8 | 2.2 | 4.3 | 4.3 | 2.0 | 0.2 | 65.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 36.6 | 17.4 | 17.3 | 94.6 | 41.3 | 28.7 | 42.3 | 45.5 | 46.0 | 51.8 | 47.8 | 409.6 |
| LnGrp LOS | D | B | B | F | D | C | D | D | D | D | D | F |
| Approach Vol, veh/h | | 1240 | | | 1312 | | | 414 | | | 1064 | |
| Approach Delay, s/veh | | 24.5 | | | 43.4 | | | 45.0 | | | 358.1 | |
| Approach LOS | | C | | | D | | | D | | | F | |

| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 11.7 | 62.9 | | 13.3 | 32.4 | 42.2 | | 22.1 |
| Change Period (Y+Rc), s | * 4.7 | 5.4 | | 5.4 | * 4.7 | 5.4 | | 5.6 |
| Max Green Setting (Gmax), s | * 7 | 26.0 | | 7.9 | * 10 | 38.0 | | 33.0 |
| Max Q Clear Time (g_c+I1), s | 7.9 | 16.6 | | 9.9 | 14.5 | 31.7 | | 12.0 |
| Green Ext Time (p_c), s | 0.0 | 5.0 | | 0.0 | 0.0 | 4.9 | | 1.7 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 120.8 |
| HCM 6th LOS | F |

**Notes**

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Woodruff Avenue/Washburn Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.514 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 34 | Level Of Service: | A |

| Street Name: | Woodruff Avenue | | | | | | Washburn Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 0 1 | 0 | 0 1 | 0 1 | 0 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 65 | 755 | 77 | 33 | 733 | 81 | 73 | 13 | 98 | 98 | 19 | 66 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 65 | 755 | 77 | 33 | 733 | 81 | 73 | 13 | 98 | 98 | 19 | 66 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 65 | 755 | 77 | 33 | 733 | 81 | 73 | 13 | 98 | 98 | 19 | 66 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 65 | 755 | 77 | 33 | 733 | 81 | 73 | 13 | 98 | 98 | 19 | 66 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 65 | 755 | 77 | 33 | 733 | 81 | 73 | 13 | 98 | 98 | 19 | 66 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 65 | 755 | 77 | 33 | 733 | 81 | 73 | 13 | 98 | 98 | 19 | 66 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.81 | 0.19 | 1.00 | 1.80 | 0.20 | 0.85 | 0.15 | 1.00 | 0.84 | 0.16 | 1.00 |
| Final Sat.: | 1600 | 2904 | 296 | 1600 | 2882 | 318 | 1358 | 242 | 1600 | 1340 | 260 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.26 | 0.26 | 0.02 | 0.25 | 0.25 | 0.05 | 0.05 | 0.06 | 0.06 | 0.07 | 0.04 |
| Crit Moves: | **** | | | **** | | | **** | | | **** | | |

12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Woodruff Avenue/Stewart and Gray Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.610 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 41 | Level Of Service: | B |

| Street Name: | Woodruff Avenue | | | | | | Stewart and Gray Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 163 | 617 | 127 | 23 | 534 | 149 | 171 | 581 | 230 | 95 | 299 | 55 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 163 | 617 | 127 | 23 | 534 | 149 | 171 | 581 | 230 | 95 | 299 | 55 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 163 | 617 | 127 | 23 | 534 | 149 | 171 | 581 | 230 | 95 | 299 | 55 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 163 | 617 | 127 | 23 | 534 | 149 | 171 | 581 | 230 | 95 | 299 | 55 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 163 | 617 | 127 | 23 | 534 | 149 | 171 | 581 | 230 | 95 | 299 | 55 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 163 | 617 | 127 | 23 | 534 | 149 | 171 | 581 | 230 | 95 | 299 | 55 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.66 | 0.34 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1600 | 2654 | 546 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.23 | 0.23 | 0.01 | 0.17 | 0.09 | 0.11 | 0.18 | 0.14 | 0.06 | 0.09 | 0.03 |
| Crit Moves: | **** | | | **** | | | **** | | | **** | | |

12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Stewart and Gray Road/Firestone Boulevard

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.531 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 35 | Level Of Service: | A |

| Street Name: | Stewart and Gray Road | | | | | | Firestone Boulevard | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Permitted | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 0 | 0 2 | 1 0 | 0 | 1 0 | 0 0 | 3 | 0 1 | 2 0 | 2 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 744 | 82 | 28 | 42 | 0 | 1261 | 64 | 374 | 1364 | 40 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 744 | 82 | 28 | 42 | 0 | 1261 | 64 | 374 | 1364 | 40 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 744 | 82 | 28 | 42 | 0 | 1261 | 64 | 374 | 1364 | 40 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 0 | 744 | 82 | 28 | 42 | 0 | 1261 | 64 | 374 | 1364 | 40 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 744 | 82 | 28 | 42 | 0 | 1261 | 64 | 374 | 1364 | 40 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 744 | 82 | 28 | 42 | 0 | 1261 | 64 | 374 | 1364 | 40 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 0.00 | 2.00 | 1.00 | 0.40 | 0.60 | 0.00 | 3.00 | 1.00 | 2.00 | 2.91 | 0.09 |
| Final Sat.: | 0 | 0 | 3200 | 1600 | 640 | 960 | 0 | 4800 | 1600 | 3200 | 4663 | 137 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.23 | 0.05 | 0.04 | 0.04 | 0.00 | 0.26 | 0.04 | 0.12 | 0.29 | 0.29 |
| Crit Moves: | **** | | | **** | | | | **** | | **** | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 1356 | 635 | 143 | 1459 | 0 | 0 | 0 | 0 | 155 | 0 | 314 |
| Future Volume (veh/h) | 0 | 1356 | 635 | 143 | 1459 | 0 | 0 | 0 | 0 | 155 | 0 | 314 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 1.00 | | | | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | | | | No | |
| Adj Sat Flow, veh/h/ln | 0 | 1870 | 1870 | 1870 | 1870 | 0 | | | | 1870 | 0 | 1870 |
| Adj Flow Rate, veh/h | 0 | 1384 | 648 | 146 | 1489 | 0 | | | | 158 | 0 | 320 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | | | | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 0 | 2 |
| Cap, veh/h | 0 | 2144 | 924 | 167 | 2629 | 0 | | | | 250 | 0 | 391 |
| Arrive On Green | 0.00 | 0.60 | 0.60 | 0.09 | 0.74 | 0.00 | | | | 0.14 | 0.00 | 0.14 |
| Sat Flow, veh/h | 0 | 3647 | 1531 | 1781 | 3647 | 0 | | | | 1781 | 0 | 2790 |
| Grp Volume(v), veh/h | 0 | 1384 | 648 | 146 | 1489 | 0 | | | | 158 | 0 | 320 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1777 | 1531 | 1781 | 1777 | 0 | | | | 1781 | 0 | 1395 |
| Q Serve(g_s), s | 0.0 | 27.8 | 32.0 | 8.9 | 20.6 | 0.0 | | | | 9.2 | 0.0 | 12.3 |
| Cycle Q Clear(g_c), s | 0.0 | 27.8 | 32.0 | 8.9 | 20.6 | 0.0 | | | | 9.2 | 0.0 | 12.3 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 2144 | 924 | 167 | 2629 | 0 | | | | 250 | 0 | 391 |
| V/C Ratio(X) | 0.00 | 0.65 | 0.70 | 0.88 | 0.57 | 0.00 | | | | 0.63 | 0.00 | 0.82 |
| Avail Cap(c_a), veh/h | 0 | 2144 | 924 | 167 | 2629 | 0 | | | | 457 | 0 | 715 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 14.2 | 15.0 | 49.2 | 6.4 | 0.0 | | | | 44.6 | 0.0 | 45.9 |
| Incr Delay (d2), s/veh | 0.0 | 1.5 | 4.4 | 36.8 | 0.9 | 0.0 | | | | 2.0 | 0.0 | 3.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 10.4 | 11.0 | 5.6 | 6.3 | 0.0 | | | | 4.2 | 0.0 | 4.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 15.7 | 19.4 | 86.0 | 7.3 | 0.0 | | | | 46.6 | 0.0 | 49.1 |
| LnGrp LOS | A | B | B | F | A | A | | | | D | A | D |
| Approach Vol, veh/h | | 2032 | | | 1635 | | | | | | 478 | |
| Approach Delay, s/veh | | 16.9 | | | 14.3 | | | | | | 48.3 | |
| Approach LOS | | B | | | B | | | | | | D | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 15.0 | 72.8 | | 22.2 | | 87.8 |
| Change Period (Y+Rc), s* | 4.7 | 6.4 | | 6.8 | | 6.4 |
| Max Green Setting (Gmax), s | 10.3 | 53.6 | | 28.2 | | 53.6 |
| Max Q Clear Time (g_c+I1), s | 10.9 | 34.0 | | 14.3 | | 22.6 |
| Green Ext Time (p_c), s | 0.0 | 17.3 | | 1.2 | | 22.3 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 19.5 |
| HCM 6th LOS | B |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 505 | 753 | 235 | 142 | 838 | 120 | 178 | 322 | 164 | 242 | 40 | 589 |
| Future Volume (veh/h) | 505 | 753 | 235 | 142 | 838 | 120 | 178 | 322 | 164 | 242 | 40 | 589 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.97 | 1.00 | | 0.96 | 1.00 | | 0.92 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 532 | 793 | 247 | 149 | 882 | 126 | 187 | 339 | 173 | 255 | 42 | 620 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 756 | 1243 | 387 | 113 | 1116 | 484 | 363 | 461 | 230 | 256 | 134 | 451 |
| Arrive On Green | 0.22 | 0.47 | 0.47 | 0.06 | 0.31 | 0.31 | 0.20 | 0.20 | 0.20 | 0.07 | 0.07 | 0.07 |
| Sat Flow, veh/h | 3456 | 2650 | 825 | 1781 | 3554 | 1540 | 1781 | 2265 | 1128 | 3563 | 1870 | 1456 |
| Grp Volume(v), veh/h | 532 | 532 | 508 | 149 | 882 | 126 | 187 | 264 | 248 | 255 | 42 | 620 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1699 | 1781 | 1777 | 1540 | 1781 | 1777 | 1616 | 1781 | 1870 | 1456 |
| Q Serve(g_s), s | 15.6 | 24.9 | 24.9 | 7.0 | 24.9 | 6.7 | 10.3 | 15.3 | 15.9 | 7.9 | 2.3 | 7.9 |
| Cycle Q Clear(g_c), s | 15.6 | 24.9 | 24.9 | 7.0 | 24.9 | 6.7 | 10.3 | 15.3 | 15.9 | 7.9 | 2.3 | 7.9 |
| Prop In Lane | 1.00 | | 0.49 | 1.00 | | 1.00 | 1.00 | | 0.70 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 756 | 834 | 797 | 113 | 1116 | 484 | 363 | 362 | 329 | 256 | 134 | 451 |
| V/C Ratio(X) | 0.70 | 0.64 | 0.64 | 1.31 | 0.79 | 0.26 | 0.52 | 0.73 | 0.75 | 1.00 | 0.31 | 1.37 |
| Avail Cap(c_a), veh/h | 756 | 834 | 797 | 113 | 1228 | 532 | 534 | 533 | 485 | 256 | 134 | 451 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 39.7 | 22.1 | 22.1 | 51.5 | 34.4 | 28.2 | 39.0 | 41.0 | 41.2 | 51.0 | 48.5 | 39.3 |
| Incr Delay (d2), s/veh | 3.7 | 3.7 | 3.9 | 190.7 | 4.1 | 0.6 | 0.8 | 2.1 | 2.9 | 55.3 | 1.0 | 181.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.9 | 10.6 | 10.2 | 9.1 | 11.0 | 2.5 | 4.6 | 6.9 | 6.6 | 5.5 | 1.1 | 34.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 43.4 | 25.8 | 26.0 | 242.2 | 38.5 | 28.8 | 39.8 | 43.1 | 44.1 | 106.3 | 49.4 | 221.0 |
| LnGrp LOS | D | C | C | F | D | C | D | D | D | F | D | F |
| Approach Vol, veh/h | | 1572 | | | 1157 | | | 699 | | | 917 | |
| Approach Delay, s/veh | | 31.8 | | | 63.7 | | | 42.6 | | | 181.3 | |
| Approach LOS | | C | | | E | | | D | | | F | |

| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 11.7 | 57.0 | | 13.3 | 28.8 | 39.9 | | 28.0 |
| Change Period (Y+Rc), s | * 4.7 | 5.4 | | 5.4 | * 4.7 | 5.4 | | 5.6 |
| Max Green Setting (Gmax), s | * 7 | 26.0 | | 7.9 | * 10 | 38.0 | | 33.0 |
| Max Q Clear Time (g_c+I1), s | 9.0 | 26.9 | | 9.9 | 17.6 | 26.9 | | 17.9 |
| Green Ext Time (p_c), s | 0.0 | 0.0 | | 0.0 | 0.0 | 7.0 | | 2.7 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 73.6 |
| HCM 6th LOS | E |

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects + Project
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Woodruff Avenue/Washburn Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.641 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 44 | Level Of Service: | B |

| Street Name: | Woodruff Avenue | | | | | | Washburn Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 0 1 | 0 | 0 1 | 0 1 | 0 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 92 | 776 | 255 | 59 | 726 | 122 | 93 | 72 | 112 | 128 | 14 | 67 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 92 | 776 | 255 | 59 | 726 | 122 | 93 | 72 | 112 | 128 | 14 | 67 |
| Added Vol: | 0 | -1 | 0 | 0 | 6 | 1 | -2 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 92 | 775 | 255 | 59 | 732 | 123 | 91 | 72 | 112 | 128 | 14 | 67 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 92 | 775 | 255 | 59 | 732 | 123 | 91 | 72 | 112 | 128 | 14 | 67 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 92 | 775 | 255 | 59 | 732 | 123 | 91 | 72 | 112 | 128 | 14 | 67 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 92 | 775 | 255 | 59 | 732 | 123 | 91 | 72 | 112 | 128 | 14 | 67 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.50 | 0.50 | 1.00 | 1.71 | 0.29 | 0.56 | 0.44 | 1.00 | 0.90 | 0.10 | 1.00 |
| Final Sat.: | 1600 | 2408 | 792 | 1600 | 2740 | 460 | 893 | 707 | 1600 | 1442 | 158 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.32 | 0.32 | 0.04 | 0.27 | 0.27 | 0.06 | 0.10 | 0.07 | 0.08 | 0.09 | 0.04 |
| Crit Moves: | | **** | | | **** | | | **** | | | **** | |

12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects + Project
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Woodruff Avenue/Stewart and Gray Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.620 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 42 | Level Of Service: | B |

| Street Name: | Woodruff Avenue | | | | | | Stewart and Gray Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 148 | 723 | 75 | 24 | 581 | 144 | 92 | 532 | 214 | 119 | 311 | 42 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 148 | 723 | 75 | 24 | 581 | 144 | 92 | 532 | 214 | 119 | 311 | 42 |
| Added Vol: | 3 | 3 | 45 | 0 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 151 | 726 | 120 | 24 | 580 | 144 | 92 | 532 | 213 | 119 | 311 | 42 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 151 | 726 | 120 | 24 | 580 | 144 | 92 | 532 | 213 | 119 | 311 | 42 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 151 | 726 | 120 | 24 | 580 | 144 | 92 | 532 | 213 | 119 | 311 | 42 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 151 | 726 | 120 | 24 | 580 | 144 | 92 | 532 | 213 | 119 | 311 | 42 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.72 | 0.28 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1600 | 2746 | 454 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.26 | 0.26 | 0.02 | 0.18 | 0.09 | 0.06 | 0.17 | 0.13 | 0.07 | 0.10 | 0.03 |
| Crit Moves: | **** | | | **** | | | | **** | | **** | | |

12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects + Project
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Stewart and Gray Road/Firestone Boulevard

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.524 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 54 | Level Of Service: | A |

| Street Name: | Stewart and Gray Road | | | | | | Firestone Boulevard | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Permitted | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 0 | 2 | 1 0 | 0 | 1 0 | 0 0 | 3 | 0 1 | 2 0 | 2 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 634 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 634 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| Added Vol: | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 679 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 0 | 679 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 679 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 679 | 113 | 30 | 37 | 0 | 972 | 26 | 424 | 1673 | 23 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 0.00 | 2.00 | 1.00 | 0.45 | 0.55 | 0.00 | 3.00 | 1.00 | 2.00 | 2.96 | 0.04 |
| Final Sat.: | 0 | 0 | 3200 | 1600 | 716 | 884 | 0 | 4800 | 1600 | 3200 | 4735 | 65 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.21 | 0.07 | 0.04 | 0.04 | 0.00 | 0.20 | 0.02 | 0.13 | 0.35 | 0.35 |
| Crit Moves: | **** | | | **** | | | | | | | **** | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↑↑ | ↱ | ↰ | ↑↑ | | | | | ↰ | | ↱↱ |
| Traffic Volume (veh/h) | 0 | 1125 | 624 | 221 | 1771 | 0 | 0 | 0 | 0 | 94 | 0 | 400 |
| Future Volume (veh/h) | 0 | 1125 | 624 | 221 | 1771 | 0 | 0 | 0 | 0 | 94 | 0 | 400 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.96 | 1.00 | | 1.00 | | | | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | | | | No | |
| Adj Sat Flow, veh/h/ln | 0 | 1870 | 1870 | 1870 | 1870 | 0 | | | | 1870 | 0 | 1870 |
| Adj Flow Rate, veh/h | 0 | 1160 | 643 | 228 | 1826 | 0 | | | | 97 | 0 | 412 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | | | | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 0 | 2 |
| Cap, veh/h | 0 | 2030 | 874 | 167 | 2515 | 0 | | | | 307 | 0 | 481 |
| Arrive On Green | 0.00 | 0.57 | 0.57 | 0.19 | 1.00 | 0.00 | | | | 0.17 | 0.00 | 0.17 |
| Sat Flow, veh/h | 0 | 3647 | 1530 | 1781 | 3647 | 0 | | | | 1781 | 0 | 2790 |
| Grp Volume(v), veh/h | 0 | 1160 | 643 | 228 | 1826 | 0 | | | | 97 | 0 | 412 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1777 | 1530 | 1781 | 1777 | 0 | | | | 1781 | 0 | 1395 |
| Q Serve(g_s), s | 0.0 | 22.9 | 34.2 | 10.3 | 0.0 | 0.0 | | | | 5.2 | 0.0 | 15.8 |
| Cycle Q Clear(g_c), s | 0.0 | 22.9 | 34.2 | 10.3 | 0.0 | 0.0 | | | | 5.2 | 0.0 | 15.8 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 2030 | 874 | 167 | 2515 | 0 | | | | 307 | 0 | 481 |
| V/C Ratio(X) | 0.00 | 0.57 | 0.74 | 1.37 | 0.73 | 0.00 | | | | 0.32 | 0.00 | 0.86 |
| Avail Cap(c_a), veh/h | 0 | 2030 | 874 | 167 | 2515 | 0 | | | | 457 | 0 | 715 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 0.10 | 0.10 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 15.0 | 17.4 | 44.7 | 0.0 | 0.0 | | | | 39.8 | 0.0 | 44.2 |
| Incr Delay (d2), s/veh | 0.0 | 1.2 | 5.5 | 169.1 | 0.2 | 0.0 | | | | 0.4 | 0.0 | 5.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 8.7 | 12.2 | 11.8 | 0.1 | 0.0 | | | | 2.3 | 0.0 | 5.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 16.2 | 22.9 | 213.8 | 0.2 | 0.0 | | | | 40.3 | 0.0 | 50.1 |
| LnGrp LOS | A | B | C | F | A | A | | | | D | A | D |
| Approach Vol, veh/h | | 1803 | | | 2054 | | | | | | 509 | |
| Approach Delay, s/veh | | 18.6 | | | 23.9 | | | | | | 48.2 | |
| Approach LOS | | B | | | C | | | | | | D | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 15.0 | 69.2 | | 25.8 | | 84.2 |
| Change Period (Y+Rc), s* | 4.7 | 6.4 | | 6.8 | | 6.4 |
| Max Green Setting (Gmax), s | 10.3 | 53.6 | | 28.2 | | 53.6 |
| Max Q Clear Time (g_c+I1), s | 12.3 | 36.2 | | 17.8 | | 2.0 |
| Green Ext Time (p_c), s | 0.0 | 14.6 | | 1.2 | | 40.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 24.5 |
| HCM 6th LOS | C |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 465 | 713 | 48 | 94 | 993 | 183 | 85 | 240 | 77 | 140 | 9 | 885 |
| Future Volume (veh/h) | 465 | 713 | 48 | 94 | 993 | 183 | 85 | 240 | 77 | 140 | 9 | 885 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.97 | 1.00 | | 0.95 | 1.00 | | 0.92 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 479 | 735 | 49 | 97 | 1024 | 189 | 88 | 247 | 79 | 144 | 9 | 912 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 870 | 1765 | 118 | 113 | 1189 | 516 | 267 | 395 | 123 | 256 | 134 | 504 |
| Arrive On Green | 0.50 | 1.00 | 1.00 | 0.06 | 0.33 | 0.33 | 0.15 | 0.15 | 0.15 | 0.07 | 0.07 | 0.07 |
| Sat Flow, veh/h | 3456 | 3376 | 225 | 1781 | 3554 | 1542 | 1781 | 2636 | 817 | 3563 | 1870 | 1456 |
| Grp Volume(v), veh/h | 479 | 387 | 397 | 97 | 1024 | 189 | 88 | 164 | 162 | 144 | 9 | 912 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1824 | 1781 | 1777 | 1542 | 1781 | 1777 | 1677 | 1781 | 1870 | 1456 |
| Q Serve(g_s), s | 10.5 | 0.0 | 0.0 | 5.9 | 29.6 | 10.2 | 4.9 | 9.5 | 10.0 | 4.3 | 0.5 | 7.9 |
| Cycle Q Clear(g_c), s | 10.5 | 0.0 | 0.0 | 5.9 | 29.6 | 10.2 | 4.9 | 9.5 | 10.0 | 4.3 | 0.5 | 7.9 |
| Prop In Lane | 1.00 | | 0.12 | 1.00 | | 1.00 | 1.00 | | 0.49 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 870 | 929 | 953 | 113 | 1189 | 516 | 267 | 266 | 251 | 256 | 134 | 504 |
| V/C Ratio(X) | 0.55 | 0.42 | 0.42 | 0.86 | 0.86 | 0.37 | 0.33 | 0.62 | 0.64 | 0.56 | 0.07 | 1.81 |
| Avail Cap(c_a), veh/h | 870 | 929 | 953 | 113 | 1228 | 533 | 534 | 533 | 503 | 256 | 134 | 504 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.81 | 0.81 | 0.81 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 23.0 | 0.0 | 0.0 | 51.0 | 34.2 | 27.8 | 41.8 | 43.8 | 44.0 | 49.4 | 47.6 | 37.5 |
| Incr Delay (d2), s/veh | 1.1 | 1.1 | 1.1 | 43.6 | 7.0 | 0.9 | 0.5 | 1.7 | 2.1 | 2.4 | 0.2 | 372.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.5 | 0.3 | 0.3 | 4.0 | 13.4 | 3.8 | 2.2 | 4.3 | 4.3 | 2.0 | 0.2 | 65.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 24.1 | 1.1 | 1.1 | 94.6 | 41.2 | 28.7 | 42.3 | 45.5 | 46.0 | 51.8 | 47.8 | 409.9 |
| LnGrp LOS | C | A | A | F | D | C | D | D | D | D | D | F |
| Approach Vol, veh/h | | 1263 | | | 1310 | | | 414 | | | 1065 | |
| Approach Delay, s/veh | | 9.8 | | | 43.3 | | | 45.0 | | | 358.4 | |
| Approach LOS | | A | | | D | | | D | | | F | |

| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 11.7 | 62.9 | | 13.3 | 32.4 | 42.2 | | 22.1 |
| Change Period (Y+Rc), s | * 4.7 | 5.4 | | 5.4 | * 4.7 | 5.4 | | 5.6 |
| Max Green Setting (Gmax), s | * 7 | 26.0 | | 7.9 | * 10 | 38.0 | | 33.0 |
| Max Q Clear Time (g_c+I1), s | 7.9 | 2.0 | | 9.9 | 12.5 | 31.6 | | 12.0 |
| Green Ext Time (p_c), s | 0.0 | 9.1 | | 0.0 | 0.0 | 5.0 | | 1.7 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 115.9 |
| HCM 6th LOS | F |

**Notes**

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 1 | 0 | 983 | 900 | 5 |
| Future Vol, veh/h | 3 | 1 | 0 | 983 | 900 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 1 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 3 | 1 | 0 | 1068 | 978 | 5 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1515 | 492 | 983 | 0 | - | 0 |
| Stage 1 | 981 | - | - | - | - | - |
| Stage 2 | 534 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | 4.14 | - | - | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | 2.22 | - | - | - |
| Pot Cap-1 Maneuver | 110 | 522 | 698 | - | - | - |
| Stage 1 | 324 | - | - | - | - | - |
| Stage 2 | 552 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 110 | 522 | 698 | - | - | - |
| Mov Cap-2 Maneuver | 232 | - | - | - | - | - |
| Stage 1 | 324 | - | - | - | - | - |
| Stage 2 | 552 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 18.6 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 698 | - | 269 | - | - |
| HCM Lane V/C Ratio | - | - | 0.016 | - | - |
| HCM Control Delay (s) | 0 | - | 18.6 | - | - |
| HCM Lane LOS | A | - | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.7 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 48 | 6 | 0 | 934 | 909 | 0 |
| Future Vol, veh/h | 48 | 6 | 0 | 934 | 909 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 60 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 52 | 7 | 0 | 1015 | 988 | 0 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1496 | 494 | 988 | 0 | - | 0 |
| Stage 1 | 988 | - | - | - | - | - |
| Stage 2 | 508 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | 4.14 | - | - | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | 2.22 | - | - | - |
| Pot Cap-1 Maneuver | 113 | 521 | 695 | - | - | - |
| Stage 1 | 321 | - | - | - | - | - |
| Stage 2 | 569 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 113 | 521 | 695 | - | - | - |
| Mov Cap-2 Maneuver | 234 | - | - | - | - | - |
| Stage 1 | 321 | - | - | - | - | - |
| Stage 2 | 569 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 23.9 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 695 | - | 249 | - | - |
| HCM Lane V/C Ratio | - | - | 0.236 | - | - |
| HCM Control Delay (s) | 0 | - | 23.9 | - | - |
| HCM Lane LOS | A | - | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.9 | - | - |

12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects + Project
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Woodruff Avenue/Washburn Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.514 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 34 | Level Of Service: | A |

| Street Name: | Woodruff Avenue | | | | | | Washburn Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 0 1 | 0 | 0 1 | 0 1 | 0 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 65 | 755 | 77 | 33 | 733 | 81 | 73 | 13 | 98 | 98 | 19 | 66 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 65 | 755 | 77 | 33 | 733 | 81 | 73 | 13 | 98 | 98 | 19 | 66 |
| Added Vol: | 0 | 4 | 0 | 0 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 65 | 759 | 77 | 33 | 734 | 80 | 73 | 13 | 98 | 98 | 19 | 66 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 65 | 759 | 77 | 33 | 734 | 80 | 73 | 13 | 98 | 98 | 19 | 66 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 65 | 759 | 77 | 33 | 734 | 80 | 73 | 13 | 98 | 98 | 19 | 66 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 65 | 759 | 77 | 33 | 734 | 80 | 73 | 13 | 98 | 98 | 19 | 66 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.82 | 0.18 | 1.00 | 1.80 | 0.20 | 0.85 | 0.15 | 1.00 | 0.84 | 0.16 | 1.00 |
| Final Sat.: | 1600 | 2905 | 295 | 1600 | 2886 | 314 | 1358 | 242 | 1600 | 1340 | 260 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.26 | 0.26 | 0.02 | 0.25 | 0.25 | 0.05 | 0.05 | 0.06 | 0.06 | 0.07 | 0.04 |
| Crit Moves: | **** | | | **** | | | **** | | | **** | | |

12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects + Project
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Woodruff Avenue/Stewart and Gray Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.631 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 43 | Level Of Service: | B |

| Street Name: | Woodruff Avenue | | | | | | Stewart and Gray Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 163 | 617 | 127 | 23 | 534 | 149 | 171 | 581 | 230 | 95 | 299 | 55 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 163 | 617 | 127 | 23 | 534 | 149 | 171 | 581 | 230 | 95 | 299 | 55 |
| Added Vol: | 0 | 0 | 13 | 0 | 2 | 0 | 0 | 0 | 2 | 33 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 163 | 617 | 140 | 23 | 536 | 149 | 171 | 581 | 232 | 128 | 299 | 55 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 163 | 617 | 140 | 23 | 536 | 149 | 171 | 581 | 232 | 128 | 299 | 55 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 163 | 617 | 140 | 23 | 536 | 149 | 171 | 581 | 232 | 128 | 299 | 55 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 163 | 617 | 140 | 23 | 536 | 149 | 171 | 581 | 232 | 128 | 299 | 55 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.63 | 0.37 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1600 | 2608 | 592 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.24 | 0.24 | 0.01 | 0.17 | 0.09 | 0.11 | 0.18 | 0.15 | 0.08 | 0.09 | 0.03 |
| Crit Moves: | **** | | | **** | | | **** | | | **** | | |

12021 Woodruff Avenue Industrial Building Project
Existing + Ambient + Cumulative Projects + Project
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Stewart and Gray Road/Firestone Boulevard

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.541 |
| Loss Time (sec): | 10 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 36 | Level Of Service: | A |

| Street Name: | Stewart and Gray Road | | | | | | Firestone Boulevard | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Permitted | | | Permitted | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 0 | 0 2 | 1 0 | 0 | 1 0 | 0 0 | 3 | 0 1 | 2 0 | 2 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 744 | 82 | 28 | 42 | 0 | 1261 | 64 | 374 | 1364 | 40 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 744 | 82 | 28 | 42 | 0 | 1261 | 64 | 374 | 1364 | 40 |
| Added Vol: | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 757 | 82 | 28 | 42 | 0 | 1261 | 64 | 407 | 1364 | 40 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 0 | 757 | 82 | 28 | 42 | 0 | 1261 | 64 | 407 | 1364 | 40 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 757 | 82 | 28 | 42 | 0 | 1261 | 64 | 407 | 1364 | 40 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 757 | 82 | 28 | 42 | 0 | 1261 | 64 | 407 | 1364 | 40 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 0.00 | 2.00 | 1.00 | 0.40 | 0.60 | 0.00 | 3.00 | 1.00 | 2.00 | 2.91 | 0.09 |
| Final Sat.: | 0 | 0 | 3200 | 1600 | 640 | 960 | 0 | 4800 | 1600 | 3200 | 4663 | 137 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.24 | 0.05 | 0.04 | 0.04 | 0.00 | 0.26 | 0.04 | 0.13 | 0.29 | 0.29 |
| Crit Moves: | **** | | | **** | | | | **** | | **** | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↑↑ | ↱ | ↰ | ↑↑ | | | | | ↰ | | ↱↱ |
| Traffic Volume (veh/h) | 0 | 1362 | 642 | 143 | 1475 | 0 | 0 | 0 | 0 | 155 | 0 | 330 |
| Future Volume (veh/h) | 0 | 1362 | 642 | 143 | 1475 | 0 | 0 | 0 | 0 | 155 | 0 | 330 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 1.00 | | | | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | | | | No | |
| Adj Sat Flow, veh/h/ln | 0 | 1870 | 1870 | 1870 | 1870 | 0 | | | | 1870 | 0 | 1870 |
| Adj Flow Rate, veh/h | 0 | 1390 | 655 | 146 | 1505 | 0 | | | | 158 | 0 | 337 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | | | | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 0 | 2 |
| Cap, veh/h | 0 | 2122 | 914 | 167 | 2607 | 0 | | | | 261 | 0 | 408 |
| Arrive On Green | 0.00 | 0.60 | 0.60 | 0.19 | 1.00 | 0.00 | | | | 0.15 | 0.00 | 0.15 |
| Sat Flow, veh/h | 0 | 3647 | 1531 | 1781 | 3647 | 0 | | | | 1781 | 0 | 2790 |
| Grp Volume(v), veh/h | 0 | 1390 | 655 | 146 | 1505 | 0 | | | | 158 | 0 | 337 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1777 | 1531 | 1781 | 1777 | 0 | | | | 1781 | 0 | 1395 |
| Q Serve(g_s), s | 0.0 | 28.5 | 33.1 | 8.8 | 0.0 | 0.0 | | | | 9.1 | 0.0 | 12.9 |
| Cycle Q Clear(g_c), s | 0.0 | 28.5 | 33.1 | 8.8 | 0.0 | 0.0 | | | | 9.1 | 0.0 | 12.9 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 2122 | 914 | 167 | 2607 | 0 | | | | 261 | 0 | 408 |
| V/C Ratio(X) | 0.00 | 0.65 | 0.72 | 0.88 | 0.58 | 0.00 | | | | 0.61 | 0.00 | 0.83 |
| Avail Cap(c_a), veh/h | 0 | 2122 | 914 | 167 | 2607 | 0 | | | | 457 | 0 | 715 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 0.44 | 0.44 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 14.7 | 15.6 | 44.1 | 0.0 | 0.0 | | | | 44.0 | 0.0 | 45.6 |
| Incr Delay (d2), s/veh | 0.0 | 1.6 | 4.8 | 19.8 | 0.4 | 0.0 | | | | 1.7 | 0.0 | 3.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 10.7 | 11.5 | 4.4 | 0.1 | 0.0 | | | | 4.1 | 0.0 | 4.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 0.0 | 16.2 | 20.4 | 63.9 | 0.4 | 0.0 | | | | 45.7 | 0.0 | 48.8 |
| LnGrp LOS | A | B | C | E | A | A | | | | D | A | D |
| Approach Vol, veh/h | | 2045 | | | 1651 | | | | | | 495 | |
| Approach Delay, s/veh | | 17.6 | | | 6.0 | | | | | | 47.8 | |
| Approach LOS | | B | | | A | | | | | | D | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 |
|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 15.0 | 72.1 | | 22.9 | | 87.1 |
| Change Period (Y+Rc), s | * 4.7 | 6.4 | | 6.8 | | 6.4 |
| Max Green Setting (Gmax), s | * 10 | 53.6 | | 28.2 | | 53.6 |
| Max Q Clear Time (g_c+I1), s | 10.8 | 35.1 | | 14.9 | | 2.0 |
| Green Ext Time (p_c), s | 0.0 | 16.4 | | 1.2 | | 32.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 16.6 |
| HCM 6th LOS | B |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 512 | 752 | 235 | 142 | 838 | 120 | 178 | 322 | 164 | 242 | 40 | 605 |
| Future Volume (veh/h) | 512 | 752 | 235 | 142 | 838 | 120 | 178 | 322 | 164 | 242 | 40 | 605 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.97 | 1.00 | | 0.96 | 1.00 | | 0.92 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 539 | 792 | 247 | 149 | 882 | 126 | 187 | 339 | 173 | 255 | 42 | 637 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 756 | 1243 | 388 | 113 | 1116 | 484 | 363 | 461 | 230 | 256 | 134 | 451 |
| Arrive On Green | 0.22 | 0.47 | 0.47 | 0.06 | 0.31 | 0.31 | 0.20 | 0.20 | 0.20 | 0.07 | 0.07 | 0.07 |
| Sat Flow, veh/h | 3456 | 2650 | 826 | 1781 | 3554 | 1540 | 1781 | 2265 | 1128 | 3563 | 1870 | 1456 |
| Grp Volume(v), veh/h | 539 | 531 | 508 | 149 | 882 | 126 | 187 | 264 | 248 | 255 | 42 | 637 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 1777 | 1699 | 1781 | 1777 | 1540 | 1781 | 1777 | 1616 | 1781 | 1870 | 1456 |
| Q Serve(g_s), s | 15.9 | 24.9 | 24.9 | 7.0 | 24.9 | 6.7 | 10.3 | 15.3 | 15.9 | 7.9 | 2.3 | 7.9 |
| Cycle Q Clear(g_c), s | 15.9 | 24.9 | 24.9 | 7.0 | 24.9 | 6.7 | 10.3 | 15.3 | 15.9 | 7.9 | 2.3 | 7.9 |
| Prop In Lane | 1.00 | | 0.49 | 1.00 | | 1.00 | 1.00 | | 0.70 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 756 | 834 | 797 | 113 | 1116 | 484 | 363 | 362 | 329 | 256 | 134 | 451 |
| V/C Ratio(X) | 0.71 | 0.64 | 0.64 | 1.31 | 0.79 | 0.26 | 0.52 | 0.73 | 0.75 | 1.00 | 0.31 | 1.41 |
| Avail Cap(c_a), veh/h | 756 | 834 | 797 | 113 | 1228 | 532 | 534 | 533 | 485 | 256 | 134 | 451 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.71 | 0.71 | 0.71 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 39.8 | 22.1 | 22.1 | 51.5 | 34.4 | 28.2 | 39.0 | 41.0 | 41.2 | 51.0 | 48.5 | 39.3 |
| Incr Delay (d2), s/veh | 2.8 | 2.6 | 2.8 | 190.7 | 4.1 | 0.6 | 0.8 | 2.1 | 2.9 | 55.3 | 1.0 | 197.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.9 | 10.3 | 9.9 | 9.1 | 11.0 | 2.5 | 4.6 | 6.9 | 6.6 | 5.5 | 1.1 | 36.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 42.6 | 24.8 | 24.9 | 242.2 | 38.5 | 28.8 | 39.8 | 43.1 | 44.1 | 106.3 | 49.4 | 237.2 |
| LnGrp LOS | D | C | C | F | D | C | D | D | D | F | D | F |
| Approach Vol, veh/h | | 1578 | | | 1157 | | | 699 | | | 934 | |
| Approach Delay, s/veh | | 30.9 | | | 63.7 | | | 42.6 | | | 193.0 | |
| Approach LOS | | C | | | E | | | D | | | F | |

| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 11.7 | 57.0 | | 13.3 | 28.8 | 39.9 | | 28.0 |
| Change Period (Y+Rc), s | * 4.7 | 5.4 | | 5.4 | * 4.7 | 5.4 | | 5.6 |
| Max Green Setting (Gmax), s | * 7 | 26.0 | | 7.9 | * 10 | 38.0 | | 33.0 |
| Max Q Clear Time (g_c+I1), s | 9.0 | 26.9 | | 9.9 | 17.9 | 26.9 | | 17.9 |
| Green Ext Time (p_c), s | 0.0 | 0.0 | | 0.0 | 0.0 | 7.0 | | 2.7 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 76.1 |
| HCM 6th LOS | E |

**Notes**

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 4 | 913 | 846 | 36 |
| Future Vol, veh/h | 0 | 0 | 4 | 913 | 846 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 1 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 4 | 992 | 920 | 39 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1444 | 480 | 959 | 0 | - | 0 |
| Stage 1 | 940 | - | - | - | - | - |
| Stage 2 | 504 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | 4.14 | - | - | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | 2.22 | - | - | - |
| Pot Cap-1 Maneuver | 123 | 532 | 713 | - | - | - |
| Stage 1 | 340 | - | - | - | - | - |
| Stage 2 | 572 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 122 | 532 | 713 | - | - | - |
| Mov Cap-2 Maneuver | 245 | - | - | - | - | - |
| Stage 1 | 338 | - | - | - | - | - |
| Stage 2 | 572 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 713 | - | - | - | - |
| HCM Lane V/C Ratio | 0.006 | - | - | - | - |
| HCM Control Delay (s) | 10.1 | - | 0 | - | - |
| HCM Lane LOS | B | - | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 18 | 1 | 0 | 899 | 845 | 0 |
| Future Vol, veh/h | 18 | 1 | 0 | 899 | 845 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 60 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 20 | 1 | 0 | 977 | 918 | 0 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1407 | 459 | 918 | 0 | - | 0 |
| Stage 1 | 918 | - | - | - | - | - |
| Stage 2 | 489 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | 4.14 | - | - | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | 2.22 | - | - | - |
| Pot Cap-1 Maneuver | 130 | 549 | 739 | - | - | - |
| Stage 1 | 349 | - | - | - | - | - |
| Stage 2 | 582 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 130 | 549 | 739 | - | - | - |
| Mov Cap-2 Maneuver | 253 | - | - | - | - | - |
| Stage 1 | 349 | - | - | - | - | - |
| Stage 2 | 582 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 20 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 739 | - | 260 | - | - |
| HCM Lane V/C Ratio | - | - | 0.079 | - | - |
| HCM Control Delay (s) | 0 | - | 20 | - | - |
| HCM Lane LOS | A | - | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.3 | - | - |

# Appendix C

## SimTraffic Queuing Worksheets

## Intersection: 1: Woodruff Avenue & Washburn Road

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 143 | 105 | 164 | 75 | 124 | 250 | 246 | 99 | 144 | 151 |
| Average Queue (ft) | 68 | 41 | 71 | 37 | 60 | 132 | 122 | 45 | 80 | 95 |
| 95th Queue (ft) | 117 | 81 | 130 | 77 | 116 | 233 | 223 | 90 | 143 | 152 |
| Link Distance (ft) | 471 | | 453 | | | 234 | 234 | | 129 | 129 |
| Upstream Blk Time (%) | | | | | | 1 | 2 | | 1 | 3 |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | 6 | 12 |
| Storage Bay Dist (ft) | | 125 | | 50 | 100 | | | 100 | | |
| Storage Blk Time (%) | 1 | 0 | 19 | 2 | 1 | 10 | | 0 | 3 | |
| Queuing Penalty (veh) | 1 | 0 | 13 | 2 | 2 | 9 | | 0 | 2 | |

## Intersection: 4: Firestone Boulevard & I-605 SB Ramps

| Movement | EB | EB | EB | B14 | B14 | B14 | WB | WB | WB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | T | T | R | T | T | T | L | T | T | L | R | R |
| Maximum Queue (ft) | 403 | 390 | 296 | 688 | 696 | 637 | 225 | 434 | 468 | 206 | 249 | 236 |
| Average Queue (ft) | 295 | 308 | 124 | 207 | 230 | 154 | 194 | 288 | 282 | 72 | 150 | 104 |
| 95th Queue (ft) | 461 | 456 | 255 | 695 | 735 | 620 | 269 | 525 | 520 | 160 | 229 | 209 |
| Link Distance (ft) | 300 | 300 | 300 | 1944 | 1944 | 1944 | | 417 | 417 | 908 | | |
| Upstream Blk Time (%) | 36 | 28 | 0 | | | | | 5 | 3 | | | |
| Queuing Penalty (veh) | 204 | 158 | 3 | | | | | 52 | 25 | | | |
| Storage Bay Dist (ft) | | | | | | | 200 | | | | 275 | 275 |
| Storage Blk Time (%) | | | | | | | 47 | 2 | | 0 | 0 | 0 |
| Queuing Penalty (veh) | | | | | | | 420 | 4 | | 0 | 0 | 0 |

## Intersection: 5: Hoxie Avenue/I-605 NB Ramps & Firestone Boulevard

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | TR | L | T | T | R | L | T | TR | L |
| Maximum Queue (ft) | 155 | 441 | 264 | 277 | 255 | 522 | 516 | 145 | 100 | 248 | 209 | 84 |
| Average Queue (ft) | 149 | 402 | 139 | 152 | 140 | 398 | 352 | 107 | 56 | 124 | 76 | 22 |
| 95th Queue (ft) | 168 | 537 | 246 | 262 | 310 | 583 | 565 | 191 | 111 | 220 | 161 | 60 |
| Link Distance (ft) | | 417 | 417 | 417 | | 479 | 479 | | | 266 | 266 | |
| Upstream Blk Time (%) | | 35 | | | | 23 | 15 | | | 1 | 0 | |
| Queuing Penalty (veh) | | 141 | | | | 0 | 0 | | | 0 | 0 | |
| Storage Bay Dist (ft) | 130 | | | | 230 | | | 120 | 75 | | | 275 |
| Storage Blk Time (%) | 49 | 70 | | | 0 | 44 | 38 | 2 | 7 | 26 | | |
| Queuing Penalty (veh) | 109 | 155 | | | 0 | 41 | 70 | 9 | 9 | 23 | | |

## Intersection: 5: Hoxie Avenue/I-605 NB Ramps & Firestone Boulevard

| Movement | SB | SB | SB |
|---|---|---|---|
| Directions Served | LT | T | R |
| Maximum Queue (ft) | 1925 | 1941 | 235 |
| Average Queue (ft) | 1883 | 1900 | 235 |
| 95th Queue (ft) | 2137 | 1985 | 235 |
| Link Distance (ft) | 1885 | 1885 | |
| Upstream Blk Time (%) | 51 | 97 | |
| Queuing Penalty (veh) | 0 | 0 | |
| Storage Bay Dist (ft) | | | 210 |
| Storage Blk Time (%) | | 1 | 92 |
| Queuing Penalty (veh) | | 9 | 4 |

## Intersection: 6: Woodruff Avenue & North Project Driveway

| Movement | NB | NB |
|---|---|---|
| Directions Served | T | T |
| Maximum Queue (ft) | 27 | 27 |
| Average Queue (ft) | 3 | 2 |
| 95th Queue (ft) | 30 | 27 |
| Link Distance (ft) | 284 | 284 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | 1 | |
| Queuing Penalty (veh) | 0 | |

## Intersection: 7: Woodruff Avenue & South Project Driveway

| Movement | SB | SB |
|---|---|---|
| Directions Served | T | TR |
| Maximum Queue (ft) | 54 | 81 |
| Average Queue (ft) | 4 | 10 |
| 95th Queue (ft) | 27 | 46 |
| Link Distance (ft) | 284 | 284 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Zone Summary

Zone wide Queuing Penalty: 1484

## Intersection: 1: Woodruff Avenue & Washburn Road

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 88 | 93 | 125 | 74 | 124 | 228 | 155 | 86 | 141 | 145 |
| Average Queue (ft) | 42 | 39 | 54 | 35 | 41 | 103 | 62 | 25 | 72 | 83 |
| 95th Queue (ft) | 83 | 70 | 98 | 74 | 90 | 184 | 128 | 61 | 132 | 141 |
| Link Distance (ft) | 471 | | 453 | | | 234 | 234 | | 129 | 129 |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | 1 | 1 |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | 4 | 6 |
| Storage Bay Dist (ft) | | 125 | | 50 | 100 | | | 100 | | |
| Storage Blk Time (%) | | 0 | 12 | 1 | 0 | 5 | | 0 | 2 | |
| Queuing Penalty (veh) | | 0 | 8 | 1 | 0 | 4 | | 0 | 1 | |

## Intersection: 4: Firestone Boulevard & I-605 SB Ramps

| Movement | EB | EB | EB | B14 | B14 | B14 | WB | WB | WB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | T | T | R | T | T | T | L | T | T | L | R | R |
| Maximum Queue (ft) | 411 | 409 | 329 | 1925 | 1963 | 1935 | 209 | 244 | 252 | 937 | 262 | 161 |
| Average Queue (ft) | 365 | 364 | 136 | 1362 | 1395 | 1352 | 114 | 134 | 131 | 812 | 60 | 20 |
| 95th Queue (ft) | 440 | 440 | 292 | 2511 | 2535 | 2572 | 199 | 213 | 208 | 1216 | 241 | 100 |
| Link Distance (ft) | 300 | 300 | 300 | 1944 | 1944 | 1944 | | 417 | 417 | 908 | | |
| Upstream Blk Time (%) | 74 | 58 | 1 | 4 | 8 | 9 | | | | 81 | | |
| Queuing Penalty (veh) | 515 | 403 | 10 | 27 | 51 | 63 | | | | 0 | | |
| Storage Bay Dist (ft) | | | | | | | 200 | | | | 275 | 275 |
| Storage Blk Time (%) | | | | | | | 1 | 1 | | 86 | 0 | 0 |
| Queuing Penalty (veh) | | | | | | | 8 | 1 | | 270 | 0 | 0 |

## Intersection: 5: Hoxie Avenue/I-605 NB Ramps & Firestone Boulevard

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | TR | L | T | T | R | L | T | TR | L |
| Maximum Queue (ft) | 155 | 440 | 311 | 354 | 255 | 472 | 384 | 145 | 100 | 281 | 242 | 195 |
| Average Queue (ft) | 151 | 434 | 93 | 109 | 155 | 272 | 206 | 83 | 85 | 173 | 136 | 110 |
| 95th Queue (ft) | 161 | 444 | 203 | 227 | 288 | 413 | 337 | 168 | 125 | 277 | 224 | 210 |
| Link Distance (ft) | | 417 | 417 | 417 | | 479 | 479 | | | 266 | 266 | |
| Upstream Blk Time (%) | | 68 | | 0 | | 0 | | | | 1 | 0 | |
| Queuing Penalty (veh) | | 340 | | 0 | | 0 | | | | 0 | 0 | |
| Storage Bay Dist (ft) | 130 | | | | 230 | | | 120 | 75 | | | 275 |
| Storage Blk Time (%) | 62 | 84 | | | 4 | 10 | 13 | 1 | 20 | 32 | | 0 |
| Queuing Penalty (veh) | 158 | 212 | | | 17 | 15 | 15 | 5 | 32 | 57 | | 0 |

## Intersection: 5: Hoxie Avenue/I-605 NB Ramps & Firestone Boulevard

| Movement | SB | SB | SB |
|---|---|---|---|
| Directions Served | LT | T | R |
| Maximum Queue (ft) | 1035 | 1176 | 235 |
| Average Queue (ft) | 397 | 723 | 228 |
| 95th Queue (ft) | 1281 | 1672 | 270 |
| Link Distance (ft) | 1885 | 1885 | |
| Upstream Blk Time (%) | 1 | 3 | |
| Queuing Penalty (veh) | 0 | 0 | |
| Storage Bay Dist (ft) | | | 210 |
| Storage Blk Time (%) | 1 | 1 | 77 |
| Queuing Penalty (veh) | 2 | 6 | 15 |

## Intersection: 6: Woodruff Avenue & North Project Driveway

| Movement | NB | NB |
|---|---|---|
| Directions Served | T | T |
| Maximum Queue (ft) | 32 | 31 |
| Average Queue (ft) | 4 | 3 |
| 95th Queue (ft) | 41 | 34 |
| Link Distance (ft) | 284 | 284 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | 1 | |
| Queuing Penalty (veh) | 0 | |

## Intersection: 7: Woodruff Avenue & South Project Driveway

| Movement | SB | SB |
|---|---|---|
| Directions Served | T | TR |
| Maximum Queue (ft) | 35 | 64 |
| Average Queue (ft) | 1 | 5 |
| 95th Queue (ft) | 18 | 29 |
| Link Distance (ft) | 284 | 284 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Zone Summary

Zone wide Queuing Penalty: 2245

## Intersection: 1: Woodruff Avenue & Washburn Road

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 148 | 88 | 156 | 75 | 124 | 257 | 249 | 99 | 144 | 153 |
| Average Queue (ft) | 67 | 36 | 67 | 39 | 56 | 123 | 115 | 39 | 82 | 96 |
| 95th Queue (ft) | 116 | 62 | 123 | 79 | 110 | 218 | 214 | 82 | 143 | 154 |
| Link Distance (ft) | 471 | | 453 | | | 234 | 234 | | 129 | 129 |
| Upstream Blk Time (%) | | | | | | 1 | 1 | | 1 | 3 |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | 7 | 13 |
| Storage Bay Dist (ft) | | 125 | | 50 | 100 | | | 100 | | |
| Storage Blk Time (%) | 0 | 0 | 17 | 1 | 1 | 8 | | 0 | 4 | |
| Queuing Penalty (veh) | 1 | 0 | 12 | 1 | 4 | 8 | | 0 | 2 | |

## Intersection: 4: Firestone Boulevard & I-605 SB Ramps

| Movement | EB | EB | EB | B14 | B14 | B14 | WB | WB | WB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | T | T | R | T | T | T | L | T | T | L | R | R |
| Maximum Queue (ft) | 392 | 404 | 333 | 1258 | 1329 | 1236 | 224 | 434 | 454 | 462 | 284 | 263 |
| Average Queue (ft) | 327 | 328 | 143 | 588 | 616 | 541 | 185 | 254 | 241 | 115 | 161 | 112 |
| 95th Queue (ft) | 472 | 478 | 302 | 1546 | 1583 | 1559 | 268 | 483 | 469 | 388 | 254 | 225 |
| Link Distance (ft) | 300 | 300 | 300 | 1944 | 1944 | 1944 | | 417 | 417 | 908 | | |
| Upstream Blk Time (%) | 57 | 42 | 2 | 0 | 0 | 1 | | 3 | 1 | 2 | | |
| Queuing Penalty (veh) | 331 | 246 | 12 | 1 | 2 | 3 | | 26 | 14 | 0 | | |
| Storage Bay Dist (ft) | | | | | | | 200 | | | | 275 | 275 |
| Storage Blk Time (%) | | | | | | | 36 | 2 | | 3 | 1 | 0 |
| Queuing Penalty (veh) | | | | | | | 320 | 4 | | 11 | 1 | 0 |

## Intersection: 5: Hoxie Avenue/I-605 NB Ramps & Firestone Boulevard

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | TR | L | T | T | R | L | T | TR | L |
| Maximum Queue (ft) | 155 | 442 | 273 | 290 | 255 | 510 | 507 | 145 | 100 | 255 | 209 | 91 |
| Average Queue (ft) | 150 | 422 | 137 | 150 | 153 | 391 | 339 | 107 | 57 | 124 | 85 | 26 |
| 95th Queue (ft) | 174 | 496 | 259 | 279 | 306 | 578 | 540 | 182 | 114 | 221 | 171 | 69 |
| Link Distance (ft) | | 417 | 417 | 417 | | 479 | 479 | | | 266 | 266 | |
| Upstream Blk Time (%) | | 40 | | | | 17 | 9 | | | 0 | 0 | |
| Queuing Penalty (veh) | | 161 | | | | 0 | 0 | | | 0 | 0 | |
| Storage Bay Dist (ft) | 130 | | | | 230 | | | 120 | 75 | | | 275 |
| Storage Blk Time (%) | 62 | 76 | | | 0 | 39 | 35 | 4 | 7 | 27 | | |
| Queuing Penalty (veh) | 144 | 177 | | | 0 | 36 | 64 | 17 | 9 | 23 | | |

## Intersection: 5: Hoxie Avenue/I-605 NB Ramps & Firestone Boulevard

| Movement | SB | SB | SB |
|---|---|---|---|
| Directions Served | LT | T | R |
| Maximum Queue (ft) | 1921 | 1939 | 235 |
| Average Queue (ft) | 1845 | 1903 | 235 |
| 95th Queue (ft) | 2288 | 1930 | 235 |
| Link Distance (ft) | 1885 | 1885 | |
| Upstream Blk Time (%) | 43 | 96 | |
| Queuing Penalty (veh) | 0 | 0 | |
| Storage Bay Dist (ft) | | | 210 |
| Storage Blk Time (%) | | 1 | 93 |
| Queuing Penalty (veh) | | 10 | 4 |

## Intersection: 6: Woodruff Avenue & North Project Driveway

| Movement | EB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 31 |
| Average Queue (ft) | 3 |
| 95th Queue (ft) | 18 |
| Link Distance (ft) | 369 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Intersection: 7: Woodruff Avenue & South Project Driveway

| Movement | EB | SB | SB |
|---|---|---|---|
| Directions Served | LR | T | TR |
| Maximum Queue (ft) | 91 | 54 | 69 |
| Average Queue (ft) | 41 | 5 | 12 |
| 95th Queue (ft) | 79 | 29 | 48 |
| Link Distance (ft) | 376 | 284 | 284 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Zone Summary

Zone wide Queuing Penalty: 1664

## Intersection: 1: Woodruff Avenue & Washburn Road

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 95 | 90 | 150 | 74 | 112 | 232 | 184 | 97 | 143 | 152 |
| Average Queue (ft) | 40 | 36 | 51 | 35 | 41 | 93 | 63 | 20 | 76 | 89 |
| 95th Queue (ft) | 80 | 68 | 104 | 71 | 91 | 176 | 132 | 56 | 139 | 150 |
| Link Distance (ft) | 471 | | 453 | | | 234 | 234 | | 129 | 129 |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | 1 | 2 |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | 6 | 10 |
| Storage Bay Dist (ft) | | 125 | | 50 | 100 | | | 100 | | |
| Storage Blk Time (%) | 0 | 0 | 9 | 1 | 0 | 5 | | 0 | 3 | |
| Queuing Penalty (veh) | 0 | 0 | 6 | 2 | 0 | 3 | | 0 | 1 | |

## Intersection: 4: Firestone Boulevard & I-605 SB Ramps

| Movement | EB | EB | EB | B14 | B14 | B14 | WB | WB | WB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | T | T | R | T | T | T | L | T | T | L | R | R |
| Maximum Queue (ft) | 403 | 408 | 357 | 1968 | 1988 | 1989 | 211 | 276 | 250 | 938 | 300 | 260 |
| Average Queue (ft) | 360 | 367 | 142 | 1214 | 1255 | 1199 | 100 | 141 | 139 | 847 | 58 | 30 |
| 95th Queue (ft) | 448 | 441 | 283 | 2492 | 2512 | 2548 | 186 | 228 | 214 | 1171 | 237 | 140 |
| Link Distance (ft) | 300 | 300 | 300 | 1944 | 1944 | 1944 | | 417 | 417 | 908 | | |
| Upstream Blk Time (%) | 75 | 60 | 1 | 3 | 7 | 8 | | | | 84 | | |
| Queuing Penalty (veh) | 519 | 418 | 6 | 22 | 47 | 56 | | | | 0 | | |
| Storage Bay Dist (ft) | | | | | | | 200 | | | | 275 | 275 |
| Storage Blk Time (%) | | | | | | | 2 | 1 | | 89 | 0 | 0 |
| Queuing Penalty (veh) | | | | | | | 14 | 1 | | 293 | 0 | 0 |

## Intersection: 5: Hoxie Avenue/I-605 NB Ramps & Firestone Boulevard

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | TR | L | T | T | R | L | T | TR | L |
| Maximum Queue (ft) | 155 | 440 | 164 | 194 | 255 | 470 | 387 | 145 | 100 | 279 | 274 | 203 |
| Average Queue (ft) | 151 | 434 | 71 | 91 | 156 | 275 | 208 | 71 | 82 | 167 | 136 | 108 |
| 95th Queue (ft) | 161 | 447 | 129 | 156 | 283 | 439 | 359 | 154 | 125 | 274 | 234 | 208 |
| Link Distance (ft) | | 417 | 417 | 417 | | 479 | 479 | | | 266 | 266 | |
| Upstream Blk Time (%) | | 69 | | | | 3 | 0 | | | 2 | 0 | |
| Queuing Penalty (veh) | | 346 | | | | 0 | 0 | | | 0 | 0 | |
| Storage Bay Dist (ft) | 130 | | | | 230 | | | 120 | 75 | | | 275 |
| Storage Blk Time (%) | 61 | 84 | | | 8 | 10 | 13 | 0 | 22 | 29 | | 0 |
| Queuing Penalty (veh) | 155 | 215 | | | 36 | 14 | 15 | 1 | 35 | 52 | | 0 |

## Intersection: 5: Hoxie Avenue/I-605 NB Ramps & Firestone Boulevard

| Movement | SB | SB | SB |
|---|---|---|---|
| Directions Served | LT | T | R |
| Maximum Queue (ft) | 1802 | 1833 | 235 |
| Average Queue (ft) | 972 | 1453 | 235 |
| 95th Queue (ft) | 2307 | 2187 | 235 |
| Link Distance (ft) | 1885 | 1885 | |
| Upstream Blk Time (%) | 13 | 32 | |
| Queuing Penalty (veh) | 0 | 0 | |
| Storage Bay Dist (ft) | | | 210 |
| Storage Blk Time (%) | 1 | 1 | 96 |
| Queuing Penalty (veh) | 1 | 7 | 19 |

## Intersection: 6: Woodruff Avenue & North Project Driveway

| Movement | NB | NB |
|---|---|---|
| Directions Served | L | T |
| Maximum Queue (ft) | 24 | 33 |
| Average Queue (ft) | 1 | 2 |
| 95th Queue (ft) | 12 | 14 |
| Link Distance (ft) | | 284 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 1 | |
| Storage Blk Time (%) | 0 | 0 |
| Queuing Penalty (veh) | 1 | 0 |

## Intersection: 7: Woodruff Avenue & South Project Driveway

| Movement | EB | SB | SB |
|---|---|---|---|
| Directions Served | LR | T | TR |
| Maximum Queue (ft) | 53 | 50 | 76 |
| Average Queue (ft) | 20 | 5 | 9 |
| 95th Queue (ft) | 48 | 32 | 45 |
| Link Distance (ft) | 376 | 284 | 284 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Zone Summary

Zone wide Queuing Penalty: 2304

# Appendix D

## Geotechnical Study

# GEOTECHNICAL FEASIBILITY STUDY
# PROPOSED DISTRIBUTION BUILDING

12021 Woodruff Avenue
Downey, California
for
ProLogis




SOUTHERN
CALIFORNIA
GEOTECHNICAL
*A California Corporation*

July 28, 2020

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

ProLogis
2141 Rosecrans Avenue, Suite 1151
El Segundo, California 90245

Attention: Mr. Blake Kelley
Vice President, Project Management

Project No.: **20G170-1**

Subject: **Geotechnical Feasibility Study**
Proposed Distribution Building
12021 Woodruff Avenue
Downey, California

Gentlemen:

In accordance with your request, we have conducted a geotechnical investigation at the subject site. We are pleased to present this report summarizing the conclusions and recommendations developed from our investigation.

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Robert G. Trazo, GE 2655
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
ROBERT TRAZO
No. 2655
GEOTECHNICAL
STATE OF CALIFORNIA

Gregory K. Mitchell, GE 2364
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
GREGORY K. MITCHELL
No. 2364
Exp. 09/30/20
GEOTECHNICAL
STATE OF CALIFORNIA

Distribution: (1) Addressee

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# 1.0 EXECUTIVE SUMMARY

Presented below is a brief summary of the conclusions and recommendations of this investigation. Since this summary is not all inclusive, it should be read in complete context with the entire report. It should be noted that this investigation was focused on determining the geotechnical feasibility of the proposed development. **This report is not a design-level investigation. Future studies will be necessary to refine the preliminary design parameters that are presented within this report**.

**Geotechnical Design Considerations**

- Undocumented fill soils were encountered at all of the boring locations extending to depths of 2½ to 6½± feet below the existing site grades. Greater depths of artificial fill may be present at this site, such as near the existing buildings and other improvements.
- The results of laboratory testing indicate that some of the near-surface soils are moderately compressible when loaded.
- The proposed development is considered to be feasible with respect to the geotechnical conditions encountered at the boring locations at the site. However, remedial grading will be necessary in order to support the proposed structure on a conventional shallow foundation system. Preliminary remedial grading and foundation design recommendations have been provided herein, based on the preliminary site plans, assumed site grading, and assumed foundation loads.

**Liquefaction**

- Our site-specific liquefaction evaluation indicates that some of the on-site soils are subject to liquefaction during the design seismic event.
- The liquefaction analysis indicates total dynamic settlements ranging between 2.56 and 2.89± inches at the two (2) 50-foot-deep CPT locations. The liquefaction-induced differential settlements within the building area are expected to be on the order of 1½± inches. Assuming that the differential settlements occur across a distance of 50± feet, maximum angular distortions of about 0.0025± inches per inch would result.
- Standard practice dictates that the proposed building can be supported on shallow foundation systems, with the understanding that some cosmetic distress could occur due to liquefaction. Such distress will be typical of buildings of this type, in this area, in the event of a large earthquake.

**Preliminary Geotechnical Design Recommendations**

- Demolition of the structures associated with the existing development, including buildings, associated improvements, and the existing pavements will be required in order to facilitate construction of the new buildings. Debris resultant from demolition should be disposed of off-site. Alternatively, concrete and asphalt debris may be pulverized to a maximum 2-inch particle size, well mixed with the on-site soils, and incorporated into new structural fills or it may be crushed and made into crushed miscellaneous base (CMB). Concrete and asphalt debris may also be crushed to particle sizes between 2 and 4 inches and used for subgrade stabilization.
- Based on the results of our subsurface exploration, laboratory testing, and engineering analysis, remedial grading should be performed within the proposed building area, to remove

the existing undocumented fill soils, as well as the upper portion of the alluvial soils, and replace these materials as compacted structural fill.

- Preliminarily, the overexcavation within the building area is recommended to extend to depths of at least 3 to 6 feet below existing and proposed building pad subgrade elevations. Within the proposed building pad, the depth of overexcavation should be deepened in order to remove all existing undocumented fill soils. The overexcavation should also extend to a depth of at least 3 to 5 feet below bearing grade within the influence zones of any new foundations. These recommendations are subject to review and may be revised based on the results of the design-level geotechnical investigation.

**Preliminary Foundation Design Recommendations**

- Conventional shallow foundations, supported in newly placed compacted fill.
- 2,000 to 2,500 lbs/ft$^2$ maximum allowable soil bearing pressure.
- The design of the foundations will depend on the results of the future design-level geotechnical study. Minimum recommended reinforcement based on geotechnical conditions is expected to consist of at least six (6) No. 5 rebars (3 top and 3 bottom) in strip footings due to the presence of potentially liquefiable soils. Additional reinforcement may be necessary for structural considerations.

**Preliminary Floor Slab Recommendations**

- Conventional Slab-on-Grade, 6 to 7 inches thick.
- Steel reinforcement is expected to be necessary, based on the presence of potentially liquefiable soils. The actual floor slab reinforcement to be determined by the structural engineer. Additional reinforcement may be necessary for structural considerations.

**Preliminary Pavement Design Recommendations**

| **ASPHALT PAVEMENTS (R = 30)** | | | | | |
|---|---|---|---|---|---|
| **Materials** | **Thickness (inches)** | | | | |
| | Auto Parking (TI = 4.0) | Auto Drive Lanes (TI = 5.0) | Truck Traffic | | |
| | | | (TI = 6.0) | (TI = 7.0) | (TI = 8.0) |
| Asphalt Concrete | 3 | 3 | 3½ | 4 | 5 |
| Aggregate Base | 3 | 6 | 8 | 10 | 11 |
| Compacted Subgrade | 12 | 12 | 12 | 12 | 12 |

| PORTLAND CEMENT CONCRETE PAVEMENTS (R = 30) | | | | |
|---|---|---|---|---|
| **Materials** | **Thickness (inches)** | | | |
| | Auto Parking & Drives (TI = 5.0) | Truck Traffic | | |
| | | (TI =6.0) | (TI =7.0) | (TI =8.0) |
| PCC | 5 | 5 | 5½ | 6½ |
| Compacted Subgrade | 12 | 12 | 12 | 12 |

# 2.0 SCOPE OF SERVICES

The scope of services performed for this project was in accordance with our Proposal No. 20P274, dated June 30, 2020. The scope of services included a visual site reconnaissance, subsurface exploration, field and laboratory testing, and geotechnical engineering analysis to determine the geotechnical feasibility of the proposed development. This report also contains preliminary design criteria for building foundations, the building floor slab, and parking lot pavements. Based on the location of this site, this investigation also included a site-specific liquefaction evaluation. The evaluation of the environmental aspects of this site was beyond the scope of services for this feasibility study.

It should be noted that additional subsurface exploration, laboratory testing and engineering analysis will be necessary to provide a design-level geotechnical report, with specific foundation, floor slab, and grading recommendations for new structures.

# 3.0 SITE AND PROJECT DESCRIPTION

## 3.1 Site Conditions

The subject site is located on the west side of Woodruff Avenue, 150± feet north of Washburn Road in Downey, California. The site is also referenced by the street address 12021 Woodruff Avenue. The site is bounded to the north, west, and south by existing commercial/industrial buildings, and to the east by Woodruff Avenue.

The site consists of a rectangular-shaped parcel, 6.31± acres in size. Based on aerial photographs obtained from Google Earth, the majority of the site is developed with numerous contiguous buildings ranging from 4,200±ft² to 85,000± ft² in size. The buildings appear to be single-story structures of metal, masonry block, and/or concrete tilt-up construction supported on conventional shallow foundations with concrete slab-on-grade floors. The perimeter of the site is developed as a parking lot and material storage area. The ground surface cover in this area of the site consists of asphaltic concrete pavements which are in fair to poor condition.

Topographic information was provided by Thienes Engineering, Inc. The survey indicates that the site is relatively flat, with a gentle slope toward the southwest at a gradient of roughly 0.7 percent. The site elevations range from 106.16 feet msl in the north to 102.50 feel msl in the southwest area of the site.

## 3.2 Proposed Development

Based on the site plan (DAB 1.1) prepared by HPA Architecture, the site will be developed with one distribution building. The building will be 44,388± ft² in size and will be located in the central area of the site. The building will be configured in a cross-dock configuration with dock-high doors constructed along the north and south sides of the building. The eastern portion of the building will be utilized as an office. The building will be surrounded by asphaltic concrete pavements in the parking and drive lanes, Portland cement concrete pavements in the loading dock areas, and concrete flatwork and landscape planters in the eastern portion of the site. The existing structures will be demolished to facilitate the new construction.

Detailed structural information was not available at the time of this proposal. It is assumed that the building will be a single-story structure of concrete tilt-up construction. Typically, such buildings would be supported on conventional shallow foundations and concrete slab-on-grade floors. Based on the assumed construction, maximum column and wall loads on the order of 100 kips and 4 to 7 kips per linear foot, respectively, are anticipated. The proposed structure is not expected to include any below grade construction such as basements or crawl spaces.

Based on the conceptual storm drain plan, prepared by Thienes Engineering, Inc. (TEI), the site is expected to utilize on-site stormwater disposal. The infiltration system will consist of below-grade chambers located in the southeastern area of the site. The depth of the bottom of the

infiltration system was not known at the time of this proposal. However, based on similar projects in the area, we assume that the bottom of the infiltration system will be approximately 10 to 12 feet below the existing site grades.

# 4.0 SUBSURFACE EXPLORATION

## 4.1 Scope of Exploration/Sampling Methods

The subsurface exploration conducted for this project consisted of six (6) borings advanced to depths of 10 to 50± feet below the existing site grades. Two (2) of these borings were drilled within the proposed building area to depths of 50± feet as part of the liquefaction evaluation. One (1) of the borings was drilled within the proposed infiltration system area to a depth of 25± feet to verify the depth to groundwater. The three (3) remaining borings were drilled to a depth of 10± feet in the proposed parking and drive lane areas.

In addition to the borings, two (2) Cone Penetration Test (CPT) soundings were advanced to a depth of 50± feet. The two (2) 50±-foot CPT soundings were used in the liquefaction analysis.

Hollow Stem Auger Borings

The borings were advanced with hollow-stem augers, by a conventional truck-mounted drilling rig. Representative bulk and relatively undisturbed soil samples were taken during drilling. Relatively undisturbed soil samples were taken with a split barrel "California Sampler" containing a series of one inch long, 2.416± inch diameter brass rings. This sampling method is described in ASTM Test Method D-3550. In-situ samples were also taken using a 1.4± inch inside diameter split spoon sampler, in general accordance with ASTM D-1586. Both of these samplers are driven into the ground with successive blows of a 140-pound weight falling 30 inches. The blow counts obtained during driving are recorded for further analysis. Bulk samples were collected in plastic bags to retain their original moisture content. The relatively undisturbed ring samples were placed in molded plastic sleeves that were then sealed and transported to our laboratory.

Based on information provided by the client and the project environmental consultant, we understand that the subject site is an environmentally sensitive area due to potential contamination from the Boeing facility. Therefore, the cuttings generated by the drilling and sampling activities were contained within 55-gallon drums and transported to an assigned storage staging area off-site. In addition, the boreholes were backfilled with cement-bentonite grout upon completion of the borings.

Cone Penetration Test (CPT) Soundings

The CPT soundings were performed by Kehoe Testing and Engineering (KTE) under the supervision of an SCG engineer. The cone system used for this project was manufactured by Vertek. The CPT soundings were performed in general accordance with ASTM standards (D-5778). The cone penetrometers were pushed using 30-ton CPT rig. The cones used during the program recorded the cone resistance, sleeve friction, and dynamic core pressure at 2.5-centimeter depth intervals. Both of the CPT soundings were advanced to a depths of 50± feet. A more complete description of the CPT program as well as the results of the data interpretation are provided in the report prepared by KTE, enclosed in Appendix F of this report. The CPT soundings do not

result in any recovered soil samples. However, correlations have been developed that utilize the cone resistance and the sleeve friction to estimate the soil type that is present at each 2.5-centimeter interval in the subsurface profile. These soil classifications are presented graphically in the CPT report, enclosed in Appendix F.

The data generated by the cone penetrometer equipment has been reduced using CPeT-IT, V2.0, published by Geologismiki Geotechnical Software. The CPeT-IT program output as well as more details regarding the interpretation procedure are presented a report prepared by KTE, which is provided in Appendix F of this report.

General

The approximate locations of the borings and CPT soundings are indicated on the Boring and CPT Location Plan, included as Plate 2 in Appendix A of this report. The Boring Logs, which illustrate the conditions encountered at the boring locations, as well as the results of some of the laboratory testing, are included in Appendix B. The results of the CPT soundings are presented in the report prepared by KTE, included in Appendix F of this report.

## 4.2 Geotechnical Conditions

Pavements

Asphaltic concrete (AC) was encountered at all six (6) boring locations and both (2) CPT locations. The AC pavements consist of 3 to 5± inches of AC underlain by 3 to 8± inches of aggregate base.

Fill

Artificial fill was encountered at the ground surface all of the boring locations, extending to depths of 2½ to 6½± feet below existing site grades. The artificial fill soils mainly consist of loose to medium dense silty fine sands with trace clays, stiff clayey fine sands, loose to medium dense fine sandy silts with trace clays, and loose gravelly fine to coarse sands with trace silt. The artificial fill possess a mottled and disturbed appearance with occasional debris, resulting in the classification of artificial fill.

Alluvium

Native alluvium was encountered beneath the artificial fill at each of the six (6) boring locations, extending to at least the maximum depth explored of 50± feet below the ground surface. The shallow alluvial soils extending to a depth of 10± feet consist of loose to medium dense clayey fine sands, loose to medium dense silty fine sands with trace clays and medium to coarse sands, medium dense fine sandy silts, medium stiff to stiff silty clays, and medium stiff clayey silts. The deeper alluvial soils extending from a depth of 10 feet to the maximum explored depth of 50± feet consist of medium stiff clayey silts, medium dense silty fine sands, medium dense to dense fine sands, loose to stiff silty clays, and medium dense to dense fine to medium sands with trace fine gravel.

Groundwater

Groundwater was not encountered at any of the borings. Based on the lack of any water within the borings and the moisture contents of the recovered soil samples, the static groundwater table is considered to have existed at a depth in excess of 50± feet below existing site grades at the time of the subsurface investigation.

As part of our research, we reviewed readily available groundwater data in order to determine regional groundwater depths. Recent water level data was obtained from the California State Water Resources Control Board, GeoTracker, website: geotracker.waterboards.ca.gov. The nearest monitoring well on record is located approximately 1,456 feet northwest of the site. Water level readings within this monitoring well indicate a groundwater level of 81± feet below the ground surface in April 2019.

# 5.0 LABORATORY TESTING

The soil samples recovered from the subsurface exploration were returned to our laboratory for further testing to determine selected physical and engineering properties of the soils. The tests are briefly discussed below. It should be noted that the test results are specific to the actual samples tested, and variations could be expected at other locations and depths.

Classification

All recovered soil samples were classified using the Unified Soil Classification System (USCS), in accordance with ASTM D-2488. Field identifications were then supplemented with additional visual classifications and/or by laboratory testing. The USCS classifications are shown on the Boring Logs and are periodically referenced throughout this report.

Dry Density and Moisture Content

The density has been determined for selected relatively undisturbed ring samples. These densities were determined in general accordance with the method presented in ASTM D-2937. The results are recorded as dry unit weight in pounds per cubic foot. The moisture contents are determined in accordance with ASTM D-2216, and are expressed as a percentage of the dry weight. These test results are presented on the Boring Logs.

Consolidation

Selected soil samples were tested to determine their consolidation potential, in accordance with ASTM D-2435. The testing apparatus is designed to accept either natural or remolded samples in a one-inch-high ring, approximately 2.416-inches in diameter. Each sample is then loaded incrementally in a geometric progression and the resulting deflection is recorded at selected time intervals. Porous stones are in contact with the top and bottom of the sample to permit the addition or release of pore water. The samples are typically inundated with water at an intermediate load to determine their potential for collapse or heave. The results of the consolidation testing are plotted on Plates C-1 through C-4 in Appendix C of this report.

Maximum Dry Density and Optimum Moisture Content

One representative bulk sample was tested for its maximum dry density and optimum moisture content. The results have been obtained using the Modified Proctor procedure, per ASTM D-1557, and are presented on Plate C-5 in Appendix C of this report. These tests are generally used to compare the in-situ densities of undisturbed field samples, and for later compaction testing. Additional testing of other soil types or soil mixes may be necessary at a later date.

Expansion Index

The expansion potential of the on-site soils was determined in general accordance with ASTM D-4829. The testing apparatus is designed to accept a 4-inch-diameter, 1-inch-high, remolded sample. The sample is initially remolded to 50± 1 percent saturation and then loaded with a surcharge equivalent to 144 pounds per square foot. The sample is then inundated with water,

and allowed to swell against the surcharge. The resultant swell or consolidation is recorded after a 24-hour period. The results of the EI testing are as follows:

| Sample Identification | Expansion Index | Expansive Potential |
|---|---|---|
| B-1 @ 0 to 5 feet | 18 | Very Low |

Soluble Sulfates

A representative sample of the near-surface soils was submitted to a subcontracted analytical laboratory for determination of soluble sulfate content as a part of the referenced previous studies. Soluble sulfates are naturally present in soils, and if the concentration is high enough, can result in degradation of concrete which comes into contact with these soils. The results of the soluble sulfate testing are presented below, and are discussed further in a subsequent section of this report.

| Sample Identification | Soluble Sulfates (%) | Severity | Class |
|---|---|---|---|
| B-1 @ 0 to 5 feet | 0.005 | Not Applicable | S0 |

Corrosivity Testing

A representative bulk sample of the near-surface soils was submitted to a subcontracted corrosion engineering laboratory to determine if the near-surface soils possess corrosive characteristics with respect to common construction materials. The corrosivity testing included a determination of the electrical resistivity, pH, and chloride and nitrate concentrations of the soils, as well as other tests. The results of some of these tests are presented below.

| Sample Identification | Saturated Resistivity (ohm-cm) | pH | Chlorides (mg/kg) |
|---|---|---|---|
| B-1 @ 0 to 5 feet | 3,440 | 7.9 | 4.3 |

# 6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our review, field exploration, laboratory testing and geotechnical analysis, the proposed development is considered feasible from a geotechnical standpoint. **Based on the preliminary nature of this investigation, further geotechnical investigation(s) will be required prior to construction of the proposed development.** The recommendations contained in this report should be taken into the design, construction, and grading considerations. The recommendations are contingent upon all grading and foundation construction activities being monitored by the geotechnical engineer of record.

The Grading Guide Specifications, included as Appendix D, should be considered part of this report, and should be incorporated into the project specifications. The contractor and/or owner of the development should bring to the attention of the geotechnical engineer any conditions that differ from those stated in this report, or which may be detrimental for the development.

## 6.1 Seismic Design Considerations

The subject site is located in an area which is subject to strong ground motions due to earthquakes. The performance of a site specific seismic hazards analysis was beyond the scope of this investigation. However, numerous faults capable of producing significant ground motions are located near the subject site. Due to economic considerations, it is not generally considered reasonable to design a structure that is not susceptible to earthquake damage. Therefore, significant damage to structures may be unavoidable during large earthquakes. The proposed structures should, however, be designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage and loss of life.

Faulting and Seismicity

Research of available maps indicates that the subject site is not located within an Alquist-Priolo Earthquake Fault Zone. Therefore, the possibility of significant fault rupture on the site is considered to be low.

Seismic Design Parameters

The 2019 California Building Code (CBC) provides procedures for earthquake resistant structural design that include considerations for on-site soil conditions, occupancy, and the configuration of the structure including the structural system and height. The seismic design parameters presented below are based on the soil profile and the proximity of known faults with respect to the subject site.

Based on standards in place at the time of this report, the proposed development is expected to be designed in accordance with the requirements of the 2019 edition of the California Building Code (CBC), which was adopted on January 1, 2020.

The 2019 CBC Seismic Design Parameters have been generated using the SEAOC/OSHPD Seismic Design Maps Tool, a web-based software application available at the website www.seismicmaps.org. This software application calculates seismic design parameters in accordance with several building code reference documents, including ASCE 7-16, upon which the 2019 CBC is based. The application utilizes a database of risk-targeted maximum considered earthquake ($MCE_R$) site accelerations at 0.01-degree intervals for each of the code documents. The tables below were created using data obtained from the application. The output generated from this program is included as Plate E-1 in Appendix E of this report.

The 2019 CBC requires that a site-specific ground motion study be performed in accordance with Section 11.4.8 of ASCE 7-16 for Site Class D sites with a mapped $S_1$ value greater than 0.2. However, Section 11.4.8 of ASCE 7-16 also indicates an exception to the requirement for a site-specific ground motion hazard analysis for certain structures on Site Class D sites. The commentary for Section 11 of ASCE 7-16 (Page 534 of Section C11 of ASCE 7-16) indicates that "In general, this exception effectively limits the requirements for site-specific hazard analysis to very tall and or flexible structures at Site Class D sites." **Based on our understanding of the proposed development, the seismic design parameters presented below were calculated assuming that the exception in Section 11.4.8 applies to the proposed structure at this site. However, the structural engineer should verify that this exception is applicable to the proposed structure.** Based on the exception, the spectral response accelerations presented below were calculated using the site coefficients ($F_a$ and $F_v$) from Tables 1613.2.3(1) and 1613.2.3(2) presented in Section 16.4.4 of the 2019 CBC:

**2019 CBC SEISMIC DESIGN PARAMETERS**

| Parameter | | Value |
|---|---|---|
| Mapped Spectral Acceleration at 0.2 sec Period | $S_S$ | 1.668 |
| Mapped Spectral Acceleration at 1.0 sec Period | $S_1$ | 0.598 |
| Site Class | --- | D* |
| Site Modified Spectral Acceleration at 0.2 sec Period | $S_{MS}$ | 1.668 |
| Site Modified Spectral Acceleration at 1.0 sec Period | $S_{M1}$ | 1.018 |
| Design Spectral Acceleration at 0.2 sec Period | $S_{DS}$ | 1.112 |
| Design Spectral Acceleration at 1.0 sec Period | $S_{D1}$ | 0.679 |

*The 2019 CBC requires that Site Class F be assigned to any profile containing soils vulnerable to potential failure or collapse under seismic loading, such as liquefiable soils. For Site Class F, the site *coefficients* are to be determined in accordance with Section 11.4.7 of ASCE 7-16. However, Section 20.3.1 of ASCE 7-16 indicates that for sites with structures having a fundamental period of vibration equal to or less than 0.5 seconds, the site coefficient factors ($F_a$ and $F_v$) may be determined using the standard procedures. The seismic design parameters tabulated above were calculated using the site coefficient factors for Site Class D, assuming that the fundamental period of the structure is less than 0.5 seconds. However, the results of the liquefaction evaluation indicate that the subject site is underlain by potentially liquefiable soils. Therefore, if the proposed structure has a fundamental period greater than 0.5 seconds, a site-specific seismic hazards analysis will be required and additional subsurface exploration will be necessary.

It should be noted that the site coefficient $F_v$ and the parameters $S_{M1}$ and $S_{D1}$ were not included in the SEAOC/OSHPD Seismic Design Maps Tool output for the 2019 CBC. We calculated these parameters-based on Table 1613.2.3(2) in Section 16.4.4 of the 2019 CBC using the value of $S_1$ obtained from the Seismic Design Maps Tool, assuming that a site-specific ground motion hazards analysis is not required for the proposed buildings at this site.

Ground Motion Parameters

For the purposes of the liquefaction analysis performed for this study, we utilized a site acceleration consistent with maximum considered earthquake ground motions, as required by the 2019 CBC. The peak ground acceleration (PGA) was determined in accordance with Section 11.8.3 of ASCE 7-16. The parameter $PGA_M$ is the maximum considered earthquake geometric mean ($MCE_G$) PGA, multiplied by the appropriate site coefficient from Table 11.8-1 of ASCE 7-16. The web-based software application SEAOC/OSHPD Seismic Design Maps Tool (described in the previous section) was used to determine $PGA_M$, which is 0.785g. A portion of the program output is included as Plate E-1 of this report. An associated earthquake magnitude was obtained from the USGS Unified Hazard Tool, Interactive Deaggregation application available on the USGS website. The deaggregated modal magnitude is 6.88, based on the peak ground acceleration and soil classification D.

Liquefaction

Research of the Whittier, California 7.5 Minute Seismic Hazard Zone Map, published by the California Geological Survey (CGS) indicates that the site is located in a designated liquefaction hazard zone. Therefore, the scope of this investigation included a detailed liquefaction evaluation in order to determine the site-specific liquefaction potential.

The liquefaction evaluation was performed using the reported historic groundwater depth of 5 feet. The primary reference used to determine the historic groundwater depths in this area is CGS Open File Report 98-28, the Seismic Hazard Evaluation of the Whittier Quadrangle.

Liquefaction is the loss of strength in generally cohesionless, saturated soils when the pore-water pressure induced in the soil by a seismic event becomes equal to or exceeds the overburden pressure. The primary factors which influence the potential for liquefaction include groundwater table elevation, soil type and plasticity characteristics, relative density of the soil, initial confining pressure, and intensity and duration of ground shaking. The depth within which the occurrence of liquefaction may impact surface improvements is generally identified as the upper 50 feet below the existing ground surface. Liquefaction potential is greater in saturated, loose, poorly graded fine sands with a mean ($d_{50}$) grain size in the range of 0.075 to 0.2 mm (Seed and Idriss, 1971). Non-sensitive clayey (cohesive) soils which possess a plasticity index of at least 18 (Bray and Sancio, 2006) are generally not considered to be susceptible to liquefaction, nor are those soils which are above the historic static groundwater table.

The liquefaction analysis was conducted in accordance with the requirements of Special Publication 117A (CDMG, 2008), and currently accepted practice (SCEC, 1997). The liquefaction potential of the subject site was evaluated using the empirical method developed by Boulanger and Idriss (Boulanger and Idriss, 2008, 2010, 2014). This method predicts the earthquake-induced liquefaction potential of the site based on a given design earthquake magnitude and peak ground acceleration at the subject site. This procedure essentially compares the cyclic resistance ratio (CRR) [the cyclic stress ratio required to induce liquefaction for a cohesionless soil stratum at a given depth] with the earthquake-induced cyclic stress ratio (CSR) at that depth from a specified design earthquake (defined by a peak ground surface acceleration and an associated earthquake moment magnitude). CRR is determined as a function of the corrected SPT N-value $(N_1)_{60\text{-}cs}$, adjusted for fines content. The factor of safety against liquefaction is defined as

CRR/CSR. Based on Special Publication 117A, a factor of safety of at least 1.3 is required in order to demonstrate that a given soil stratum is non-liquefiable. Additionally, in accordance with Special Publication 117A, clayey soils which do not meet the criteria for liquefiable soils defined by Bray and Sancio (2006), loose soils with a plasticity index (PI) less than 12 and moisture content greater than 85% of the liquid limit, are considered to be insusceptible to liquefaction. Non-sensitive soils with a PI greater than 18 are also considered non-liquefiable.

As part of the liquefaction evaluation, CPT-1 and CPT-2 were extended to depths of at least 50 feet. The borings were also drilled in close proximity to the CPT locations to provide physical samples for further analysis and support of the CPT data. The liquefaction potential for the on-site soils was evaluated the computer program CLiq V3.0.3.2, which was developed by Geologismiki, copyright 2007. The analysis method is based on Boulanger and Idriss 2014. The liquefaction potential of the site was analyzed utilizing a $PGA_M$ of 0.785g for a magnitude 6.88 seismic event. The potential settlements that could occur as a result of liquefaction for each of the potentially liquefiable layers was calculated. A copy of the program output is presented in Appendix G of this report.

Conclusions and Recommendations

The results of the liquefaction analysis have identified potentially liquefiable soils at both of the CPT soundings performed at the site. Soils which are located above the historic groundwater table or possess factors of safety of at least 1.3 are considered non-liquefiable. Several clayey strata encountered between depths of 5 and 50± feet are considered to be non-liquefiable due to their cohesive characteristics, as interpreted by the CPT. Several Atterberg limits tests were also performed on representative soil samples recovered at the boring locations, in order to confirm the cohesive characteristics of the on-site soils. Settlement analyses were conducted for each of the potentially liquefiable strata. The total dynamic settlement for each CPT location, based on the results of the dynamic settlement analyses (presented in Appendix G) are presented below:

- CPT-1: 2.89± inches
- CPT-2: 2.56± inches

Based on these total settlements, differential settlements of up to 1½± inches should be expected to occur during a liquefaction inducing seismic event. The estimated differential settlement could be assumed to occur across a distance of 50 feet, indicating a maximum angular distortion of about 0.0025± inches per inch.

Based on our understanding of the proposed development, it is considered feasible to support the proposed structure on shallow foundations. Such a foundation system can be designed to resist the effects of the anticipated differential settlements, to the extent that the structure would not catastrophically fail. Designing the proposed structure to remain completely undamaged during a major seismic event is not considered to be economically feasible. Based on this understanding, the use of a shallow foundation system is considered to be the most economical means of supporting the proposed structure.

In order to support the proposed structure on shallow foundations (such as spread footings) the structural engineer should verify that the structure would not catastrophically fail due to the predicted dynamic differential settlements. Any utility connections to the structure should be

designed to withstand the estimated differential settlements. It should also be noted that minor to moderate repairs, including re-leveling, restoration of utility connections, repair of damaged drywall and stucco, etc., would likely be required after occurrence of the liquefaction-induced settlements.

The use of a shallow foundation system, as described in this report, is typical for buildings of the type planned for this site, where they are underlain by the extent of liquefiable soils encountered at this site. The post-liquefaction damage that could occur within the buildings proposed for this site will also be typical of similar buildings in the vicinity of this project. However, if the owner determines that this level of potential damage is not acceptable, other geotechnical and structural options are available, including the use of ground improvement, deep foundations or a mat foundation.

## 6.2 Preliminary Geotechnical Design Considerations

General

The near-surface soils encountered within the proposed building area generally consist of low to moderate strength fill and native alluvium. The existing fill soils encountered at the boring locations extend to depths of 1½ to 6½± feet possess variable densities. The fill soils and near-surface alluvial soils are considered to represent undocumented fill based on their variable densities and compositions, therefore remedial grading will be necessary to remove and replace the existing fill and a portion of the near-surface alluvial soils as compacted structural fill.

The site plans indicate that the existing building will be demolished in order to facilitate the construction of the proposed building. Since no borings were performed inside the existing building, the presence and extent of any undocumented fill soils beneath the existing structure is presently unknown. Additionally, the demolition of the existing building and surrounding improvements, such as the foundations, utilities, and any other subsurface improvements is expected to cause significant disturbance to the near surface soils. Therefore, the recommended remedial grading should also remove any soils disturbed during demolition, prior to the placement of any compacted fill materials.

As discussed in the previous section of this report, potentially liquefiable soils were identified at this site. The presence of the recommended layer of newly placed compacted structural fill above these liquefiable soils will help to reduce surface manifestations that could occur as a result of liquefaction. The foundation design recommendations presented in the subsequent sections of this report also contain recommendations to provide additional rigidity in order to reduce the potential effects of differential settlement that could occur as a result of liquefaction.

We recommend that additional consolidation testing be performed during the design-level investigation, in order to determine the actual depth of overexcavation necessary to limit potential settlement of the soils underlying the proposed building area.

LA County Section 111 Statement

Based on the results of our geotechnical analysis, the proposed development will be safe with regard to landslides, settlement and/or slippage. In addition, the proposed development will not adversely affect the geologic stability of the adjacent properties. This finding is in accordance with Section 111 of the Los Angeles County Building Code.

Settlement

The recommended remedial grading will remove the existing undocumented fill soils as well as a portion of the near-surface native alluvium, and replace these materials as compacted structural fill. The native soils that will remain in place below the recommended depth of overexcavation will not be subject to significant load increases from the foundations of the new structure. Provided that the recommended remedial grading is completed, the post-construction static settlements of the proposed structure is expected to be within tolerable limits.

Expansion

Laboratory testing performed on representative samples of the near surface soils indicates that these materials possess a very low expansion potential (EI = 18). Therefore, no design considerations related to expansive soils are considered warranted for this site. We recommend that additional expansion index testing be performed at the time of the design-level geotechnical investigation and at the completion of rough grading in order to confirm the expansion potential of the near-surface soils at this site.

Soluble Sulfates

The results of the soluble sulfate testing indicate that a selected sample of the on-site soils correspond to Class S0 with respect to the American Concrete Institute (ACI) Publication 318 Building Code Requirements for Structural Concrete and Commentary, Section 4.3. Therefore, specialized concrete mix designs are not considered to be necessary, with regard to sulfate protection purposes. It is, however, recommended that additional soluble sulfate testing be conducted at time of the design-level geotechnical investigation and at the completion of rough grading to verify the soluble sulfate concentrations of the soils which are present at pad grade within the building areas.

Corrosion Potential

The results of laboratory testing indicate that the tested sample of the on-site soils possesses a saturated resistivity value of 3,440 ohm-cm, and a pH value of 7.9. These test results have been evaluated in accordance with guidelines published by the Ductile Iron Pipe Research Association (DIPRA). The DIPRA guidelines consist of a point system by which characteristics of the soils are used to quantify the corrosivity characteristics of the site. Resistivity and pH are two of the five factors that enter into the evaluation procedure. Redox potential, relative soil moisture content and sulfides are also included. Although sulfide testing was not part of the scope of services for this project, we have evaluated the corrosivity characteristics of the on-site soils using resistivity, pH and moisture content. **Based on these factors, and utilizing the DIPRA procedure, the on-site soils are not considered to be corrosive to ductile iron pipe.** It should be noted that SCG does not practice in the field of corrosion engineering, and therefore, the client may also wish to contact a corrosion engineer to provide a more thorough evaluation. Additional

laboratory testing should be performed during the design-level study in order to verify these findings.

A relatively low concentration (4.3 mg/kg) of chlorides was detected in the sample submitted for corrosivity testing. In general, soils possessing chloride concentrations in excess of 500 parts per million (ppm) are considered to be corrosive with respect to steel reinforcement within reinforced concrete. Based on the lack of any significant chlorides in the tested sample, the site is considered to have a C1 chloride exposure in accordance with the American Concrete Institute (ACI) Publication 318 Building Code Requirements for Structural Concrete and Commentary. Therefore, a specialized concrete mix design for reinforced concrete for protection against chloride exposure is not considered warranted. We recommend that additional corrosivity testing be performed at the time of the design-level geotechnical investigation in order to confirm the chloride exposure category.

Shrinkage/Subsidence

Removal and recompaction of the near-surface alluvium and fill soils is estimated to result in an average shrinkage of 7 to 14 percent. However, the estimated shrinkage of the individual soil layers at the site is highly variable, with individual strata ranging from 0 to 18 percent shrinkage. It should be noted that the potential shrinkage estimate is based on dry density testing performed on small-diameter samples taken at the boring locations. If a more accurate and precise shrinkage estimate is desired, SCG can perform a shrinkage study involving several excavated test-pits where in-place densities are determined using in-situ testing methods instead of laboratory density testing on small-diameter samples. Please contact SCG for details and a cost estimate regarding a shrinkage study, if desired.

Minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. The subsidence is estimated to be 0.1 feet.

These estimates are based on previous experience and the subsurface conditions encountered at the boring locations. The actual amount of subsidence is expected to be variable and will be dependent on the type of machinery used, repetitions of use, and dynamic effects, all of which are difficult to assess precisely.

Additional Geotechnical Investigation

As discussed above, the focus of the current phase of investigation was to determine the geotechnical feasibility of the proposed development at the subject site. Prior to preparing detailed grading or foundation plans, a site-specific, detailed geotechnical investigation should be performed. The purpose of this supplementary investigation will be to obtain more detailed data regarding the subsurface conditions at the subject site. The scope of this future investigation should be sufficient to provide detailed grading recommendations as well as foundation, floor slab, and pavement design recommendations.

## 6.3 Preliminary Site Grading Recommendations

The preliminary grading recommendations presented below are based on the design details that were available at the time of this report, and the subsurface conditions encountered at our boring locations. These recommendations are general and preliminary in nature, and should be confirmed as part of the future design-level geotechnical investigation.

Site Stripping and Demolition

Demolition of the existing structure and pavements will be necessary in order to facilitate the construction of the proposed development. Demolition should include all foundations, floor slabs, utilities and any other subsurface improvements that will not remain in place with the new development.

Demolition activities may result in moderate quantities of asphalt and concrete debris. These materials may be crushed to a maximum 2-inch particle size and blended with on-site soils for reuse as structural fill. These materials could also be crushed to a 4- to 6-inch particle size and used as stabilization material for use at the base of the recommended overexcavation, as discussed in a subsequent section of this report.

Treatment of Existing Soils: Building Pad

Remedial grading should be performed within the proposed building area in order to remove the artificial fill materials, the upper portion of the alluvial soils, and any soils disturbed during the demolition of the existing site improvements. The depth of overexcavation should be determined during the design-level geotechnical investigation. Undocumented fill soils were encountered at all of the boring locations extending to depths of 2½ to 6½± feet below the existing site grades. On a preliminary basis, overexcavation to depths of 3 to 6± feet below existing and proposed building pad grades should be anticipated. Some additional overexcavation should also be anticipated in localized areas of the site. The overexcavation recommendation within the foundation areas will likely be 3 to 5± feet below foundation bearing grade. Additional consolidation testing should be performed during the design-level geotechnical investigation. Additional overexcavation may be necessary if adverse conditions are encountered during the design-level investigation.

The overexcavation areas should extend at least 5 feet beyond the building perimeter and foundations, and to an extent equal to the depth of fill below the new foundations. If the proposed structure incorporates any exterior columns (such as for a canopy or overhang) the overexcavation should also encompass these areas.

**Based on conditions encountered at the exploratory boring locations, some zones of very moist soils will be encountered at or near the base of the recommended overexcavation.** Stabilization of the exposed overexcavation subgrade soils will likely be necessary. Scarification and air drying of these materials may be sufficient to obtain a stable subgrade. However, if highly unstable soils are identified, and if the construction schedule does not allow for delays associated with drying, mechanical stabilization, usually consisting of coarse crushed stone or geotextile, could be necessary. Crushed asphalt and concrete debris could

potentially be used as subgrade stabilization material as well. If stabilization is required, the geotechnical engineer should be contacted for supplementary recommendations.

After a suitable overexcavation subgrade has been achieved, the exposed soils should be scarified to a depth of at least 12 inches and moisture conditioned or air dried to achieve a moisture content of 0 to 4 percent above optimum moisture content. The subgrade soils should then be recompacted to at least 90 percent of the ASTM D-1557 maximum dry density.

The building pad areas may then be raised to grade with previously excavated soils or imported, very low expansive structural fill. All structural fill soils placed at the site should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density.

Treatment of Existing Soils: Retaining Walls and Site Walls

The existing soils within the areas of any proposed retaining and site walls should be overexcavated to a depth of 2 to 4 feet below foundation bearing grade and replaced as compacted structural fill as discussed above for the proposed building pad. Any undocumented fill soils within any of these foundation areas should be removed in their entirety. The overexcavation should also extend to a depth of at least 2 to 4 feet beneath to bottom of any erection pads used to construct tilt-up concrete walls. The overexcavation subgrade soils should be evaluated by the geotechnical engineer prior to scarifying, moisture conditioning, and recompacting the upper 12 inches of exposed subgrade soils, as discussed for the building area. The previously excavated soils may then be replaced as compacted structural fill.

Treatment of Existing Soils: Parking Areas

Based on economic considerations, overexcavation of the existing fill soils and/or the surficial alluvial soils in the new parking areas is not considered warranted, with the exception of areas where lower strength, or unstable soils are identified by the geotechnical engineer during grading.

Subgrade preparation in the new parking areas should initially consist of removal of all soils disturbed during stripping and demolition operations. The geotechnical engineer should then evaluate the subgrade to identify any areas of additional unsuitable soils. The subgrade soils should then be scarified to a depth of 12± inches, moisture conditioned to 0 to 4 percent above optimum, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. Based on the presence of variable strength alluvial soils throughout the site, it is expected that some isolated areas of additional overexcavation may be required to remove zones of lower strength, unsuitable soils.

The grading recommendations presented above for the proposed parking and drive areas assume that the owner and/or developer can tolerate minor amounts of settlement within the proposed parking areas. The grading recommendations presented above do not completely mitigate the extent of existing undocumented fill soils and low strength alluvium in the parking areas. As such, settlement and associated pavement distress could occur. Typically, repair of such distressed areas involves significantly lower costs than completely mitigating these soils at the time of construction. If the owner cannot tolerate the risk of such settlements, the parking and drive areas should be overexcavated to a depth of 2 feet below proposed pavement subgrade elevation, with the resulting soils replaced as compacted structural fill.

Treatment of Existing Soils: Flatwork Areas

Subgrade preparation in the new flatwork areas should initially consist of removal of all soils disturbed during stripping and demolition operations. The geotechnical engineer should then evaluate the subgrade to identify any areas of additional unsuitable soils. The subgrade soils should then be scarified to a depth of 12± inches, moisture conditioned to 0 to 4 percent above optimum, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. Based on the presence of variable strength alluvial soils throughout the site, it is expected that some isolated areas of additional overexcavation may be required to remove zones of lower strength, unsuitable soils.

Fill Placement

- Fill soils should be placed in thin (6± inches), near-horizontal lifts, moisture conditioned to 0 to 4 percent above the optimum moisture content, and compacted.
- On-site soils may be used for fill provided they are cleaned of any debris to the satisfaction of the geotechnical engineer.
- All grading and fill placement activities should be completed in accordance with the requirements of the 2019 CBC and the grading code of the City of Downey/ County of Los Angeles.
- All fill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. Fill soils should be well mixed.
- Compaction tests should be performed periodically by the geotechnical engineer as random verification of compaction and moisture content. These tests are intended to aid the contractor. Since the tests are taken at discrete locations and depths, they may not be indicative of the entire fill and therefore should not relieve the contractor of his responsibility to meet the job specifications.

Imported Structural Fill

All imported structural fill should consist of very low expansive (EI < 20), well graded soils possessing at least 10 percent fines (that portion of the sample passing the No. 200 sieve). Additional specifications for structural fill are presented in the Grading Guide Specifications, included as Appendix D.

Utility Trench Backfill

In general, all utility trench backfill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. As an alternative, a clean sand (minimum Sand Equivalent of 30) may be placed within trenches and compacted in place (jetting or flooding is not recommended). Compacted trench backfill should conform to the requirements of the local grading code, and more restrictive requirements may be indicated by the City of Downey or County of Los Angeles. All utility trench backfills should be witnessed by the geotechnical engineer. The trench backfill soils should be compaction tested where possible; probed and visually evaluated elsewhere.

Utility trenches which parallel a footing, and extending below a 1h:1v plane projected from the outside edge of the footing should be backfilled with structural fill soils, compacted to at least 90 percent of the ASTM D-1557 standard. Pea gravel backfill should not be used for these trenches.

## 6.4 Construction Considerations

Excavation Considerations

The near surface soils generally consist of silty sands, fine sandy silts, and sands. These materials will likely be subject to caving within shallow excavations. Where caving occurs within shallow excavations, flattened excavation slopes may be sufficient to provide excavation stability. On a preliminary basis, the inclination of temporary slopes should not exceed 2h:1v. Maintaining adequate moisture content within the near-surface soils will improve excavation stability. All excavation activities on this site should be conducted in accordance with Cal-OSHA regulations.

Moisture Sensitive Subgrade Soils

Some of the near surface soils possess appreciable silt content and may become unstable if exposed to significant moisture infiltration or disturbance by construction traffic. In addition, based on their granular content, some of the on-site soils will also be susceptible to erosion. The site should, therefore, be graded to prevent ponding of surface water and to prevent water from running into excavations.

If the construction schedule dictates that site grading will occur during a period of wet weather, allowances should be made for costs and delays associated with drying the on-site soils or import of a drier, less moisture sensitive fill material. Grading during wet or cool weather may also increase the depth of overexcavation in the pad areas as well as the need for and/or the thickness of the crushed stone stabilization layer, discussed in Section 6.3 of this report.

Expansive Soils

The near-surface soils have been determined to possess a very low expansion potential (EI = 18). Therefore, care should be given to proper moisture conditioning the subgrade soils to a moisture content of 0 to 4 percent above the Modified Proctor optimum during site grading. All imported fill soils should have very low expansive (EI < 20) characteristics. In addition to adequately moisture conditioning the subgrade soils and fill soils during grading, special care must be taken to maintain moisture content of these soils at 0 to 4 percent above the Modified Proctor optimum. This will require the contractor to frequently moisture condition these soils throughout the grading process, unless grading occurs during a period of relatively wet weather.

Groundwater

The static groundwater table is considered to exist at a depth of 50± feet or more below existing grade. Therefore, groundwater is not expected to impact the grading or foundation construction activities.

## 6.5 Preliminary Foundation Design and Construction

Based on the preceding geotechnical design considerations and preliminary grading recommendations, it is assumed that the new building pad will be underlain by structural fill soils

used to replace existing fill and near surface alluvial soils. These new structural fill soils will extend to depths of at least 3 to 5 feet below proposed foundation bearing grade, underlain by 1± foot of additional soil that has been densified and moisture conditioned in place. Based on this subsurface profile, and based on the design considerations presented in Section 6.1 of this report, the proposed structure may be supported on shallow foundations.

Foundation Design Parameters

New square and rectangular footings may be designed as follows:

- Maximum, net allowable soil bearing pressure: 2,000 to 2,500 lbs/ft$^2$.
- Minimum longitudinal steel reinforcement within strip footings: Six (6) No. 5 rebars (3 top and 3 bottom), due to the liquefaction potential of the soils.
- The actual design of the foundations should be determined by the structural engineer.

General Foundation Design Recommendations

The allowable bearing pressures presented above may be increased by one-third when considering short duration wind or seismic loads. Additional reinforcement may be necessary for structural considerations. The actual design of the foundations should be determined by the structural engineer.

Estimated Foundation Settlements

Post-construction total and differential settlements of shallow foundations designed and constructed in accordance with the previously presented recommendations are estimated to be less than 1.0 and 0.5 inches, respectively. Differential movements are expected to occur over a 30-foot span, thereby resulting in an angular distortion of less than 0.002 inches per inch. These settlements are in addition to the liquefaction-induced settlements previously discussed in Section 6.1 of this report. However, the likelihood of these two settlements combining is considered remote. The static settlements are expected to occur in a relatively short period of time after the building loads being applied to the foundations, during and immediately subsequent to construction. It should be noted that the projected potential dynamic settlement is related to a major seismic event and a conservative historic high groundwater level. A detailed settlement analysis should be conducted as part of the design-level geotechnical investigation, once detailed foundation loading information is available.

Lateral Load Resistance

Lateral load resistance will be developed by a combination of friction acting at the base of foundations and slabs and the passive earth pressure developed by footings below grade. The following friction and passive pressure may be used to resist lateral forces:

- Passive Earth Pressure: 225 to 300 lbs/ft$^3$
- Friction Coefficient: 0.25 to 0.30

These are allowable values, and include a factor of safety. When combining friction and passive resistance, the passive pressure component should be reduced by one-third. These values assume that footings will be poured directly against compacted structural fill soils. The maximum allowable passive pressure is 2,500 lbs/ft$^2$.

## 6.6 Preliminary Floor Slab Design and Construction Recommendations

Subgrades which will support new floor slabs should be prepared in accordance with the recommendations contained in the ***Site Grading Recommendations*** section of this report. Preliminarily, the floor of the proposed structure may be constructed as a conventional slab-on-grade supported on newly placed structural fill. Based on geotechnical considerations, the floor slab may be preliminarily designed as follows:

- Minimum slab thickness: 6 to 7 inches
- Modulus of Subgrade Reaction: k = 100 to 150 psi/in
- Steel reinforcement is expected to be necessary, based on the liquefaction potential of the soils underlying the subject site.
- Slab underlayment: If moisture sensitive floor coverings will be used then minimum slab underlayment should consist of a moisture vapor barrier constructed below the entire area of the proposed slab which will incorporate such coverings. The moisture vapor barrier should meet or exceed the Class A rating as defined by ASTM E 1745-97 and have a permeance rating less than 0.01 perms as described in ASTM E 96-95 and ASTM E 154-88. A polyolefin material such as Stego® Wrap Vapor Barrier or equivalent will meet these specifications. The moisture vapor barrier should be properly constructed in accordance with all applicable manufacturer specifications. Given that a rock free subgrade is anticipated and that a capillary break is not required, sand below the barrier is not required. The need for sand and/or the amount of sand above the moisture vapor barrier should be specified by the structural engineer or concrete contractor. The selection of sand above the barrier is not a geotechnical engineering issue and hence outside our purview. Where moisture sensitive floor coverings are not anticipated, the vapor barrier may be eliminated.
- Moisture condition the floor slab subgrade soils to 2 to 4 percent above the Modified Proctor optimum moisture content, to a depth of 12 inches. The moisture content of the floor slab subgrade soils should be verified by the geotechnical engineer within 24 hours prior to concrete placement.
- Proper concrete curing techniques should be utilized to reduce the potential for slab curling or the formation of excessive shrinkage cracks.

The actual design of the floor slab should be completed by the structural engineer to verify adequate thickness and reinforcement.

## 6.7 Preliminary Retaining Wall Design and Construction

Although not indicated on the site plan, some small (less than 3 to 4 feet in height) retaining walls may be required to facilitate the new site grades. Retaining walls up to 5 feet in height will also be required in the loading dock areas. The parameters recommended for use in the design of these walls are presented below.

Retaining Wall Design Parameters

Based on the soil conditions encountered at the boring locations, the following parameters may be used in the design of new retaining walls for this site. We have provided parameters assuming the use of on-site soils for retaining wall backfill. The near surface soils generally consist of fine silty sands, and sandy silts and have been preliminarily assigned an estimated friction angle of 30 degrees when compacted to 90 percent of the ASTM-1557 maximum dry density. The design parameters provided below are based on the assumed friction angle and should be confirmed during the design-level geotechnical investigation.

If desired, SCG could provide design parameters for an alternative select backfill material behind the retaining walls. The use of select backfill material could result in lower lateral earth pressures. In order to use the design parameters for the imported select fill, this material must be placed within the entire active failure wedge. This wedge is defined as extending from the heel of the retaining wall upwards at an angle of approximately 60° from horizontal. If select backfill material behind the retaining wall is desired, SCG should be contacted for supplementary recommendations.

**RETAINING WALL DESIGN PARAMETERS**

| Design Parameter | | Soil Type |
|---|---|---|
| | | On-site Soils |
| Internal Friction Angle ($\phi$) | | 30° |
| Unit Weight | | 125 lbs/ft$^3$ |
| Equivalent Fluid Pressure: | Active Condition (level backfill) | 42 lbs/ft$^3$ |
| | Active Condition (2h:1v backfill) | 67 lbs/ft$^3$ |
| | At-Rest Condition (level backfill) | 63 lbs/ft$^3$ |

The walls should be designed using a soil-footing coefficient of friction of 0.25 to 0.30 and an equivalent passive pressure of 225 to 300 lbs/ft$^3$. The structural engineer should incorporate appropriate factors of safety in the design of the retaining walls.

The active earth pressure may be used for the design of retaining walls that do not directly support structures or support soils that in turn support structures and which will be allowed to deflect. The at-rest earth pressure should be used for walls that will not be allowed to deflect

such as those which will support foundation bearing soils, or which will support foundation loads directly.

Where the soils on the toe side of the retaining wall are not covered by a "hard" surface such as a structure or pavement, the upper 1 foot of soil should be neglected when calculating passive resistance due to the potential for the material to become disturbed or degraded during the life of the structure.

Seismic Lateral Earth Pressures

In addition to the lateral earth pressures presented in the previous section, retaining walls which are more than 6 feet in height should be designed for a seismic lateral earth pressure, in accordance with the 2019 CBC. Based on the current site plan, it is not expected that any walls in excess of 6 feet in height will be required for this project. If any such walls are proposed, our office should be contacted for supplementary design recommendations.

Retaining Wall Foundation Design

The retaining wall foundations should be supported within newly placed compacted structural fill. Foundations to support new retaining walls should be designed in accordance with the general Foundation Design Parameters presented in a previous section of this report.

Backfill Material

On-site soils may be used to backfill the retaining walls. However, all backfill material placed within 3 feet of the back wall face should have a particle size no greater than 3 inches. The retaining wall backfill materials should be well graded.

It is recommended that a properly installed prefabricated drainage composite such as the MiraDRAIN 6000XL (or approved equivalent), which is specifically designed for use behind retaining walls be used. If the drainage composite material is not covered by an impermeable surface, such as a structure or pavement, a 12-inch thick layer of a low permeability soil should be placed over the backfill to reduce surface water migration to the underlying soils. The drainage composite should be separated from the backfill soils by a suitable geotextile, approved by the geotechnical engineer.

All retaining wall backfill should be placed and compacted under engineering controlled conditions in the necessary layer thicknesses to ensure an in-place density between 90 and 93 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D1557). Care should be taken to avoid over-compaction of the soils behind the retaining walls, and the use of heavy compaction equipment should be avoided.

Subsurface Drainage

As previously indicated, the retaining wall design parameters are based upon drained backfill conditions. Consequently, some form of permanent drainage system will be necessary in conjunction with the appropriate backfill material. Subsurface drainage may consist of either:

- A weep hole drainage system typically consisting of a series of 4-inch diameter holes in the wall situated slightly above the ground surface elevation on the exposed side of the wall and at an approximate 8-foot on-center spacing. The weep holes should include a 2 cubic foot pocket of open graded gravel, surrounded by an approved geotextile fabric, at each weep hole location.

- A 4-inch diameter perforated pipe surrounded by 2 cubic feet of gravel per linear foot of drain placed behind the wall, above the retaining wall footing. The gravel layer should be wrapped in a suitable geotextile fabric to reduce the potential for migration of fines. The footing drain should be extended to daylight or tied into a storm drainage system.

Weep holes or a footing drain will not be required for building stem walls.

## 6.8 Preliminary Pavement Design Parameters

Presented below are preliminary recommendations for the proposed pavements at the subject site. Grading recommendations for these pavement areas should be developed during the design-level geotechnical investigation.

Pavement Subgrades

It is anticipated that the new pavements will be primarily supported on a layer of compacted structural fill, consisting of scarified, thoroughly moisture conditioned and recompacted existing soils. The near-surface soils generally consist of silty sands and sandy silts. Based on their classification, these materials are expected to possess fair to good pavement support characteristics, with R-values in the range of 30 to 40. Since R-value testing was not included in the scope of services for this project, the subsequent pavement design is based upon a conservatively assumed R-value of 30. Any fill material imported to the site should have support characteristics equal to or greater than that of the on-site soils and be placed and compacted under engineering controlled conditions. It is recommended that R-value testing be performed after completion of rough grading. Depending upon the results of the R-value testing, it may be feasible to use thinner pavement sections in some areas of the site.

Asphaltic Concrete

Presented below are the recommended thicknesses for new flexible pavement structures consisting of asphaltic concrete over a granular base. The pavement designs are based on the traffic indices (TI's) indicated. The client and/or civil engineer should verify that these TI's are representative of the anticipated traffic volumes. If the client and/or civil engineer determine that the expected traffic volume will exceed the applicable traffic index, we should be contacted for supplementary recommendations. The design traffic indices equate to the following approximate daily traffic volumes over a 20 year design life, assuming six operational traffic days per week.

| Traffic Index | No. of Heavy Trucks per Day |
|---|---|
| 4.0 | 0 |
| 5.0 | 1 |
| 6.0 | 3 |
| 7.0 | 11 |
| 8.0 | 35 |

For the purpose of the traffic volumes indicated above, a truck is defined as a 5-axle tractor trailer unit with one 8-kip axle and two 32-kip tandem axles. All of the traffic indices allow for 1,000 automobiles per day.

| ASPHALT PAVEMENTS (R = 30) | | | | | |
|---|---|---|---|---|---|
| **Materials** | **Thickness (inches)** | | | | |
| | Auto Parking (TI = 4.0) | Auto Drive Lanes (TI = 5.0) | Truck Traffic | | |
| | | | (TI = 6.0) | (TI = 7.0) | (TI = 8.0) |
| Asphalt Concrete | 3 | 3 | 3½ | 4 | 5 |
| Aggregate Base | 3 | 6 | 8 | 10 | 11 |
| Compacted Subgrade | 12 | 12 | 12 | 12 | 12 |

The aggregate base course should be compacted to at least 95 percent of the ASTM D-1557 maximum dry density. The asphaltic concrete should be compacted to at least 95 percent of the Marshall maximum density, as determined by ASTM D-2726. The aggregate base course may consist of crushed aggregate base (CAB) or crushed miscellaneous base (CMB), which is a recycled gravel, asphalt and concrete material. The gradation, R-Value, Sand Equivalent, and Percentage Wear of the CAB or CMB should comply with appropriate specifications contained in the current edition of the "Greenbook" Standard Specifications for Public Works Construction.

Portland Cement Concrete

The preparation of the subgrade soils within concrete pavement areas should be performed as previously described for proposed asphalt pavement areas. The minimum recommended thicknesses for the Portland Cement Concrete pavement sections are as follows:

| PORTLAND CEMENT CONCRETE PAVEMENTS (R=30) | | | | |
|---|---|---|---|---|
| **Materials** | **Thickness (inches)** | | | |
| | Auto Parking & Drives (TI = 5.0) | Truck Traffic | | |
| | | (TI =6.0) | (TI =7.0) | (TI =8.0) |
| PCC | 5 | 5 | 5½ | 6½ |
| Compacted Subgrade | 12 | 12 | 12 | 12 |

The concrete should have a 28-day compressive strength of at least 3,000 psi. Any reinforcement within the PCC pavements should be determined by the project structural engineer. The maximum joint spacing within all of the PCC pavements is recommended to be equal to or less than 30 times the pavement thickness.

# 7.0 GENERAL COMMENTS

This report has been prepared as an instrument of service for use by the client, in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, civil engineer, and/or structural engineer. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur. The client(s)' reliance upon this report is subject to the Engineering Services Agreement, incorporated into our proposal for this project.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between boring locations and sample depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted.

The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

# 8.0 REFERENCES


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Idriss, I. M. and Boulanger, R. W., "Soil Liquefaction During Earthquakes", Earthquake Engineering Research Institute, 2008.

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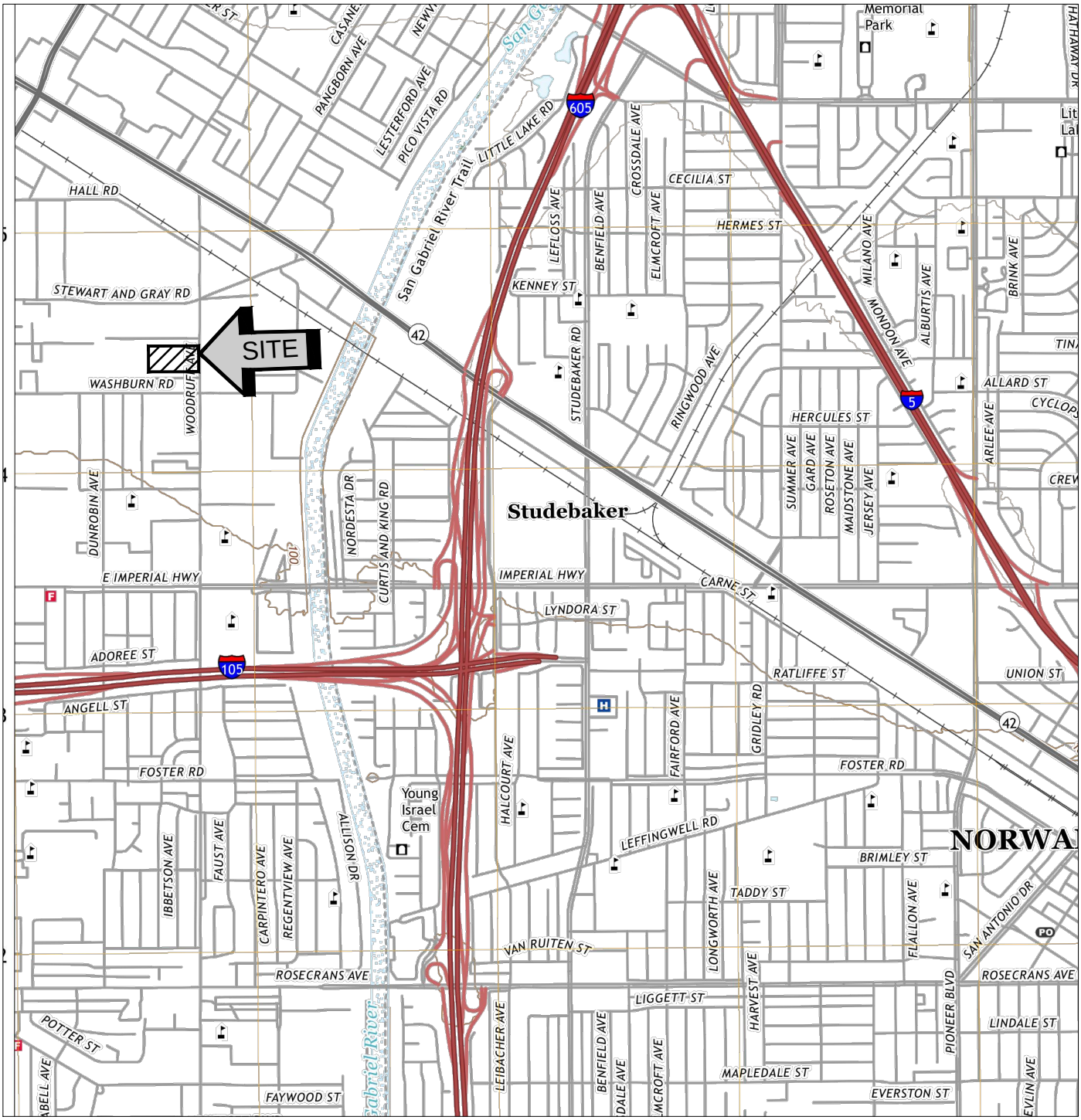
Southern California Earthquake Center (SCEC), University of Southern California, "Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California," Committee formed 1997.

Tokimatsu K., and Seed, H. B., "Evaluation of Settlements in Sands Due to Earthquake Shaking," Journal of the Geotechnical Engineering Division, American society of Civil Engineers, Volume 113, No. 8, August 1987, pp. 861-878.

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Youd, T. L. and Idriss, I. M. (Editors), "Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils," Salt Lake City, UT, January 5-6 1996, NCEER Technical Report NCEER-97-0022, Buffalo, NY.

# APPENDIX A




SOURCE: USGS TOPOGRAPHIC MAP OF THE WHITTIER QUADRANGLE, LOS ANGELES COUNTY, CALIFORNIA, 2018

**SITE LOCATION MAP**

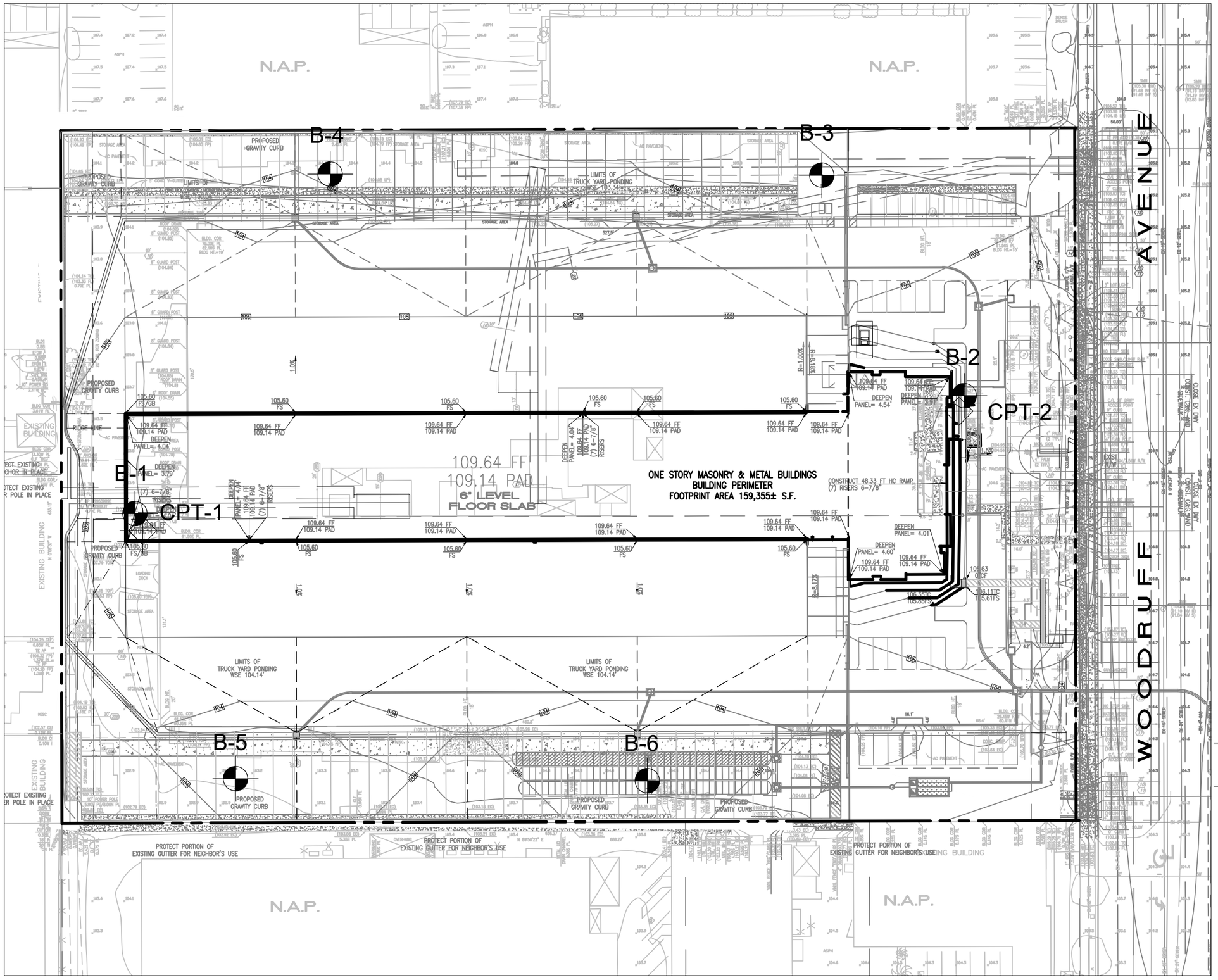
PROPOSED DISTRIBUTION BUILDING

DOWNEY, CALIFORNIA

| | |
|---|---|
| SCALE: 1" = 2000' | |
| DRAWN: RB<br>CHKD: RGT | |
| SCG PROJECT<br>20G170-1 | |
| **PLATE 1** | |

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL




## GEOTECHNICAL LEGEND

- APPROXIMATE BORING LOCATION
- APPROXIMATE CPT LOCATION

**BORING AND CPT LOCATION PLAN**

PROPOSED DISTRIBUTION BUILDING

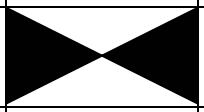
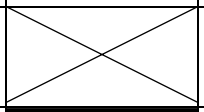
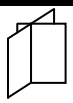
DOWNEY, CALIFORNIA

| | |
|---|---|
| SCALE: 1" = 60' | |
| DRAWN: RB<br>CHKD: RGT | |
| SCG PROJECT<br>20G170-1 | |
| **PLATE 2** | |

SOUTHERN CALIFORNIA GEOTECHNICAL

# APPENDIX B

# BORING LOG LEGEND

| SAMPLE TYPE | GRAPHICAL SYMBOL | SAMPLE DESCRIPTION |
|---|---|---|
| **AUGER** |  | SAMPLE COLLECTED FROM AUGER CUTTINGS, NO FIELD MEASUREMENT OF SOIL STRENGTH. (DISTURBED) |
| **CORE** |  | ROCK CORE SAMPLE: TYPICALLY TAKEN WITH A DIAMOND-TIPPED CORE BARREL. TYPICALLY USED ONLY IN HIGHLY CONSOLIDATED BEDROCK. |
| **GRAB** |  | SOIL SAMPLE TAKEN WITH NO SPECIALIZED EQUIPMENT, SUCH AS FROM A STOCKPILE OR THE GROUND SURFACE. (DISTURBED) |
| **CS** |  | CALIFORNIA SAMPLER: 2-1/2 INCH I.D. SPLIT BARREL SAMPLER, LINED WITH 1-INCH HIGH BRASS RINGS. DRIVEN WITH SPT HAMMER. (RELATIVELY UNDISTURBED) |
| **NSR** |  | NO RECOVERY: THE SAMPLING ATTEMPT DID NOT RESULT IN RECOVERY OF ANY SIGNIFICANT SOIL OR ROCK MATERIAL. |
| **SPT** |  | STANDARD PENETRATION TEST: SAMPLER IS A 1.4 INCH INSIDE DIAMETER SPLIT BARREL, DRIVEN 18 INCHES WITH THE SPT HAMMER. (DISTURBED) |
| **SH** |  | SHELBY TUBE: TAKEN WITH A THIN WALL SAMPLE TUBE, PUSHED INTO THE SOIL AND THEN EXTRACTED. (UNDISTURBED) |
| **VANE** |  | VANE SHEAR TEST: SOIL STRENGTH OBTAINED USING A 4 BLADED SHEAR DEVICE. TYPICALLY USED IN SOFT CLAYS-NO SAMPLE RECOVERED. |

**COLUMN DESCRIPTIONS**

**DEPTH:** Distance in feet below the ground surface.

**SAMPLE**: Sample Type as depicted above.

**BLOW COUNT**: Number of blows required to advance the sampler 12 inches using a 140 lb hammer with a 30-inch drop. 50/3" indicates penetration refusal (>50 blows) at 3 inches. WH indicates that the weight of the hammer was sufficient to push the sampler 6 inches or more.

**POCKET PEN.**: Approximate shear strength of a cohesive soil sample as measured by pocket penetrometer.

**GRAPHIC LOG**: Graphic Soil Symbol as depicted on the following page.

**DRY DENSITY**: Dry density of an undisturbed or relatively undisturbed sample in $lbs/ft^3$.

**MOISTURE CONTENT**: Moisture content of a soil sample, expressed as a percentage of the dry weight.

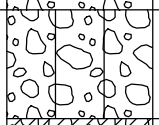
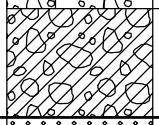
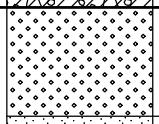
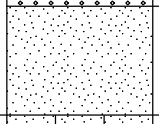
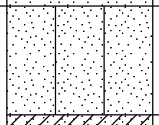
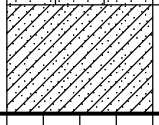
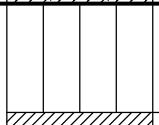
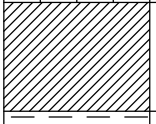
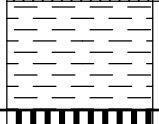
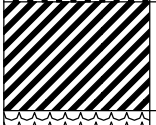
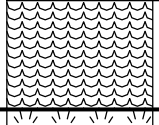
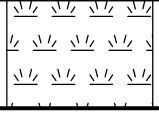
**LIQUID LIMIT**: The moisture content above which a soil behaves as a liquid.

**PLASTIC LIMIT**: The moisture content above which a soil behaves as a plastic.

**PASSING #200 SIEVE**: The percentage of the sample finer than the #200 standard sieve.

**UNCONFINED SHEAR**: The shear strength of a cohesive soil sample, as measured in the unconfined state.

# SOIL CLASSIFICATION CHART

| MAJOR DIVISIONS | | | SYMBOLS | | TYPICAL DESCRIPTIONS |
|---|---|---|---|---|---|
| | | | GRAPH | LETTER | |
| COARSE GRAINED SOILS<br>MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE | GRAVEL AND GRAVELLY SOILS<br>MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE | CLEAN GRAVELS<br>(LITTLE OR NO FINES) |  | GW | WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES |
| | | |  | GP | POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES |
| | | GRAVELS WITH FINES<br>(APPRECIABLE AMOUNT OF FINES) |  | GM | SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES |
| | | |  | GC | CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES |
| | SAND AND SANDY SOILS<br>MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE | CLEAN SANDS<br>(LITTLE OR NO FINES) |  | SW | WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES |
| | | |  | SP | POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES |
| | | SANDS WITH FINES<br>(APPRECIABLE AMOUNT OF FINES) |  | SM | SILTY SANDS, SAND - SILT MIXTURES |
| | | |  | SC | CLAYEY SANDS, SAND - CLAY MIXTURES |
| FINE GRAINED SOILS<br>MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE | SILTS AND CLAYS | LIQUID LIMIT LESS THAN 50 |  | ML | INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY |
| | | |  | CL | INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS |
| | | |  | OL | ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY |
| | SILTS AND CLAYS | LIQUID LIMIT GREATER THAN 50 |  | MH | INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS |
| | | |  | CH | INORGANIC CLAYS OF HIGH PLASTICITY |
| | | |  | OH | ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS |
| HIGHLY ORGANIC SOILS | | |  | PT | PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS |

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

**BORING NO. B-1**

JOB NO.: 20G170-1
PROJECT: Proposed Distribution Building
LOCATION: Downey, California

DRILLING DATE: 7/10/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Ryan Bremer

WATER DEPTH: ---
CAVE DEPTH: 45 feet
READING TAKEN: At Completion

| FIELD RESULTS | | | | | | LABORATORY RESULTS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FEET) | SAMPLE | BLOW COUNT | POCKET PEN. (TSF) | GRAPHIC LOG | DESCRIPTION<br>SURFACE ELEVATION: 103.9 feet MSL | DRY DENSITY (PCF) | MOISTURE CONTENT (%) | LIQUID LIMIT | PLASTIC LIMIT | PASSING #200 SIEVE (%) | ORGANIC CONTENT (%) | COMMENTS |
| | | | | | 4± inches Asphaltic Concrete, 4± inches Aggregate Base | | | | | | | |
| | | 10 | | | FILL: Gray Brown Silty fine Sand, trace to little Clay, extensive AC fragments, dry to damp-loose | | 3 | | | | | EI = 18 @ 0 to 5 feet |
| | | 11 | | | ALLUVIUM: Gray Brown Clayey fine Sand to fine Sandy Clay, loose to medium dense/medium stiff to stiff-very moist | 104 | 14 | | | | | |
| 5 | | 18 | 3.0 | | | 107 | 17 | | | 66 | | |
| | | 25 | | | Gray Brown Silty fine Sand, medium dense-moist | 108 | 11 | | | 35 | | |
| 10 | | 21 | | | | 117 | 11 | | | 35 | | |
| | | | | | Gray Clayey Silt, trace fine Sand, stiff-moist | | | | | 86 | | |
| | | | | | Gray Brown fine Sandy Silt, medium dense-very moist | | | | | | | |
| 15 | | 12 | | | | | 21 | | | 65 | | |
| | | | | | Gray Brown Silty fine Sand, 4" lense of Gray Silty Clay, medium dense-very moist | | | | | | | |
| | | 13 | | | | | 15 | | | 34 | | |
| 20 | | | | | Light Gray fine Sand, little Silt, medium dense-damp | | | | | | | |
| | | 21 | | | | | 5 | | | 10 | | |
| 25 | | | | | | | | | | | | |
| | | | | | Dark Gray Clayey Silt, little fine Sand, stiff-very moist | | | | | | | |
| | | 10 | | | | | 24 | 42 | 27 | 79 | | |
| 30 | | | | | | | | | | | | |
| | | 10 | 2.5 | | | | 33 | 52 | 27 | 87 | | |

TBL 20G170-1.GPJ SOCALGEO.GDT 7/28/20

**TEST BORING LOG**

**PLATE B-1a**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

**BORING NO. B-1**

JOB NO.: 20G170-1
PROJECT: Proposed Distribution Building
LOCATION: Downey, California

DRILLING DATE: 7/10/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Ryan Bremer

WATER DEPTH: ---
CAVE DEPTH: 45 feet
READING TAKEN: At Completion

| FIELD RESULTS | | | | | | LABORATORY RESULTS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FEET) | SAMPLE | BLOW COUNT | POCKET PEN. (TSF) | GRAPHIC LOG | DESCRIPTION (Continued) | DRY DENSITY (PCF) | MOISTURE CONTENT (%) | LIQUID LIMIT | PLASTIC LIMIT | PASSING #200 SIEVE (%) | ORGANIC CONTENT (%) | COMMENTS |
| | | | | | Light Gray fine to medium Sand, trace fine Gravel, trace Silt, dry to damp-medium dense to dense | | | | | | | |
| 40 | | 27 | | | | | 3 | | | 6 | | |
| 45 | | 46 | | | | | 2 | | | | | |
| 50 | | 40 | | | | | 3 | | | | | |
| | | | | | Boring Terminated at 50' | | | | | | | |

TBL 20G170-1.GPJ SOCALGEO.GDT 7/28/20

**TEST BORING LOG**

**PLATE B-1b**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

# BORING NO. B-2

JOB NO.: 20G170-1
PROJECT: Proposed Distribution Building
LOCATION: Downey, California

DRILLING DATE: 7/10/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Ryan Bremer

WATER DEPTH: ---
CAVE DEPTH: 46 feet
READING TAKEN: At Completion

| FIELD RESULTS | | | | | | LABORATORY RESULTS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FEET) | SAMPLE | BLOW COUNT | POCKET PEN. (TSF) | GRAPHIC LOG | DESCRIPTION<br>SURFACE ELEVATION: 105.27 feet MSL | DRY DENSITY (PCF) | MOISTURE CONTENT (%) | LIQUID LIMIT | PLASTIC LIMIT | PASSING #200 SIEVE (%) | ORGANIC CONTENT (%) | COMMENTS |
| | | | | | 5± inches Asphaltic Concrete, 8± inches Aggregate Base | | | | | | | |
| | | 14 | | | FILL: Gray Brown Silty fine Sand, trace Clay, trace wood fragments, mottled, loose-moist | 108 | 13 | | | | | |
| | | 11 | | | FILL: Dark Gray to Black Gravelly fine to coarse Sand, trace Silt, some AC fragments, loose-very moist | 104 | 14 | | | | | |
| 5 | | 16 | | | FILL: Gray Brown Clayey fine Sand, medium dense-very moist | 101 | 17 | | | 52 | | |
| | | 17 | | | FILL: Dark Brown Silty fine Sand to fine Sandy Silt, medium dense-very moist<br>ALLUVIUM: Gray Brown fine Sandy Silt, trace iron oxide staining, medium dense-very moist | 96 | 22 | | | 63 | | |
| 10 | | 10 | 2.0 | | Dark Gray Silty Clay, trace to little fine Sand, little iron oxide staining, stiff-very moist | 96 | 29 | | | 91 | | |
| 15 | | 10 | 2.0 | | | | 30 | 35 | 22 | 84 | | |
| | | 21 | | | Brown fine Sand, little Silt, medium dense-damp | | 5 | | | 11 | | |
| 20 | | | | | | | | | | | | |
| | | 13 | | | Gray Brown Silty fine Sand, medium dense-damp | | 9 | | | 29 | | |
| 25 | | | | | | | | | | | | |
| | | 36 | | | Gray fine Sand, little Silt, dense-damp | | 3 | | | 14 | | |
| 30 | | | | | | | | | | | | |
| | | 10 | 1.5 | | Dark Gray Brown Silty Clay, trace to little fine Sand, stiff-very moist | | 30 | | | 90 | | |

TBL 20G170-1.GPJ SOCALGEO.GDT 7/28/20

## TEST BORING LOG

## PLATE B-2a

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

# BORING NO. B-2

JOB NO.: 20G170-1
PROJECT: Proposed Distribution Building
LOCATION: Downey, California

DRILLING DATE: 7/10/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Ryan Bremer

WATER DEPTH: ---
CAVE DEPTH: 46 feet
READING TAKEN: At Completion

| FIELD RESULTS | | | | | | LABORATORY RESULTS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FEET) | SAMPLE | BLOW COUNT | POCKET PEN. (TSF) | GRAPHIC LOG | DESCRIPTION (Continued) | DRY DENSITY (PCF) | MOISTURE CONTENT (%) | LIQUID LIMIT | PLASTIC LIMIT | PASSING #200 SIEVE (%) | ORGANIC CONTENT (%) | COMMENTS |
| | | | | | Dark Gray Brown Silty Clay, trace to little fine Sand, stiff-very moist | | | | | | | |
| 40 | | 10 | 2.0 | | | | 29 | 54 | 21 | 86 | | |
| 45 | | 10 | 1.5 | | | | 29 | | | 82 | | |
| | | | | | Gray fine to medium Sand, trace Silt, dense-damp | | | | | | | |
| 50 | | 40 | | | | | 4 | | | | | |
| | | | | | Boring Terminated at 50' | | | | | | | |

TBL 20G170-1.GPJ SOCALGEO.GDT 7/28/20

**TEST BORING LOG** **PLATE B-2b**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

# BORING NO. B-3

JOB NO.: 20G170-1
PROJECT: Proposed Distribution Building
LOCATION: Downey, California

DRILLING DATE: 7/10/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Ryan Bremer

WATER DEPTH: ---
CAVE DEPTH: 7 feet
READING TAKEN: At Completion

| FIELD RESULTS | | | | | | LABORATORY RESULTS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FEET) | SAMPLE | BLOW COUNT | POCKET PEN. (TSF) | GRAPHIC LOG | DESCRIPTION<br>SURFACE ELEVATION: 105.3 feet MSL | DRY DENSITY (PCF) | MOISTURE CONTENT (%) | LIQUID LIMIT | PLASTIC LIMIT | PASSING #200 SIEVE (%) | ORGANIC CONTENT (%) | COMMENTS |
| | | | | | 5± inches Asphaltic Concrete, 4± inches Aggregate Base | | | | | | | |
| | | 4 | | | FILL: Brown Silty fine Sand to fine Sandy Silt, loose-very moist | | 16 | | | | | |
| | | 4 | | | | | 14 | | | | | |
| 5 | | | | | | | | | | | | |
| | | 13 | | | ALLUVIUM: Dark Brown fine Sandy Silt, trace Clay nodules, medium dense-very moist | | 15 | | | | | |
| | | 5 | 2.5 | | Light Gray Brown Silty Clay, trace fine Sand, medium stiff-very moist | | 25 | | | | | |
| 10 | | | | | | | | | | | | |
| | | | | | Boring Terminated at 10' | | | | | | | |

TBL 20G170-1.GPJ SOCALGEO.GDT 7/28/20

**TEST BORING LOG** **PLATE B-3**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

# BORING NO. B-4

JOB NO.: 20G170-1
PROJECT: Proposed Distribution Building
LOCATION: Downey, California

DRILLING DATE: 7/10/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Ryan Bremer

WATER DEPTH: ---
CAVE DEPTH: 8 feet
READING TAKEN: At Completion

| FIELD RESULTS | | | | | | LABORATORY RESULTS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FEET) | SAMPLE | BLOW COUNT | POCKET PEN. (TSF) | GRAPHIC LOG | DESCRIPTION<br>SURFACE ELEVATION: 104.4 feet MSL | DRY DENSITY (PCF) | MOISTURE CONTENT (%) | LIQUID LIMIT | PLASTIC LIMIT | PASSING #200 SIEVE (%) | ORGANIC CONTENT (%) | COMMENTS |
| | | | | | 4± inches Asphaltic Concrete, 4± inches Aggregate Base | | | | | | | |
| | | 4 | | | FILL: Dark Brown fine Sandy Silt, trace Clay, loose-very moist | | 16 | | | | | |
| | | 6 | | | | | 16 | | | | | |
| 5 | | | | | | | | | | | | |
| | | 9 | | | ALLUVIUM: Brown Silty fine Sand, trace Clay, trace medium to coarse Sand, loose to medium dense-moist to very moist | | 16 | | | | | |
| | | 14 | | | | | 11 | | | | | |
| 10 | | | | | Boring Terminated at 10' | | | | | | | |

TBL 20G170-1.GPJ SOCALGEO.GDT 7/28/20

**TEST BORING LOG** **PLATE B-4**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

# BORING NO. B-5

JOB NO.: 20G170-1
PROJECT: Proposed Distribution Building
LOCATION: Downey, California

DRILLING DATE: 7/10/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Ryan Bremer

WATER DEPTH: ---
CAVE DEPTH: 7 feet
READING TAKEN: At Completion

| FIELD RESULTS | | | | | | LABORATORY RESULTS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FEET) | SAMPLE | BLOW COUNT | POCKET PEN. (TSF) | GRAPHIC LOG | DESCRIPTION<br>SURFACE ELEVATION: 103.1 feet MSL | DRY DENSITY (PCF) | MOISTURE CONTENT (%) | LIQUID LIMIT | PLASTIC LIMIT | PASSING #200 SIEVE (%) | ORGANIC CONTENT (%) | COMMENTS |
| | | | | | 4± inches Asphaltic Concrete, 4± inches Aggregate Base | | | | | | | |
| | | 5 | | | FILL: Dark Gray Brown fine Sandy Silt, trace Clay, loose-very moist | | 20 | | | | | |
| | | 4 | | | ALLUVIUM Gray Brown Silty fine Sand, loose-moist | | 10 | | | | | |
| 5 | | | | | | | | | | | | |
| | | 14 | | | Gray Brown fine Sandy Silt, trace Clay, medium dense-very moist | | 16 | | | | | |
| | | 18 | | | Gray Brown Silty fine Sand, medium dense-damp to moist | | 8 | | | | | |
| 10 | | | | | | | | | | | | |
| | | | | | Boring Terminated at 10' | | | | | | | |

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**TEST BORING LOG**

**PLATE B-5**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

# BORING NO. B-6

JOB NO.: 20G170-1
PROJECT: Proposed Distribution Building
LOCATION: Downey, California

DRILLING DATE: 7/10/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Ryan Bremer

WATER DEPTH: ---
CAVE DEPTH: 7 feet
READING TAKEN: At Completion

| FIELD RESULTS | | | | | | LABORATORY RESULTS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FEET) | SAMPLE | BLOW COUNT | POCKET PEN. (TSF) | GRAPHIC LOG | DESCRIPTION<br>SURFACE ELEVATION: 104.4 feet MSL | DRY DENSITY (PCF) | MOISTURE CONTENT (%) | LIQUID LIMIT | PLASTIC LIMIT | PASSING #200 SIEVE (%) | ORGANIC CONTENT (%) | COMMENTS |
| | | | | | 3± inches Asphaltic Concrete, 3± inches Aggregate Base | | | | | | | |
| | | 7 | | | FILL: Brown fine Sandy Silt, trace AC fragments, loose-very moist | | 15 | | | | | |
| | | 6 | | | ALLUVIUM Gray Brown Silty fine Sand, loose-moist | | 10 | | | | | |
| 5 | | 9 | | | | | 11 | | | | | |
| | | 11 | | | Gray Brown Clayey Silt, trace fine Sand, stiff-very moist | | 26 | | | | | |
| 10 | | | | | Gray Brown Silty Clay, trace fine Sand, trace iron oxide staining, medium stiff to stiff-very moist | | | | | | | |
| | | 7 | 2 | | | | 30 | | | | | |
| 15 | | 18 | | | | | 25 | | | | | |
| | | | | | Light Gray fine Sand, trace medium Sand, medium dense-damp | | | | | | | |
| | | 18 | | | | | 5 | | | | | |
| 20 | | | | | | | | | | | | |
| | | 15 | | | | | 4 | | | | | |
| 25 | | | | | Boring Terminated at 25' | | | | | | | |

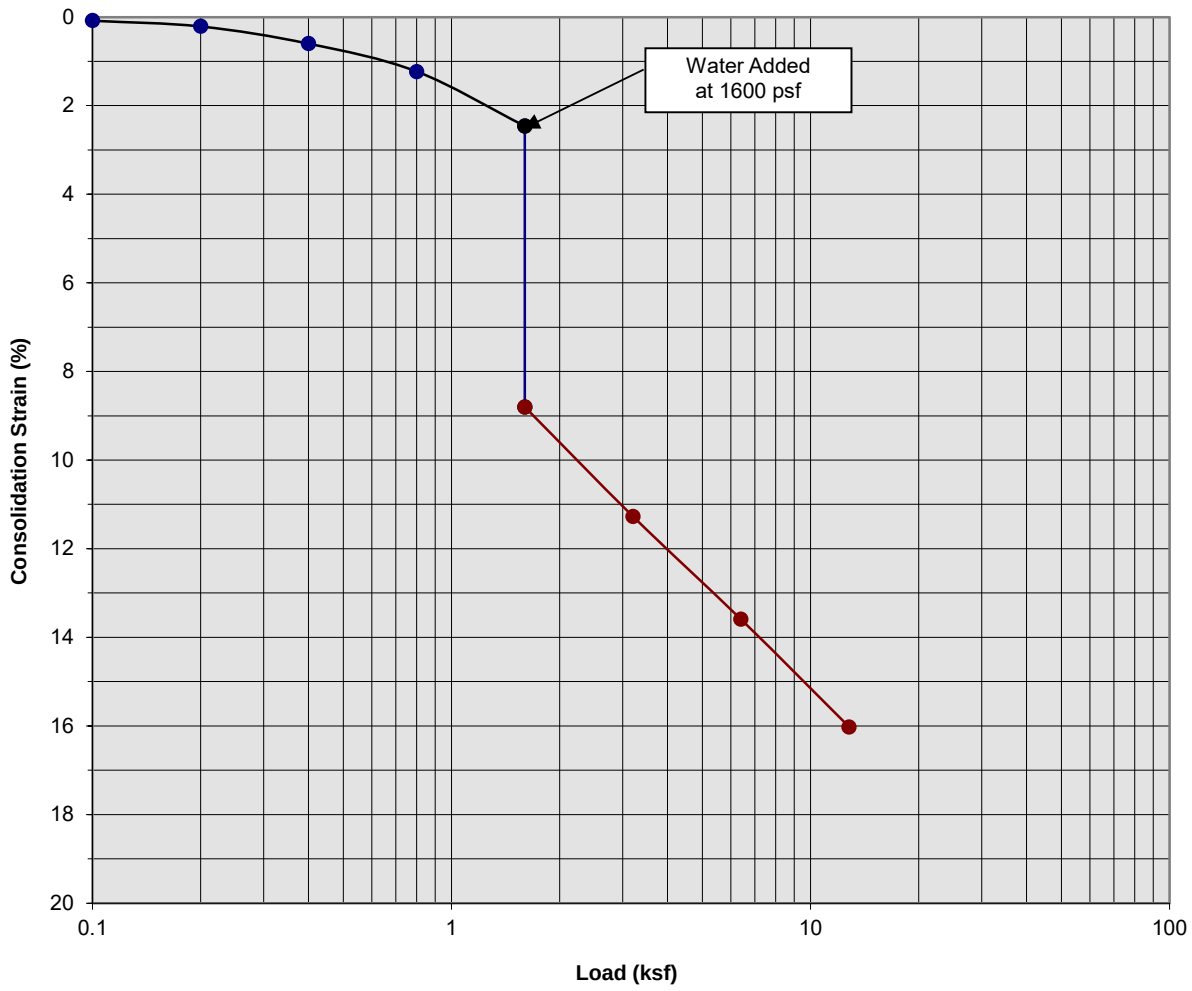
TBL 20G170-1.GPJ SOCALGEO.GDT 7/28/20

**TEST BORING LOG**

**PLATE B-6**

# APPENDIX C

## Consolidation/Collapse Test Results




Classification: FILL: Dark Gray to Black Gravelly fine to coarse Sand, trace Silt

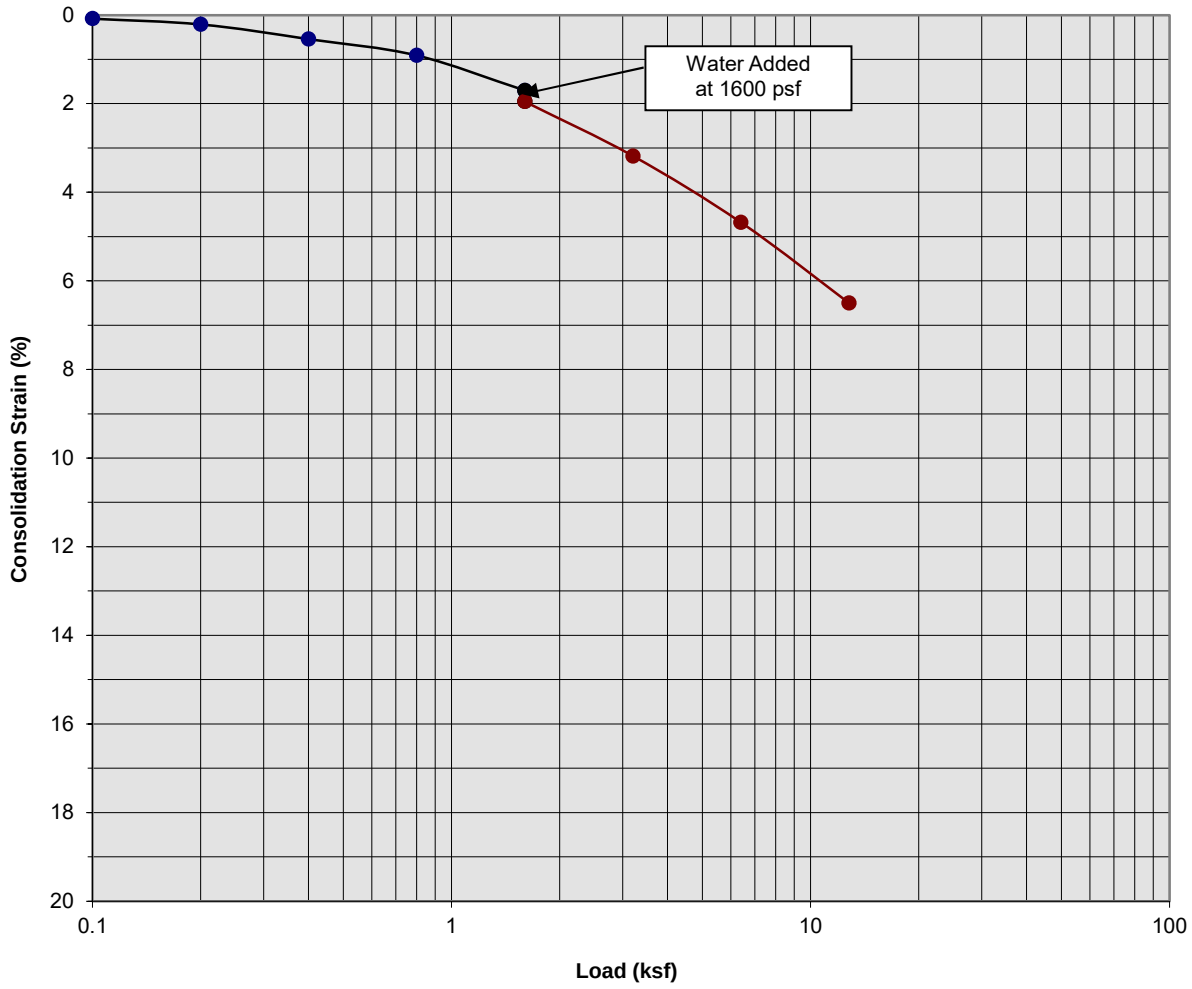
| | | | |
|---|---|---|---|
| Boring Number: | B-2 | Initial Moisture Content (%) | 13 |
| Sample Number: | --- | Final Moisture Content (%) | 17 |
| Depth (ft) | 3 to 4 | Initial Dry Density (pcf) | 103.4 |
| Specimen Diameter (in) | 2.4 | Final Dry Density (pcf) | 122.9 |
| Specimen Thickness (in) | 1.0 | Percent Collapse (%) | 6.34 |

Proposed Distribution Building
Downey, California
Project No. 20G170

**PLATE C- 1**

SoCalGeo
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## Consolidation/Collapse Test Results




Classification: FILL: Gray Brown Clayey fine Sand

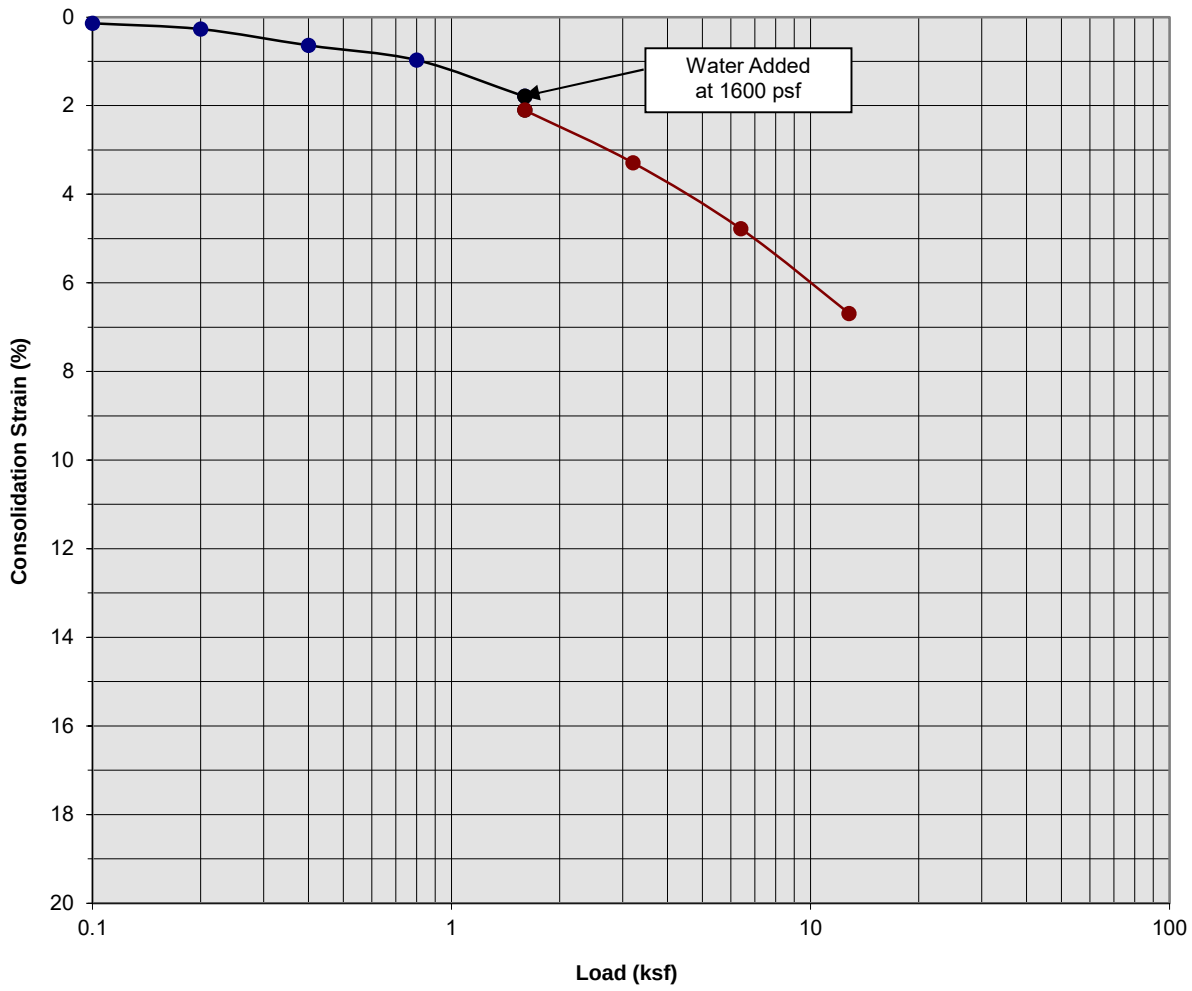
| | | | |
|---|---|---|---|
| Boring Number: | B-2 | Initial Moisture Content (%) | 19 |
| Sample Number: | --- | Final Moisture Content (%) | 20 |
| Depth (ft) | 5 to 6 | Initial Dry Density (pcf) | 100.3 |
| Specimen Diameter (in) | 2.4 | Final Dry Density (pcf) | 111.6 |
| Specimen Thickness (in) | 1.0 | Percent Collapse (%) | 0.25 |

Proposed Distribution Building
Downey, California
Project No. 20G170

**PLATE C- 2**

SoCalGeo
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*A California Corporation*

## Consolidation/Collapse Test Results



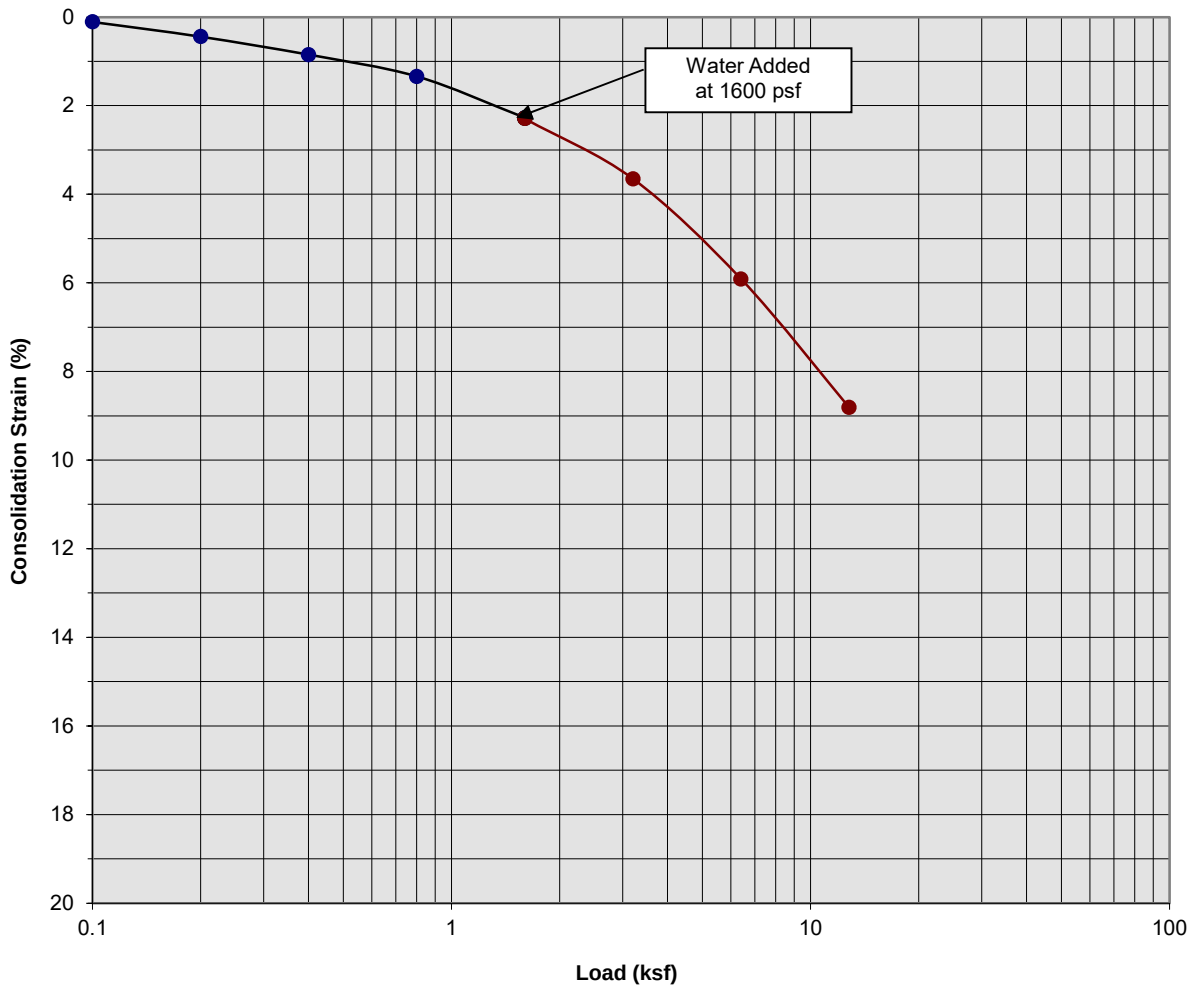

Classification: Gray Brown fine Sandy Silt

| | | | |
|---|---|---|---|
| Boring Number: | B-2 | Initial Moisture Content (%) | 21 |
| Sample Number: | --- | Final Moisture Content (%) | 26 |
| Depth (ft) | 7 to 8 | Initial Dry Density (pcf) | 96.4 |
| Specimen Diameter (in) | 2.4 | Final Dry Density (pcf) | 103.1 |
| Specimen Thickness (in) | 1.0 | Percent Collapse (%) | 0.31 |

Proposed Distribution Building
Downey, California
Project No. 20G170
**PLATE C- 3**

SoCalGeo
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## Consolidation/Collapse Test Results




Classification: Dark Gray Silty Clay, trace to little fine Sand

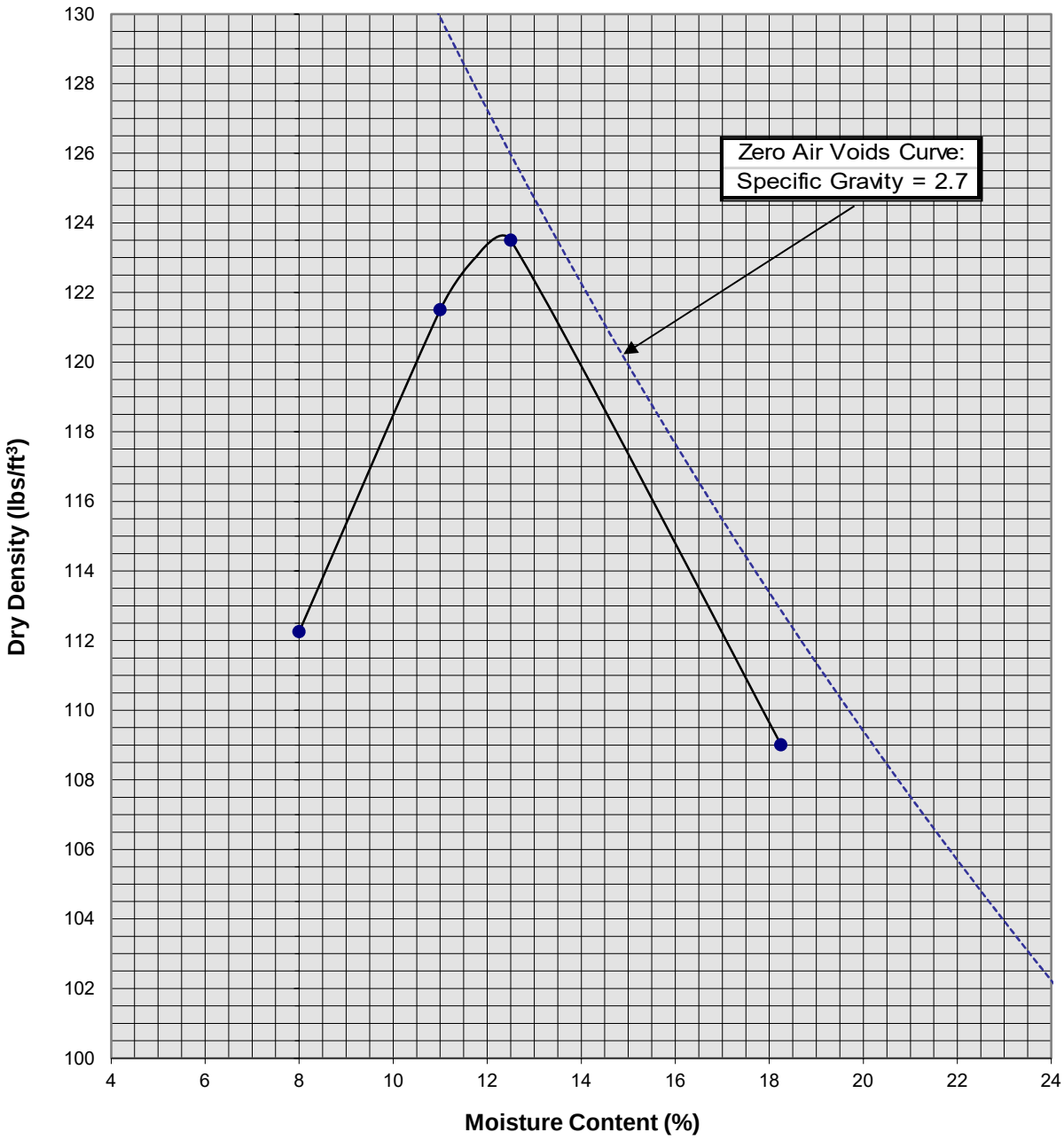
| | | | |
|---|---|---|---|
| Boring Number: | B-2 | Initial Moisture Content (%) | 29 |
| Sample Number: | --- | Final Moisture Content (%) | 29 |
| Depth (ft) | 9 to 10 | Initial Dry Density (pcf) | 95.3 |
| Specimen Diameter (in) | 2.4 | Final Dry Density (pcf) | 104.3 |
| Specimen Thickness (in) | 1.0 | Percent Collapse (%) | 0.02 |

Proposed Distribution Building
Downey, California
Project No. 20G170

**PLATE C- 4**

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## Moisture/Density Relationship
## ASTM D-1557

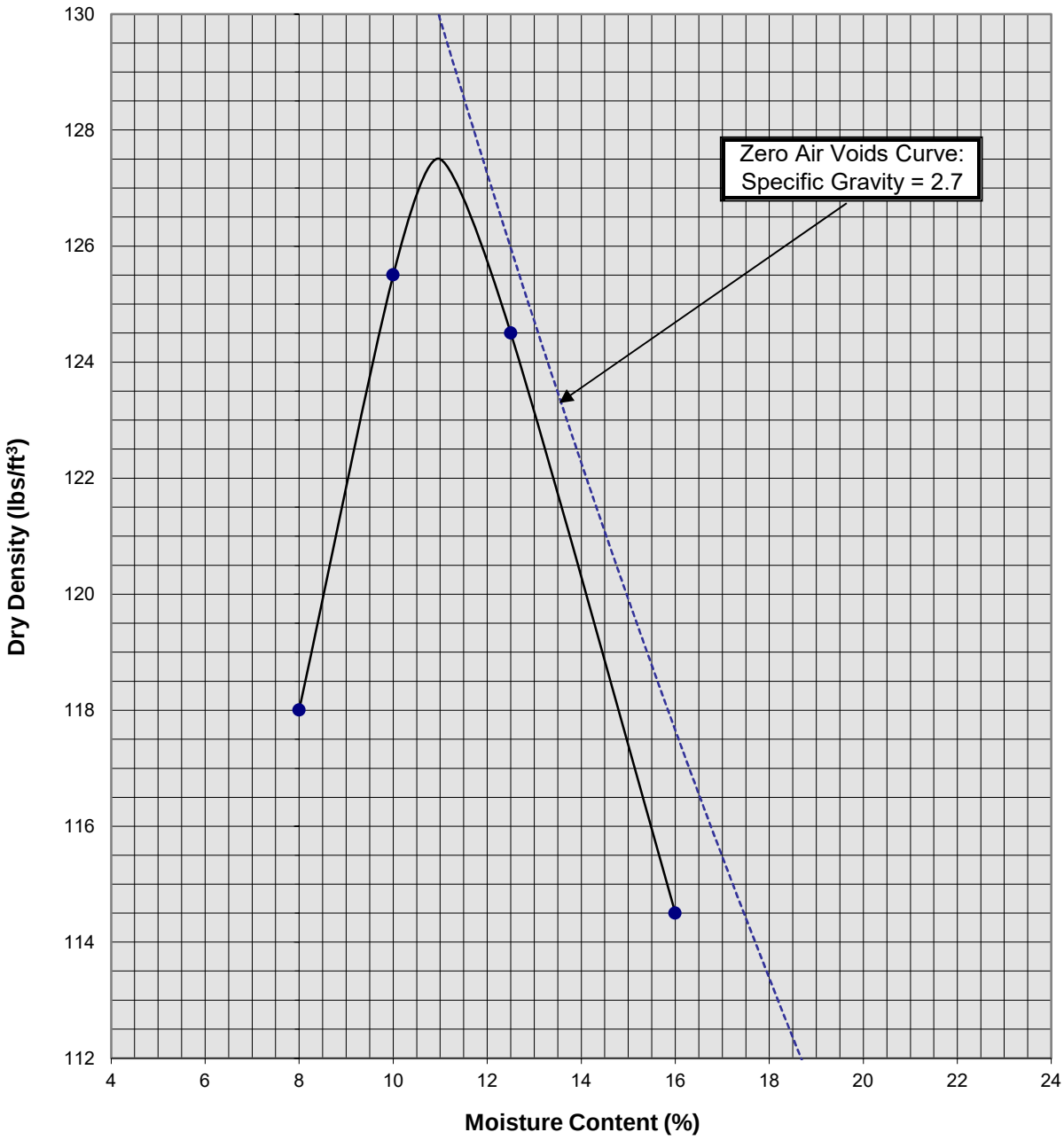



| | |
|---|---|
| Soil ID Number | B-1 @ 0-5' |
| Optimum Moisture (%) | 12 |
| Maximum Dry Density (pcf) | 123 |
| Soil Classification | Gray Brown Silty fine Sand, little Clay, trace fine Gravel |

Proposed Distribution Building
Downey, California
Project No. 20G170
**PLATE C-5**

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## Moisture/Density Relationship
## ASTM D-1557




| Soil ID Number | B-2 @ 0-5' |
|---|---|
| Optimum Moisture (%) | 11 |
| Maximum Dry Density (pcf) | 127.3 |
| Soil Classification | Gray Brown to Dark Gray Brown Silty fine to coarse Sand, little fine Gravel |

Proposed Distribution Building
Downey, California
Project No. 20G170

**PLATE C-6**

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# APPENDIX D

# GRADING GUIDE SPECIFICATIONS

These grading guide specifications are intended to provide typical procedures for grading operations. They are intended to supplement the recommendations contained in the geotechnical investigation report for this project. Should the recommendations in the geotechnical investigation report conflict with the grading guide specifications, the more site specific recommendations in the geotechnical investigation report will govern.

## General

- The Earthwork Contractor is responsible for the satisfactory completion of all earthwork in accordance with the plans and geotechnical reports, and in accordance with city, county, and applicable building codes.

- The Geotechnical Engineer is the representative of the Owner/Builder for the purpose of implementing the report recommendations and guidelines. These duties are not intended to relieve the Earthwork Contractor of any responsibility to perform in a workman-like manner, nor is the Geotechnical Engineer to direct the grading equipment or personnel employed by the Contractor.

- The Earthwork Contractor is required to notify the Geotechnical Engineer of the anticipated work and schedule so that testing and inspections can be provided. If necessary, work may be stopped and redone if personnel have not been scheduled in advance.

- The Earthwork Contractor is required to have suitable and sufficient equipment on the job-site to process, moisture condition, mix and compact the amount of fill being placed to the approved compaction. In addition, suitable support equipment should be available to conform with recommendations and guidelines in this report.

- Canyon cleanouts, overexcavation areas, processed ground to receive fill, key excavations, subdrains and benches should be observed by the Geotechnical Engineer prior to placement of any fill. It is the Earthwork Contractor's responsibility to notify the Geotechnical Engineer of areas that are ready for inspection.

- Excavation, filling, and subgrade preparation should be performed in a manner and sequence that will provide drainage at all times and proper control of erosion. Precipitation, springs, and seepage water encountered shall be pumped or drained to provide a suitable working surface. The Geotechnical Engineer must be informed of springs or water seepage encountered during grading or foundation construction for possible revision to the recommended construction procedures and/or installation of subdrains.

## Site Preparation

- The Earthwork Contractor is responsible for all clearing, grubbing, stripping and site preparation for the project in accordance with the recommendations of the Geotechnical Engineer.

- If any materials or areas are encountered by the Earthwork Contractor which are suspected of having toxic or environmentally sensitive contamination, the Geotechnical Engineer and Owner/Builder should be notified immediately.

- Major vegetation should be stripped and disposed of off-site. This includes trees, brush, heavy grasses and any materials considered unsuitable by the Geotechnical Engineer.

- Underground structures such as basements, cesspools or septic disposal systems, mining shafts, tunnels, wells and pipelines should be removed under the inspection of the Geotechnical Engineer and recommendations provided by the Geotechnical Engineer and/or city, county or state agencies. If such structures are known or found, the Geotechnical Engineer should be notified as soon as possible so that recommendations can be formulated.

- Any topsoil, slopewash, colluvium, alluvium and rock materials which are considered unsuitable by the Geotechnical Engineer should be removed prior to fill placement.

- Remaining voids created during site clearing caused by removal of trees, foundations basements, irrigation facilities, etc., should be excavated and filled with compacted fill.

- Subsequent to clearing and removals, areas to receive fill should be scarified to a depth of 10 to 12 inches, moisture conditioned and compacted

- The moisture condition of the processed ground should be at or slightly above the optimum moisture content as determined by the Geotechnical Engineer. Depending upon field conditions, this may require air drying or watering together with mixing and/or discing.

Compacted Fills

- Soil materials imported to or excavated on the property may be utilized in the fill, provided each material has been determined to be suitable in the opinion of the Geotechnical Engineer. Unless otherwise approved by the Geotechnical Engineer, all fill materials shall be free of deleterious, organic, or frozen matter, shall contain no chemicals that may result in the material being classified as “contaminated,” and shall be very low to non-expansive with a maximum expansion index (EI) of 50. The top 12 inches of the compacted fill should have a maximum particle size of 3 inches, and all underlying compacted fill material a maximum 6-inch particle size, except as noted below.

- All soils should be evaluated and tested by the Geotechnical Engineer. Materials with high expansion potential, low strength, poor gradation or containing organic materials may require removal from the site or selective placement and/or mixing to the satisfaction of the Geotechnical Engineer.

- Rock fragments or rocks less than 6 inches in their largest dimensions, or as otherwise determined by the Geotechnical Engineer, may be used in compacted fill, provided the distribution and placement is satisfactory in the opinion of the Geotechnical Engineer.

- Rock fragments or rocks greater than 12 inches should be taken off-site or placed in accordance with recommendations and in areas designated as suitable by the Geotechnical Engineer. These materials should be placed in accordance with Plate D-8 of these Grading Guide Specifications and in accordance with the following recommendations:

    - Rocks 12 inches or more in diameter should be placed in rows at least 15 feet apart, 15 feet from the edge of the fill, and 10 feet or more below subgrade. Spaces should be left between each rock fragment to provide for placement and compaction of soil around the fragments.

    - Fill materials consisting of soil meeting the minimum moisture content requirements and free of oversize material should be placed between and over the rows of rock or

concrete. Ample water and compactive effort should be applied to the fill materials as they are placed in order that all of the voids between each of the fragments are filled and compacted to the specified density.

- Subsequent rows of rocks should be placed such that they are not directly above a row placed in the previous lift of fill. A minimum 5-foot offset between rows is recommended.

- To facilitate future trenching, oversized material should not be placed within the range of foundation excavations, future utilities or other underground construction unless specifically approved by the soil engineer and the developer/owner representative.

- Fill materials approved by the Geotechnical Engineer should be placed in areas previously prepared to receive fill and in evenly placed, near horizontal layers at about 6 to 8 inches in loose thickness, or as otherwise determined by the Geotechnical Engineer for the project.

- Each layer should be moisture conditioned to optimum moisture content, or slightly above, as directed by the Geotechnical Engineer. After proper mixing and/or drying, to evenly distribute the moisture, the layers should be compacted to at least 90 percent of the maximum dry density in compliance with ASTM D-1557-78 unless otherwise indicated.

- Density and moisture content testing should be performed by the Geotechnical Engineer at random intervals and locations as determined by the Geotechnical Engineer. These tests are intended as an aid to the Earthwork Contractor, so he can evaluate his workmanship, equipment effectiveness and site conditions. The Earthwork Contractor is responsible for compaction as required by the Geotechnical Report(s) and governmental agencies.

- Fill areas unused for a period of time may require moisture conditioning, processing and recompaction prior to the start of additional filling. The Earthwork Contractor should notify the Geotechnical Engineer of his intent so that an evaluation can be made.

- Fill placed on ground sloping at a 5-to-1 inclination (horizontal-to-vertical) or steeper should be benched into bedrock or other suitable materials, as directed by the Geotechnical Engineer. Typical details of benching are illustrated on Plates D-2, D-4, and D-5.

- Cut/fill transition lots should have the cut portion overexcavated to a depth of at least 3 feet and rebuilt with fill (see Plate D-1), as determined by the Geotechnical Engineer.

- All cut lots should be inspected by the Geotechnical Engineer for fracturing and other bedrock conditions. If necessary, the pads should be overexcavated to a depth of 3 feet and rebuilt with a uniform, more cohesive soil type to impede moisture penetration.

- Cut portions of pad areas above buttresses or stabilizations should be overexcavated to a depth of 3 feet and rebuilt with uniform, more cohesive compacted fill to impede moisture penetration.

- Non-structural fill adjacent to structural fill should typically be placed in unison to provide lateral support. Backfill along walls must be placed and compacted with care to ensure that excessive unbalanced lateral pressures do not develop. The type of fill material placed adjacent to below grade walls must be properly tested and approved by the Geotechnical Engineer with consideration of the lateral earth pressure used in the design.

Foundations

- The foundation influence zone is defined as extending one foot horizontally from the outside edge of a footing, and proceeding downward at a ½ horizontal to 1 vertical (0.5:1) inclination.

- Where overexcavation beneath a footing subgrade is necessary, it should be conducted so as to encompass the entire foundation influence zone, as described above.

- Compacted fill adjacent to exterior footings should extend at least 12 inches above foundation bearing grade. Compacted fill within the interior of structures should extend to the floor subgrade elevation.

Fill Slopes

- The placement and compaction of fill described above applies to all fill slopes. Slope compaction should be accomplished by overfilling the slope, adequately compacting the fill in even layers, including the overfilled zone and cutting the slope back to expose the compacted core

- Slope compaction may also be achieved by backrolling the slope adequately every 2 to 4 vertical feet during the filling process as well as requiring the earth moving and compaction equipment to work close to the top of the slope. Upon completion of slope construction, the slope face should be compacted with a sheepsfoot connected to a sideboom and then grid rolled. This method of slope compaction should only be used if approved by the Geotechnical Engineer.

- Sandy soils lacking in adequate cohesion may be unstable for a finished slope condition and therefore should not be placed within 15 horizontal feet of the slope face.

- All fill slopes should be keyed into bedrock or other suitable material. Fill keys should be at least 15 feet wide and inclined at 2 percent into the slope. For slopes higher than 30 feet, the fill key width should be equal to one-half the height of the slope (see Plate D-5).

- All fill keys should be cleared of loose slough material prior to geotechnical inspection and should be approved by the Geotechnical Engineer and governmental agencies prior to filling.

- The cut portion of fill over cut slopes should be made first and inspected by the Geotechnical Engineer for possible stabilization requirements. The fill portion should be adequately keyed through all surficial soils and into bedrock or suitable material. Soils should be removed from the transition zone between the cut and fill portions (see Plate D-2).

Cut Slopes

- All cut slopes should be inspected by the Geotechnical Engineer to determine the need for stabilization. The Earthwork Contractor should notify the Geotechnical Engineer when slope cutting is in progress at intervals of 10 vertical feet. Failure to notify may result in a delay in recommendations.

- Cut slopes exposing loose, cohesionless sands should be reported to the Geotechnical Engineer for possible stabilization recommendations.

- All stabilization excavations should be cleared of loose slough material prior to geotechnical inspection. Stakes should be provided by the Civil Engineer to verify the location and dimensions of the key. A typical stabilization fill detail is shown on Plate D-5.

- Stabilization key excavations should be provided with subdrains. Typical subdrain details are shown on Plates D-6.

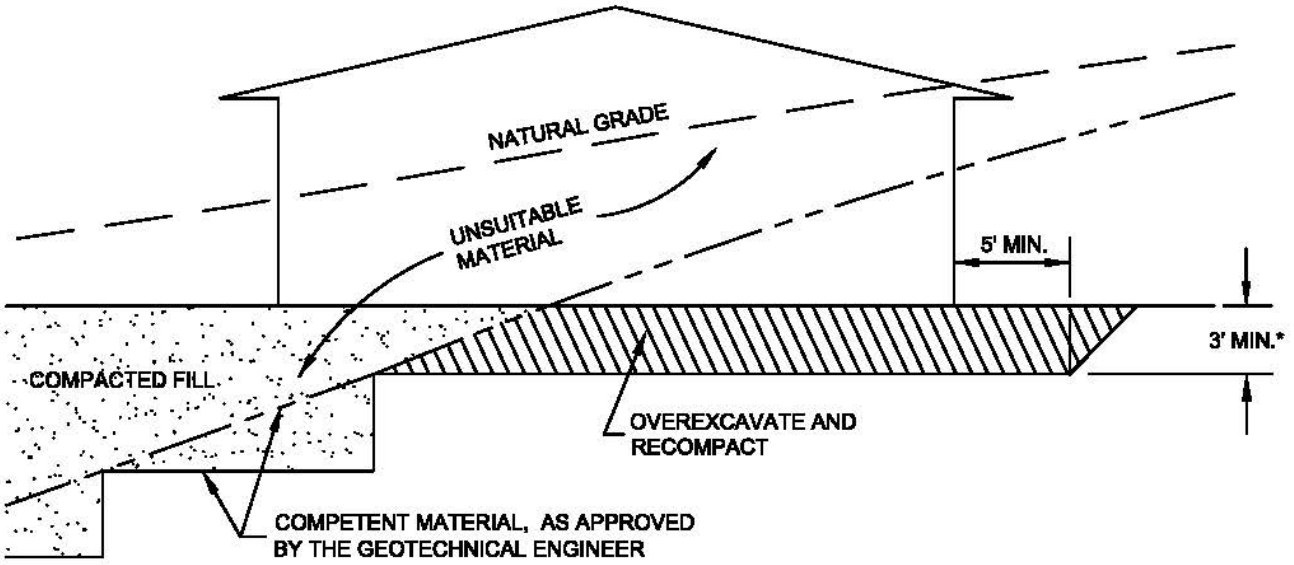
Subdrains

- Subdrains may be required in canyons and swales where fill placement is proposed. Typical subdrain details for canyons are shown on Plate D-3. Subdrains should be installed after approval of removals and before filling, as determined by the Soils Engineer.

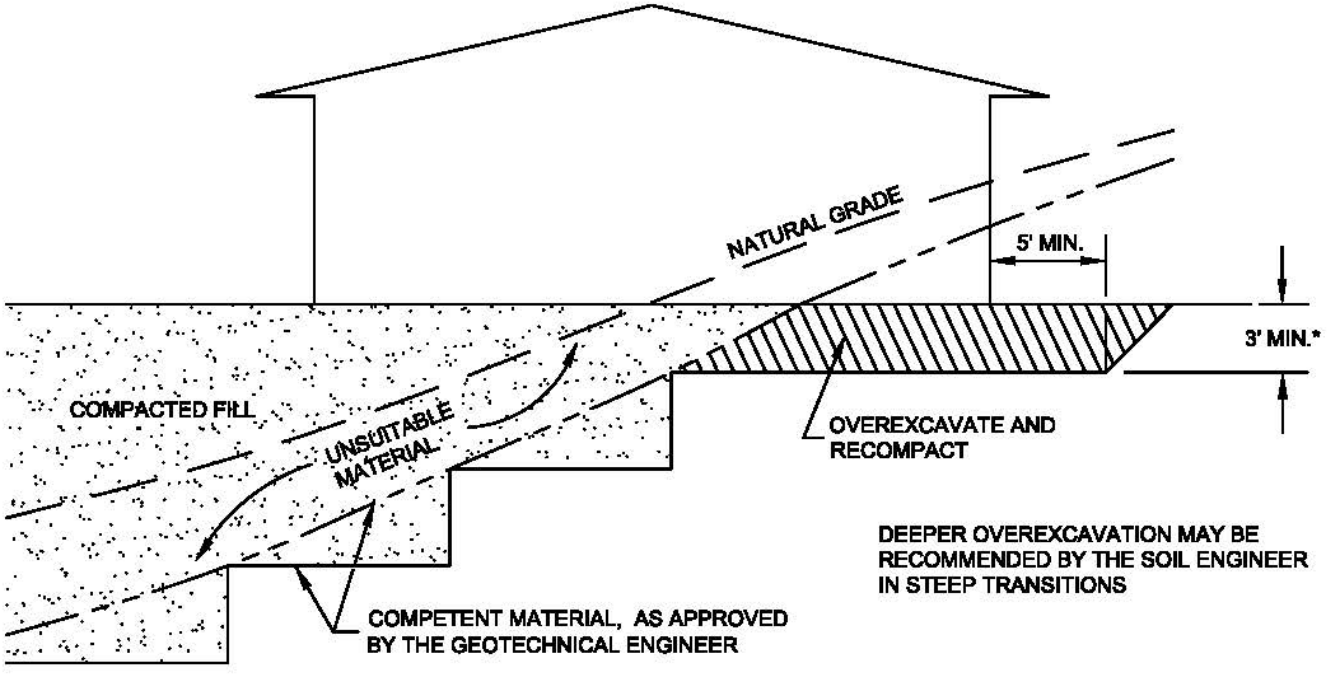
- Plastic pipe may be used for subdrains provided it is Schedule 40 or SDR 35 or equivalent. Pipe should be protected against breakage, typically by placement in a square-cut (backhoe) trench or as recommended by the manufacturer.

- Filter material for subdrains should conform to CALTRANS Specification 68-1.025 or as approved by the Geotechnical Engineer for the specific site conditions. Clean ¾-inch crushed rock may be used provided it is wrapped in an acceptable filter cloth and approved by the Geotechnical Engineer. Pipe diameters should be 6 inches for runs up to 500 feet and 8 inches for the downstream continuations of longer runs. Four-inch diameter pipe may be used in buttress and stabilization fills.

## CUT LOT




## CUT/FILL LOT (TRANSITION)

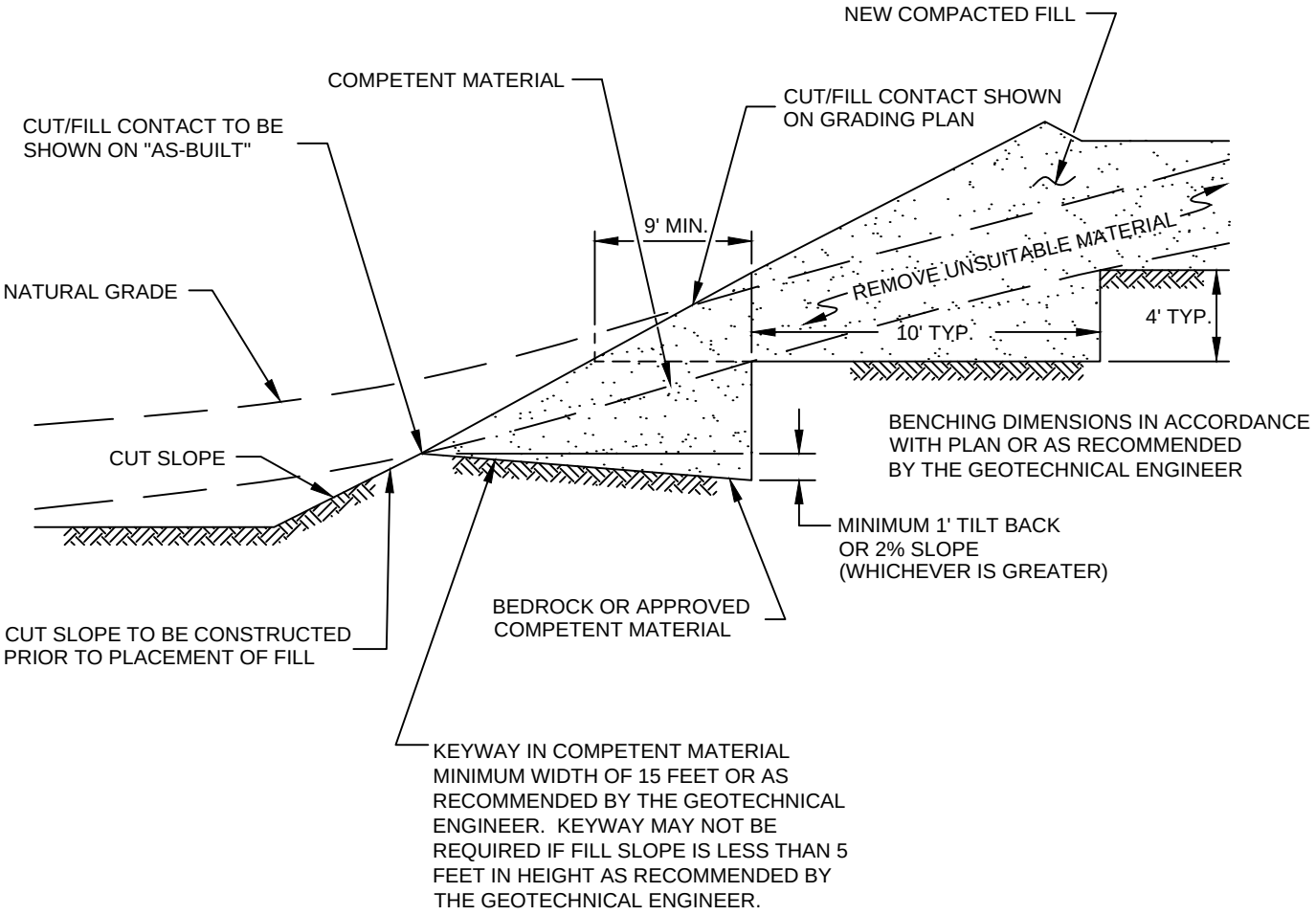



*SEE TEXT OF REPORT FOR SPECIFIC RECOMMENDATION. ACTUAL DEPTH OF OVEREXCAVATION MAY BE GREATER.

**TRANSITION LOT DETAIL**

GRADING GUIDE SPECIFICATIONS

| | |
|---|---|
| NOT TO SCALE | SoCalGeo SOUTHERN CALIFORNIA GEOTECHNICAL |
| DRAWN: JAS<br>CHKD: GKM | |
| PLATE D-1 | |




**FILL ABOVE CUT SLOPE DETAIL**

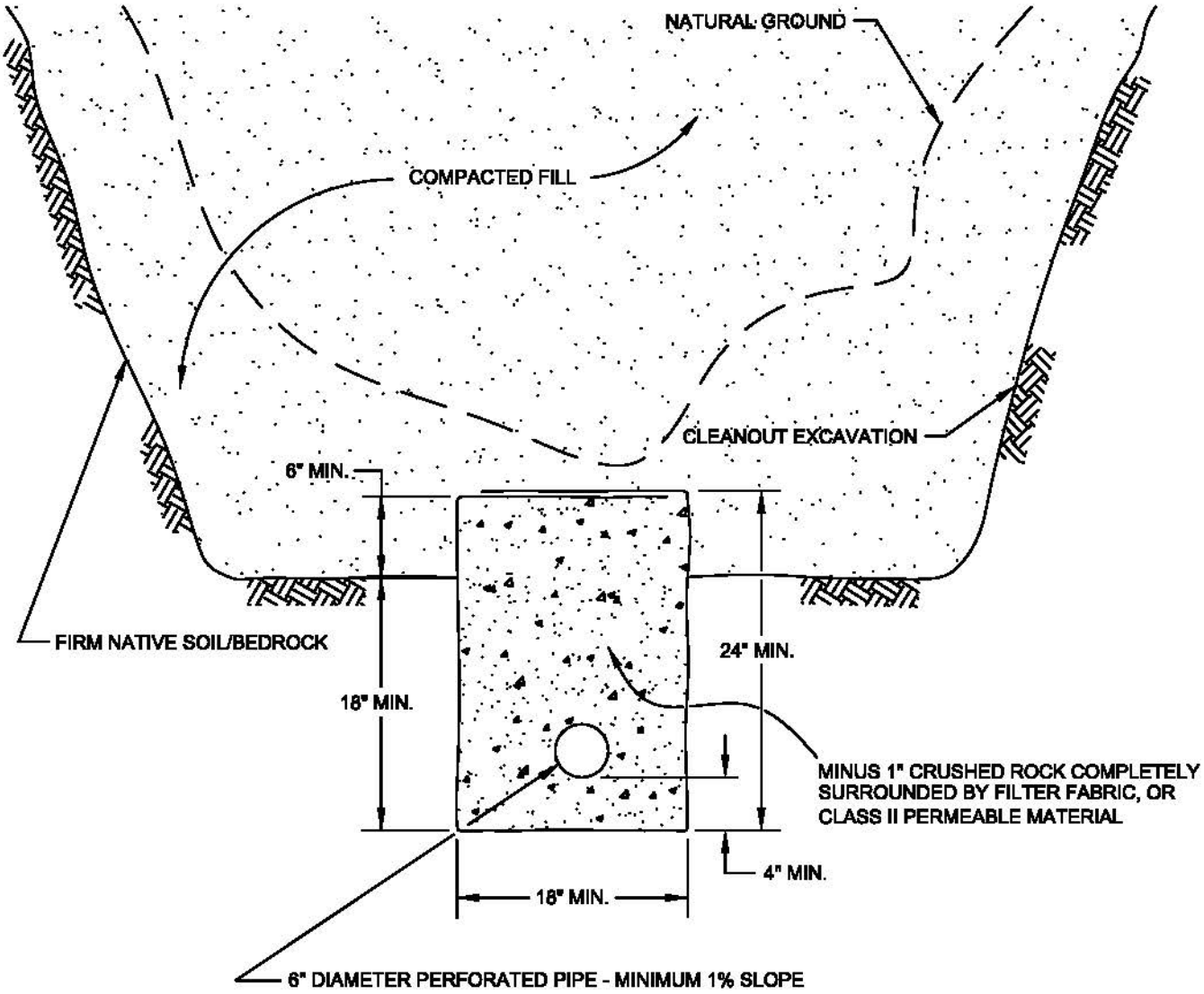
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

**PLATE D-2**

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



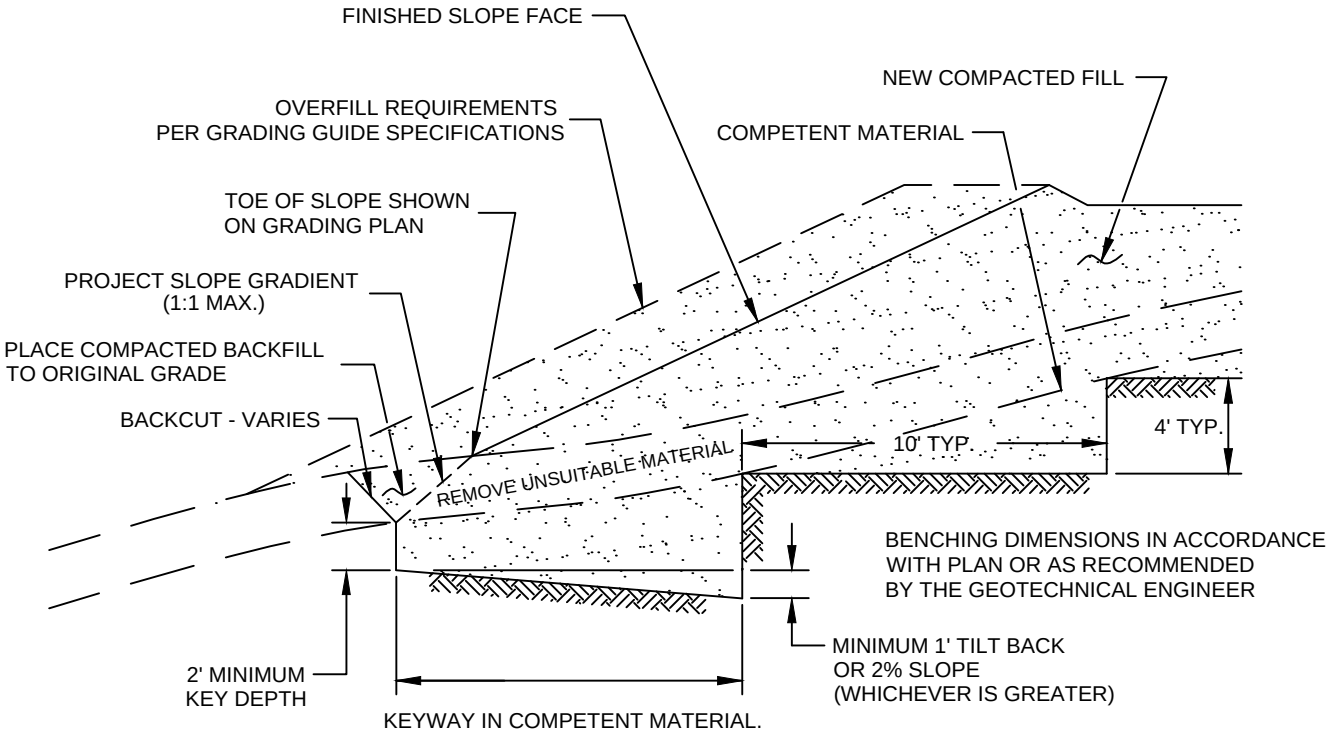

| PIPE MATERIAL | DEPTH OF FILL OVER SUBDRAIN |
|---|---|
| ADS (CORRUGATED POLETHYLENE) | 8 |
| TRANSITE UNDERDRAIN | 20 |
| PVC OR ABS: SDR 35 | 35 |
| SDR 21 | 100 |

**SCHEMATIC ONLY**
**NOT TO SCALE**

**CANYON SUBDRAIN DETAIL**
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE
DRAWN: JAS
CHKD: GKM
PLATE D-3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL




NOTE:
BENCHING SHALL BE REQUIRED WHEN NATURAL SLOPES ARE EQUAL TO OR STEEPER THAN 5:1 OR WHEN RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

**FILL ABOVE NATURAL SLOPE DETAIL**

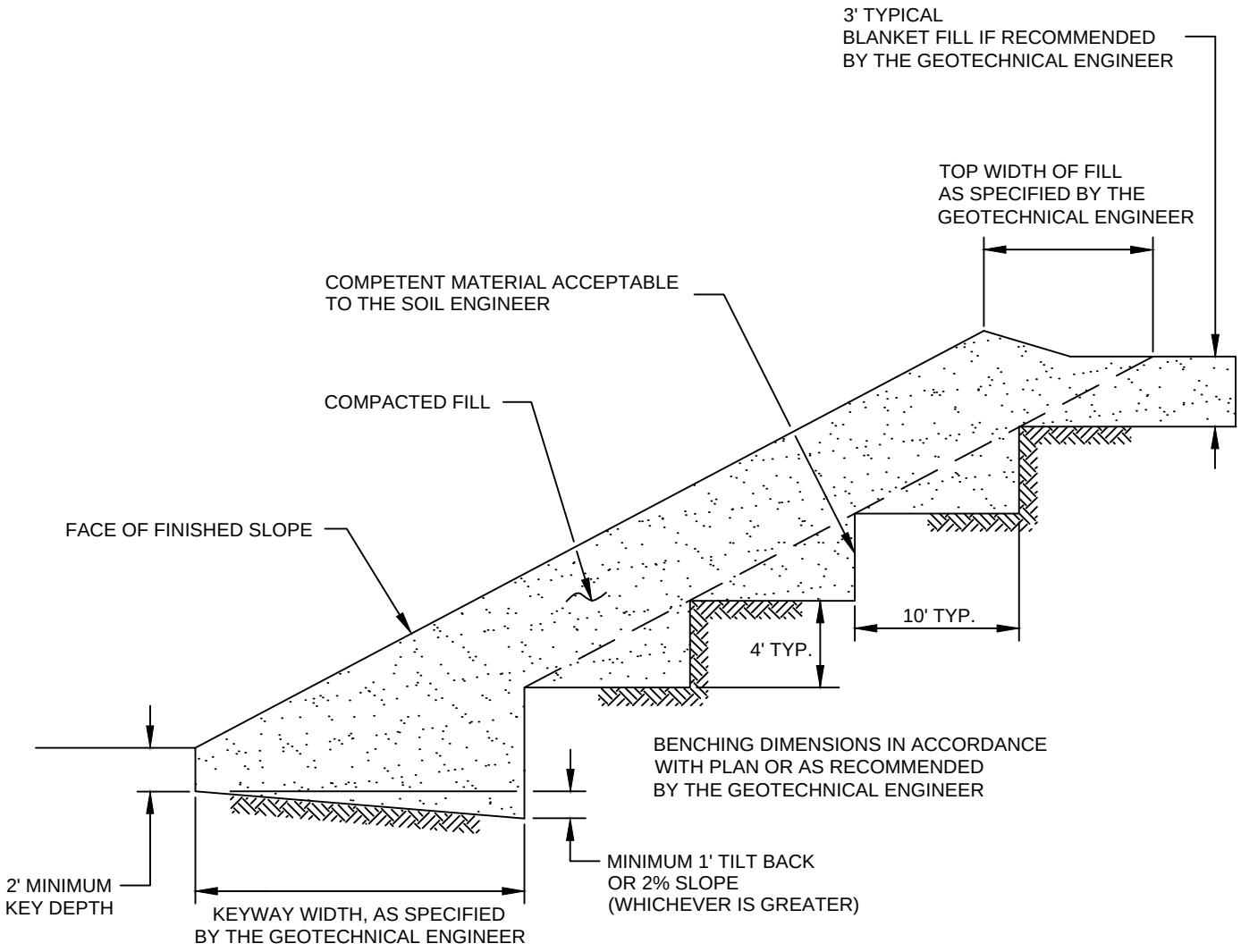
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

**PLATE D-4**

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL




**STABILIZATION FILL DETAIL**

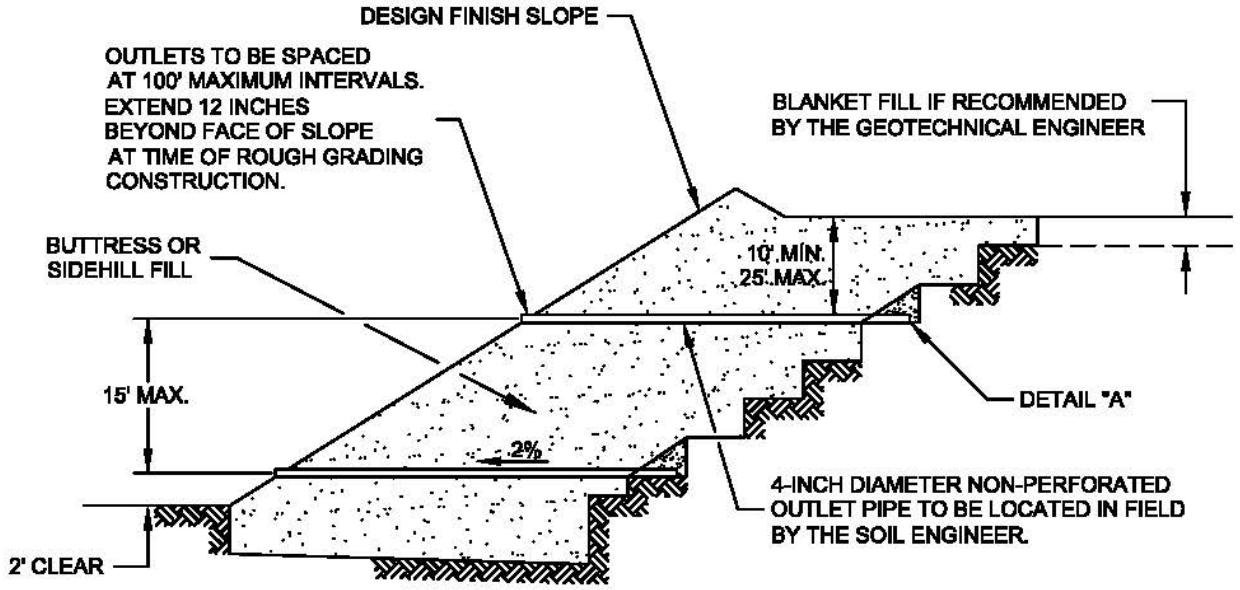
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

**PLATE D-5**

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



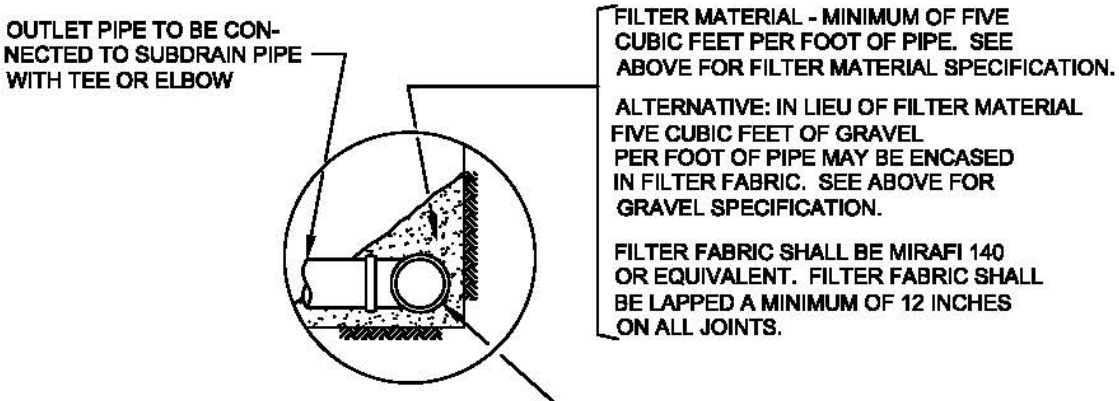

"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

| SIEVE SIZE | PERCENTAGE PASSING |
|---|---|
| 1" | 100 |
| 3/4" | 90-100 |
| 3/8" | 40-100 |
| NO. 4 | 25-40 |
| NO. 8 | 18-33 |
| NO. 30 | 5-15 |
| NO. 50 | 0-7 |
| NO. 200 | 0-3 |

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

| SIEVE SIZE | MAXIMUM PERCENTAGE PASSING |
|---|---|
| 1 1/2" | 100 |
| NO. 4 | 50 |
| NO. 200 | 8 |

SAND EQUIVALENT = MINIMUM OF 50




DETAIL "A"

NOTES:
1. TRENCH FOR OUTLET PIPES TO BE BACKFILLED WITH ON-SITE SOIL.

**SLOPE FILL SUBDRAINS**

GRADING GUIDE SPECIFICATIONS

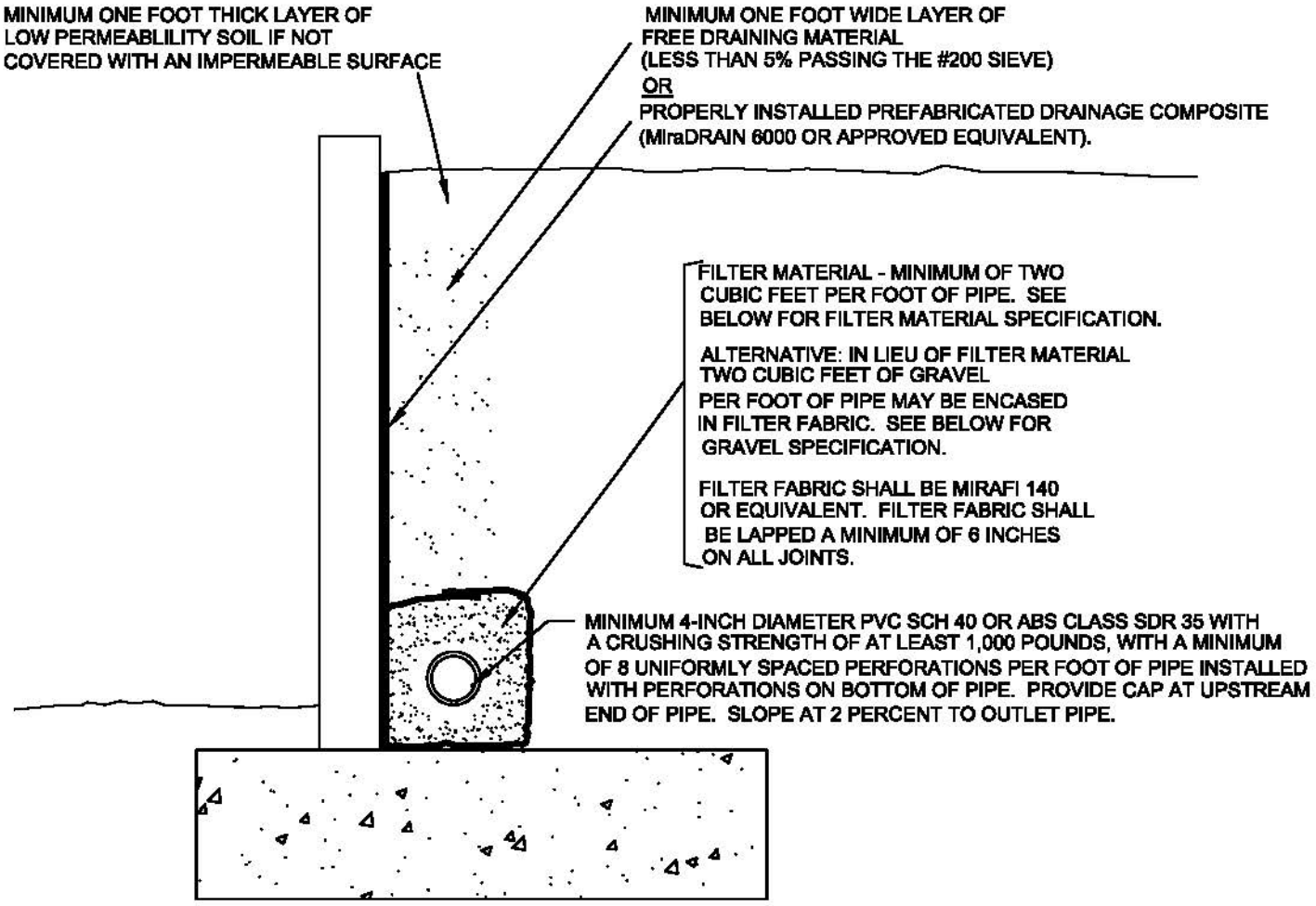
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-6

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL




"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

| SIEVE SIZE | PERCENTAGE PASSING |
|---|---|
| 1" | 100 |
| 3/4" | 90-100 |
| 3/8" | 40-100 |
| NO. 4 | 25-40 |
| NO. 8 | 18-33 |
| NO. 30 | 5-15 |
| NO. 50 | 0-7 |
| NO. 200 | 0-3 |

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

| SIEVE SIZE | MAXIMUM PERCENTAGE PASSING |
|---|---|
| 1 1/2" | 100 |
| NO. 4 | 50 |
| NO. 200 | 8 |

SAND EQUIVALENT = MINIMUM OF 50

**RETAINING WALL BACKDRAINS**

GRADING GUIDE SPECIFICATIONS

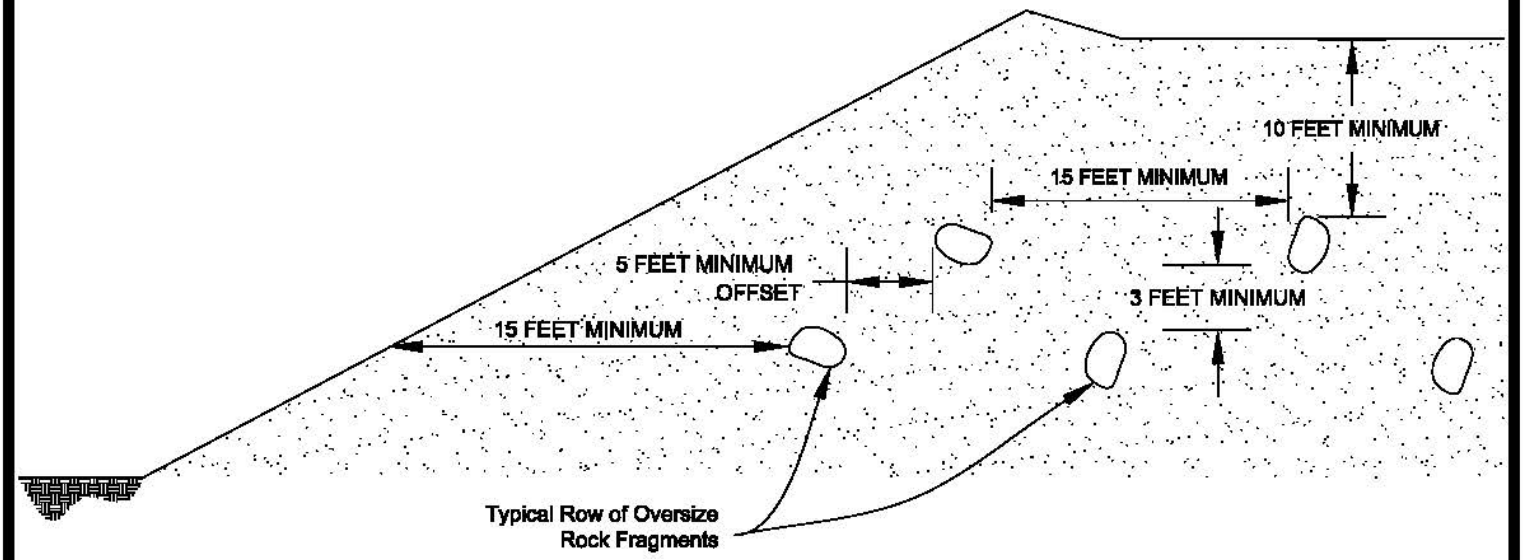
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

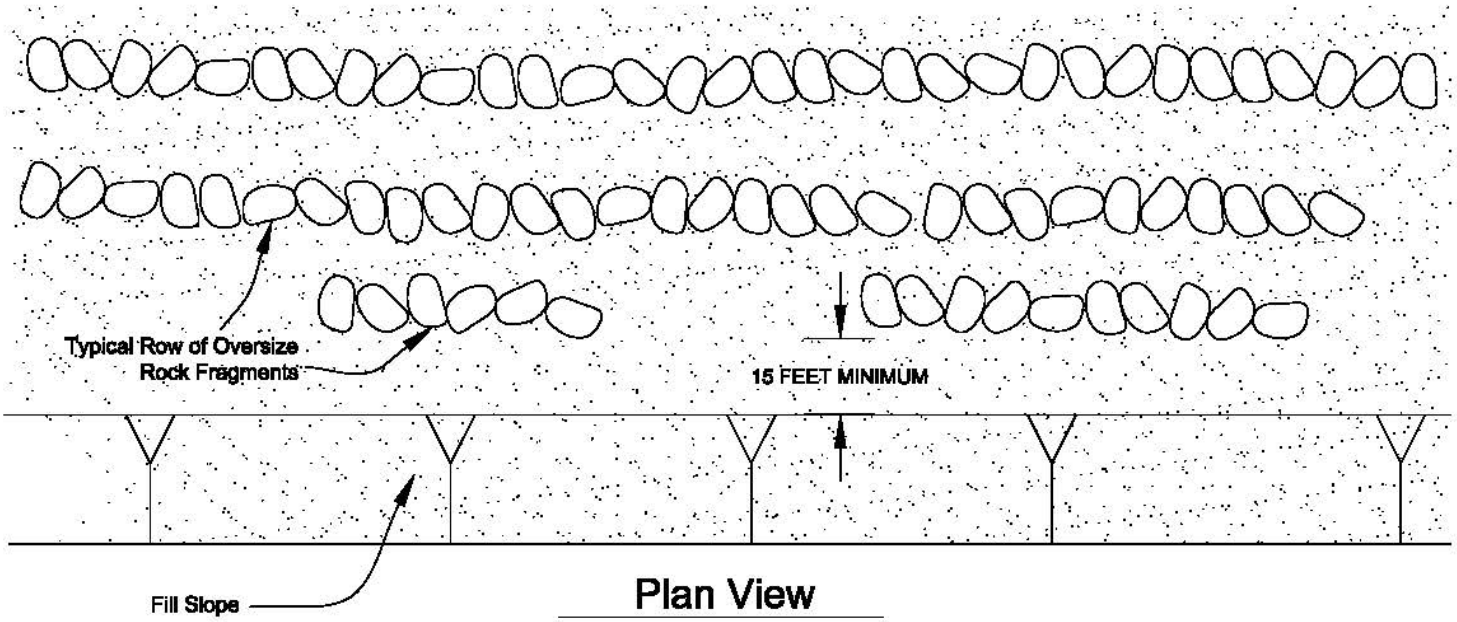
PLATE D-7

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL




## Section View




## Plan View

**PLACEMENT OF OVERSIZED MATERIAL**

**GRADING GUIDE SPECIFICATIONS**

NOT TO SCALE

DRAWN: PM
CHKD: GKM

PLATE D-8

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL

# APPENDIX E

# 20G170

**Latitude, Longitude: 33.925352, -118.117979**




| | |
|---|---|
| **Date** | 7/22/2020, 9:50:25 AM |
| **Design Code Reference Document** | ASCE7-16 |
| **Risk Category** | III |
| **Site Class** | D - Stiff Soil |

| Type | Value | Description |
|---|---|---|
| $S_S$ | 1.668 | $MCE_R$ ground motion. (for 0.2 second period) |
| $S_1$ | 0.598 | $MCE_R$ ground motion. (for 1.0s period) |
| $S_{MS}$ | 1.668 | Site-modified spectral acceleration value |
| $S_{M1}$ | null -See Section 11.4.8 | Site-modified spectral acceleration value |
| $S_{DS}$ | 1.112 | Numeric seismic design value at 0.2 second SA |
| $S_{D1}$ | null -See Section 11.4.8 | Numeric seismic design value at 1.0 second SA |

| Type | Value | Description |
|---|---|---|
| SDC | null -See Section 11.4.8 | Seismic design category |
| $F_a$ | 1 | Site amplification factor at 0.2 second |
| $F_v$ | null -See Section 11.4.8 | Site amplification factor at 1.0 second |
| PGA | 0.714 | $MCE_G$ peak ground acceleration |
| $F_{PGA}$ | 1.1 | Site amplification factor at PGA |
| $PGA_M$ | 0.785 | Site modified peak ground acceleration |
| $T_L$ | 8 | Long-period transition period in seconds |
| SsRT | 1.668 | Probabilistic risk-targeted ground motion. (0.2 second) |
| SsUH | 1.838 | Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration |
| SsD | 2.402 | Factored deterministic acceleration value. (0.2 second) |
| S1RT | 0.598 | Probabilistic risk-targeted ground motion. (1.0 second) |
| S1UH | 0.664 | Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration. |
| S1D | 0.804 | Factored deterministic acceleration value. (1.0 second) |
| PGAd | 0.969 | Factored deterministic acceleration value. (Peak Ground Acceleration) |
| $C_{RS}$ | 0.907 | Mapped value of the risk coefficient at short periods |

SOURCE: SEAOC/OSHPD Seismic Design Maps Tool
<https://seismicmaps.org/>

**SEISMIC DESIGN PARAMETERS - 2019 CBC**
PROPOSED DISTRIBUTION BUILDING
DOWNEY, CALIFORNIA

DRAWN: RB
CHKD: RGT
SCG PROJECT 20G170-1
**PLATE E-1**

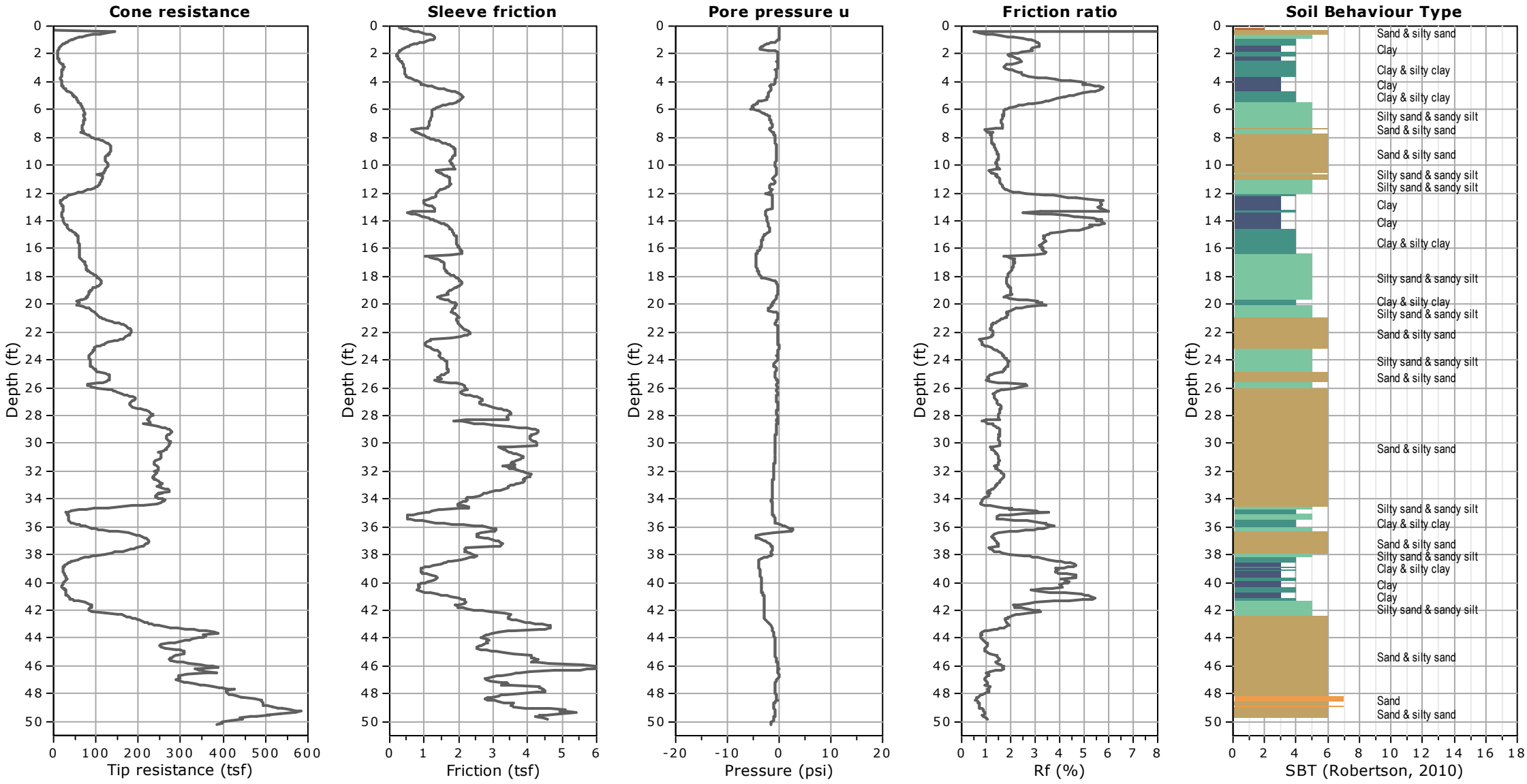
SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL

# APPENDIX F

**Kehoe Testing and Engineering**
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

**Project:** **Southern California Geotechnical**
**Location:** **12021 Woodruff Ave, Downey, CA**

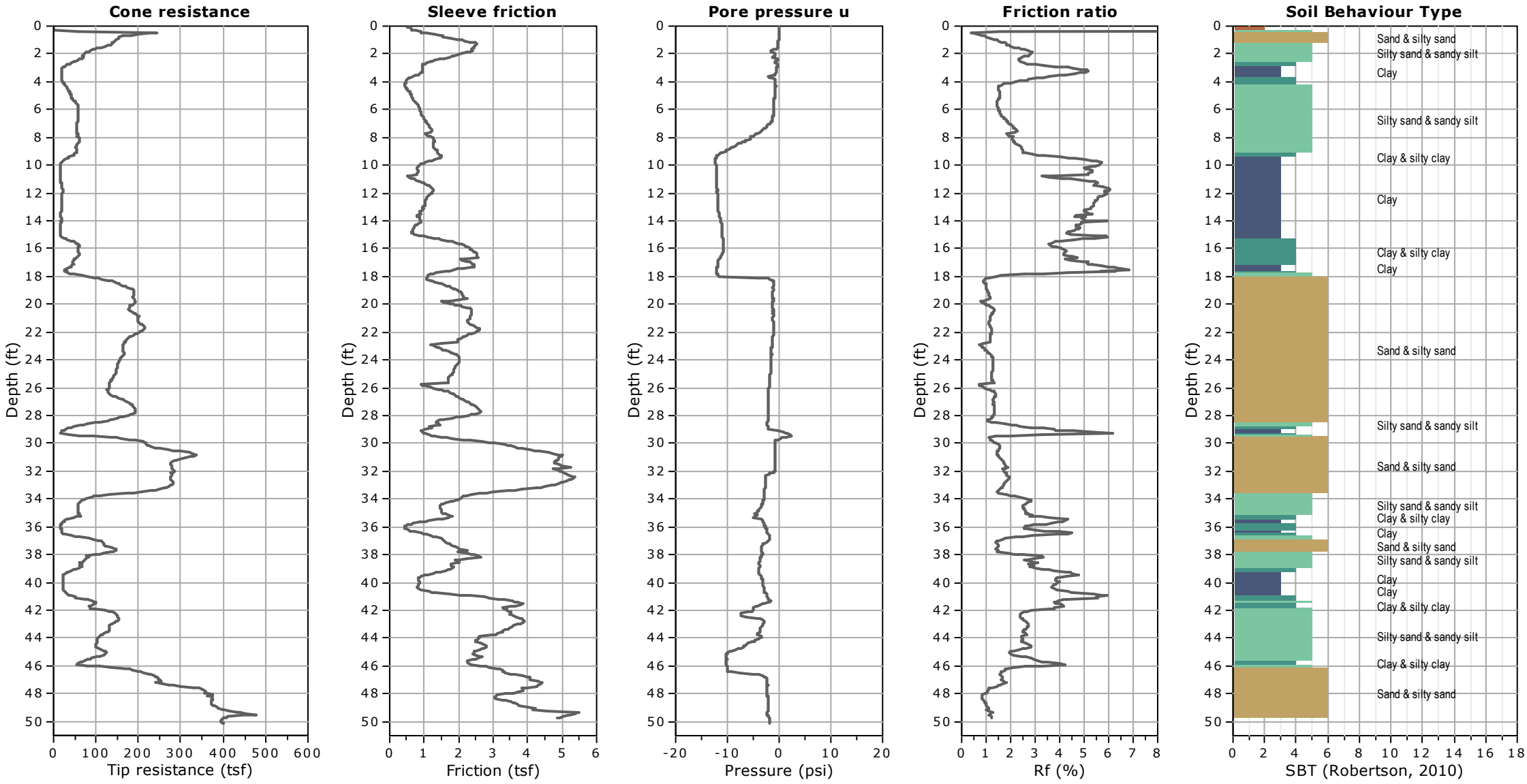
**CPT-1**
Total depth: 50.21 ft, Date: 7/8/2020



**Kehoe Testing and Engineering**
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

**Project:** **Southern California Geotechnical**
**Location:** **12021 Woodruff Ave, Downey, CA**

**CPT-2**
Total depth: 50.13 ft, Date: 7/8/2020



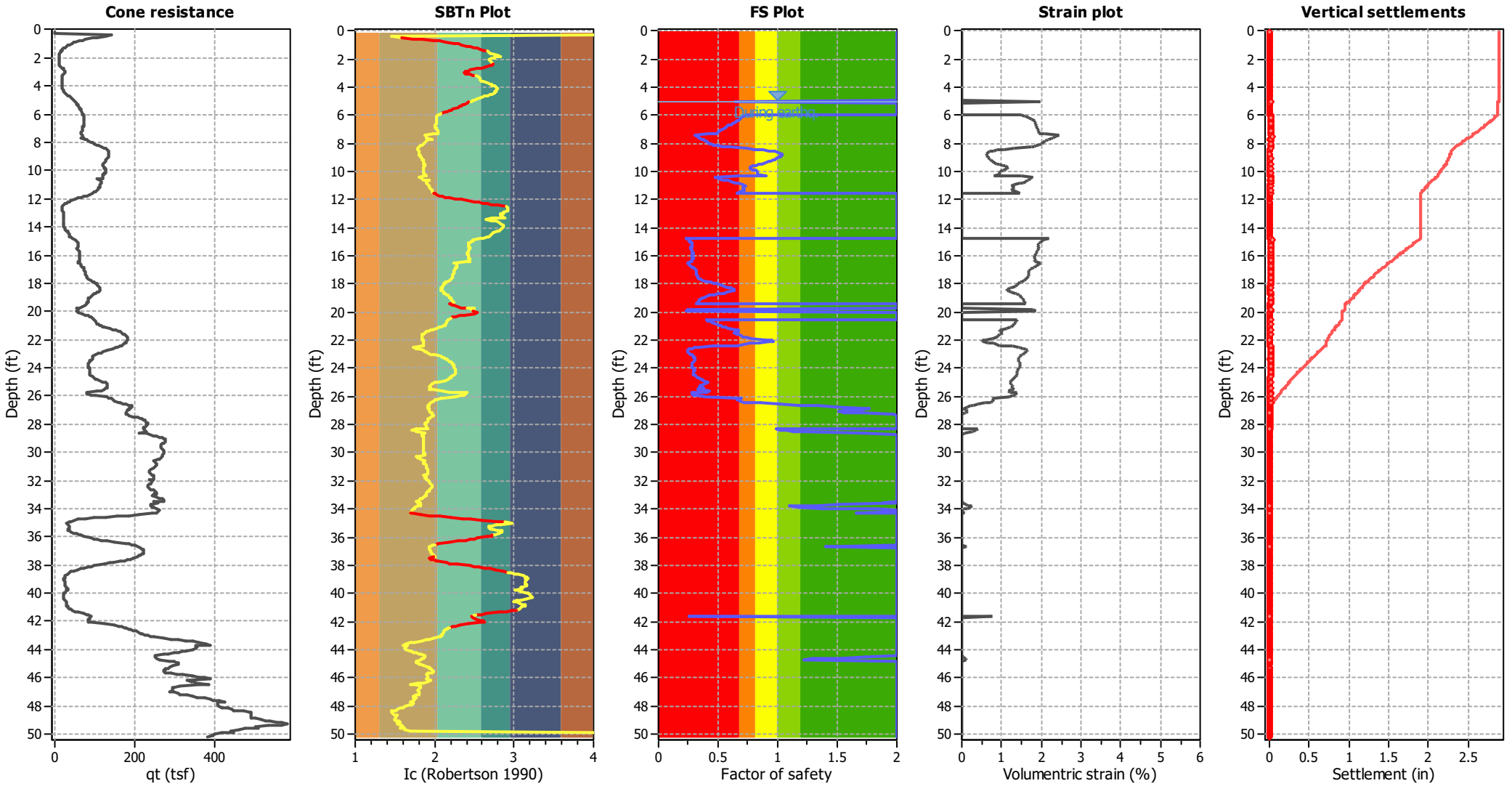
# APPENDIX G

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**CPT-1 results**
Vertical settlements summary report 1
Vertical settlements data report 2

**CPT-2 results**
Vertical settlements summary report 10
Vertical settlements data report 11

# Estimation of post-earthquake settlements




**Abbreviations**

| | |
|---|---|
| $q_t$: | Total cone resistance (cone resistance $q_c$ corrected for pore water effects) |
| $I_c$: | Soil Behaviour Type Index |
| FS: | Calculated Factor of Safety against liquefaction |
| Volumentric strain: | Post-liquefaction volumentric strain |

**:: Post-earthquake settlement due to soil liquefaction ::**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.01 | 145.52 | 0.64 | 1.97 | 0.92 | 0.01 | 5.07 | 149.28 | 0.70 | 1.82 | 0.91 | 0.01 |
| 5.12 | 150.61 | 2.00 | 0.00 | 0.91 | 0.00 | 5.23 | 153.55 | 2.00 | 0.00 | 0.91 | 0.00 |
| 5.29 | 155.82 | 2.00 | 0.00 | 0.91 | 0.00 | 5.34 | 156.84 | 2.00 | 0.00 | 0.91 | 0.00 |
| 5.39 | 156.99 | 2.00 | 0.00 | 0.91 | 0.00 | 5.45 | 157.80 | 2.00 | 0.00 | 0.91 | 0.00 |
| 5.56 | 159.77 | 2.00 | 0.00 | 0.91 | 0.00 | 5.61 | 159.80 | 2.00 | 0.00 | 0.90 | 0.00 |
| 5.67 | 159.17 | 2.00 | 0.00 | 0.90 | 0.00 | 5.72 | 158.56 | 2.00 | 0.00 | 0.90 | 0.00 |
| 5.78 | 157.76 | 2.00 | 0.00 | 0.90 | 0.00 | 5.89 | 156.32 | 2.00 | 0.00 | 0.90 | 0.00 |
| 5.94 | 155.37 | 2.00 | 0.00 | 0.90 | 0.00 | 6.00 | 154.38 | 0.73 | 1.49 | 0.90 | 0.01 |
| 6.06 | 153.70 | 0.72 | 1.57 | 0.90 | 0.01 | 6.11 | 153.37 | 0.71 | 1.62 | 0.90 | 0.01 |
| 6.22 | 152.91 | 0.69 | 1.69 | 0.89 | 0.02 | 6.28 | 152.48 | 0.68 | 1.76 | 0.89 | 0.01 |
| 6.33 | 152.03 | 0.67 | 1.82 | 0.89 | 0.01 | 6.39 | 151.42 | 0.66 | 1.83 | 0.89 | 0.01 |
| 6.45 | 151.10 | 0.65 | 1.83 | 0.89 | 0.01 | 6.50 | 150.57 | 0.64 | 1.84 | 0.89 | 0.01 |
| 6.61 | 149.47 | 0.62 | 1.85 | 0.89 | 0.03 | 6.67 | 148.74 | 0.61 | 1.86 | 0.89 | 0.01 |
| 6.74 | 147.87 | 0.59 | 1.87 | 0.89 | 0.02 | 6.80 | 147.02 | 0.58 | 1.88 | 0.88 | 0.01 |
| 6.86 | 146.35 | 0.57 | 1.89 | 0.88 | 0.01 | 6.91 | 145.73 | 0.56 | 1.89 | 0.88 | 0.01 |
| 6.97 | 144.87 | 0.54 | 1.90 | 0.88 | 0.01 | 7.03 | 144.27 | 0.53 | 1.91 | 0.88 | 0.01 |
| 7.14 | 143.06 | 0.52 | 1.92 | 0.88 | 0.03 | 7.19 | 142.25 | 0.51 | 1.93 | 0.88 | 0.01 |
| 7.25 | 141.39 | 0.49 | 1.95 | 0.88 | 0.01 | 7.30 | 141.04 | 0.49 | 1.95 | 0.88 | 0.01 |
| 7.36 | 133.37 | 0.42 | 2.07 | 0.88 | 0.01 | 7.42 | 114.16 | 0.31 | 2.45 | 0.87 | 0.02 |
| 7.53 | 118.15 | 0.32 | 2.35 | 0.87 | 0.03 | 7.59 | 120.83 | 0.34 | 2.30 | 0.87 | 0.02 |
| 7.64 | 122.75 | 0.35 | 2.26 | 0.87 | 0.01 | 7.68 | 125.71 | 0.36 | 2.20 | 0.87 | 0.01 |
| 7.77 | 127.84 | 0.37 | 2.15 | 0.87 | 0.02 | 7.82 | 129.98 | 0.38 | 2.11 | 0.87 | 0.01 |
| 7.88 | 132.25 | 0.40 | 2.07 | 0.87 | 0.01 | 7.99 | 136.35 | 0.43 | 2.00 | 0.86 | 0.03 |
| 8.04 | 138.33 | 0.45 | 1.96 | 0.86 | 0.01 | 8.10 | 140.71 | 0.47 | 1.92 | 0.86 | 0.01 |
| 8.16 | 143.84 | 0.50 | 1.88 | 0.86 | 0.01 | 8.21 | 147.57 | 0.54 | 1.82 | 0.86 | 0.01 |
| 8.27 | 151.81 | 0.60 | 1.76 | 0.86 | 0.01 | 8.38 | 159.37 | 0.74 | 1.31 | 0.86 | 0.02 |
| 8.43 | 162.41 | 0.81 | 1.07 | 0.86 | 0.01 | 8.49 | 165.06 | 0.88 | 0.89 | 0.86 | 0.01 |
| 8.55 | 166.81 | 0.93 | 0.79 | 0.86 | 0.01 | 8.60 | 168.34 | 0.98 | 0.71 | 0.85 | 0.00 |
| 8.71 | 170.00 | 1.03 | 0.63 | 0.85 | 0.01 | 8.77 | 170.24 | 1.04 | 0.62 | 0.85 | 0.00 |
| 8.82 | 170.21 | 1.04 | 0.62 | 0.85 | 0.00 | 8.88 | 169.98 | 1.03 | 0.63 | 0.85 | 0.00 |
| 8.94 | 169.84 | 1.02 | 0.64 | 0.85 | 0.00 | 8.99 | 169.64 | 1.01 | 0.66 | 0.85 | 0.00 |
| 9.10 | 169.10 | 0.99 | 0.69 | 0.85 | 0.01 | 9.16 | 168.78 | 0.97 | 0.71 | 0.84 | 0.00 |
| 9.21 | 168.53 | 0.96 | 0.72 | 0.84 | 0.00 | 9.27 | 168.01 | 0.94 | 0.75 | 0.84 | 0.01 |
| 9.32 | 167.45 | 0.92 | 0.79 | 0.84 | 0.01 | 9.44 | 165.81 | 0.87 | 0.89 | 0.84 | 0.01 |
| 9.49 | 164.99 | 0.85 | 0.94 | 0.84 | 0.01 | 9.55 | 164.04 | 0.82 | 1.01 | 0.84 | 0.01 |
| 9.60 | 163.01 | 0.79 | 1.08 | 0.84 | 0.01 | 9.66 | 162.18 | 0.77 | 1.15 | 0.84 | 0.01 |
| 9.72 | 162.00 | 0.76 | 1.16 | 0.84 | 0.01 | 9.82 | 162.54 | 0.77 | 1.13 | 0.83 | 0.01 |
| 9.87 | 163.32 | 0.79 | 1.07 | 0.83 | 0.01 | 9.93 | 164.18 | 0.81 | 1.01 | 0.83 | 0.01 |
| 9.99 | 164.70 | 0.82 | 0.98 | 0.83 | 0.01 | 10.04 | 164.87 | 0.83 | 0.97 | 0.83 | 0.01 |
| 10.15 | 165.14 | 0.83 | 0.95 | 0.83 | 0.01 | 10.21 | 165.24 | 0.83 | 0.95 | 0.83 | 0.01 |
| 10.27 | 167.49 | 0.90 | 0.81 | 0.83 | 0.01 | 10.32 | 158.64 | 0.68 | 1.48 | 0.83 | 0.01 |
| 10.38 | 144.91 | 0.47 | 1.78 | 0.82 | 0.01 | 10.43 | 145.64 | 0.48 | 1.77 | 0.82 | 0.01 |
| 10.55 | 148.64 | 0.51 | 1.72 | 0.82 | 0.02 | 10.60 | 150.52 | 0.54 | 1.70 | 0.82 | 0.01 |
| 10.63 | 153.63 | 0.58 | 1.66 | 0.82 | 0.01 | 10.73 | 155.64 | 0.61 | 1.63 | 0.82 | 0.02 |
| 10.79 | 157.18 | 0.64 | 1.55 | 0.82 | 0.01 | 10.84 | 158.99 | 0.67 | 1.46 | 0.82 | 0.01 |
| 10.90 | 160.51 | 0.70 | 1.33 | 0.82 | 0.01 | 11.01 | 161.71 | 0.73 | 1.23 | 0.81 | 0.02 |
| 11.06 | 161.24 | 0.72 | 1.27 | 0.81 | 0.01 | 11.12 | 160.63 | 0.70 | 1.32 | 0.81 | 0.01 |
| 11.17 | 160.66 | 0.70 | 1.32 | 0.81 | 0.01 | 11.23 | 161.18 | 0.71 | 1.28 | 0.81 | 0.01 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.34 | 161.45 | 0.72 | 1.26 | 0.81 | 0.02 | 11.39 | 161.17 | 0.71 | 1.28 | 0.81 | 0.01 |
| 11.45 | 160.15 | 0.69 | 1.37 | 0.81 | 0.01 | 11.50 | 158.67 | 0.66 | 1.45 | 0.81 | 0.01 |
| 11.56 | 156.68 | 2.00 | 0.00 | 0.80 | 0.00 | 11.62 | 154.34 | 2.00 | 0.00 | 0.80 | 0.00 |
| 11.73 | 147.64 | 2.00 | 0.00 | 0.80 | 0.00 | 11.78 | 143.40 | 2.00 | 0.00 | 0.80 | 0.00 |
| 11.84 | 138.54 | 2.00 | 0.00 | 0.80 | 0.00 | 11.90 | 132.84 | 2.00 | 0.00 | 0.80 | 0.00 |
| 11.95 | 126.43 | 2.00 | 0.00 | 0.80 | 0.00 | 12.01 | 119.49 | 2.00 | 0.00 | 0.80 | 0.00 |
| 12.12 | 107.10 | 2.00 | 0.00 | 0.79 | 0.00 | 12.18 | 102.78 | 2.00 | 0.00 | 0.79 | 0.00 |
| 12.24 | 37.21 | 2.00 | 0.00 | 0.79 | 0.00 | 12.29 | 33.38 | 2.00 | 0.00 | 0.79 | 0.00 |
| 12.35 | 29.42 | 2.00 | 0.00 | 0.79 | 0.00 | 12.40 | 25.79 | 2.00 | 0.00 | 0.79 | 0.00 |
| 12.52 | 20.90 | 2.00 | 0.00 | 0.79 | 0.00 | 12.57 | 19.44 | 2.00 | 0.00 | 0.79 | 0.00 |
| 12.63 | 19.40 | 2.00 | 0.00 | 0.79 | 0.00 | 12.69 | 19.35 | 2.00 | 0.00 | 0.79 | 0.00 |
| 12.74 | 19.63 | 2.00 | 0.00 | 0.78 | 0.00 | 12.80 | 20.22 | 2.00 | 0.00 | 0.78 | 0.00 |
| 12.91 | 22.60 | 2.00 | 0.00 | 0.78 | 0.00 | 12.96 | 23.62 | 2.00 | 0.00 | 0.78 | 0.00 |
| 13.02 | 25.16 | 2.00 | 0.00 | 0.78 | 0.00 | 13.08 | 25.32 | 2.00 | 0.00 | 0.78 | 0.00 |
| 13.13 | 25.36 | 2.00 | 0.00 | 0.78 | 0.00 | 13.24 | 24.72 | 2.00 | 0.00 | 0.78 | 0.00 |
| 13.30 | 23.62 | 2.00 | 0.00 | 0.77 | 0.00 | 13.35 | 23.07 | 2.00 | 0.00 | 0.77 | 0.00 |
| 13.41 | 22.83 | 2.00 | 0.00 | 0.77 | 0.00 | 13.47 | 22.44 | 2.00 | 0.00 | 0.77 | 0.00 |
| 13.52 | 22.08 | 2.00 | 0.00 | 0.77 | 0.00 | 13.64 | 22.08 | 2.00 | 0.00 | 0.77 | 0.00 |
| 13.69 | 22.03 | 2.00 | 0.00 | 0.77 | 0.00 | 13.72 | 22.48 | 2.00 | 0.00 | 0.77 | 0.00 |
| 13.82 | 22.86 | 2.00 | 0.00 | 0.77 | 0.00 | 13.87 | 23.22 | 2.00 | 0.00 | 0.76 | 0.00 |
| 13.93 | 23.89 | 2.00 | 0.00 | 0.76 | 0.00 | 13.99 | 25.28 | 2.00 | 0.00 | 0.76 | 0.00 |
| 14.05 | 25.63 | 2.00 | 0.00 | 0.76 | 0.00 | 14.16 | 27.45 | 2.00 | 0.00 | 0.76 | 0.00 |
| 14.22 | 28.71 | 2.00 | 0.00 | 0.76 | 0.00 | 14.28 | 30.48 | 2.00 | 0.00 | 0.76 | 0.00 |
| 14.33 | 33.54 | 2.00 | 0.00 | 0.76 | 0.00 | 14.39 | 33.68 | 2.00 | 0.00 | 0.76 | 0.00 |
| 14.44 | 35.22 | 2.00 | 0.00 | 0.76 | 0.00 | 14.55 | 36.68 | 2.00 | 0.00 | 0.75 | 0.00 |
| 14.61 | 37.11 | 2.00 | 0.00 | 0.75 | 0.00 | 14.66 | 39.12 | 2.00 | 0.00 | 0.75 | 0.00 |
| 14.72 | 42.82 | 2.00 | 0.00 | 0.75 | 0.00 | 14.77 | 109.18 | 0.23 | 2.20 | 0.75 | 0.01 |
| 14.88 | 116.25 | 0.25 | 2.05 | 0.75 | 0.03 | 14.94 | 117.41 | 0.26 | 2.03 | 0.75 | 0.01 |
| 15.00 | 118.83 | 0.26 | 2.00 | 0.75 | 0.01 | 15.05 | 120.80 | 0.27 | 1.96 | 0.74 | 0.01 |
| 15.11 | 122.58 | 0.28 | 1.93 | 0.74 | 0.01 | 15.16 | 122.53 | 0.28 | 1.93 | 0.74 | 0.01 |
| 15.27 | 122.99 | 0.28 | 1.92 | 0.74 | 0.03 | 15.33 | 122.53 | 0.28 | 1.92 | 0.74 | 0.01 |
| 15.38 | 121.84 | 0.27 | 1.93 | 0.74 | 0.01 | 15.44 | 121.25 | 0.27 | 1.94 | 0.74 | 0.01 |
| 15.50 | 120.88 | 0.27 | 1.94 | 0.74 | 0.01 | 15.61 | 122.93 | 0.28 | 1.90 | 0.74 | 0.03 |
| 15.66 | 123.78 | 0.28 | 1.89 | 0.73 | 0.01 | 15.77 | 125.50 | 0.29 | 1.85 | 0.73 | 0.02 |
| 15.83 | 125.07 | 0.29 | 1.86 | 0.73 | 0.01 | 15.88 | 125.53 | 0.29 | 1.85 | 0.73 | 0.01 |
| 15.94 | 124.92 | 0.28 | 1.86 | 0.73 | 0.01 | 15.99 | 125.34 | 0.29 | 1.85 | 0.73 | 0.01 |
| 16.05 | 126.08 | 0.29 | 1.83 | 0.73 | 0.01 | 16.11 | 125.48 | 0.29 | 1.84 | 0.73 | 0.01 |
| 16.16 | 125.83 | 0.29 | 1.83 | 0.73 | 0.01 | 16.22 | 124.51 | 0.28 | 1.85 | 0.73 | 0.01 |
| 16.33 | 125.50 | 0.29 | 1.83 | 0.72 | 0.02 | 16.38 | 124.77 | 0.28 | 1.84 | 0.72 | 0.01 |
| 16.44 | 122.79 | 0.27 | 1.87 | 0.72 | 0.01 | 16.50 | 116.03 | 0.25 | 1.98 | 0.72 | 0.01 |
| 16.55 | 116.76 | 0.25 | 1.97 | 0.72 | 0.01 | 16.61 | 118.03 | 0.25 | 1.94 | 0.72 | 0.01 |
| 16.72 | 122.03 | 0.27 | 1.87 | 0.72 | 0.02 | 16.77 | 123.49 | 0.27 | 1.84 | 0.72 | 0.01 |
| 16.84 | 126.79 | 0.29 | 1.79 | 0.71 | 0.01 | 16.90 | 129.16 | 0.30 | 1.75 | 0.71 | 0.01 |
| 16.95 | 130.38 | 0.31 | 1.73 | 0.71 | 0.01 | 17.01 | 131.59 | 0.31 | 1.71 | 0.71 | 0.01 |
| 17.06 | 132.25 | 0.32 | 1.70 | 0.71 | 0.01 | 17.17 | 132.57 | 0.32 | 1.69 | 0.71 | 0.02 |
| 17.23 | 132.64 | 0.32 | 1.69 | 0.71 | 0.01 | 17.28 | 132.67 | 0.32 | 1.68 | 0.71 | 0.01 |
| 17.34 | 133.10 | 0.32 | 1.68 | 0.71 | 0.01 | 17.39 | 133.58 | 0.32 | 1.67 | 0.71 | 0.01 |
| 17.50 | 134.71 | 0.33 | 1.65 | 0.70 | 0.02 | 17.56 | 135.17 | 0.33 | 1.64 | 0.70 | 0.01 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17.61 | 136.03 | 0.34 | 1.62 | 0.70 | 0.01 | 17.67 | 137.63 | 0.35 | 1.60 | 0.70 | 0.01 |
| 17.72 | 139.78 | 0.37 | 1.57 | 0.70 | 0.01 | 17.83 | 145.05 | 0.41 | 1.50 | 0.70 | 0.02 |
| 17.89 | 147.45 | 0.44 | 1.47 | 0.70 | 0.01 | 17.95 | 150.03 | 0.46 | 1.44 | 0.70 | 0.01 |
| 18.00 | 152.27 | 0.49 | 1.42 | 0.69 | 0.01 | 18.06 | 154.46 | 0.52 | 1.39 | 0.69 | 0.01 |
| 18.12 | 156.10 | 0.55 | 1.36 | 0.69 | 0.01 | 18.23 | 158.57 | 0.59 | 1.25 | 0.69 | 0.02 |
| 18.28 | 159.74 | 0.61 | 1.20 | 0.69 | 0.01 | 18.34 | 160.78 | 0.63 | 1.16 | 0.69 | 0.01 |
| 18.40 | 161.26 | 0.64 | 1.14 | 0.69 | 0.01 | 18.45 | 161.29 | 0.64 | 1.14 | 0.69 | 0.01 |
| 18.50 | 160.80 | 0.63 | 1.15 | 0.69 | 0.01 | 18.61 | 158.24 | 0.58 | 1.25 | 0.68 | 0.02 |
| 18.66 | 156.15 | 0.54 | 1.34 | 0.68 | 0.01 | 18.72 | 153.21 | 0.50 | 1.38 | 0.68 | 0.01 |
| 18.78 | 149.98 | 0.46 | 1.42 | 0.68 | 0.01 | 18.84 | 146.81 | 0.42 | 1.45 | 0.68 | 0.01 |
| 18.94 | 141.88 | 0.38 | 1.50 | 0.68 | 0.02 | 19.00 | 139.88 | 0.36 | 1.52 | 0.68 | 0.01 |
| 19.06 | 138.45 | 0.35 | 1.54 | 0.68 | 0.01 | 19.11 | 137.25 | 0.34 | 1.55 | 0.68 | 0.01 |
| 19.17 | 136.54 | 0.34 | 1.56 | 0.68 | 0.01 | 19.28 | 135.93 | 0.33 | 1.56 | 0.67 | 0.02 |
| 19.33 | 135.60 | 0.33 | 1.56 | 0.67 | 0.01 | 19.39 | 132.77 | 0.31 | 1.60 | 0.67 | 0.01 |
| 19.44 | 130.51 | 2.00 | 0.00 | 0.67 | 0.00 | 19.50 | 129.99 | 2.00 | 0.00 | 0.67 | 0.00 |
| 19.56 | 128.59 | 2.00 | 0.00 | 0.67 | 0.00 | 19.67 | 123.72 | 2.00 | 0.00 | 0.67 | 0.00 |
| 19.72 | 119.12 | 2.00 | 0.00 | 0.67 | 0.00 | 19.75 | 112.65 | 2.00 | 0.00 | 0.67 | 0.00 |
| 19.86 | 116.93 | 0.24 | 1.81 | 0.66 | 0.02 | 19.91 | 114.55 | 0.23 | 1.85 | 0.66 | 0.01 |
| 19.97 | 116.74 | 0.24 | 1.81 | 0.66 | 0.01 | 20.02 | 113.26 | 2.00 | 0.00 | 0.66 | 0.00 |
| 20.08 | 116.11 | 2.00 | 0.00 | 0.66 | 0.00 | 20.19 | 126.65 | 2.00 | 0.00 | 0.66 | 0.00 |
| 20.25 | 132.14 | 2.00 | 0.00 | 0.66 | 0.00 | 20.30 | 136.54 | 2.00 | 0.00 | 0.66 | 0.00 |
| 20.36 | 139.24 | 2.00 | 0.00 | 0.65 | 0.00 | 20.41 | 141.03 | 2.00 | 0.00 | 0.65 | 0.00 |
| 20.52 | 143.46 | 2.00 | 0.00 | 0.65 | 0.00 | 20.58 | 145.02 | 0.40 | 1.40 | 0.65 | 0.01 |
| 20.63 | 146.88 | 0.42 | 1.38 | 0.65 | 0.01 | 20.69 | 148.58 | 0.43 | 1.36 | 0.65 | 0.01 |
| 20.74 | 150.28 | 0.45 | 1.34 | 0.65 | 0.01 | 20.85 | 153.26 | 0.49 | 1.31 | 0.65 | 0.02 |
| 20.91 | 154.64 | 0.51 | 1.29 | 0.65 | 0.01 | 20.97 | 155.63 | 0.52 | 1.28 | 0.64 | 0.01 |
| 21.02 | 156.57 | 0.54 | 1.25 | 0.64 | 0.01 | 21.08 | 157.83 | 0.56 | 1.19 | 0.64 | 0.01 |
| 21.14 | 159.66 | 0.59 | 1.12 | 0.64 | 0.01 | 21.24 | 163.11 | 0.65 | 0.99 | 0.64 | 0.01 |
| 21.30 | 164.01 | 0.67 | 0.96 | 0.64 | 0.01 | 21.35 | 163.78 | 0.67 | 0.97 | 0.64 | 0.01 |
| 21.41 | 162.98 | 0.65 | 0.99 | 0.64 | 0.01 | 21.46 | 162.52 | 0.64 | 1.01 | 0.64 | 0.01 |
| 21.57 | 163.48 | 0.66 | 0.97 | 0.63 | 0.01 | 21.63 | 164.27 | 0.68 | 0.94 | 0.63 | 0.01 |
| 21.68 | 164.91 | 0.69 | 0.92 | 0.63 | 0.01 | 21.74 | 165.72 | 0.71 | 0.90 | 0.63 | 0.01 |
| 21.80 | 166.84 | 0.74 | 0.86 | 0.63 | 0.01 | 21.85 | 168.71 | 0.79 | 0.77 | 0.63 | 0.01 |
| 21.97 | 172.35 | 0.90 | 0.59 | 0.63 | 0.01 | 22.02 | 173.76 | 0.95 | 0.53 | 0.63 | 0.00 |
| 22.08 | 174.10 | 0.96 | 0.52 | 0.63 | 0.00 | 22.13 | 173.13 | 0.92 | 0.56 | 0.62 | 0.00 |
| 22.19 | 170.83 | 0.85 | 0.66 | 0.62 | 0.00 | 22.25 | 168.16 | 0.77 | 0.80 | 0.62 | 0.01 |
| 22.35 | 163.42 | 0.65 | 0.95 | 0.62 | 0.01 | 22.41 | 151.17 | 0.46 | 1.28 | 0.62 | 0.01 |
| 22.47 | 137.80 | 0.34 | 1.41 | 0.62 | 0.01 | 22.52 | 133.15 | 0.31 | 1.47 | 0.62 | 0.01 |
| 22.58 | 127.50 | 0.28 | 1.53 | 0.62 | 0.01 | 22.64 | 122.85 | 0.26 | 1.60 | 0.62 | 0.01 |
| 22.74 | 119.33 | 0.24 | 1.64 | 0.61 | 0.02 | 22.81 | 119.79 | 0.25 | 1.63 | 0.61 | 0.01 |
| 22.87 | 120.03 | 0.25 | 1.63 | 0.61 | 0.01 | 22.92 | 123.01 | 0.26 | 1.58 | 0.61 | 0.01 |
| 22.98 | 126.32 | 0.27 | 1.53 | 0.61 | 0.01 | 23.04 | 128.54 | 0.28 | 1.50 | 0.61 | 0.01 |
| 23.15 | 130.21 | 0.29 | 1.48 | 0.61 | 0.02 | 23.20 | 131.29 | 0.29 | 1.46 | 0.61 | 0.01 |
| 23.26 | 132.76 | 0.30 | 1.44 | 0.61 | 0.01 | 23.31 | 133.71 | 0.31 | 1.43 | 0.60 | 0.01 |
| 23.37 | 134.00 | 0.31 | 1.42 | 0.60 | 0.01 | 23.48 | 133.19 | 0.30 | 1.43 | 0.60 | 0.02 |
| 23.53 | 132.12 | 0.30 | 1.44 | 0.60 | 0.01 | 23.59 | 130.63 | 0.29 | 1.45 | 0.60 | 0.01 |
| 23.65 | 129.27 | 0.28 | 1.47 | 0.60 | 0.01 | 23.70 | 128.24 | 0.28 | 1.48 | 0.60 | 0.01 |
| 23.76 | 127.98 | 0.28 | 1.48 | 0.60 | 0.01 | 23.87 | 129.05 | 0.28 | 1.46 | 0.60 | 0.02 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23.93 | 129.84 | 0.29 | 1.45 | 0.59 | 0.01 | 23.98 | 130.85 | 0.29 | 1.43 | 0.59 | 0.01 |
| 24.04 | 131.74 | 0.30 | 1.42 | 0.59 | 0.01 | 24.09 | 132.43 | 0.30 | 1.41 | 0.59 | 0.01 |
| 24.15 | 132.56 | 0.30 | 1.41 | 0.59 | 0.01 | 24.26 | 132.18 | 0.30 | 1.41 | 0.59 | 0.02 |
| 24.32 | 131.95 | 0.30 | 1.41 | 0.59 | 0.01 | 24.37 | 131.98 | 0.30 | 1.41 | 0.59 | 0.01 |
| 24.43 | 132.36 | 0.30 | 1.40 | 0.59 | 0.01 | 24.48 | 133.31 | 0.30 | 1.39 | 0.59 | 0.01 |
| 24.59 | 136.03 | 0.32 | 1.35 | 0.58 | 0.02 | 24.65 | 137.71 | 0.33 | 1.33 | 0.58 | 0.01 |
| 24.70 | 139.47 | 0.34 | 1.31 | 0.58 | 0.01 | 24.76 | 140.89 | 0.35 | 1.29 | 0.58 | 0.01 |
| 24.82 | 142.29 | 0.36 | 1.28 | 0.58 | 0.01 | 24.87 | 144.22 | 0.38 | 1.25 | 0.58 | 0.01 |
| 24.98 | 148.17 | 0.42 | 1.21 | 0.58 | 0.02 | 25.04 | 147.49 | 0.41 | 1.22 | 0.58 | 0.01 |
| 25.10 | 145.31 | 0.39 | 1.24 | 0.57 | 0.01 | 25.15 | 143.27 | 0.37 | 1.25 | 0.57 | 0.01 |
| 25.21 | 141.06 | 0.35 | 1.27 | 0.57 | 0.01 | 25.27 | 138.64 | 0.34 | 1.30 | 0.57 | 0.01 |
| 25.38 | 144.29 | 0.38 | 1.24 | 0.57 | 0.02 | 25.43 | 140.23 | 0.35 | 1.27 | 0.57 | 0.01 |
| 25.49 | 136.95 | 0.32 | 1.31 | 0.57 | 0.01 | 25.55 | 142.44 | 0.36 | 1.25 | 0.57 | 0.01 |
| 25.60 | 149.36 | 0.43 | 1.18 | 0.57 | 0.01 | 25.66 | 147.02 | 0.40 | 1.20 | 0.57 | 0.01 |
| 25.73 | 128.21 | 0.28 | 1.39 | 0.56 | 0.01 | 25.83 | 130.00 | 0.28 | 1.37 | 0.56 | 0.02 |
| 25.88 | 132.25 | 0.30 | 1.34 | 0.56 | 0.01 | 25.94 | 137.38 | 0.33 | 1.28 | 0.56 | 0.01 |
| 25.99 | 145.17 | 0.39 | 1.20 | 0.56 | 0.01 | 26.10 | 164.91 | 0.67 | 0.81 | 0.56 | 0.01 |
| 26.16 | 166.23 | 0.70 | 0.78 | 0.56 | 0.00 | 26.21 | 164.64 | 0.66 | 0.82 | 0.56 | 0.01 |
| 26.27 | 165.48 | 0.68 | 0.79 | 0.55 | 0.01 | 26.32 | 165.71 | 0.69 | 0.79 | 0.55 | 0.01 |
| 26.43 | 167.17 | 0.72 | 0.75 | 0.55 | 0.01 | 26.49 | 171.86 | 0.85 | 0.57 | 0.55 | 0.00 |
| 26.54 | 176.46 | 1.02 | 0.40 | 0.55 | 0.00 | 26.60 | 179.95 | 1.18 | 0.29 | 0.55 | 0.00 |
| 26.65 | 182.89 | 1.34 | 0.20 | 0.55 | 0.00 | 26.71 | 185.05 | 1.48 | 0.14 | 0.55 | 0.00 |
| 26.82 | 188.35 | 1.73 | 0.07 | 0.55 | 0.00 | 26.87 | 188.87 | 1.77 | 0.05 | 0.54 | 0.00 |
| 26.93 | 188.00 | 1.70 | 0.07 | 0.54 | 0.00 | 26.99 | 186.38 | 1.58 | 0.11 | 0.54 | 0.00 |
| 27.04 | 185.55 | 1.52 | 0.13 | 0.54 | 0.00 | 27.15 | 186.21 | 1.56 | 0.11 | 0.54 | 0.00 |
| 27.20 | 188.34 | 1.73 | 0.07 | 0.54 | 0.00 | 27.26 | 191.21 | 1.98 | 0.00 | 0.54 | 0.00 |
| 27.32 | 194.50 | 2.00 | 0.00 | 0.54 | 0.00 | 27.37 | 197.60 | 2.00 | 0.00 | 0.54 | 0.00 |
| 27.48 | 204.13 | 2.00 | 0.00 | 0.53 | 0.00 | 27.54 | 207.38 | 2.00 | 0.00 | 0.53 | 0.00 |
| 27.59 | 210.43 | 2.00 | 0.00 | 0.53 | 0.00 | 27.65 | 212.97 | 2.00 | 0.00 | 0.53 | 0.00 |
| 27.71 | 215.43 | 2.00 | 0.00 | 0.53 | 0.00 | 27.76 | 216.95 | 2.00 | 0.00 | 0.53 | 0.00 |
| 27.87 | 216.91 | 2.00 | 0.00 | 0.53 | 0.00 | 27.93 | 215.45 | 2.00 | 0.00 | 0.53 | 0.00 |
| 27.98 | 214.14 | 2.00 | 0.00 | 0.53 | 0.00 | 28.04 | 213.41 | 2.00 | 0.00 | 0.52 | 0.00 |
| 28.09 | 213.44 | 2.00 | 0.00 | 0.52 | 0.00 | 28.20 | 213.84 | 2.00 | 0.00 | 0.52 | 0.00 |
| 28.26 | 214.02 | 2.00 | 0.00 | 0.52 | 0.00 | 28.32 | 176.02 | 0.99 | 0.40 | 0.52 | 0.00 |
| 28.37 | 176.70 | 1.02 | 0.37 | 0.52 | 0.00 | 28.43 | 177.87 | 1.07 | 0.34 | 0.52 | 0.00 |
| 28.49 | 179.12 | 1.13 | 0.30 | 0.52 | 0.00 | 28.54 | 181.19 | 1.23 | 0.24 | 0.52 | 0.00 |
| 28.63 | 188.45 | 1.72 | 0.06 | 0.51 | 0.00 | 28.69 | 196.66 | 2.00 | 0.00 | 0.51 | 0.00 |
| 28.80 | 214.56 | 2.00 | 0.00 | 0.51 | 0.00 | 28.85 | 224.47 | 2.00 | 0.00 | 0.51 | 0.00 |
| 28.91 | 232.61 | 2.00 | 0.00 | 0.51 | 0.00 | 28.96 | 237.78 | 2.00 | 0.00 | 0.51 | 0.00 |
| 29.02 | 241.67 | 2.00 | 0.00 | 0.51 | 0.00 | 29.07 | 243.73 | 2.00 | 0.00 | 0.51 | 0.00 |
| 29.18 | 244.24 | 2.00 | 0.00 | 0.51 | 0.00 | 29.24 | 242.75 | 2.00 | 0.00 | 0.50 | 0.00 |
| 29.35 | 238.96 | 2.00 | 0.00 | 0.50 | 0.00 | 29.40 | 237.65 | 2.00 | 0.00 | 0.50 | 0.00 |
| 29.46 | 236.74 | 2.00 | 0.00 | 0.50 | 0.00 | 29.51 | 236.08 | 2.00 | 0.00 | 0.50 | 0.00 |
| 29.57 | 235.73 | 2.00 | 0.00 | 0.50 | 0.00 | 29.63 | 235.39 | 2.00 | 0.00 | 0.50 | 0.00 |
| 29.68 | 235.86 | 2.00 | 0.00 | 0.50 | 0.00 | 29.73 | 237.16 | 2.00 | 0.00 | 0.50 | 0.00 |
| 29.84 | 240.29 | 2.00 | 0.00 | 0.49 | 0.00 | 29.90 | 241.60 | 2.00 | 0.00 | 0.49 | 0.00 |
| 29.95 | 242.25 | 2.00 | 0.00 | 0.49 | 0.00 | 30.01 | 242.44 | 2.00 | 0.00 | 0.49 | 0.00 |
| 30.07 | 242.82 | 2.00 | 0.00 | 0.49 | 0.00 | 30.12 | 242.39 | 2.00 | 0.00 | 0.49 | 0.00 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 30.23 | 218.28 | 2.00 | 0.00 | 0.49 | 0.00 | 30.29 | 213.16 | 2.00 | 0.00 | 0.49 | 0.00 |
| 30.35 | 212.44 | 2.00 | 0.00 | 0.49 | 0.00 | 30.41 | 212.03 | 2.00 | 0.00 | 0.48 | 0.00 |
| 30.46 | 211.88 | 2.00 | 0.00 | 0.48 | 0.00 | 30.52 | 212.49 | 2.00 | 0.00 | 0.48 | 0.00 |
| 30.62 | 214.93 | 2.00 | 0.00 | 0.48 | 0.00 | 30.67 | 215.99 | 2.00 | 0.00 | 0.48 | 0.00 |
| 30.73 | 219.06 | 2.00 | 0.00 | 0.48 | 0.00 | 30.78 | 223.22 | 2.00 | 0.00 | 0.48 | 0.00 |
| 30.89 | 229.43 | 2.00 | 0.00 | 0.48 | 0.00 | 30.95 | 230.10 | 2.00 | 0.00 | 0.48 | 0.00 |
| 31.01 | 229.82 | 2.00 | 0.00 | 0.47 | 0.00 | 31.06 | 228.62 | 2.00 | 0.00 | 0.47 | 0.00 |
| 31.12 | 227.24 | 2.00 | 0.00 | 0.47 | 0.00 | 31.22 | 223.55 | 2.00 | 0.00 | 0.47 | 0.00 |
| 31.28 | 221.25 | 2.00 | 0.00 | 0.47 | 0.00 | 31.33 | 219.05 | 2.00 | 0.00 | 0.47 | 0.00 |
| 31.39 | 218.56 | 2.00 | 0.00 | 0.47 | 0.00 | 31.45 | 219.47 | 2.00 | 0.00 | 0.47 | 0.00 |
| 31.50 | 222.04 | 2.00 | 0.00 | 0.47 | 0.00 | 31.61 | 207.74 | 2.00 | 0.00 | 0.46 | 0.00 |
| 31.67 | 221.50 | 2.00 | 0.00 | 0.46 | 0.00 | 31.73 | 214.55 | 2.00 | 0.00 | 0.46 | 0.00 |
| 31.78 | 216.64 | 2.00 | 0.00 | 0.46 | 0.00 | 31.84 | 221.22 | 2.00 | 0.00 | 0.46 | 0.00 |
| 31.89 | 225.53 | 2.00 | 0.00 | 0.46 | 0.00 | 31.98 | 228.54 | 2.00 | 0.00 | 0.46 | 0.00 |
| 32.03 | 230.49 | 2.00 | 0.00 | 0.46 | 0.00 | 32.09 | 232.71 | 2.00 | 0.00 | 0.46 | 0.00 |
| 32.25 | 237.43 | 2.00 | 0.00 | 0.45 | 0.00 | 32.30 | 236.07 | 2.00 | 0.00 | 0.45 | 0.00 |
| 32.36 | 234.87 | 2.00 | 0.00 | 0.45 | 0.00 | 32.42 | 233.54 | 2.00 | 0.00 | 0.45 | 0.00 |
| 32.47 | 232.26 | 2.00 | 0.00 | 0.45 | 0.00 | 32.53 | 231.23 | 2.00 | 0.00 | 0.45 | 0.00 |
| 32.58 | 231.03 | 2.00 | 0.00 | 0.45 | 0.00 | 32.64 | 231.60 | 2.00 | 0.00 | 0.45 | 0.00 |
| 32.69 | 232.22 | 2.00 | 0.00 | 0.45 | 0.00 | 32.75 | 231.18 | 2.00 | 0.00 | 0.44 | 0.00 |
| 32.86 | 225.38 | 2.00 | 0.00 | 0.44 | 0.00 | 32.92 | 223.93 | 2.00 | 0.00 | 0.44 | 0.00 |
| 32.97 | 221.84 | 2.00 | 0.00 | 0.44 | 0.00 | 33.02 | 217.93 | 2.00 | 0.00 | 0.44 | 0.00 |
| 33.08 | 215.30 | 2.00 | 0.00 | 0.44 | 0.00 | 33.19 | 214.92 | 2.00 | 0.00 | 0.44 | 0.00 |
| 33.25 | 210.22 | 2.00 | 0.00 | 0.44 | 0.00 | 33.31 | 210.32 | 2.00 | 0.00 | 0.44 | 0.00 |
| 33.36 | 209.85 | 2.00 | 0.00 | 0.43 | 0.00 | 33.42 | 208.86 | 2.00 | 0.00 | 0.43 | 0.00 |
| 33.48 | 207.08 | 2.00 | 0.00 | 0.43 | 0.00 | 33.53 | 190.73 | 1.88 | 0.02 | 0.43 | 0.00 |
| 33.61 | 193.51 | 2.00 | 0.00 | 0.43 | 0.00 | 33.67 | 186.06 | 1.52 | 0.10 | 0.43 | 0.00 |
| 33.74 | 183.21 | 1.33 | 0.16 | 0.43 | 0.00 | 33.83 | 178.92 | 1.10 | 0.26 | 0.43 | 0.00 |
| 33.88 | 180.40 | 1.17 | 0.22 | 0.43 | 0.00 | 33.94 | 183.95 | 1.37 | 0.15 | 0.42 | 0.00 |
| 33.99 | 190.36 | 1.85 | 0.03 | 0.42 | 0.00 | 34.10 | 197.23 | 2.00 | 0.00 | 0.42 | 0.00 |
| 34.16 | 194.86 | 2.00 | 0.00 | 0.42 | 0.00 | 34.21 | 191.77 | 1.98 | 0.00 | 0.42 | 0.00 |
| 34.27 | 188.00 | 1.65 | 0.07 | 0.42 | 0.00 | 34.33 | 180.03 | 2.00 | 0.00 | 0.42 | 0.00 |
| 34.43 | 156.36 | 2.00 | 0.00 | 0.42 | 0.00 | 34.49 | 169.98 | 2.00 | 0.00 | 0.42 | 0.00 |
| 34.55 | 170.76 | 2.00 | 0.00 | 0.41 | 0.00 | 34.60 | 154.66 | 2.00 | 0.00 | 0.41 | 0.00 |
| 34.66 | 132.17 | 2.00 | 0.00 | 0.41 | 0.00 | 34.72 | 113.84 | 2.00 | 0.00 | 0.41 | 0.00 |
| 34.78 | 101.98 | 2.00 | 0.00 | 0.41 | 0.00 | 34.90 | 26.04 | 2.00 | 0.00 | 0.41 | 0.00 |
| 34.95 | 22.78 | 2.00 | 0.00 | 0.41 | 0.00 | 34.99 | 19.11 | 2.00 | 0.00 | 0.41 | 0.00 |
| 35.07 | 21.47 | 2.00 | 0.00 | 0.41 | 0.00 | 35.13 | 21.36 | 2.00 | 0.00 | 0.40 | 0.00 |
| 35.19 | 21.57 | 2.00 | 0.00 | 0.40 | 0.00 | 35.24 | 22.00 | 2.00 | 0.00 | 0.40 | 0.00 |
| 35.36 | 22.30 | 2.00 | 0.00 | 0.40 | 0.00 | 35.41 | 21.89 | 2.00 | 0.00 | 0.40 | 0.00 |
| 35.46 | 22.25 | 2.00 | 0.00 | 0.40 | 0.00 | 35.52 | 21.64 | 2.00 | 0.00 | 0.40 | 0.00 |
| 35.57 | 22.23 | 2.00 | 0.00 | 0.40 | 0.00 | 35.68 | 26.14 | 2.00 | 0.00 | 0.40 | 0.00 |
| 35.74 | 29.72 | 2.00 | 0.00 | 0.39 | 0.00 | 35.80 | 34.69 | 2.00 | 0.00 | 0.39 | 0.00 |
| 35.85 | 39.93 | 2.00 | 0.00 | 0.39 | 0.00 | 35.91 | 42.66 | 2.00 | 0.00 | 0.39 | 0.00 |
| 35.96 | 48.82 | 2.00 | 0.00 | 0.39 | 0.00 | 36.08 | 129.83 | 2.00 | 0.00 | 0.39 | 0.00 |
| 36.13 | 136.57 | 2.00 | 0.00 | 0.39 | 0.00 | 36.19 | 141.74 | 2.00 | 0.00 | 0.39 | 0.00 |
| 36.24 | 150.62 | 2.00 | 0.00 | 0.39 | 0.00 | 36.30 | 162.56 | 2.00 | 0.00 | 0.38 | 0.00 |
| 36.35 | 173.36 | 2.00 | 0.00 | 0.38 | 0.00 | 36.46 | 184.43 | 2.00 | 0.00 | 0.38 | 0.00 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 36.52 | 184.34 | 2.00 | 0.00 | 0.38 | 0.00 | 36.57 | 184.25 | 2.00 | 0.00 | 0.38 | 0.00 |
| 36.63 | 186.00 | 1.50 | 0.10 | 0.38 | 0.00 | 36.68 | 184.45 | 1.40 | 0.12 | 0.38 | 0.00 |
| 36.80 | 193.01 | 2.00 | 0.00 | 0.38 | 0.00 | 36.85 | 197.36 | 2.00 | 0.00 | 0.38 | 0.00 |
| 36.91 | 201.49 | 2.00 | 0.00 | 0.37 | 0.00 | 36.96 | 205.06 | 2.00 | 0.00 | 0.37 | 0.00 |
| 37.02 | 207.82 | 2.00 | 0.00 | 0.37 | 0.00 | 37.07 | 209.75 | 2.00 | 0.00 | 0.37 | 0.00 |
| 37.18 | 211.22 | 2.00 | 0.00 | 0.37 | 0.00 | 37.24 | 210.61 | 2.00 | 0.00 | 0.37 | 0.00 |
| 37.29 | 209.67 | 2.00 | 0.00 | 0.37 | 0.00 | 37.35 | 207.84 | 2.00 | 0.00 | 0.37 | 0.00 |
| 37.41 | 200.67 | 2.00 | 0.00 | 0.37 | 0.00 | 37.52 | 172.67 | 2.00 | 0.00 | 0.36 | 0.00 |
| 37.57 | 171.87 | 2.00 | 0.00 | 0.36 | 0.00 | 37.63 | 172.39 | 2.00 | 0.00 | 0.36 | 0.00 |
| 37.69 | 171.90 | 2.00 | 0.00 | 0.36 | 0.00 | 37.74 | 168.75 | 2.00 | 0.00 | 0.36 | 0.00 |
| 37.82 | 161.57 | 2.00 | 0.00 | 0.36 | 0.00 | 37.88 | 158.25 | 2.00 | 0.00 | 0.36 | 0.00 |
| 37.93 | 150.16 | 2.00 | 0.00 | 0.36 | 0.00 | 38.04 | 133.70 | 2.00 | 0.00 | 0.36 | 0.00 |
| 38.10 | 127.11 | 2.00 | 0.00 | 0.35 | 0.00 | 38.16 | 120.72 | 2.00 | 0.00 | 0.35 | 0.00 |
| 38.21 | 48.11 | 2.00 | 0.00 | 0.35 | 0.00 | 38.27 | 41.71 | 2.00 | 0.00 | 0.35 | 0.00 |
| 38.32 | 36.51 | 2.00 | 0.00 | 0.35 | 0.00 | 38.44 | 28.46 | 2.00 | 0.00 | 0.35 | 0.00 |
| 38.49 | 25.62 | 2.00 | 0.00 | 0.35 | 0.00 | 38.54 | 23.32 | 2.00 | 0.00 | 0.35 | 0.00 |
| 38.60 | 21.34 | 2.00 | 0.00 | 0.35 | 0.00 | 38.65 | 19.39 | 2.00 | 0.00 | 0.34 | 0.00 |
| 38.76 | 16.16 | 2.00 | 0.00 | 0.34 | 0.00 | 38.82 | 15.17 | 2.00 | 0.00 | 0.34 | 0.00 |
| 38.88 | 14.19 | 2.00 | 0.00 | 0.34 | 0.00 | 38.93 | 13.58 | 2.00 | 0.00 | 0.34 | 0.00 |
| 38.99 | 14.11 | 2.00 | 0.00 | 0.34 | 0.00 | 39.05 | 13.62 | 2.00 | 0.00 | 0.34 | 0.00 |
| 39.16 | 14.01 | 2.00 | 0.00 | 0.34 | 0.00 | 39.22 | 14.06 | 2.00 | 0.00 | 0.34 | 0.00 |
| 39.27 | 14.11 | 2.00 | 0.00 | 0.33 | 0.00 | 39.33 | 14.28 | 2.00 | 0.00 | 0.33 | 0.00 |
| 39.38 | 14.45 | 2.00 | 0.00 | 0.33 | 0.00 | 39.44 | 14.86 | 2.00 | 0.00 | 0.33 | 0.00 |
| 39.55 | 16.94 | 2.00 | 0.00 | 0.33 | 0.00 | 39.61 | 17.96 | 2.00 | 0.00 | 0.33 | 0.00 |
| 39.65 | 17.40 | 2.00 | 0.00 | 0.33 | 0.00 | 39.73 | 19.83 | 2.00 | 0.00 | 0.33 | 0.00 |
| 39.78 | 18.90 | 2.00 | 0.00 | 0.33 | 0.00 | 39.84 | 17.42 | 2.00 | 0.00 | 0.32 | 0.00 |
| 39.95 | 14.57 | 2.00 | 0.00 | 0.32 | 0.00 | 40.01 | 13.55 | 2.00 | 0.00 | 0.32 | 0.00 |
| 40.07 | 12.89 | 2.00 | 0.00 | 0.32 | 0.00 | 40.12 | 12.41 | 2.00 | 0.00 | 0.32 | 0.00 |
| 40.18 | 12.04 | 2.00 | 0.00 | 0.32 | 0.00 | 40.24 | 11.86 | 2.00 | 0.00 | 0.32 | 0.00 |
| 40.29 | 11.91 | 2.00 | 0.00 | 0.32 | 0.00 | 40.40 | 13.12 | 2.00 | 0.00 | 0.32 | 0.00 |
| 40.46 | 14.41 | 2.00 | 0.00 | 0.31 | 0.00 | 40.52 | 15.70 | 2.00 | 0.00 | 0.31 | 0.00 |
| 40.57 | 16.35 | 2.00 | 0.00 | 0.31 | 0.00 | 40.63 | 16.58 | 2.00 | 0.00 | 0.31 | 0.00 |
| 40.69 | 16.38 | 2.00 | 0.00 | 0.31 | 0.00 | 40.77 | 16.37 | 2.00 | 0.00 | 0.31 | 0.00 |
| 40.84 | 16.35 | 2.00 | 0.00 | 0.31 | 0.00 | 40.90 | 17.35 | 2.00 | 0.00 | 0.31 | 0.00 |
| 40.95 | 18.54 | 2.00 | 0.00 | 0.31 | 0.00 | 41.01 | 19.79 | 2.00 | 0.00 | 0.30 | 0.00 |
| 41.12 | 21.89 | 2.00 | 0.00 | 0.30 | 0.00 | 41.18 | 23.42 | 2.00 | 0.00 | 0.30 | 0.00 |
| 41.23 | 26.01 | 2.00 | 0.00 | 0.30 | 0.00 | 41.29 | 29.67 | 2.00 | 0.00 | 0.30 | 0.00 |
| 41.34 | 34.54 | 2.00 | 0.00 | 0.30 | 0.00 | 41.45 | 45.31 | 2.00 | 0.00 | 0.30 | 0.00 |
| 41.51 | 114.86 | 2.00 | 0.00 | 0.30 | 0.00 | 41.56 | 118.51 | 2.00 | 0.00 | 0.30 | 0.00 |
| 41.62 | 120.81 | 2.00 | 0.00 | 0.29 | 0.00 | 41.68 | 122.43 | 0.25 | 0.76 | 0.29 | 0.01 |
| 41.79 | 120.84 | 2.00 | 0.00 | 0.29 | 0.00 | 41.84 | 119.59 | 2.00 | 0.00 | 0.29 | 0.00 |
| 41.90 | 118.34 | 2.00 | 0.00 | 0.29 | 0.00 | 41.96 | 51.81 | 2.00 | 0.00 | 0.29 | 0.00 |
| 42.01 | 52.56 | 2.00 | 0.00 | 0.29 | 0.00 | 42.07 | 124.53 | 2.00 | 0.00 | 0.29 | 0.00 |
| 42.18 | 150.54 | 2.00 | 0.00 | 0.29 | 0.00 | 42.28 | 172.33 | 2.00 | 0.00 | 0.28 | 0.00 |
| 42.34 | 180.04 | 2.00 | 0.00 | 0.28 | 0.00 | 42.39 | 185.53 | 2.00 | 0.00 | 0.28 | 0.00 |
| 42.44 | 189.82 | 2.00 | 0.00 | 0.28 | 0.00 | 42.50 | 193.67 | 2.00 | 0.00 | 0.28 | 0.00 |
| 42.55 | 197.57 | 2.00 | 0.00 | 0.28 | 0.00 | 42.61 | 200.95 | 2.00 | 0.00 | 0.28 | 0.00 |
| 42.67 | 205.77 | 2.00 | 0.00 | 0.28 | 0.00 | 42.72 | 210.94 | 2.00 | 0.00 | 0.28 | 0.00 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 42.83 | 221.40 | 2.00 | 0.00 | 0.27 | 0.00 | 42.89 | 226.13 | 2.00 | 0.00 | 0.27 | 0.00 |
| 42.94 | 231.39 | 2.00 | 0.00 | 0.27 | 0.00 | 43.00 | 237.46 | 2.00 | 0.00 | 0.27 | 0.00 |
| 43.05 | 244.04 | 2.00 | 0.00 | 0.27 | 0.00 | 43.11 | 250.13 | 2.00 | 0.00 | 0.27 | 0.00 |
| 43.22 | 254.00 | 2.00 | 0.00 | 0.27 | 0.00 | 43.27 | 254.00 | 2.00 | 0.00 | 0.27 | 0.00 |
| 43.32 | 254.00 | 2.00 | 0.00 | 0.27 | 0.00 | 43.39 | 254.00 | 2.00 | 0.00 | 0.26 | 0.00 |
| 43.45 | 253.80 | 2.00 | 0.00 | 0.26 | 0.00 | 43.51 | 254.00 | 2.00 | 0.00 | 0.26 | 0.00 |
| 43.60 | 254.00 | 2.00 | 0.00 | 0.26 | 0.00 | 43.68 | 254.00 | 2.00 | 0.00 | 0.26 | 0.00 |
| 43.75 | 254.00 | 2.00 | 0.00 | 0.26 | 0.00 | 43.78 | 254.00 | 2.00 | 0.00 | 0.26 | 0.00 |
| 43.86 | 254.00 | 2.00 | 0.00 | 0.26 | 0.00 | 43.92 | 254.00 | 2.00 | 0.00 | 0.26 | 0.00 |
| 43.97 | 252.91 | 2.00 | 0.00 | 0.25 | 0.00 | 44.08 | 236.53 | 2.00 | 0.00 | 0.25 | 0.00 |
| 44.14 | 229.37 | 2.00 | 0.00 | 0.25 | 0.00 | 44.19 | 219.24 | 2.00 | 0.00 | 0.25 | 0.00 |
| 44.25 | 208.23 | 2.00 | 0.00 | 0.25 | 0.00 | 44.30 | 197.57 | 2.00 | 0.00 | 0.25 | 0.00 |
| 44.36 | 193.93 | 2.00 | 0.00 | 0.25 | 0.00 | 44.47 | 192.36 | 2.00 | 0.00 | 0.25 | 0.00 |
| 44.53 | 189.32 | 1.73 | 0.03 | 0.25 | 0.00 | 44.58 | 186.38 | 1.52 | 0.06 | 0.24 | 0.00 |
| 44.64 | 182.78 | 1.29 | 0.10 | 0.24 | 0.00 | 44.70 | 181.45 | 1.22 | 0.12 | 0.24 | 0.00 |
| 44.80 | 196.68 | 2.00 | 0.00 | 0.24 | 0.00 | 44.86 | 205.63 | 2.00 | 0.00 | 0.24 | 0.00 |
| 44.91 | 211.71 | 2.00 | 0.00 | 0.24 | 0.00 | 44.97 | 215.50 | 2.00 | 0.00 | 0.24 | 0.00 |
| 45.02 | 218.56 | 2.00 | 0.00 | 0.24 | 0.00 | 45.09 | 226.74 | 2.00 | 0.00 | 0.24 | 0.00 |
| 45.20 | 249.89 | 2.00 | 0.00 | 0.23 | 0.00 | 45.26 | 250.01 | 2.00 | 0.00 | 0.23 | 0.00 |
| 45.32 | 249.86 | 2.00 | 0.00 | 0.23 | 0.00 | 45.37 | 249.50 | 2.00 | 0.00 | 0.23 | 0.00 |
| 45.43 | 251.25 | 2.00 | 0.00 | 0.23 | 0.00 | 45.49 | 253.27 | 2.00 | 0.00 | 0.23 | 0.00 |
| 45.54 | 254.00 | 2.00 | 0.00 | 0.23 | 0.00 | 45.64 | 251.87 | 2.00 | 0.00 | 0.23 | 0.00 |
| 45.70 | 250.48 | 2.00 | 0.00 | 0.23 | 0.00 | 45.75 | 254.00 | 2.00 | 0.00 | 0.22 | 0.00 |
| 45.81 | 254.00 | 2.00 | 0.00 | 0.22 | 0.00 | 45.92 | 254.00 | 2.00 | 0.00 | 0.22 | 0.00 |
| 45.97 | 254.00 | 2.00 | 0.00 | 0.22 | 0.00 | 46.02 | 254.00 | 2.00 | 0.00 | 0.22 | 0.00 |
| 46.07 | 254.00 | 2.00 | 0.00 | 0.22 | 0.00 | 46.16 | 254.00 | 2.00 | 0.00 | 0.22 | 0.00 |
| 46.20 | 254.00 | 2.00 | 0.00 | 0.22 | 0.00 | 46.27 | 254.00 | 2.00 | 0.00 | 0.22 | 0.00 |
| 46.34 | 254.00 | 2.00 | 0.00 | 0.21 | 0.00 | 46.41 | 254.00 | 2.00 | 0.00 | 0.21 | 0.00 |
| 46.46 | 254.00 | 2.00 | 0.00 | 0.21 | 0.00 | 46.53 | 254.00 | 2.00 | 0.00 | 0.21 | 0.00 |
| 46.59 | 226.42 | 2.00 | 0.00 | 0.21 | 0.00 | 46.67 | 212.85 | 2.00 | 0.00 | 0.21 | 0.00 |
| 46.73 | 208.38 | 2.00 | 0.00 | 0.21 | 0.00 | 46.81 | 203.10 | 2.00 | 0.00 | 0.21 | 0.00 |
| 46.86 | 199.84 | 2.00 | 0.00 | 0.21 | 0.00 | 46.92 | 200.29 | 2.00 | 0.00 | 0.20 | 0.00 |
| 46.99 | 195.74 | 2.00 | 0.00 | 0.20 | 0.00 | 47.06 | 203.56 | 2.00 | 0.00 | 0.20 | 0.00 |
| 47.15 | 216.52 | 2.00 | 0.00 | 0.20 | 0.00 | 47.19 | 221.91 | 2.00 | 0.00 | 0.20 | 0.00 |
| 47.26 | 233.71 | 2.00 | 0.00 | 0.20 | 0.00 | 47.34 | 247.72 | 2.00 | 0.00 | 0.20 | 0.00 |
| 47.38 | 254.00 | 2.00 | 0.00 | 0.20 | 0.00 | 47.47 | 254.00 | 2.00 | 0.00 | 0.20 | 0.00 |
| 47.53 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 | 47.59 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 |
| 47.64 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 | 47.71 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 |
| 47.77 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 | 47.84 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 |
| 47.90 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 | 47.99 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 |
| 48.04 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 | 48.10 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 |
| 48.19 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 | 48.25 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 |
| 48.31 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 | 48.40 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 |
| 48.44 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 | 48.50 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 |
| 48.56 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 | 48.63 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 |
| 48.70 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 | 48.77 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 |
| 48.84 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 | 48.89 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 |
| 48.97 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 | 49.03 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

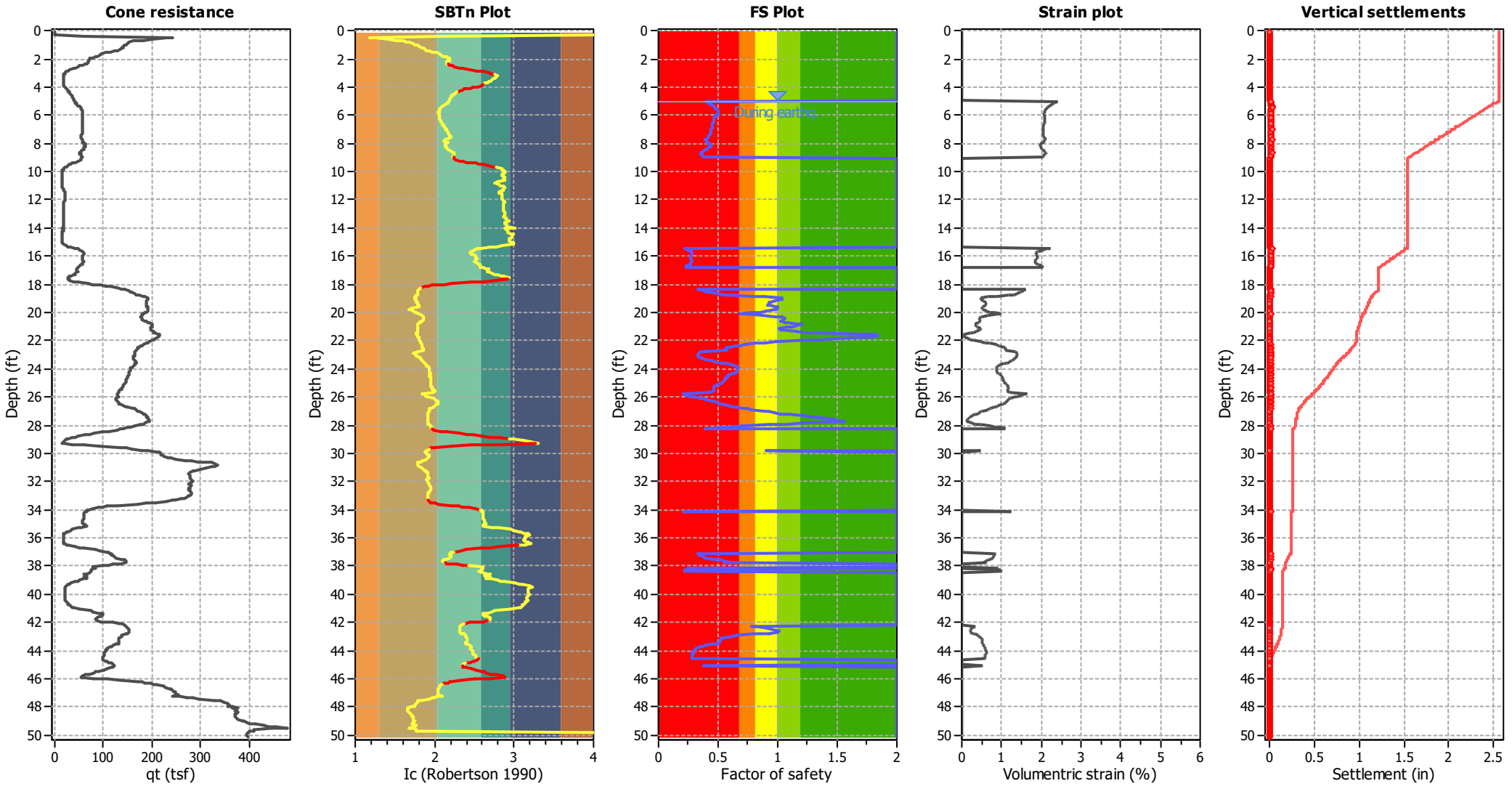
| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 49.09 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 | 49.16 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 |
| 49.22 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 | 49.28 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 |
| 49.35 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 | 49.42 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 |
| 49.48 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 | 49.54 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 |
| 49.62 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 | 49.68 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 |
| 49.75 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 | 49.81 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 |
| 49.87 | 316.84 | 2.00 | 0.00 | 0.15 | 0.00 | 49.94 | 297.79 | 2.00 | 0.00 | 0.15 | 0.00 |
| 50.01 | 283.11 | 2.00 | 0.00 | 0.15 | 0.00 | 50.09 | 279.08 | 2.00 | 0.00 | 0.15 | 0.00 |
| 50.15 | 281.65 | 2.00 | 0.00 | 0.15 | 0.00 | 50.21 | 271.70 | 2.00 | 0.00 | 0.15 | 0.00 |

**Total estimated settlement: 2.89**

**Abbreviations**

| | |
|---|---|
| $Q_{tn,cs}$: | Equivalent dean sand normalized cone resistance |
| FS: | Factor of safety against liquefaction |
| $e_v$ (%): | Post-liquefaction volumentric strain |
| DF: | $e_v$ depth weighting factor |
| Settlement: | Calculated settlement |

## Estimation of post-earthquake settlements




**Abbreviations**

| | |
|---|---|
| $q_t$: | Total cone resistance (cone resistance $q_c$ corrected for pore water effects) |
| $I_c$: | Soil Behaviour Type Index |
| FS: | Calculated Factor of Safety against liquefaction |
| Volumentric strain: | Post-liquefaction volumentric strain |

**:: Post-earthquake settlement due to soil liquefaction ::**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.01 | 121.02 | 0.41 | 2.41 | 0.92 | 0.02 | 5.06 | 121.80 | 0.41 | 2.39 | 0.91 | 0.02 |
| 5.14 | 123.43 | 0.42 | 2.35 | 0.91 | 0.02 | 5.20 | 125.04 | 0.43 | 2.32 | 0.91 | 0.02 |
| 5.25 | 127.19 | 0.44 | 2.27 | 0.91 | 0.02 | 5.35 | 130.36 | 0.46 | 2.21 | 0.91 | 0.02 |
| 5.39 | 131.36 | 0.46 | 2.19 | 0.91 | 0.01 | 5.50 | 133.06 | 0.48 | 2.15 | 0.91 | 0.03 |
| 5.54 | 133.95 | 0.48 | 2.13 | 0.91 | 0.01 | 5.59 | 134.86 | 0.49 | 2.12 | 0.91 | 0.01 |
| 5.68 | 135.99 | 0.49 | 2.09 | 0.90 | 0.02 | 5.73 | 136.26 | 0.49 | 2.09 | 0.90 | 0.01 |
| 5.78 | 136.70 | 0.50 | 2.08 | 0.90 | 0.01 | 5.88 | 136.97 | 0.50 | 2.07 | 0.90 | 0.02 |
| 5.93 | 137.04 | 0.49 | 2.07 | 0.90 | 0.01 | 5.97 | 136.82 | 0.49 | 2.07 | 0.90 | 0.01 |
| 6.07 | 136.26 | 0.48 | 2.07 | 0.90 | 0.02 | 6.12 | 135.97 | 0.48 | 2.08 | 0.90 | 0.01 |
| 6.21 | 135.40 | 0.47 | 2.08 | 0.89 | 0.02 | 6.26 | 135.24 | 0.47 | 2.08 | 0.89 | 0.01 |
| 6.31 | 135.17 | 0.46 | 2.08 | 0.89 | 0.01 | 6.41 | 135.22 | 0.46 | 2.08 | 0.89 | 0.02 |
| 6.45 | 135.15 | 0.46 | 2.08 | 0.89 | 0.01 | 6.50 | 135.14 | 0.46 | 2.08 | 0.89 | 0.01 |
| 6.60 | 135.25 | 0.46 | 2.07 | 0.89 | 0.02 | 6.65 | 135.41 | 0.46 | 2.07 | 0.89 | 0.01 |
| 6.70 | 135.49 | 0.45 | 2.06 | 0.89 | 0.01 | 6.79 | 135.48 | 0.45 | 2.06 | 0.88 | 0.02 |
| 6.84 | 135.40 | 0.45 | 2.06 | 0.88 | 0.01 | 6.89 | 135.07 | 0.45 | 2.06 | 0.88 | 0.01 |
| 6.99 | 134.71 | 0.44 | 2.06 | 0.88 | 0.02 | 7.04 | 134.81 | 0.44 | 2.06 | 0.88 | 0.01 |
| 7.09 | 134.88 | 0.44 | 2.06 | 0.88 | 0.01 | 7.18 | 135.05 | 0.44 | 2.05 | 0.88 | 0.02 |
| 7.23 | 135.09 | 0.44 | 2.05 | 0.88 | 0.01 | 7.33 | 134.97 | 0.43 | 2.05 | 0.88 | 0.02 |
| 7.38 | 134.68 | 0.43 | 2.05 | 0.88 | 0.01 | 7.42 | 134.36 | 0.43 | 2.05 | 0.87 | 0.01 |
| 7.52 | 133.64 | 0.42 | 2.06 | 0.87 | 0.02 | 7.57 | 133.42 | 0.42 | 2.06 | 0.87 | 0.01 |
| 7.62 | 132.64 | 0.41 | 2.07 | 0.87 | 0.01 | 7.71 | 130.42 | 0.39 | 2.11 | 0.87 | 0.02 |
| 7.76 | 131.23 | 0.40 | 2.09 | 0.87 | 0.01 | 7.81 | 132.19 | 0.40 | 2.07 | 0.87 | 0.01 |
| 7.91 | 134.38 | 0.42 | 2.03 | 0.87 | 0.02 | 7.95 | 132.41 | 0.40 | 2.06 | 0.87 | 0.01 |
| 8.03 | 136.59 | 0.43 | 1.99 | 0.86 | 0.02 | 8.08 | 137.43 | 0.44 | 1.98 | 0.86 | 0.01 |
| 8.18 | 138.00 | 0.44 | 1.96 | 0.86 | 0.02 | 8.23 | 137.72 | 0.44 | 1.97 | 0.86 | 0.01 |
| 8.27 | 136.85 | 0.43 | 1.98 | 0.86 | 0.01 | 8.37 | 134.75 | 0.41 | 2.01 | 0.86 | 0.02 |
| 8.42 | 133.71 | 0.40 | 2.02 | 0.86 | 0.01 | 8.47 | 132.75 | 0.39 | 2.04 | 0.86 | 0.01 |
| 8.56 | 130.46 | 0.38 | 2.07 | 0.85 | 0.02 | 8.61 | 128.89 | 0.37 | 2.10 | 0.85 | 0.01 |
| 8.71 | 126.72 | 0.35 | 2.13 | 0.85 | 0.02 | 8.75 | 126.94 | 0.35 | 2.13 | 0.85 | 0.01 |
| 8.80 | 128.26 | 0.36 | 2.10 | 0.85 | 0.01 | 8.89 | 130.36 | 0.37 | 2.06 | 0.85 | 0.02 |
| 8.94 | 131.09 | 0.38 | 2.05 | 0.85 | 0.01 | 8.99 | 131.28 | 0.38 | 2.04 | 0.85 | 0.01 |
| 9.09 | 129.42 | 2.00 | 0.00 | 0.85 | 0.00 | 9.14 | 127.73 | 2.00 | 0.00 | 0.85 | 0.00 |
| 9.24 | 124.27 | 2.00 | 0.00 | 0.84 | 0.00 | 9.28 | 121.82 | 2.00 | 0.00 | 0.84 | 0.00 |
| 9.33 | 118.03 | 2.00 | 0.00 | 0.84 | 0.00 | 9.43 | 109.59 | 2.00 | 0.00 | 0.84 | 0.00 |
| 9.48 | 105.77 | 2.00 | 0.00 | 0.84 | 0.00 | 9.53 | 39.45 | 2.00 | 0.00 | 0.84 | 0.00 |
| 9.62 | 33.10 | 2.00 | 0.00 | 0.84 | 0.00 | 9.67 | 29.90 | 2.00 | 0.00 | 0.84 | 0.00 |
| 9.72 | 27.29 | 2.00 | 0.00 | 0.84 | 0.00 | 9.81 | 23.53 | 2.00 | 0.00 | 0.83 | 0.00 |
| 9.86 | 22.51 | 2.00 | 0.00 | 0.83 | 0.00 | 9.91 | 21.36 | 2.00 | 0.00 | 0.83 | 0.00 |
| 10.01 | 19.92 | 2.00 | 0.00 | 0.83 | 0.00 | 10.06 | 19.87 | 2.00 | 0.00 | 0.83 | 0.00 |
| 10.11 | 19.93 | 2.00 | 0.00 | 0.83 | 0.00 | 10.20 | 20.09 | 2.00 | 0.00 | 0.83 | 0.00 |
| 10.25 | 19.92 | 2.00 | 0.00 | 0.83 | 0.00 | 10.30 | 19.74 | 2.00 | 0.00 | 0.83 | 0.00 |
| 10.40 | 19.65 | 2.00 | 0.00 | 0.82 | 0.00 | 10.45 | 19.60 | 2.00 | 0.00 | 0.82 | 0.00 |
| 10.54 | 19.63 | 2.00 | 0.00 | 0.82 | 0.00 | 10.59 | 19.47 | 2.00 | 0.00 | 0.82 | 0.00 |
| 10.64 | 19.31 | 2.00 | 0.00 | 0.82 | 0.00 | 10.73 | 19.24 | 2.00 | 0.00 | 0.82 | 0.00 |
| 10.78 | 19.21 | 2.00 | 0.00 | 0.82 | 0.00 | 10.83 | 19.39 | 2.00 | 0.00 | 0.82 | 0.00 |
| 10.93 | 19.65 | 2.00 | 0.00 | 0.81 | 0.00 | 10.98 | 19.60 | 2.00 | 0.00 | 0.81 | 0.00 |
| 11.02 | 19.19 | 2.00 | 0.00 | 0.81 | 0.00 | 11.11 | 19.69 | 2.00 | 0.00 | 0.81 | 0.00 |
| 11.16 | 19.99 | 2.00 | 0.00 | 0.81 | 0.00 | 11.26 | 21.17 | 2.00 | 0.00 | 0.81 | 0.00 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.31 | 21.92 | 2.00 | 0.00 | 0.81 | 0.00 | 11.35 | 22.90 | 2.00 | 0.00 | 0.81 | 0.00 |
| 11.45 | 24.51 | 2.00 | 0.00 | 0.81 | 0.00 | 11.50 | 24.79 | 2.00 | 0.00 | 0.81 | 0.00 |
| 11.59 | 24.56 | 2.00 | 0.00 | 0.80 | 0.00 | 11.64 | 24.51 | 2.00 | 0.00 | 0.80 | 0.00 |
| 11.69 | 24.46 | 2.00 | 0.00 | 0.80 | 0.00 | 11.78 | 24.70 | 2.00 | 0.00 | 0.80 | 0.00 |
| 11.83 | 24.86 | 2.00 | 0.00 | 0.80 | 0.00 | 11.88 | 25.04 | 2.00 | 0.00 | 0.80 | 0.00 |
| 11.98 | 24.38 | 2.00 | 0.00 | 0.80 | 0.00 | 12.03 | 23.88 | 2.00 | 0.00 | 0.80 | 0.00 |
| 12.08 | 23.28 | 2.00 | 0.00 | 0.80 | 0.00 | 12.18 | 22.63 | 2.00 | 0.00 | 0.79 | 0.00 |
| 12.23 | 22.58 | 2.00 | 0.00 | 0.79 | 0.00 | 12.28 | 22.53 | 2.00 | 0.00 | 0.79 | 0.00 |
| 12.37 | 22.01 | 2.00 | 0.00 | 0.79 | 0.00 | 12.42 | 21.96 | 2.00 | 0.00 | 0.79 | 0.00 |
| 12.51 | 21.87 | 2.00 | 0.00 | 0.79 | 0.00 | 12.56 | 21.83 | 2.00 | 0.00 | 0.79 | 0.00 |
| 12.61 | 21.79 | 2.00 | 0.00 | 0.79 | 0.00 | 12.71 | 22.02 | 2.00 | 0.00 | 0.78 | 0.00 |
| 12.75 | 21.98 | 2.00 | 0.00 | 0.78 | 0.00 | 12.80 | 21.84 | 2.00 | 0.00 | 0.78 | 0.00 |
| 12.89 | 21.21 | 2.00 | 0.00 | 0.78 | 0.00 | 12.94 | 20.74 | 2.00 | 0.00 | 0.78 | 0.00 |
| 12.99 | 20.70 | 2.00 | 0.00 | 0.78 | 0.00 | 13.09 | 20.62 | 2.00 | 0.00 | 0.78 | 0.00 |
| 13.14 | 20.79 | 2.00 | 0.00 | 0.78 | 0.00 | 13.23 | 20.71 | 2.00 | 0.00 | 0.78 | 0.00 |
| 13.28 | 20.14 | 2.00 | 0.00 | 0.77 | 0.00 | 13.33 | 19.57 | 2.00 | 0.00 | 0.77 | 0.00 |
| 13.43 | 19.07 | 2.00 | 0.00 | 0.77 | 0.00 | 13.47 | 18.61 | 2.00 | 0.00 | 0.77 | 0.00 |
| 13.52 | 18.58 | 2.00 | 0.00 | 0.77 | 0.00 | 13.62 | 19.04 | 2.00 | 0.00 | 0.77 | 0.00 |
| 13.67 | 19.00 | 2.00 | 0.00 | 0.77 | 0.00 | 13.71 | 18.97 | 2.00 | 0.00 | 0.77 | 0.00 |
| 13.81 | 19.21 | 2.00 | 0.00 | 0.77 | 0.00 | 13.86 | 19.17 | 2.00 | 0.00 | 0.77 | 0.00 |
| 13.96 | 19.10 | 2.00 | 0.00 | 0.76 | 0.00 | 13.98 | 16.59 | 2.00 | 0.00 | 0.76 | 0.00 |
| 14.07 | 20.27 | 2.00 | 0.00 | 0.76 | 0.00 | 14.12 | 19.72 | 2.00 | 0.00 | 0.76 | 0.00 |
| 14.21 | 18.20 | 2.00 | 0.00 | 0.76 | 0.00 | 14.26 | 17.76 | 2.00 | 0.00 | 0.76 | 0.00 |
| 14.31 | 17.31 | 2.00 | 0.00 | 0.76 | 0.00 | 14.40 | 16.02 | 2.00 | 0.00 | 0.76 | 0.00 |
| 14.45 | 15.37 | 2.00 | 0.00 | 0.76 | 0.00 | 14.55 | 15.32 | 2.00 | 0.00 | 0.75 | 0.00 |
| 14.60 | 15.29 | 2.00 | 0.00 | 0.75 | 0.00 | 14.64 | 15.26 | 2.00 | 0.00 | 0.75 | 0.00 |
| 14.74 | 15.83 | 2.00 | 0.00 | 0.75 | 0.00 | 14.78 | 15.89 | 2.00 | 0.00 | 0.75 | 0.00 |
| 14.83 | 15.87 | 2.00 | 0.00 | 0.75 | 0.00 | 14.93 | 16.22 | 2.00 | 0.00 | 0.75 | 0.00 |
| 14.98 | 16.39 | 2.00 | 0.00 | 0.75 | 0.00 | 15.07 | 16.84 | 2.00 | 0.00 | 0.74 | 0.00 |
| 15.12 | 17.61 | 2.00 | 0.00 | 0.74 | 0.00 | 15.17 | 19.18 | 2.00 | 0.00 | 0.74 | 0.00 |
| 15.27 | 24.98 | 2.00 | 0.00 | 0.74 | 0.00 | 15.32 | 29.29 | 2.00 | 0.00 | 0.74 | 0.00 |
| 15.37 | 34.16 | 2.00 | 0.00 | 0.74 | 0.00 | 15.46 | 106.59 | 0.22 | 2.22 | 0.74 | 0.03 |
| 15.51 | 111.38 | 0.23 | 2.12 | 0.74 | 0.01 | 15.56 | 115.21 | 0.25 | 2.04 | 0.74 | 0.01 |
| 15.65 | 120.81 | 0.27 | 1.94 | 0.73 | 0.02 | 15.70 | 123.06 | 0.28 | 1.90 | 0.73 | 0.01 |
| 15.79 | 124.97 | 0.28 | 1.86 | 0.73 | 0.02 | 15.84 | 124.74 | 0.28 | 1.86 | 0.73 | 0.01 |
| 15.89 | 123.97 | 0.28 | 1.87 | 0.73 | 0.01 | 15.98 | 122.00 | 0.27 | 1.90 | 0.73 | 0.02 |
| 16.03 | 121.95 | 0.27 | 1.90 | 0.73 | 0.01 | 16.08 | 121.94 | 0.27 | 1.90 | 0.73 | 0.01 |
| 16.18 | 121.84 | 0.27 | 1.90 | 0.73 | 0.02 | 16.23 | 122.83 | 0.27 | 1.88 | 0.72 | 0.01 |
| 16.27 | 123.62 | 0.28 | 1.86 | 0.72 | 0.01 | 16.37 | 125.16 | 0.28 | 1.83 | 0.72 | 0.02 |
| 16.42 | 124.97 | 0.28 | 1.83 | 0.72 | 0.01 | 16.51 | 122.72 | 0.27 | 1.87 | 0.72 | 0.02 |
| 16.56 | 120.94 | 0.26 | 1.89 | 0.72 | 0.01 | 16.61 | 118.76 | 0.26 | 1.93 | 0.72 | 0.01 |
| 16.70 | 113.46 | 0.24 | 2.02 | 0.72 | 0.02 | 16.75 | 111.42 | 0.23 | 2.06 | 0.72 | 0.01 |
| 16.80 | 46.15 | 2.00 | 0.00 | 0.72 | 0.00 | 16.90 | 44.23 | 2.00 | 0.00 | 0.71 | 0.00 |
| 16.95 | 43.33 | 2.00 | 0.00 | 0.71 | 0.00 | 17.00 | 44.67 | 2.00 | 0.00 | 0.71 | 0.00 |
| 17.09 | 45.11 | 2.00 | 0.00 | 0.71 | 0.00 | 17.13 | 44.39 | 2.00 | 0.00 | 0.71 | 0.00 |
| 17.23 | 41.37 | 2.00 | 0.00 | 0.71 | 0.00 | 17.28 | 39.17 | 2.00 | 0.00 | 0.71 | 0.00 |
| 17.33 | 36.70 | 2.00 | 0.00 | 0.71 | 0.00 | 17.42 | 31.66 | 2.00 | 0.00 | 0.70 | 0.00 |
| 17.47 | 29.30 | 2.00 | 0.00 | 0.70 | 0.00 | 17.57 | 25.68 | 2.00 | 0.00 | 0.70 | 0.00 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17.61 | 29.40 | 2.00 | 0.00 | 0.70 | 0.00 | 17.66 | 24.50 | 2.00 | 0.00 | 0.70 | 0.00 |
| 17.76 | 29.50 | 2.00 | 0.00 | 0.70 | 0.00 | 17.80 | 35.54 | 2.00 | 0.00 | 0.70 | 0.00 |
| 17.85 | 105.24 | 2.00 | 0.00 | 0.70 | 0.00 | 17.94 | 121.62 | 2.00 | 0.00 | 0.70 | 0.00 |
| 17.99 | 127.08 | 2.00 | 0.00 | 0.70 | 0.00 | 18.09 | 129.29 | 2.00 | 0.00 | 0.69 | 0.00 |
| 18.14 | 126.42 | 2.00 | 0.00 | 0.69 | 0.00 | 18.19 | 123.67 | 2.00 | 0.00 | 0.69 | 0.00 |
| 18.29 | 126.22 | 2.00 | 0.00 | 0.69 | 0.00 | 18.34 | 129.81 | 2.00 | 0.00 | 0.69 | 0.00 |
| 18.39 | 134.37 | 0.32 | 1.62 | 0.69 | 0.01 | 18.48 | 141.61 | 0.38 | 1.52 | 0.69 | 0.02 |
| 18.53 | 144.75 | 0.40 | 1.48 | 0.69 | 0.01 | 18.58 | 147.42 | 0.43 | 1.45 | 0.69 | 0.01 |
| 18.67 | 153.22 | 0.50 | 1.38 | 0.68 | 0.02 | 18.72 | 156.37 | 0.54 | 1.33 | 0.68 | 0.01 |
| 18.77 | 160.18 | 0.61 | 1.17 | 0.68 | 0.01 | 18.86 | 167.51 | 0.78 | 0.86 | 0.68 | 0.01 |
| 18.91 | 171.16 | 0.89 | 0.66 | 0.68 | 0.00 | 19.01 | 175.11 | 1.03 | 0.48 | 0.68 | 0.01 |
| 19.06 | 175.30 | 1.04 | 0.48 | 0.68 | 0.00 | 19.10 | 175.06 | 1.03 | 0.49 | 0.68 | 0.00 |
| 19.20 | 173.80 | 0.98 | 0.54 | 0.67 | 0.01 | 19.24 | 172.93 | 0.94 | 0.58 | 0.67 | 0.00 |
| 19.29 | 172.35 | 0.92 | 0.61 | 0.67 | 0.00 | 19.39 | 172.60 | 0.93 | 0.59 | 0.67 | 0.01 |
| 19.44 | 172.03 | 0.91 | 0.62 | 0.67 | 0.00 | 19.53 | 172.99 | 0.94 | 0.58 | 0.67 | 0.01 |
| 19.58 | 173.91 | 0.98 | 0.54 | 0.67 | 0.00 | 19.63 | 174.59 | 1.00 | 0.51 | 0.67 | 0.00 |
| 19.73 | 174.44 | 0.99 | 0.51 | 0.67 | 0.01 | 19.78 | 174.26 | 0.99 | 0.52 | 0.66 | 0.00 |
| 19.83 | 174.00 | 0.98 | 0.53 | 0.66 | 0.00 | 19.92 | 172.02 | 0.90 | 0.62 | 0.66 | 0.01 |
| 19.97 | 170.48 | 0.85 | 0.69 | 0.66 | 0.00 | 20.02 | 167.71 | 0.77 | 0.84 | 0.66 | 0.00 |
| 20.11 | 164.24 | 0.68 | 0.98 | 0.66 | 0.01 | 20.15 | 166.24 | 0.73 | 0.92 | 0.66 | 0.01 |
| 20.25 | 171.42 | 0.88 | 0.65 | 0.66 | 0.01 | 20.30 | 174.06 | 0.97 | 0.53 | 0.66 | 0.00 |
| 20.35 | 175.65 | 1.04 | 0.46 | 0.66 | 0.00 | 20.44 | 176.25 | 1.06 | 0.44 | 0.65 | 0.01 |
| 20.49 | 175.95 | 1.05 | 0.45 | 0.65 | 0.00 | 20.59 | 175.46 | 1.03 | 0.47 | 0.65 | 0.01 |
| 20.64 | 175.73 | 1.04 | 0.46 | 0.65 | 0.00 | 20.69 | 176.33 | 1.06 | 0.43 | 0.65 | 0.00 |
| 20.74 | 176.86 | 1.09 | 0.41 | 0.65 | 0.00 | 20.83 | 178.76 | 1.17 | 0.34 | 0.65 | 0.00 |
| 20.88 | 179.39 | 1.21 | 0.32 | 0.65 | 0.00 | 20.98 | 178.45 | 1.16 | 0.35 | 0.64 | 0.00 |
| 21.02 | 177.76 | 1.12 | 0.38 | 0.64 | 0.00 | 21.07 | 176.76 | 1.08 | 0.42 | 0.64 | 0.00 |
| 21.17 | 175.38 | 1.02 | 0.47 | 0.64 | 0.01 | 21.22 | 175.62 | 1.03 | 0.46 | 0.64 | 0.00 |
| 21.26 | 175.87 | 1.04 | 0.45 | 0.64 | 0.00 | 21.36 | 178.45 | 1.15 | 0.35 | 0.64 | 0.00 |
| 21.41 | 180.17 | 1.24 | 0.29 | 0.64 | 0.00 | 21.46 | 182.34 | 1.37 | 0.22 | 0.64 | 0.00 |
| 21.55 | 187.27 | 1.72 | 0.08 | 0.63 | 0.00 | 21.60 | 188.61 | 1.83 | 0.05 | 0.63 | 0.00 |
| 21.70 | 188.79 | 1.84 | 0.04 | 0.63 | 0.00 | 21.75 | 188.23 | 1.79 | 0.06 | 0.63 | 0.00 |
| 21.79 | 187.37 | 1.72 | 0.08 | 0.63 | 0.00 | 21.89 | 184.06 | 1.47 | 0.17 | 0.63 | 0.00 |
| 21.94 | 182.22 | 1.35 | 0.23 | 0.63 | 0.00 | 21.99 | 179.85 | 1.22 | 0.30 | 0.63 | 0.00 |
| 22.08 | 174.72 | 0.98 | 0.49 | 0.63 | 0.01 | 22.13 | 172.13 | 0.89 | 0.60 | 0.62 | 0.00 |
| 22.18 | 169.88 | 0.82 | 0.71 | 0.62 | 0.00 | 22.28 | 166.17 | 0.72 | 0.87 | 0.62 | 0.01 |
| 22.33 | 164.72 | 0.68 | 0.91 | 0.62 | 0.01 | 22.38 | 163.28 | 0.65 | 0.96 | 0.62 | 0.01 |
| 22.47 | 160.40 | 0.59 | 1.05 | 0.62 | 0.01 | 22.52 | 159.34 | 0.57 | 1.09 | 0.62 | 0.01 |
| 22.62 | 158.94 | 0.57 | 1.10 | 0.62 | 0.01 | 22.67 | 159.16 | 0.57 | 1.09 | 0.62 | 0.01 |
| 22.71 | 159.39 | 0.57 | 1.08 | 0.62 | 0.01 | 22.81 | 140.73 | 0.36 | 1.37 | 0.61 | 0.02 |
| 22.86 | 138.88 | 0.34 | 1.39 | 0.61 | 0.01 | 22.91 | 138.30 | 0.34 | 1.39 | 0.61 | 0.01 |
| 23.01 | 137.78 | 0.33 | 1.39 | 0.61 | 0.02 | 23.05 | 137.95 | 0.33 | 1.39 | 0.61 | 0.01 |
| 23.10 | 137.16 | 0.33 | 1.40 | 0.61 | 0.01 | 23.21 | 139.16 | 0.34 | 1.37 | 0.61 | 0.02 |
| 23.25 | 140.91 | 0.36 | 1.35 | 0.61 | 0.01 | 23.30 | 143.50 | 0.38 | 1.32 | 0.61 | 0.01 |
| 23.40 | 148.45 | 0.42 | 1.27 | 0.60 | 0.01 | 23.45 | 150.59 | 0.45 | 1.24 | 0.60 | 0.01 |
| 23.50 | 152.82 | 0.47 | 1.22 | 0.60 | 0.01 | 23.59 | 157.33 | 0.54 | 1.13 | 0.60 | 0.01 |
| 23.64 | 159.55 | 0.57 | 1.05 | 0.60 | 0.01 | 23.73 | 162.30 | 0.62 | 0.95 | 0.60 | 0.01 |
| 23.78 | 163.28 | 0.64 | 0.92 | 0.60 | 0.01 | 23.83 | 164.09 | 0.66 | 0.89 | 0.60 | 0.01 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23.92 | 164.52 | 0.67 | 0.88 | 0.59 | 0.01 | 23.97 | 164.53 | 0.67 | 0.88 | 0.59 | 0.01 |
| 24.02 | 164.38 | 0.66 | 0.88 | 0.59 | 0.00 | 24.12 | 164.23 | 0.66 | 0.88 | 0.59 | 0.01 |
| 24.17 | 164.13 | 0.66 | 0.89 | 0.59 | 0.01 | 24.22 | 163.91 | 0.65 | 0.89 | 0.59 | 0.01 |
| 24.31 | 163.00 | 0.63 | 0.92 | 0.59 | 0.01 | 24.36 | 162.09 | 0.62 | 0.94 | 0.59 | 0.01 |
| 24.45 | 160.71 | 0.59 | 0.99 | 0.59 | 0.01 | 24.50 | 160.22 | 0.58 | 1.00 | 0.58 | 0.01 |
| 24.55 | 159.84 | 0.57 | 1.01 | 0.58 | 0.01 | 24.65 | 159.48 | 0.57 | 1.02 | 0.58 | 0.01 |
| 24.70 | 159.26 | 0.56 | 1.03 | 0.58 | 0.01 | 24.74 | 158.93 | 0.56 | 1.04 | 0.58 | 0.01 |
| 24.84 | 158.29 | 0.55 | 1.06 | 0.58 | 0.01 | 24.89 | 158.10 | 0.54 | 1.06 | 0.58 | 0.01 |
| 24.94 | 157.85 | 0.54 | 1.07 | 0.58 | 0.01 | 25.03 | 156.80 | 0.52 | 1.11 | 0.58 | 0.01 |
| 25.09 | 155.76 | 0.51 | 1.14 | 0.57 | 0.01 | 25.14 | 154.75 | 0.49 | 1.15 | 0.57 | 0.01 |
| 25.23 | 152.77 | 0.47 | 1.16 | 0.57 | 0.01 | 25.28 | 152.60 | 0.47 | 1.16 | 0.57 | 0.01 |
| 25.37 | 152.95 | 0.47 | 1.16 | 0.57 | 0.01 | 25.42 | 152.92 | 0.47 | 1.16 | 0.57 | 0.01 |
| 25.47 | 152.99 | 0.47 | 1.15 | 0.57 | 0.01 | 25.57 | 152.94 | 0.47 | 1.15 | 0.57 | 0.01 |
| 25.61 | 152.83 | 0.47 | 1.15 | 0.57 | 0.01 | 25.66 | 148.12 | 0.41 | 1.19 | 0.57 | 0.01 |
| 25.76 | 109.52 | 0.21 | 1.65 | 0.56 | 0.02 | 25.81 | 113.09 | 0.22 | 1.59 | 0.56 | 0.01 |
| 25.86 | 118.24 | 0.24 | 1.52 | 0.56 | 0.01 | 25.95 | 127.59 | 0.27 | 1.39 | 0.56 | 0.02 |
| 26.00 | 132.63 | 0.30 | 1.33 | 0.56 | 0.01 | 26.09 | 142.12 | 0.36 | 1.23 | 0.56 | 0.01 |
| 26.14 | 144.99 | 0.38 | 1.20 | 0.56 | 0.01 | 26.19 | 147.50 | 0.41 | 1.18 | 0.56 | 0.01 |
| 26.28 | 151.29 | 0.45 | 1.14 | 0.55 | 0.01 | 26.33 | 152.55 | 0.46 | 1.13 | 0.55 | 0.01 |
| 26.43 | 155.07 | 0.49 | 1.10 | 0.55 | 0.01 | 26.47 | 156.52 | 0.51 | 1.07 | 0.55 | 0.01 |
| 26.52 | 158.09 | 0.54 | 1.01 | 0.55 | 0.01 | 26.62 | 161.05 | 0.59 | 0.91 | 0.55 | 0.01 |
| 26.67 | 162.74 | 0.62 | 0.86 | 0.55 | 0.01 | 26.72 | 164.35 | 0.65 | 0.81 | 0.55 | 0.00 |
| 26.81 | 166.73 | 0.71 | 0.75 | 0.55 | 0.01 | 26.86 | 168.13 | 0.74 | 0.71 | 0.54 | 0.00 |
| 26.90 | 169.75 | 0.79 | 0.66 | 0.54 | 0.00 | 27.00 | 173.28 | 0.90 | 0.51 | 0.54 | 0.01 |
| 27.05 | 174.30 | 0.93 | 0.47 | 0.54 | 0.00 | 27.14 | 175.61 | 0.98 | 0.42 | 0.54 | 0.00 |
| 27.19 | 176.70 | 1.03 | 0.39 | 0.54 | 0.00 | 27.24 | 178.44 | 1.10 | 0.33 | 0.54 | 0.00 |
| 27.34 | 181.02 | 1.23 | 0.25 | 0.54 | 0.00 | 27.39 | 182.08 | 1.29 | 0.22 | 0.54 | 0.00 |
| 27.44 | 182.91 | 1.34 | 0.20 | 0.53 | 0.00 | 27.53 | 184.15 | 1.42 | 0.17 | 0.53 | 0.00 |
| 27.58 | 184.69 | 1.45 | 0.15 | 0.53 | 0.00 | 27.63 | 185.31 | 1.49 | 0.14 | 0.53 | 0.00 |
| 27.72 | 186.20 | 1.56 | 0.11 | 0.53 | 0.00 | 27.77 | 185.25 | 1.49 | 0.14 | 0.53 | 0.00 |
| 27.87 | 180.62 | 1.21 | 0.26 | 0.53 | 0.00 | 27.91 | 177.75 | 1.07 | 0.35 | 0.53 | 0.00 |
| 27.96 | 174.12 | 0.92 | 0.47 | 0.53 | 0.00 | 28.06 | 166.32 | 0.69 | 0.73 | 0.52 | 0.01 |
| 28.11 | 161.91 | 0.60 | 0.85 | 0.52 | 0.01 | 28.16 | 156.58 | 0.51 | 1.01 | 0.52 | 0.01 |
| 28.25 | 146.51 | 0.39 | 1.11 | 0.52 | 0.01 | 28.30 | 142.72 | 2.00 | 0.00 | 0.52 | 0.00 |
| 28.35 | 140.23 | 2.00 | 0.00 | 0.52 | 0.00 | 28.44 | 136.10 | 2.00 | 0.00 | 0.52 | 0.00 |
| 28.49 | 132.20 | 2.00 | 0.00 | 0.52 | 0.00 | 28.59 | 120.89 | 2.00 | 0.00 | 0.52 | 0.00 |
| 28.64 | 114.76 | 2.00 | 0.00 | 0.51 | 0.00 | 28.68 | 108.46 | 2.00 | 0.00 | 0.51 | 0.00 |
| 28.78 | 96.80 | 2.00 | 0.00 | 0.51 | 0.00 | 28.83 | 30.84 | 2.00 | 0.00 | 0.51 | 0.00 |
| 28.88 | 26.19 | 2.00 | 0.00 | 0.51 | 0.00 | 28.98 | 19.48 | 2.00 | 0.00 | 0.51 | 0.00 |
| 29.03 | 17.32 | 2.00 | 0.00 | 0.51 | 0.00 | 29.08 | 14.17 | 2.00 | 0.00 | 0.51 | 0.00 |
| 29.16 | 12.39 | 2.00 | 0.00 | 0.51 | 0.00 | 29.24 | 10.90 | 2.00 | 0.00 | 0.50 | 0.00 |
| 29.29 | 11.73 | 2.00 | 0.00 | 0.50 | 0.00 | 29.37 | 25.23 | 2.00 | 0.00 | 0.50 | 0.00 |
| 29.42 | 105.67 | 2.00 | 0.00 | 0.50 | 0.00 | 29.47 | 126.59 | 2.00 | 0.00 | 0.50 | 0.00 |
| 29.56 | 145.17 | 2.00 | 0.00 | 0.50 | 0.00 | 29.61 | 150.61 | 2.00 | 0.00 | 0.50 | 0.00 |
| 29.66 | 156.77 | 2.00 | 0.00 | 0.50 | 0.00 | 29.76 | 167.76 | 2.00 | 0.00 | 0.50 | 0.00 |
| 29.80 | 173.68 | 0.90 | 0.46 | 0.49 | 0.00 | 29.90 | 187.14 | 1.61 | 0.09 | 0.49 | 0.00 |
| 29.95 | 193.96 | 2.00 | 0.00 | 0.49 | 0.00 | 29.99 | 200.66 | 2.00 | 0.00 | 0.49 | 0.00 |
| 30.09 | 210.66 | 2.00 | 0.00 | 0.49 | 0.00 | 30.14 | 214.84 | 2.00 | 0.00 | 0.49 | 0.00 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 30.19 | 217.35 | 2.00 | 0.00 | 0.49 | 0.00 | 30.29 | 222.10 | 2.00 | 0.00 | 0.49 | 0.00 |
| 30.34 | 224.76 | 2.00 | 0.00 | 0.49 | 0.00 | 30.39 | 228.43 | 2.00 | 0.00 | 0.48 | 0.00 |
| 30.48 | 236.75 | 2.00 | 0.00 | 0.48 | 0.00 | 30.53 | 241.26 | 2.00 | 0.00 | 0.48 | 0.00 |
| 30.58 | 247.13 | 2.00 | 0.00 | 0.48 | 0.00 | 30.67 | 254.00 | 2.00 | 0.00 | 0.48 | 0.00 |
| 30.72 | 254.00 | 2.00 | 0.00 | 0.48 | 0.00 | 30.79 | 254.00 | 2.00 | 0.00 | 0.48 | 0.00 |
| 30.87 | 254.00 | 2.00 | 0.00 | 0.48 | 0.00 | 30.94 | 254.00 | 2.00 | 0.00 | 0.48 | 0.00 |
| 30.98 | 254.00 | 2.00 | 0.00 | 0.47 | 0.00 | 31.05 | 254.00 | 2.00 | 0.00 | 0.47 | 0.00 |
| 31.13 | 254.00 | 2.00 | 0.00 | 0.47 | 0.00 | 31.21 | 254.00 | 2.00 | 0.00 | 0.47 | 0.00 |
| 31.24 | 254.00 | 2.00 | 0.00 | 0.47 | 0.00 | 31.34 | 254.00 | 2.00 | 0.00 | 0.47 | 0.00 |
| 31.39 | 254.00 | 2.00 | 0.00 | 0.47 | 0.00 | 31.44 | 254.00 | 2.00 | 0.00 | 0.47 | 0.00 |
| 31.54 | 254.00 | 2.00 | 0.00 | 0.47 | 0.00 | 31.58 | 254.00 | 2.00 | 0.00 | 0.46 | 0.00 |
| 31.63 | 254.00 | 2.00 | 0.00 | 0.46 | 0.00 | 31.73 | 254.00 | 2.00 | 0.00 | 0.46 | 0.00 |
| 31.78 | 254.00 | 2.00 | 0.00 | 0.46 | 0.00 | 31.83 | 254.00 | 2.00 | 0.00 | 0.46 | 0.00 |
| 31.93 | 254.00 | 2.00 | 0.00 | 0.46 | 0.00 | 31.98 | 254.00 | 2.00 | 0.00 | 0.46 | 0.00 |
| 32.02 | 254.00 | 2.00 | 0.00 | 0.46 | 0.00 | 32.09 | 254.00 | 2.00 | 0.00 | 0.46 | 0.00 |
| 32.15 | 254.00 | 2.00 | 0.00 | 0.46 | 0.00 | 32.25 | 254.00 | 2.00 | 0.00 | 0.45 | 0.00 |
| 32.30 | 254.00 | 2.00 | 0.00 | 0.45 | 0.00 | 32.40 | 254.00 | 2.00 | 0.00 | 0.45 | 0.00 |
| 32.44 | 254.00 | 2.00 | 0.00 | 0.45 | 0.00 | 32.49 | 254.00 | 2.00 | 0.00 | 0.45 | 0.00 |
| 32.59 | 254.00 | 2.00 | 0.00 | 0.45 | 0.00 | 32.64 | 254.00 | 2.00 | 0.00 | 0.45 | 0.00 |
| 32.68 | 254.00 | 2.00 | 0.00 | 0.45 | 0.00 | 32.78 | 254.00 | 2.00 | 0.00 | 0.44 | 0.00 |
| 32.83 | 254.00 | 2.00 | 0.00 | 0.44 | 0.00 | 32.88 | 254.00 | 2.00 | 0.00 | 0.44 | 0.00 |
| 32.97 | 254.00 | 2.00 | 0.00 | 0.44 | 0.00 | 33.02 | 254.00 | 2.00 | 0.00 | 0.44 | 0.00 |
| 33.12 | 252.62 | 2.00 | 0.00 | 0.44 | 0.00 | 33.16 | 248.78 | 2.00 | 0.00 | 0.44 | 0.00 |
| 33.21 | 244.71 | 2.00 | 0.00 | 0.44 | 0.00 | 33.31 | 229.98 | 2.00 | 0.00 | 0.44 | 0.00 |
| 33.35 | 223.28 | 2.00 | 0.00 | 0.43 | 0.00 | 33.40 | 216.90 | 2.00 | 0.00 | 0.43 | 0.00 |
| 33.50 | 201.02 | 2.00 | 0.00 | 0.43 | 0.00 | 33.55 | 192.18 | 2.00 | 0.00 | 0.43 | 0.00 |
| 33.60 | 183.09 | 2.00 | 0.00 | 0.43 | 0.00 | 33.68 | 158.36 | 2.00 | 0.00 | 0.43 | 0.00 |
| 33.77 | 142.56 | 2.00 | 0.00 | 0.43 | 0.00 | 33.82 | 133.92 | 2.00 | 0.00 | 0.43 | 0.00 |
| 33.86 | 126.80 | 2.00 | 0.00 | 0.43 | 0.00 | 33.94 | 117.82 | 2.00 | 0.00 | 0.42 | 0.00 |
| 34.02 | 111.78 | 2.00 | 0.00 | 0.42 | 0.00 | 34.06 | 109.81 | 2.00 | 0.00 | 0.42 | 0.00 |
| 34.14 | 107.43 | 0.20 | 1.26 | 0.42 | 0.01 | 34.19 | 42.46 | 2.00 | 0.00 | 0.42 | 0.00 |
| 34.27 | 40.82 | 2.00 | 0.00 | 0.42 | 0.00 | 34.35 | 39.64 | 2.00 | 0.00 | 0.42 | 0.00 |
| 34.39 | 39.12 | 2.00 | 0.00 | 0.42 | 0.00 | 34.48 | 39.20 | 2.00 | 0.00 | 0.42 | 0.00 |
| 34.53 | 39.17 | 2.00 | 0.00 | 0.41 | 0.00 | 34.62 | 39.26 | 2.00 | 0.00 | 0.41 | 0.00 |
| 34.67 | 38.95 | 2.00 | 0.00 | 0.41 | 0.00 | 34.71 | 38.58 | 2.00 | 0.00 | 0.41 | 0.00 |
| 34.81 | 38.12 | 2.00 | 0.00 | 0.41 | 0.00 | 34.86 | 37.88 | 2.00 | 0.00 | 0.41 | 0.00 |
| 34.95 | 38.00 | 2.00 | 0.00 | 0.41 | 0.00 | 35.01 | 37.94 | 2.00 | 0.00 | 0.41 | 0.00 |
| 35.06 | 41.26 | 2.00 | 0.00 | 0.41 | 0.00 | 35.11 | 39.70 | 2.00 | 0.00 | 0.40 | 0.00 |
| 35.22 | 43.36 | 2.00 | 0.00 | 0.40 | 0.00 | 35.26 | 36.52 | 2.00 | 0.00 | 0.40 | 0.00 |
| 35.31 | 30.71 | 2.00 | 0.00 | 0.40 | 0.00 | 35.40 | 22.87 | 2.00 | 0.00 | 0.40 | 0.00 |
| 35.45 | 20.49 | 2.00 | 0.00 | 0.40 | 0.00 | 35.54 | 17.02 | 2.00 | 0.00 | 0.40 | 0.00 |
| 35.59 | 15.48 | 2.00 | 0.00 | 0.40 | 0.00 | 35.64 | 14.07 | 2.00 | 0.00 | 0.40 | 0.00 |
| 35.73 | 11.53 | 2.00 | 0.00 | 0.39 | 0.00 | 35.78 | 11.03 | 2.00 | 0.00 | 0.39 | 0.00 |
| 35.88 | 10.76 | 2.00 | 0.00 | 0.39 | 0.00 | 35.92 | 10.75 | 2.00 | 0.00 | 0.39 | 0.00 |
| 35.97 | 10.68 | 2.00 | 0.00 | 0.39 | 0.00 | 36.07 | 10.67 | 2.00 | 0.00 | 0.39 | 0.00 |
| 36.12 | 10.79 | 2.00 | 0.00 | 0.39 | 0.00 | 36.16 | 10.84 | 2.00 | 0.00 | 0.39 | 0.00 |
| 36.26 | 10.95 | 2.00 | 0.00 | 0.39 | 0.00 | 36.31 | 11.06 | 2.00 | 0.00 | 0.38 | 0.00 |
| 36.36 | 11.24 | 2.00 | 0.00 | 0.38 | 0.00 | 36.45 | 12.65 | 2.00 | 0.00 | 0.38 | 0.00 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 36.50 | 14.26 | 2.00 | 0.00 | 0.38 | 0.00 | 36.55 | 16.83 | 2.00 | 0.00 | 0.38 | 0.00 |
| 36.65 | 25.81 | 2.00 | 0.00 | 0.38 | 0.00 | 36.70 | 32.18 | 2.00 | 0.00 | 0.38 | 0.00 |
| 36.75 | 101.59 | 2.00 | 0.00 | 0.38 | 0.00 | 36.84 | 117.28 | 2.00 | 0.00 | 0.38 | 0.00 |
| 36.89 | 123.62 | 2.00 | 0.00 | 0.37 | 0.00 | 36.98 | 132.82 | 2.00 | 0.00 | 0.37 | 0.00 |
| 37.03 | 135.85 | 2.00 | 0.00 | 0.37 | 0.00 | 37.08 | 137.93 | 0.32 | 0.85 | 0.37 | 0.01 |
| 37.18 | 140.40 | 0.34 | 0.83 | 0.37 | 0.01 | 37.23 | 141.19 | 0.35 | 0.82 | 0.37 | 0.00 |
| 37.27 | 141.88 | 0.35 | 0.81 | 0.37 | 0.00 | 37.37 | 144.64 | 0.37 | 0.79 | 0.37 | 0.01 |
| 37.42 | 147.16 | 0.40 | 0.78 | 0.37 | 0.00 | 37.51 | 154.56 | 0.48 | 0.73 | 0.36 | 0.01 |
| 37.56 | 157.75 | 0.52 | 0.68 | 0.36 | 0.00 | 37.61 | 159.84 | 0.55 | 0.63 | 0.36 | 0.00 |
| 37.71 | 163.02 | 0.61 | 0.56 | 0.36 | 0.01 | 37.76 | 159.21 | 0.54 | 0.64 | 0.36 | 0.00 |
| 37.80 | 154.23 | 2.00 | 0.00 | 0.36 | 0.00 | 37.90 | 147.08 | 2.00 | 0.00 | 0.36 | 0.00 |
| 37.95 | 140.38 | 2.00 | 0.00 | 0.36 | 0.00 | 38.00 | 133.41 | 2.00 | 0.00 | 0.36 | 0.00 |
| 38.07 | 50.88 | 2.00 | 0.00 | 0.35 | 0.00 | 38.16 | 121.31 | 0.24 | 0.93 | 0.35 | 0.01 |
| 38.20 | 52.27 | 2.00 | 0.00 | 0.35 | 0.00 | 38.30 | 114.43 | 0.22 | 0.98 | 0.35 | 0.01 |
| 38.34 | 113.08 | 0.22 | 0.99 | 0.35 | 0.01 | 38.39 | 112.66 | 0.22 | 0.99 | 0.35 | 0.01 |
| 38.49 | 45.60 | 2.00 | 0.00 | 0.35 | 0.00 | 38.54 | 42.16 | 2.00 | 0.00 | 0.35 | 0.00 |
| 38.59 | 38.68 | 2.00 | 0.00 | 0.35 | 0.00 | 38.68 | 42.02 | 2.00 | 0.00 | 0.34 | 0.00 |
| 38.73 | 38.06 | 2.00 | 0.00 | 0.34 | 0.00 | 38.82 | 41.91 | 2.00 | 0.00 | 0.34 | 0.00 |
| 38.87 | 41.41 | 2.00 | 0.00 | 0.34 | 0.00 | 38.92 | 38.49 | 2.00 | 0.00 | 0.34 | 0.00 |
| 39.02 | 32.41 | 2.00 | 0.00 | 0.34 | 0.00 | 39.07 | 29.39 | 2.00 | 0.00 | 0.34 | 0.00 |
| 39.12 | 26.48 | 2.00 | 0.00 | 0.34 | 0.00 | 39.21 | 20.53 | 2.00 | 0.00 | 0.34 | 0.00 |
| 39.26 | 18.40 | 2.00 | 0.00 | 0.33 | 0.00 | 39.31 | 16.80 | 2.00 | 0.00 | 0.33 | 0.00 |
| 39.41 | 13.74 | 2.00 | 0.00 | 0.33 | 0.00 | 39.46 | 12.78 | 2.00 | 0.00 | 0.33 | 0.00 |
| 39.55 | 12.40 | 2.00 | 0.00 | 0.33 | 0.00 | 39.60 | 12.75 | 2.00 | 0.00 | 0.33 | 0.00 |
| 39.65 | 12.56 | 2.00 | 0.00 | 0.33 | 0.00 | 39.74 | 12.72 | 2.00 | 0.00 | 0.33 | 0.00 |
| 39.79 | 12.65 | 2.00 | 0.00 | 0.33 | 0.00 | 39.84 | 12.71 | 2.00 | 0.00 | 0.32 | 0.00 |
| 39.93 | 12.75 | 2.00 | 0.00 | 0.32 | 0.00 | 39.98 | 12.68 | 2.00 | 0.00 | 0.32 | 0.00 |
| 40.08 | 12.84 | 2.00 | 0.00 | 0.32 | 0.00 | 40.13 | 12.83 | 2.00 | 0.00 | 0.32 | 0.00 |
| 40.18 | 12.88 | 2.00 | 0.00 | 0.32 | 0.00 | 40.23 | 12.87 | 2.00 | 0.00 | 0.32 | 0.00 |
| 40.32 | 12.74 | 2.00 | 0.00 | 0.32 | 0.00 | 40.38 | 12.73 | 2.00 | 0.00 | 0.32 | 0.00 |
| 40.42 | 12.72 | 2.00 | 0.00 | 0.31 | 0.00 | 40.52 | 13.29 | 2.00 | 0.00 | 0.31 | 0.00 |
| 40.57 | 13.88 | 2.00 | 0.00 | 0.31 | 0.00 | 40.66 | 15.17 | 2.00 | 0.00 | 0.31 | 0.00 |
| 40.71 | 16.17 | 2.00 | 0.00 | 0.31 | 0.00 | 40.76 | 17.12 | 2.00 | 0.00 | 0.31 | 0.00 |
| 40.85 | 19.15 | 2.00 | 0.00 | 0.31 | 0.00 | 40.90 | 21.10 | 2.00 | 0.00 | 0.31 | 0.00 |
| 40.95 | 23.24 | 2.00 | 0.00 | 0.31 | 0.00 | 41.05 | 30.21 | 2.00 | 0.00 | 0.30 | 0.00 |
| 41.09 | 31.56 | 2.00 | 0.00 | 0.30 | 0.00 | 41.17 | 46.30 | 2.00 | 0.00 | 0.30 | 0.00 |
| 41.22 | 49.94 | 2.00 | 0.00 | 0.30 | 0.00 | 41.31 | 57.56 | 2.00 | 0.00 | 0.30 | 0.00 |
| 41.36 | 60.98 | 2.00 | 0.00 | 0.30 | 0.00 | 41.41 | 64.06 | 2.00 | 0.00 | 0.30 | 0.00 |
| 41.50 | 64.71 | 2.00 | 0.00 | 0.30 | 0.00 | 41.55 | 62.27 | 2.00 | 0.00 | 0.30 | 0.00 |
| 41.60 | 59.13 | 2.00 | 0.00 | 0.29 | 0.00 | 41.70 | 54.80 | 2.00 | 0.00 | 0.29 | 0.00 |
| 41.75 | 52.83 | 2.00 | 0.00 | 0.29 | 0.00 | 41.84 | 54.89 | 2.00 | 0.00 | 0.29 | 0.00 |
| 41.89 | 55.11 | 2.00 | 0.00 | 0.29 | 0.00 | 41.94 | 60.50 | 2.00 | 0.00 | 0.29 | 0.00 |
| 42.03 | 149.69 | 2.00 | 0.00 | 0.29 | 0.00 | 42.08 | 158.06 | 2.00 | 0.00 | 0.29 | 0.00 |
| 42.13 | 163.15 | 2.00 | 0.00 | 0.29 | 0.00 | 42.23 | 168.32 | 2.00 | 0.00 | 0.28 | 0.00 |
| 42.27 | 170.09 | 0.78 | 0.35 | 0.28 | 0.00 | 42.32 | 171.72 | 0.82 | 0.31 | 0.28 | 0.00 |
| 42.42 | 174.22 | 0.90 | 0.26 | 0.28 | 0.00 | 42.47 | 175.53 | 0.95 | 0.23 | 0.28 | 0.00 |
| 42.57 | 176.96 | 1.01 | 0.21 | 0.28 | 0.00 | 42.61 | 176.98 | 1.01 | 0.21 | 0.28 | 0.00 |
| 42.66 | 176.75 | 1.00 | 0.21 | 0.28 | 0.00 | 42.76 | 174.76 | 0.92 | 0.24 | 0.28 | 0.00 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 42.80 | 172.80 | 0.86 | 0.28 | 0.27 | 0.00 | 42.85 | 170.52 | 0.79 | 0.33 | 0.27 | 0.00 |
| 42.95 | 165.16 | 0.66 | 0.39 | 0.27 | 0.00 | 43.00 | 162.62 | 0.61 | 0.43 | 0.27 | 0.00 |
| 43.09 | 158.97 | 0.54 | 0.48 | 0.27 | 0.01 | 43.14 | 158.14 | 0.53 | 0.49 | 0.27 | 0.00 |
| 43.19 | 157.77 | 0.52 | 0.50 | 0.27 | 0.00 | 43.28 | 156.97 | 0.51 | 0.51 | 0.27 | 0.01 |
| 43.33 | 156.99 | 0.51 | 0.51 | 0.27 | 0.00 | 43.38 | 157.36 | 0.52 | 0.50 | 0.26 | 0.00 |
| 43.48 | 156.28 | 0.50 | 0.52 | 0.26 | 0.01 | 43.53 | 154.66 | 0.48 | 0.53 | 0.26 | 0.00 |
| 43.57 | 152.40 | 0.45 | 0.53 | 0.26 | 0.00 | 43.67 | 146.49 | 0.39 | 0.55 | 0.26 | 0.01 |
| 43.72 | 143.42 | 0.37 | 0.57 | 0.26 | 0.00 | 43.77 | 140.39 | 0.34 | 0.58 | 0.26 | 0.00 |
| 43.87 | 135.95 | 0.32 | 0.59 | 0.26 | 0.01 | 43.91 | 135.10 | 0.31 | 0.60 | 0.26 | 0.00 |
| 43.96 | 134.07 | 0.30 | 0.60 | 0.25 | 0.00 | 44.06 | 132.00 | 0.29 | 0.61 | 0.25 | 0.01 |
| 44.11 | 130.71 | 0.29 | 0.61 | 0.25 | 0.00 | 44.20 | 130.50 | 0.29 | 0.61 | 0.25 | 0.01 |
| 44.24 | 130.83 | 0.29 | 0.60 | 0.25 | 0.00 | 44.29 | 130.67 | 0.29 | 0.60 | 0.25 | 0.00 |
| 44.39 | 130.28 | 0.29 | 0.60 | 0.25 | 0.01 | 44.44 | 129.96 | 0.28 | 0.60 | 0.25 | 0.00 |
| 44.53 | 128.79 | 0.28 | 0.60 | 0.25 | 0.01 | 44.58 | 128.72 | 0.28 | 0.60 | 0.24 | 0.00 |
| 44.63 | 129.35 | 2.00 | 0.00 | 0.24 | 0.00 | 44.73 | 132.69 | 2.00 | 0.00 | 0.24 | 0.00 |
| 44.77 | 134.66 | 2.00 | 0.00 | 0.24 | 0.00 | 44.82 | 136.94 | 2.00 | 0.00 | 0.24 | 0.00 |
| 44.92 | 141.81 | 2.00 | 0.00 | 0.24 | 0.00 | 44.96 | 143.75 | 2.00 | 0.00 | 0.24 | 0.00 |
| 45.06 | 145.56 | 0.39 | 0.51 | 0.24 | 0.01 | 45.12 | 145.00 | 0.38 | 0.51 | 0.24 | 0.00 |
| 45.17 | 143.72 | 2.00 | 0.00 | 0.23 | 0.00 | 45.21 | 141.80 | 2.00 | 0.00 | 0.23 | 0.00 |
| 45.31 | 135.03 | 2.00 | 0.00 | 0.23 | 0.00 | 45.36 | 130.42 | 2.00 | 0.00 | 0.23 | 0.00 |
| 45.45 | 121.46 | 2.00 | 0.00 | 0.23 | 0.00 | 45.50 | 51.33 | 2.00 | 0.00 | 0.23 | 0.00 |
| 45.55 | 48.34 | 2.00 | 0.00 | 0.23 | 0.00 | 45.65 | 42.59 | 2.00 | 0.00 | 0.23 | 0.00 |
| 45.69 | 40.10 | 2.00 | 0.00 | 0.23 | 0.00 | 45.74 | 37.36 | 2.00 | 0.00 | 0.22 | 0.00 |
| 45.84 | 32.79 | 2.00 | 0.00 | 0.22 | 0.00 | 45.88 | 31.75 | 2.00 | 0.00 | 0.22 | 0.00 |
| 45.98 | 48.53 | 2.00 | 0.00 | 0.22 | 0.00 | 46.03 | 134.82 | 2.00 | 0.00 | 0.22 | 0.00 |
| 46.08 | 156.19 | 2.00 | 0.00 | 0.22 | 0.00 | 46.17 | 182.01 | 2.00 | 0.00 | 0.22 | 0.00 |
| 46.22 | 188.85 | 2.00 | 0.00 | 0.22 | 0.00 | 46.27 | 193.76 | 2.00 | 0.00 | 0.22 | 0.00 |
| 46.36 | 200.59 | 2.00 | 0.00 | 0.21 | 0.00 | 46.41 | 204.32 | 2.00 | 0.00 | 0.21 | 0.00 |
| 46.46 | 208.67 | 2.00 | 0.00 | 0.21 | 0.00 | 46.56 | 217.73 | 2.00 | 0.00 | 0.21 | 0.00 |
| 46.61 | 222.09 | 2.00 | 0.00 | 0.21 | 0.00 | 46.70 | 230.46 | 2.00 | 0.00 | 0.21 | 0.00 |
| 46.75 | 233.95 | 2.00 | 0.00 | 0.21 | 0.00 | 46.80 | 236.36 | 2.00 | 0.00 | 0.21 | 0.00 |
| 46.90 | 238.30 | 2.00 | 0.00 | 0.21 | 0.00 | 46.95 | 239.36 | 2.00 | 0.00 | 0.20 | 0.00 |
| 47.00 | 239.92 | 2.00 | 0.00 | 0.20 | 0.00 | 47.09 | 246.24 | 2.00 | 0.00 | 0.20 | 0.00 |
| 47.14 | 248.35 | 2.00 | 0.00 | 0.20 | 0.00 | 47.20 | 241.61 | 2.00 | 0.00 | 0.20 | 0.00 |
| 47.25 | 250.23 | 2.00 | 0.00 | 0.20 | 0.00 | 47.35 | 254.00 | 2.00 | 0.00 | 0.20 | 0.00 |
| 47.40 | 254.00 | 2.00 | 0.00 | 0.20 | 0.00 | 47.44 | 254.00 | 2.00 | 0.00 | 0.20 | 0.00 |
| 47.54 | 245.04 | 2.00 | 0.00 | 0.19 | 0.00 | 47.59 | 245.88 | 2.00 | 0.00 | 0.19 | 0.00 |
| 47.64 | 250.55 | 2.00 | 0.00 | 0.19 | 0.00 | 47.74 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 |
| 47.78 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 | 47.88 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 |
| 47.93 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 | 47.97 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 |
| 48.07 | 254.00 | 2.00 | 0.00 | 0.19 | 0.00 | 48.12 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 |
| 48.17 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 | 48.26 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 |
| 48.31 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 | 48.41 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 |
| 48.46 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 | 48.50 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 |
| 48.60 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 | 48.65 | 254.00 | 2.00 | 0.00 | 0.18 | 0.00 |
| 48.70 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 | 48.79 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 |
| 48.84 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 | 48.89 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 |
| 48.98 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 | 49.03 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 |

**:: Post-earthquake settlement due to soil liquefaction :: (continued)**

| Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) | Depth (ft) | $q_{c1N,cs}$ | FS | $e_v$ (%) | DF | Settlement (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 49.13 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 | 49.18 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 |
| 49.23 | 254.00 | 2.00 | 0.00 | 0.17 | 0.00 | 49.32 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 |
| 49.37 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 | 49.42 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 |
| 49.49 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 | 49.55 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 |
| 49.63 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 | 49.69 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 |
| 49.75 | 254.00 | 2.00 | 0.00 | 0.16 | 0.00 | 49.82 | 282.80 | 2.00 | 0.00 | 0.16 | 0.00 |
| 49.89 | 281.26 | 2.00 | 0.00 | 0.15 | 0.00 | 49.95 | 280.23 | 2.00 | 0.00 | 0.15 | 0.00 |
| 50.01 | 279.95 | 2.00 | 0.00 | 0.15 | 0.00 | 50.09 | 283.83 | 2.00 | 0.00 | 0.15 | 0.00 |
| 50.13 | 282.75 | 2.00 | 0.00 | 0.15 | 0.00 | | | | | | |

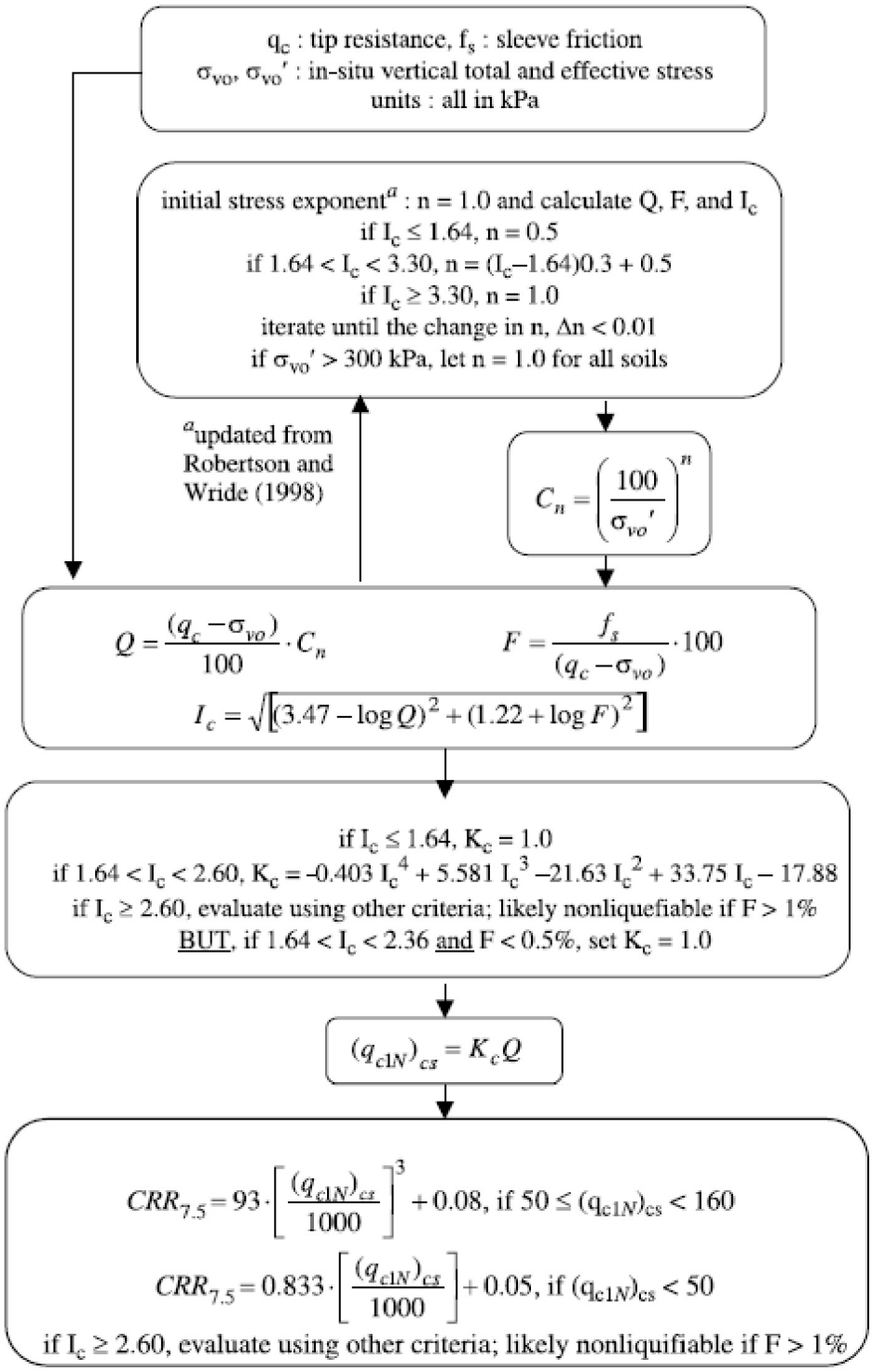
**Total estimated settlement: 2.56**

**Abbreviations**

| | |
|---|---|
| $Q_{tn,cs}$: | Equivalent dean sand normalized cone resistance |
| FS: | Factor of safety against liquefaction |
| $e_v$ (%): | Post-liquefaction volumentric strain |
| DF: | $e_v$ depth weighting factor |
| Settlement: | Calculated settlement |

## Procedure for the evaluation of soil liquefaction resistance, NCEER (1998)

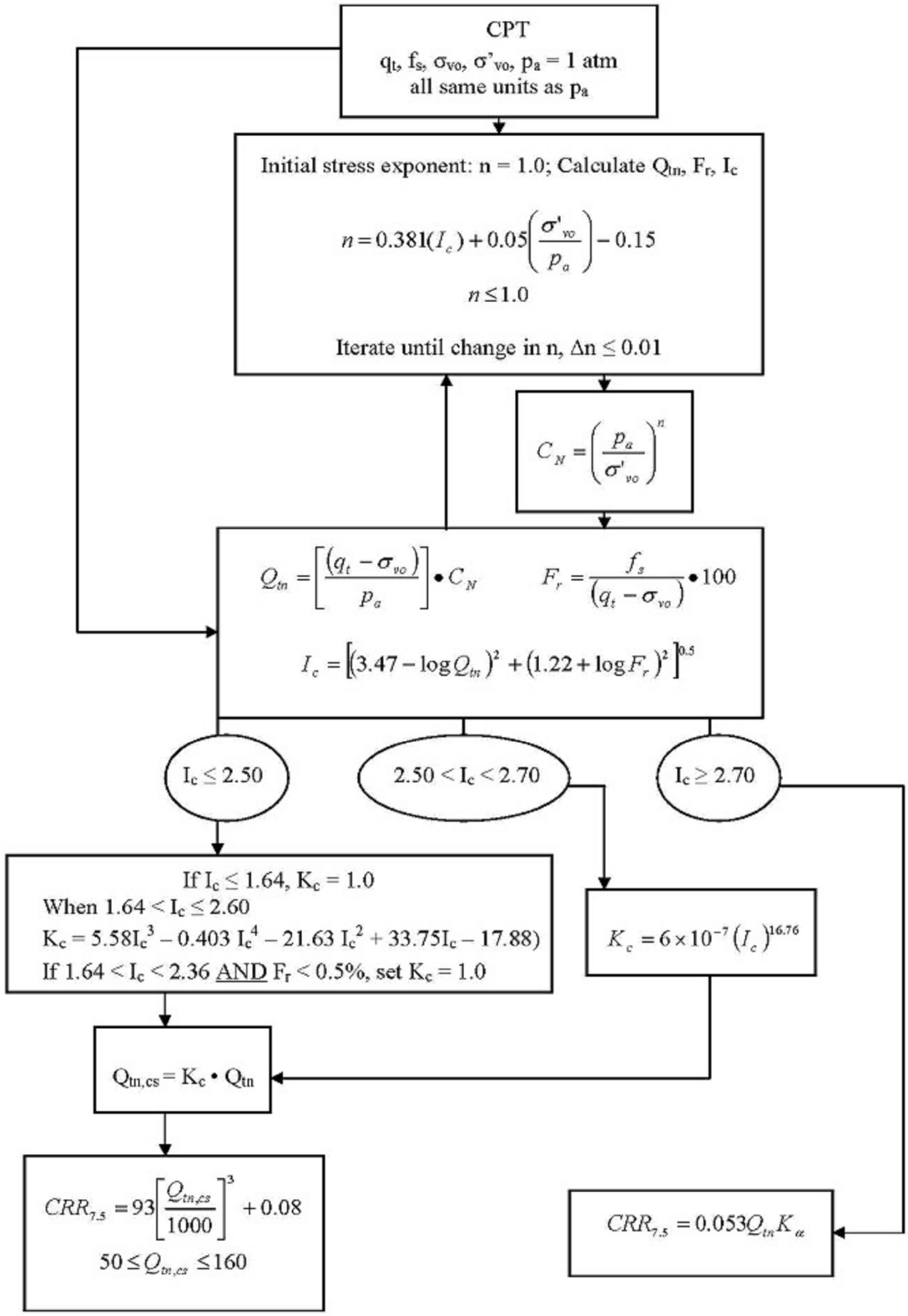
Calculation of soil resistance against liquefaction is performed according to the Robertson & Wride (1998) procedure. The procedure used in the software, slightly differs from the one originally published in NCEER-97-0022 (Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils). The revised procedure is presented below in the form of a flowchart[1]:




[1] "Estimating liquefaction-induced ground settlements from CPT for level ground", G. Zhang, P.K. Robertson, and R.W.I. Brachman

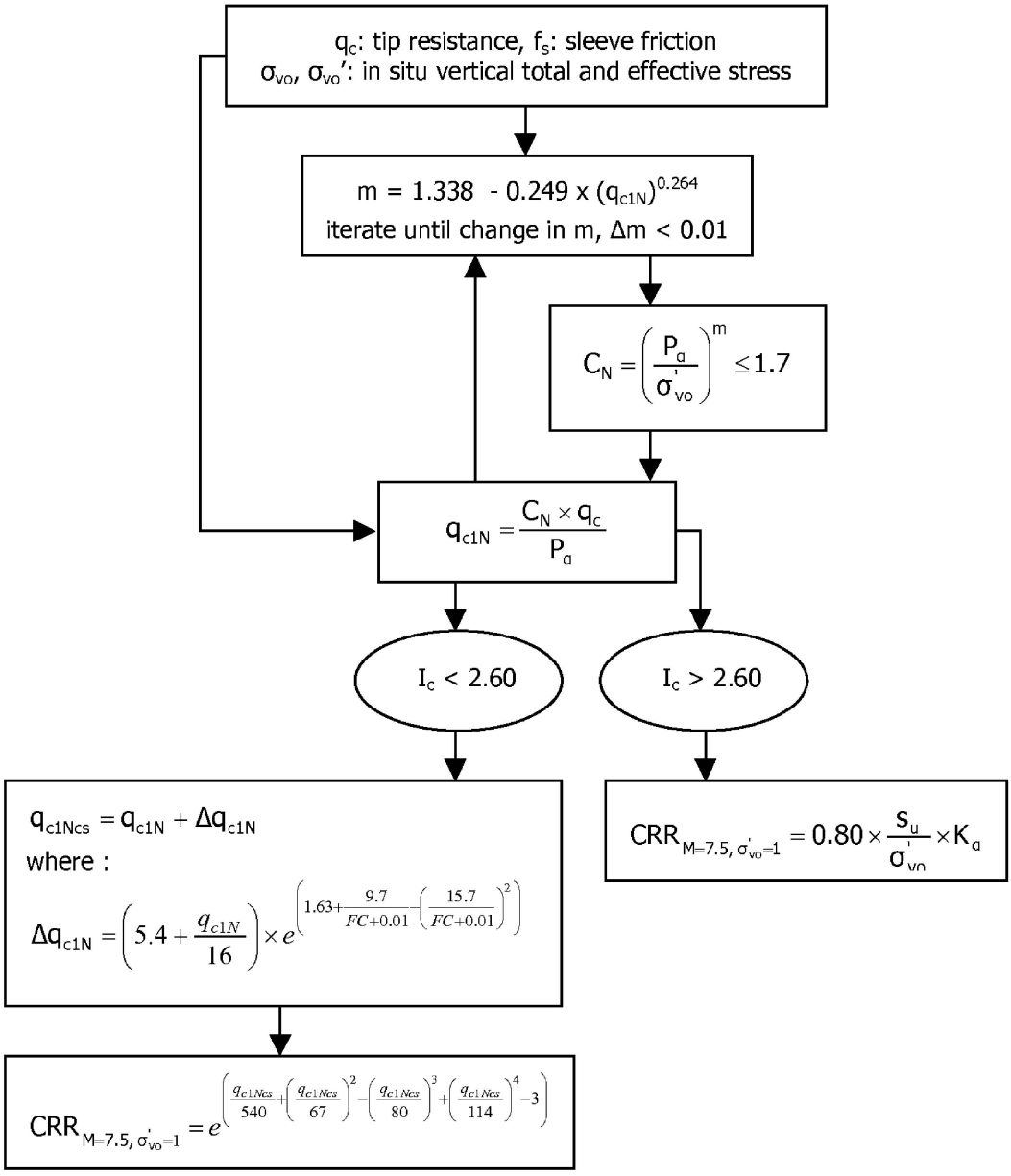
## Procedure for the evaluation of soil liquefaction resistance (all soils), Robertson (2010)

Calculation of soil resistance against liquefaction is performed according to the Robertson & Wride (1998) procedure. This procedure used in the software, slightly differs from the one originally published in NCEER-97-0022 (Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils). The revised procedure is presented below in the form of a flowchart[1]:

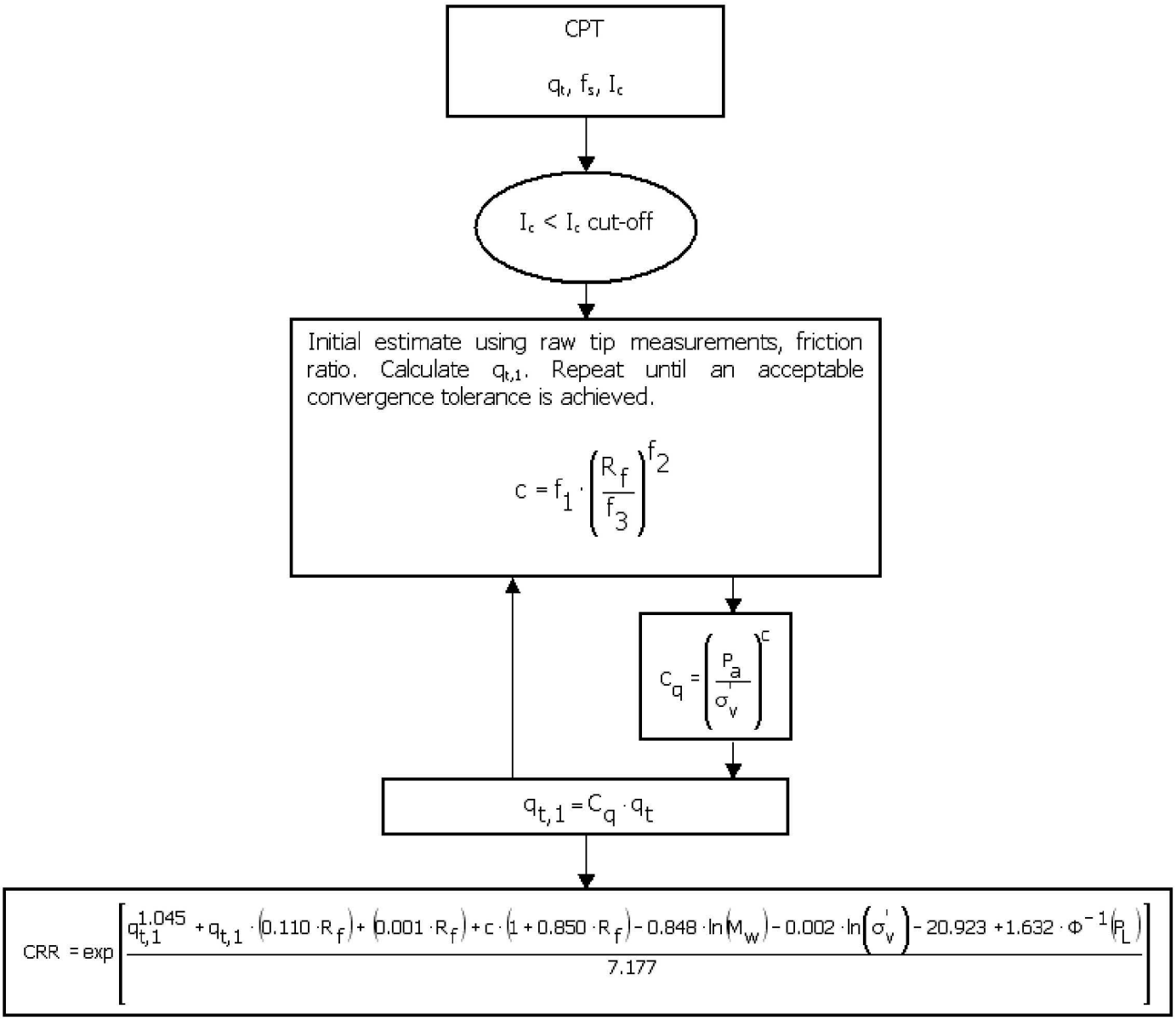



[1] P.K. Robertson, 2009. "Performance based earthquake design using the CPT", Keynote Lecture, International Conference on Performance-based Design in Earthquake Geotechnical Engineering – from case history to practice, IS-Tokyo, June 2009

**Procedure for the evaluation of soil liquefaction resistance, Idriss & Boulanger (2008)**



**Procedure for the evaluation of soil liquefaction resistance (sandy soils), Moss et al. (2006)**



**Procedure for the evaluation of soil liquefaction resistance, Boulanger & Idriss(2014)**

$$FS_{liq} = \frac{CRR_{M=7.5,\sigma'_v=1atm}}{CSR_{M=7.5,\sigma'_v=1atm}}$$

$$CSR_{M=7.5,\sigma'_v=1atm} = 0.65 \frac{\sigma_v}{\sigma'_v} \frac{a_{max}}{g} r_d \frac{1}{MSF} \frac{1}{K_\sigma}$$

$$r_d = \exp\left[\alpha(z) + \beta(z) \cdot M\right]$$

$$\alpha(z) = -1.012 - 1.126 \sin\left(\frac{z}{11.73} + 5.133\right)$$

$$\beta(z) = 0.106 + 0.118 \sin\left(\frac{z}{11.28} + 5.142\right)$$

$$K_\sigma = 1 - C_\sigma \ln\left(\frac{\sigma'_v}{P_a}\right) \le 1.1$$

$$C_\sigma = \frac{1}{37.3 - 8.27\left(q_{c1Ncs}\right)^{0.264}} \le 0.3$$

$$MSF = 1 + \left(MSF_{max} - 1\right)\left(8.64 \exp\left(\frac{-M}{4}\right) - 1.325\right)$$

$$MSF_{max} = 1.09 + \left(\frac{q_{c1Ncs}}{180}\right)^3 \le 2.2$$

$\sigma'_v$ *and* $\sigma_v$ *at start of earthquake shaking*

$$CRR_{M=7.5,\sigma'_v=1atm} = \exp\left(\frac{q_{c1Ncs}}{113} + \left(\frac{q_{c1Ncs}}{1000}\right)^2 - \left(\frac{q_{c1Ncs}}{140}\right)^3 + \left(\frac{q_{c1Ncs}}{137}\right)^4 - 2.80\right)$$

$$q_{c1Ncs} = q_{c1N} + \Delta q_{c1N}$$

$$\Delta q_{c1N} = \left(11.9 + \frac{q_{c1N}}{14.6}\right) \exp\left(1.63 - \frac{9.7}{FC+2} - \left(\frac{15.7}{FC+2}\right)^2\right)$$

$$q_{c1N} = C_{Ne} \frac{q_c}{P_a}$$

$$C_{Ne} = \left(\frac{P_a}{\sigma'_v}\right)^m \le 1.7$$

$$m = 1.338 - 0.249\left(q_{c1Ncs}\right)^{0.264} \quad with \quad 0.264 \le m \le 0.782$$

$$FC = 80\left(I_C + C_{FC}\right) - 137 \quad with \quad 0\% \le FC \le 100\%$$

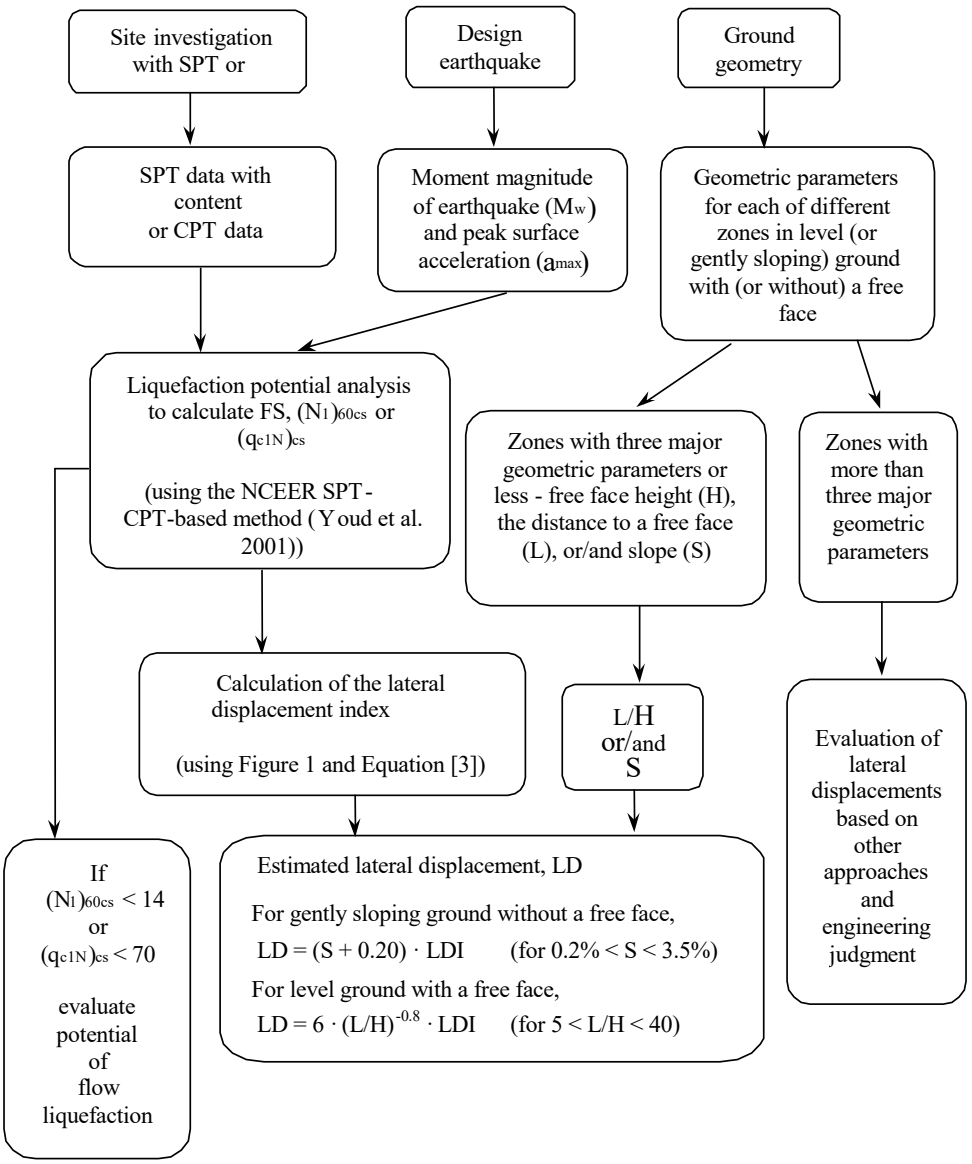
$$I_c = \left[\left(3.47 - \log\left(Q\right)\right)^2 + \left(1.22 + \log\left(F\right)\right)^2\right]^{0.5}$$

$$Q = \left(\frac{q_c - \sigma_{vc}}{P_a}\right)\left(\frac{P_a}{\sigma'_{vc}}\right)^n \; with \; 0.5 \le n \le 1.0 \; per \; Robertson \; \& \; Wride \; (1998)$$

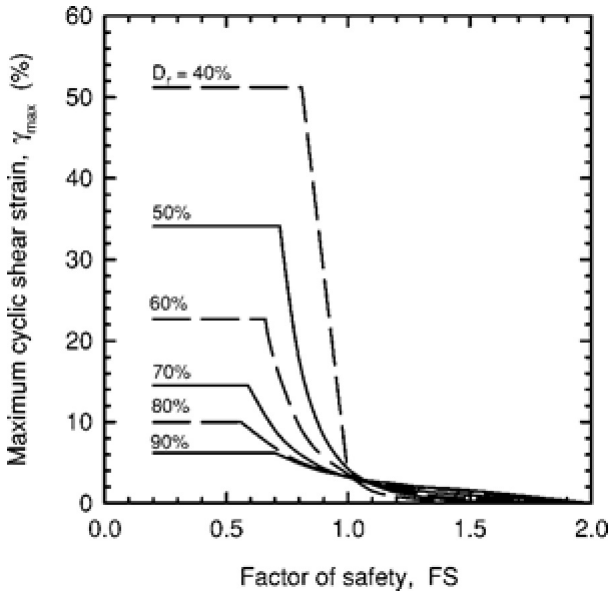
$$F = \left(\frac{f_s}{q_c - \sigma_{vc}}\right) \cdot 100\%$$

$\sigma'_v$ *at time of CPT sounding*

## Procedure for the evaluation of liquefaction-induced lateral spreading displacements




[1] Flow chart illustrating major steps in estimating liquefaction-induced lateral spreading displacements using the proposed approach



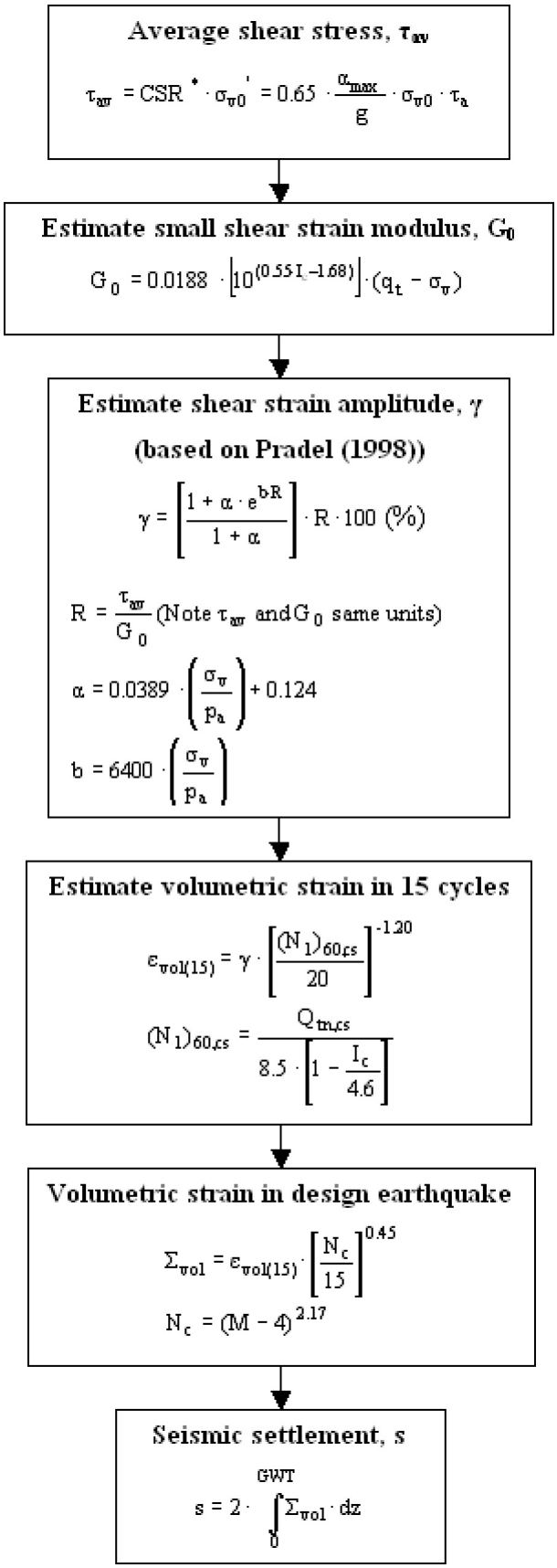

**[1] Figure 1**

$$LDI = \int_0^{z_{max}} \gamma_{max} dz$$

**[1] Equation [3]**

[1] "Estimating liquefaction-induced ground settlements from CPT for level ground", G. Zhang, P.K. Robertson, and R.W.I. Brachman

**Procedure for the estimation of seismic induced settlements in dry sands**




Robertson, P.K. and Lisheng, S., 2010, "Estimation of seismic compression in dry soils using the CPT" FIFTH INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN GEOTECHNICAL EARTHQUAKE ENGINEERING AND SOIL DYNAMICS, Symposium in honor of professor I. M. Idriss, San Diego, CA

## Liquefaction Potential Index (LPI) calculation procedure

Calculation of the Liquefaction Potential Index (LPI) is used to interpret the liquefaction assessment calculations in terms of severity over depth. The calculation procedure is based on the methology developed by Iwasaki (1982) and is adopted by AFPS.

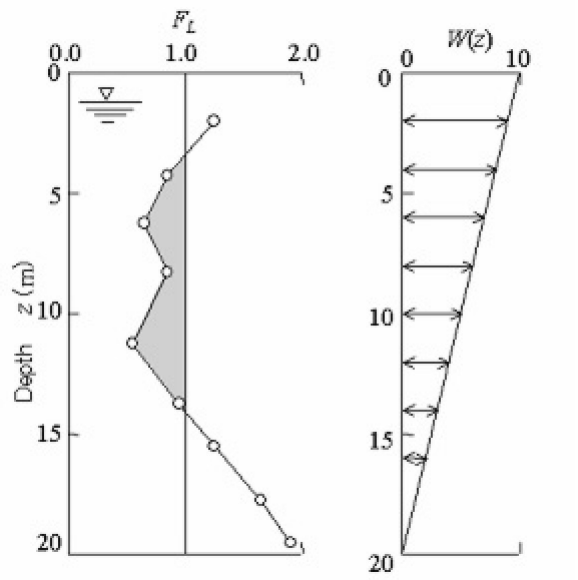
To estimate the severity of liquefaction extent at a given site, LPI is calculated based on the following equation:

$$\mathbf{LPI} = \int_0^{20} (10 - 0{,}5z) \times F_L \times dz$$

where:
$F_L$ = 1 - F.S. when F.S. less than 1
$F_L$ = 0 when F.S. greater than 1
z depth of measurment in meters

Values of LPI range between zero (0) when no test point is characterized as liquefiable and 100 when all points are characterized as susceptible to liquefaction. Iwasaki proposed four (4) discrete categories based on the numeric value of LPI:

- LPI = 0 : Liquefaction risk is very low
- 0 < LPI <= 5 : Liquefaction risk is low
- 5 < LPI <= 15 : Liquefaction risk is high
- LPI > 15 : Liquefaction risk is very high




**Graphical presentation of the LPI calculation procedure**

## Shear-Induced Building Settlement (Ds) calculation procedure

The shear-induced building settlement (Ds) due to liquefaction below the building can be estimated using the relationship developed by Bray and Macedo (2017):

$$Ln(Ds) = c1 + c2 * LBS + 0.58 * Ln\left(Tanh\left(\frac{HL}{6}\right)\right) + 4.59 * Ln(Q) - 0.42 * Ln(Q)^2 - 0.02 * B + 0.84 * Ln(CAVdp) + 0.41 * Ln(Sa1) + \varepsilon$$

where Ds is in the units of mm, c1= -8.35 and c2= 0.072 for LBS ≤ 16, and c1= -7.48 and c2= 0.014 otherwise. Q is the building contact pressure in units of kPa, HL is the cumulative thickness of the liquefiable layers in the units of m, B is the building width in the units of m, CAVdp is a standardized version of the cumulative absolute velocity in the units of g-s, Sa1 is 5%-damped pseudo-acceleration response spectral value at a period of 1 s in the units of g, and ε is a normal random variable with zero mean and 0.50 standard deviation in Ln units. The liquefaction-induced building settlement index (LBS) is:

$$LBS = \sum W * \frac{\varepsilon_{shear}}{z} dz$$

where z (m) is the depth measured from the ground surface > 0, W is a foundation-weighting factor wherein W = 0.0 for z less than Df, which is the embedment depth of the foundation, and W = 1.0 otherwise. The shear strain parameter (ε_shear) is the liquefaction-induced free-field shear strain (in %) estimated using Zhang et al. (2004). It is calculated based on the estimated Dr of the liquefied soil layer and the calculated safety factor against liquefaction triggering (FSL).

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# Appendix E

## Phase I Environmental Site Assessment

PARTNER
Engineering and Science, Inc.



# PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

**Kirkhill**
12021 and 12023 Woodruff Avenue
Downey, California 90241

Report Date: September 26, 2018
Partner Project No. 18-220634.1



Prepared for:

**Prologis, Inc.**
Pier 1, Bay 1
San Francisco, California 94111

PARTNER
Engineering and Science, Inc.

September 26, 2018

Ms. Janet Frentzel
Prologis, Inc.
Pier 1, Bay 1
San Francisco, California 94111

Subject: Phase I Environmental Site Assessment
Kirkhill
12021 and 12023 Woodruff Avenue
Downey, California 90241
Partner Project No. 18-220634.1

Dear Ms. Frentzel:

Partner Engineering and Science, Inc. (Partner) is pleased to provide the results of the *Phase I Environmental Site Assessment* (Phase I ESA) report of the abovementioned address (the "subject property"). This assessment was performed in general conformance with the scope and limitations as detailed in the ASTM Practice E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

This assessment included a site reconnaissance as well as research and interviews with representatives of the public, property ownership, site manager, and regulatory agencies. An assessment was made, conclusions stated, and recommendations outlined.

We appreciate the opportunity to provide environmental services to you. If you have any questions concerning this report, or if we can assist you in any other matter, please contact me at (818) 337-1203.

Sincerely,



Misty Ponce
Principal

# EXECUTIVE SUMMARY

Partner Engineering and Science, Inc. (Partner) has performed a Phase I Environmental Site Assessment (ESA) in general accordance with the scope of work and limitations of ASTM Standard Practice E1527-13, the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312) and as set forth by the Master Services Agreement between Prologis and Partner dated April 18, 2013 for the property located at 12021 and 12023 Woodruff Avenue in the City of Downey, Los Angeles County, California (the "subject property"). The Phase I Environmental Site Assessment is designed to provide Prologis, Inc. with an assessment concerning environmental conditions (limited to those issues identified in the report) as they exist at the subject property.

### Property Description

The subject property is located on the west side of Woodruff Avenue just north of Washburn Road within an industrial area of Los Angeles County. Please refer to the table below for further description of the subject property:

| ***Subject Property Data*** | |
|---|---|
| **Addresses:** | 12021 and 12023 Woodruff Avenue, Downey, California 90241 |
| **Additional Addresses:** | None Identified |
| **Historical Addresses:** | None Identified |
| **Property Use:** | Industrial (zone M-2, General Manufacturing) |
| **Land Acreage (Ac):** | 6.31 +/- Ac (per Assessor's map) |
| **Number of Buildings:** | One (five separate additions) |
| **Number of Floors:** | One |
| **Gross Building Area (SF):** | 193,451 SF (per Assessor's records) |
| **Dates of Construction:** | 1951 to 1971 |
| **Assessor's Parcel Number (APN):** | 6284-025-018 |
| **Type of Construction:** | Concrete Tilt-Up/Concrete Block/Concrete Slab |
| **Current Tenants:** | Kirkhill, manufacturer of custom rubber products |
| **Site Assessment Performed By:** | Margaret Thomas and Kathy Lehnus of Partner |
| **Site Assessment Conducted On:** | September 6, 2018 |

The subject property is currently occupied by Kirkhill, a manufacturer of custom rubber products who has occupied all or part of the subject building since initial construction in 1951. The subject property consists of one large single-story building that was constructed in piecemeal fashion starting in 1951 that has a central open courtyard. Onsite operations consist of the manufacture of unvolcanized rubber from raw materials through a series of processes starting with large-scale mixing of a variety of polymers, fillers, and various grades of petroleum-based process oils through rubber injection molding, rubber compression molding, sponge rubber molding, and mold fabrication. Product is then warehoused and shipped through several loading dock areas. There are up to 30 hydraulic rubber presses on three lines within the eastern side of the manufacturing area, and various mixing equipment toward the west side of the manufacturing area. The building also includes two laboratories for research and development (R&D),

newer interior 2-story mixing equipment with batch-off conveyors, special mixing rooms, a cold room, warehouse storage, and office space.

Solid raw materials such as custom polymers, talc, neoprene, carbon black, monomers, and zinc are stored in 55-gallon drums and larger totes up to 300 gallons at the subject property. Liquids used in the process include lubricating oils, waste lubricating oil, and the process oils (classified as solvent refined in regulatory records). In addition to the current structure, the subject property is also improved with paved parking and driveways that extend around the building, front landscaping and exterior storage of raw materials, large dumpsters, empty containers, and other miscellaneous active and idle equipment.

According to available historical sources, the subject property was formerly open farm land from at least 1928 until it was developed in 1951. The property appeared to be occupied by row crops with no farm structures identified in aerial photographs. Occupants of the subject property have included Kirkhill Inc. (et. al, including Kirkhill Chemical) on the southern/manufacturing areas of the subject property, as well as tenants including Charcoal Masters International, Immanuel Industries Inc., Source One Staffing, Felchco Investment Group LLC, Cal Pipe Industries Inc., Cal Pipe Manufacturing Inc., Carnaval Access, Discount Advertising Xpress, Ikeep Inventing Corporation, Kollaborator Productions, Inc., Monster Sells, Hector Moran, Nomad Trading, Perimeter Defense Tech Inc., PTG International Inc., Standard industries and Kong Pet Toys on the warehouse/northern portions. Based on interviews with the site contact, it appears that the northern side of the subject property was leased at various times for warehouse and office space and light manufacturing operations.

The immediately surrounding properties consist primarily of industrial facilities including some office usage to the south and a restaurant to the southeast. The adjacent properties are zoned M-2 for industrial usage. None of the adjacent properties were identified to present an immediate environmental concern.

According to information reported by the State Water Resources Control Board GeoTracker website for a property located approximately 0.53-miles south of the subject property, at 9851 Imperial Highway, the depth of groundwater in the vicinity of the subject property is inferred to be approximately 33 to 53 feet below ground surface (bgs), with groundwater flow reported toward the southeast. In addition, during a 2013 Phase II ESA investigation conducted at the subject property, groundwater was encountered at 45 feet bgs (not sampled at the time).

### Findings

A *recognized environmental condition (REC)* refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The following was identified during the course of this assessment:

- All or part of the subject property building has been occupied by Kirkhill, a manufacturer of custom rubber products, since initial construction in 1951, utilizing raw materials including polymers, talc, neoprene, carbon black, monomers, and zinc as well as petroleum hydrocarbons as lubricating oils, waste lubricating oil, and the process oils (classified as a solvent refined in

regulatory records). Process oils are currently stored in three interior aboveground storage tanks (ASTs) (two 3,000-gallon ASTs and one 4,000-gallon AST) within the manufacturing area. In addition, the manufacturing area includes an internal hydraulic system comprised of a network of below-grade trenches and overhead piping that deliver a recirculated water and hydraulic oil mixture to the rubber presses and molding machines. Additionally, a central clarifier is present that is used primarily for boiler blowdown and cooling tower discharges. The clarifier previously received rinse water from a former tank wash out area that included acid and caustic tanks and rinse water tanks, which were used to clean molds, as the molds would get covered with rubber and need to be washed, which then discharged through the clarifier. The subject property operates a small electrical substation that includes one large pad-mounted transformer and additional electrical equipment situated within a chain link fence within the central courtyard, with apparent associated equipment on the interior adjacent wall. The transformer was not labeled indicating PCB content. The electrical equipment is not original and has been replaced at least once or twice. No staining or leakage was observed in the vicinity of the transformer equipment.

A prior Phase II ESA was conducted at the subject property by S&S Commercial Environmental Services, Inc., dated November 9, 2005, that identified high concentrations of diesel range and oil range petroleum in the soil located in the courtyard area to a maximum depth of 20 feet. The investigation included the advancement of 14 soil borings in the central courtyard area adjacent to the clarifier/discharge channel and cooling tower. Concentrations of diesel were reported as high as 54,100 milligrams per kilogram (mg/kg) at 5 feet bgs and 21,300 mg/kg at 20 feet bgs at the Boring SS-5 location. No volatile organic compounds (VOCs) or semi-VOCs were detected at SS-5 (the only boring analyzed for VOCs). Arsenic was detected at concentrations slightly above Cal-Hazardous levels, which was later determined to be an isolated area of 3 to 6 cubic yards of soluble arsenic above threshold limits that was left in place due to the presence of a capped surface. Additionally, the diesel and oil impacted soils were left in place and not remediated due to a reported clean earth interval between the last identified diesel impacted soil at 20 feet bgs and the maximum depth explored to 45 feet bgs.

Due to the known release of petroleum in the courtyard area and the number of years the subject property has operated as a rubber manufacturing plant, including the presence of subsurface conduits/trenches that carry a petroleum based cutting fluid and a clarifier that was previously used for wash down of rubber residues, soil beneath the concrete slab may be impacted with petroleum-based cutting oils or other constituents. Of note, polychlorinated biphenyls (PCBs) may be associated with historical usage of hydraulic equipment and electrical transformers on the subject property.

A *controlled recognized environmental condition (CREC)* refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following was identified during the course of this assessment:

- Partner did not identify controlled recognized environmental conditions during the course of this assessment.

A *historical recognized environmental condition (HREC)* refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The following was identified during the course of this assessment:

- A total of four steel underground storage tanks (USTs) were formerly operated at the subject property, three of which contained diesel to fuel the two boilers associated with rubber molding (when the rubber products produced were volcanized), and one of which contained naphthene cutting oil. Three of the USTs (Tanks 1, 2, and 3) were located along the exterior south side of the subject property and were removed in 1989. A fourth UST (Tank 4 containing diesel) was abandoned in place in the central courtyard area in or around 1989. During the removal of Tanks 1 through 3, soil samples from beneath the tanks were tested and a release was detected; therefore, additional site investigation, excavation, and remediation work was performed in this area under the oversight of the Los Angeles County Department of Public Works (LACDPW). Subsequently, a No Further Action (NFA) letter was issued for Closure Permit Number 5999B by the Los Angeles County Department of Public Works, Waste Management Division (currently Environmental Programs Division) dated August 6, 1992, which pertains to the three exterior removed USTs. The abandoned in-place UST was assigned a separate Closure Permit Number of 6000B, which was not listed on the NFA letter. However, based on preliminary conversations with LACDPW staff, this appears to be an error in which Tank 4 should have been noted, as all four USTs appear to have been closed under this NFA letter.

An *environmental issue* refers to environmental concerns identified by Partner, which do not qualify as RECs; however, warrant further discussion. The following was identified during the course of this assessment:

- Partner noted exterior storage at the subject property including raw materials (covered) and unused hydraulic equipment, as well as approximately eight 55-gallon drums with no secondary containment, predominantly on the exterior west side of the building. Due to the presence of excessive storage covered with plastic sheeting (to protect raw material from sun exposure), this area was not fully accessed and evaluated by Partner. Partner noted that the observed drums were labelled as Non-Resource Conservation and Recovery Act (RCRA) hazardous waste solid, which is an oily debris, and Non-RCRA liquid waste oil. Minor oil staining was observed on the pavement under one of the drums that was covered with an absorbent material. According to site personnel, the waste is routinely collected by Express Oil Company, a third party vendor, on a regular basis. Based on the nature of the reported contents issuance of a Stormwater Pollution Prevention Plan (SWPPP), and lack of violations noted, the exterior storage is not expected to represent a significant environmental concern;

- The subject property formerly operated printing machinery, which is no longer conducted. The printing area was located in the southeast portion of the building that was constructed in 1973. This area is used for general storage at this time. According to reported information in a prior Environmental Audit Report dated 1990, small amounts of oil-based ink and methyl ethyl ketone (MEK) (35 gallons/year) were used. No drains or other subsurface conduits are located in this area. Former printing operations are not expected to present a significant environmental concern;
- Due to the age of the subject property buildings, there is a potential that asbestos-containing material (ACM) and/or lead-based paint (LBP) are present. Overall, all suspect ACMs and painted surfaces were observed in fair to good condition and do not pose a health and safety concern to the occupants of the subject property at this time. The identified suspect ACMs would need to be sampled to confirm the presence or absence of asbestos prior to any renovation or demolition activities to prevent potential exposure to workers and/or building occupants. A prior survey conducted in 1990 (Environmental Audit report by Tetra Tech February 1990) identified asbestos in drywall next to the cooling tower and office ceiling tiles (1,360 SF of material). The amount of asbestos containing drywall was not reported.

**Conclusions, Opinions and Recommendations**

Partner has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of 12021 and 12023 Woodruff Avenue in the City of Downey, Los Angeles County, California (the "subject property"). Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This assessment has revealed evidence of a recognized environmental condition and environmental issues in connection with the subject property. Based on the conclusions of this assessment, Partner recommends the following:

- A limited subsurface investigation should be conducted in order to determine the presence or absence of soil and/or soil vapor contamination due to the current and historical use of the subject property;
- A Soil Management Plan (SMP) should be prepared to appropriately handle the known oil releases at the subject property and any unknown releases associated with the current and former industrial use;
- The NFA letter dated August 6, 1992, pertaining to the historical USTs at the subject property should be revised to clearly include Closure Permit Number 6000B for the abandoned in-place UST to avoid confusion in the future as to whether it was officially closed.
- An asbestos survey conducted in 1990 identified asbestos in the subject property building. It is not known if the survey was conducted for all equipment and building materials at the time; therefore, an asbestos survey should be performed and known ACM should be abated or removed for safety purposes (or an Operations and Maintenance (O&M) Program should be

implemented in order to safely manage the known and suspect ACMs located at the subject property).

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# 1.0 INTRODUCTION

Partner Engineering and Science, Inc. (Partner) has performed a Phase I Environmental Site Assessment (ESA) in general conformance with the scope and limitations of ASTM Standard Practice E1527-13, the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312) and as set forth by the Master Services Agreement between Prologis and Partner dated April 18, 2013 for the property located at 12021 and 12023 Woodruff Avenue in the City of Downey, Los Angeles County, California (the "subject property"). Any exceptions to, or deletions from, this scope of work are described in the report.

## 1.1 Purpose

The purpose of this ESA is to identify existing or potential Recognized Environmental Conditions (as defined by ASTM Standard E1527-13) affecting the subject property that: 1) constitute or result in a material violation or a potential material violation of any applicable environmental law; 2) impose any material constraints on the operation of the subject property or require a material change in the use thereof; 3) require clean-up, remedial action or other response with respect to Hazardous Substances or Petroleum Products on or affecting the subject property under any applicable environmental law; 4) may affect the value of the subject property; and 5) may require specific actions to be performed with regard to such conditions and circumstances. The information contained in the ESA Report will be used by Client to: 1) evaluate its legal and financial liabilities for transactions related to foreclosure, purchase, sale, loan origination, loan workout or seller financing; 2) evaluate the subject property's overall development potential, the associated market value and the impact of applicable laws that restrict financial and other types of assistance for the future development of the subject property; and/or 3) determine whether specific actions are required to be performed prior to the foreclosure, purchase, sale, loan origination, loan workout or seller financing of the subject property.

This ESA was performed to permit the *User* to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) liability (hereinafter, the "*landowner liability protections*," or "*LLPs*"). ASTM Standard E1527-13 constitutes "*all appropriate inquiry* into the previous ownership and uses of the *property* consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35)(B).

## 1.2 Scope of Work

The scope of work for this ESA is in general accordance with the requirements of ASTM Standard E1527-13. This assessment included: 1) a property and adjacent site reconnaissance; 2) interviews with key personnel; 3) a review of historical sources; 4) a review of regulatory agency records; and 5) a review of a regulatory database report provided by a third-party vendor. Partner contacted local agencies, such as environmental health departments, fire departments, and building departments in order to determine any current and/or former hazardous substances usage, storage, and/or releases of hazardous substances on the subject property. Additionally, Partner researched information on the presence of activity and use limitations (AULs) at these agencies. As defined by ASTM E1527-13, AULs are the legal or physical

restrictions or limitations on the use of, or access to, a site or facility: 1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil or groundwater on the subject property; or 2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls (IC/ECs), are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil or groundwater on the property.

If requested by Client, this report may also include the identification, discussion of, and/or limited sampling of asbestos-containing materials (ACMs), lead-based paint (LBP), mold, and/or radon.

## 1.3 Limitations

Partner warrants that the findings and conclusions contained herein were accomplished in accordance with the methodologies set forth in the Scope of Work. These methodologies are described as representing good commercial and customary practice for conducting an ESA of a property for the purpose of identifying recognized environmental conditions. There is a possibility that even with the proper application of these methodologies there may exist on the subject property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. Partner believes that the information obtained from the record review and the interviews concerning the subject property is reliable. However, Partner cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The conclusions and findings set forth in this report are strictly limited in time and scope to the date of the evaluations. The conclusions presented in the report are based solely on the services described therein, and not on scientific tasks or procedures beyond the scope of agreed-upon services or the time and budgeting restraints imposed by the Client. No other warranties are implied or expressed.

Some of the information provided in this report is based upon personal interviews, and research of available documents, records, and maps held by the appropriate government and private agencies. This report is subject to the limitations of historical documentation, availability, and accuracy of pertinent records, and the personal recollections of those persons contacted.

This practice does not address requirements of any state or local laws or of any federal laws other than the all appropriate inquiry provisions of the LLPs. Further, this report does not intend to address all of the safety concerns, if any, associated with the subject property.

Environmental concerns, which are beyond the scope of a Phase I ESA as defined by ASTM include the following: ACMs, LBP, radon, and lead in drinking water. These issues may affect environmental risk at the subject property and may warrant discussion and/or assessment; however, are considered non-scope issues. If specifically requested by the Client, these non-scope issues are discussed in Section 6.3.

## 1.4 User Reliance

Prologis, Inc., engaged Partner to perform this assessment in accordance with an agreement governing the nature, scope, and purpose of the work as well as other matters critical to the engagement. All

reports, both verbal and written, are for the sole use and benefit of Prologis, Inc. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with Partner granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against Partner, its officers, employees, vendors, successors or assigns. Any such unauthorized user shall be responsible to protect, indemnify and hold Partner, Client and their respective officers, employees, vendors, successors and assigns harmless from any and all claims, damages, losses, liabilities, expenses (including reasonable attorneys' fees) and costs attributable to such Use. Unauthorized use of this report shall constitute acceptance of and commitment to these responsibilities, which shall be irrevocable and shall apply regardless of the cause of action or legal theory pled or asserted. Additional legal penalties may apply.

This report has been completed under specific Terms and Conditions relating to scope, relying parties, limitations of liability, indemnification, dispute resolution, and other factors relevant to any reliance on this report. Any parties relying on this report do so having accepted the Terms and Conditions for which this report was completed.

## 1.5 Limiting Conditions

The findings and conclusions contain all of the limitations inherent in these methodologies that are referred to in ASTM E1527-13.

Specific limitations and exceptions to this ESA are more specifically set forth below:

- Interviews with past owners, operators, and occupants were not reasonably ascertainable and thus constitute a data gap. Based on information obtained from other historical sources (as discussed in Section 3.0), this data gap is not expected to alter the findings of this assessment;
- Partner submitted Freedom of Information Act (FOIA) request to the City of Downey City Clerk's office for original building and mechanical permits. As of the date of this report, this agency has not fulfilled Partner's request. Based on information obtained from other historical sources, this limitation is not expected to alter the overall findings of this assessment.
- Partner's view of the ground during the site assessment was obstructed due to excessive storage of raw materials, containers, bins, equipment, and other items stored on the exterior of the building. Additionally, the full view of the interior floors were largely impeded due to the presence of rubber mixing and rolling equipment. Based on information obtained from other historical sources, this limitation is not expected to alter the overall findings of this assessment.

# 2.0 SITE DESCRIPTION

## 2.1 Site Location and Legal Description

The subject property at 12021 and 12023 Woodruff Avenue in the City of Downey, California is located on the west side of Woodruff Avenue just north of Washburn Road within an industrial area of Los Angeles County. According to the Los Angeles County Assessor, the subject property is associated with Assessor's Parcel Number 6284-025-018 and is legally described as: Rancho Santa Gertrudes Sections, Township and Range Lot (Ex of St) Com N 175 feet from Southeast Corner of NE ¼ of Section 10 T3S R12W Th N 432.15 feet Th W 686.27 feet Th S to a line parallel ¼ of NE ¼ of Lot 10.

According to *Environmental Lien & AUL Report* prepared by AFX Research LLC, ownership is currently vested in Felchco Investment Group LLC since 2013.

Please refer to Figure 1: Site Location Map, Figure 2: Site Plan, Figure 3: Topographic Map, and Appendix A: Site Photographs for the location and site characteristics of the subject property.

## 2.2 Current Property Use

The subject property is currently occupied by Kirkhill, a manufacturer of custom rubber products and has occupied all or part of the subject building since initial construction in 1951. Kirkhill serves the original equipment manufacturer (OEM) industry and wholesale markets and is the original tenant of the subject building since 1951. The manufacture of products by Kirkhill has changed over the years with market demand; the main product currently manufactured is unvulcanized rubber produced in strips, blocks, and sheets. Onsite operations consist of the manufacture of rubber from raw materials through a series of processes starting with large-scale mixing of a variety of polymers, fillers, and various grades of petroleum-based process oils through rubber injection molding, rubber compression molding, sponge rubber molding, and mold fabrication. Product is then warehoused and shipped through several loading dock areas.

Several regulatory permits have been issued for the operation of equipment, storage of hazardous materials, and hazardous waste generation and industrial waste discharges to the municipal sewer system. Kirkhill reports the hazardous substances stored at the subject property through the California Environmental Reporting System (CERS), which most recently listed up to 38 chemical components that included solid raw materials such as custom polymers, talc, neoprene, carbon black, monomers, and zinc stored in 55-gallon drums and larger totes up to 300 gallons. Kirkhill uses polymers of different grades for custom orders. Liquids include petroleum hydrocarbons as lubricating oils, waste lubricating oil, and the process oil is classified as solvent refined in regulatory records. Process oils are currently stored in three interior aboveground storage tanks (ASTs) (two 3,000-gallon ASTs and one 4,000-gallon AST) within the manufacturing area. Various compressed gasses (oxygen, propane, argon, acetylene) are also used at the subject property. Open violations pertaining to hazardous materials storage were not reported by the City of Downey Fire Department or by site personnel. In addition, site personnel are not aware of any environmental impacts, enforcement orders or ongoing environmental investigations at the subject property at this time.

The manufacturing area includes an internal hydraulic system comprised of a network of below-grade trenches and overhead piping that deliver a recirculated non-contact cooling water and hydraulic oil mixture to the presses and molding machines.

A central clarifier is present that is used primarily for boiler blowdown and cooling tower discharges. The clarifier previously received rinse water from a former tank wash out area that included acid and caustic tanks and rinse water tanks, which were used to clean molds, as the molds would get covered with rubber and need to be washed, which then discharged through the clarifier. This operation is no longer conducted and all former wash tanks are gone. The earliest industrial waste discharge permit identified was issued to Kirkhill Inc. dated 1979 which listed the wastewater producing operations as blow down and bleed water from boilers and cooling tower, cleanup, and floor wash down. The constituents of wastewater discharges were listed solely as water. The rate of flow as reported as 1,752 gallons per day at that time. The active 2017 permit reported discharges as calcium stearate water, cooling tower bleed off, boiler blowdown, household washers, rinse water from molding wash rack, lab sinks, self-regenerating water softener backflush, and floor scrubber.

The subject property consists of one large single-story building that was constructed in piecemeal fashion starting in 1951 that has a central open courtyard. The manufacturing area seems to have been consistently on the southern portion of the building. There are up to 30 hydraulic presses on three lines toward the east side of the manufacturing area, and various mixing equipment toward the west side of the manufacturing area. The building includes two laboratories for R&D, newer interior 2-story mixing equipment with batch-off conveyors, special mixing rooms, a cold room, warehouse storage, and office space.

In addition to the current structures, the subject property is also improved with paved parking and driveways that extend around the building, front landscaping, and exterior storage of raw materials, large dumpsters, empty containers, and other miscellaneous active and idle equipment. The subject property maintains a storm water pollution prevention plan (SWPPP) for exterior storage of materials.

The subject property is designated for industrial development by the City of Downey.

The subject property was identified in the EDR regulatory database report, as further discussed in Section 4.2.

## 2.3 Current Use of Adjacent Properties

The subject property is located within an industrial area of the City of Downey. During the vicinity reconnaissance, Partner observed the following land use on properties in the immediate vicinity of the subject property:

***Immediately Surrounding Properties***

**North:** Industrial buildings at 12001, 12003, and 12005 Woodruff Avenue with identified occupants including Servpro (12001), Vulcan Casters (12003) and Storopack (12005)

**South:** Southeast Employment Center at 12049 Woodruff Avenue; The Reagan Banquet and Conference Center event venue at 9545 Washburn Road; Arc-Southeast Industries vocational and education center at 9501 Washburn Road; Stud Welding Products at 9459 Washburn

Road

**East:** Woodruff Avenue followed by a multi-tenant industrial building at 12010-20 Woodruff Avenue; and industrial building at 12000 Woodruff Avenue

**West:** Industrial building at 9451 Washburn Road (Wheel Creations PVD); and Stud Welding at 9455 Washburn Road

Four adjacent addresses were identified on the EDR regulatory database report, as discussed further in Section 4.2. None of the adjacent properties were identified to present an environmental concern.

## 2.4 Physical Setting Sources

### *2.4.1 Topography*

The United States Geological Survey (USGS) *Whittier, California* Quadrangle 7.5-minute series topographic map was reviewed for this ESA. According to the contour lines on the topographic map, the subject property is located at approximately 105 feet above mean sea level (MSL). The contour lines in the area of the subject property indicate the area is relatively flat with a slope in a southerly direction. The subject property is depicted as developed with the existing building in different stages of development in the topographic maps dating between 1964 to 1981, and is depicted as an area of general urban development on the most recent map dated 2012.

A copy of the most recent topographic map is included as Figure 3 of this report.

### *2.4.2 Hydrology*

According to topographic map interpretation, the direction of groundwater in the vicinity of the subject property is inferred to flow toward the south. The nearest surface water in the vicinity of the subject property is the San Gabriel River located approximately 0.36 mile east-southeast of the subject property at its nearest point. No settling ponds, lagoons, surface impoundments, wetlands, or natural catch basins were observed at the subject property during this assessment.

According to available information, a public water system operated by the City of Downey Department of Public Works serves the subject property vicinity. The City water supply and distribution system is composed of 20 groundwater wells located throughout the City and approximately 276 miles of distribution pipeline. The city wells provide one hundred percent of the domestic water supply. Partner contacted the City of Downey Public Works Department for information on the location of the city drinking water wells. The nearest city well to the subject property is located approximately 470 feet southeast (downgradient) of the subject property at 9643 Washburn Road. This is an active well that draws water from the Silverado Aquifer at a depth of approximately 540 feet bgs. No environmental issues were reported in connection with this well. This well undergoes annual groundwater testing as reported in the Annual Water Quality Report.

According to information reported by the State Water Resources Control Board GeoTracker website for a property located approximately 0.53 mile south of the subject property at 9851 Imperial Highway in Downey, the depth and direction of groundwater in the vicinity of the subject property is inferred to be approximately 33 to 53 feet below ground surface (bgs) and flow toward the southeast. This information

was collected during Second Quarter 2018 groundwater monitoring activities at this property. In addition, during a 2013 Phase II ESA investigation conducted at the subject property by PCI Environmental Services (PIC), groundwater was encountered at 45 feet bgs in two soil borings at PIC-1 and PIC-2 (but not sampled).

### *2.4.3 Geology/Soils*

The subject property is located within the San Gabriel River flood plain. Underlying soil consists of Pleistocene alluvial sediments. PIC's 2013 Phase II Investigation reviewed herein determined that to an approximate depth of 50 feet below surface, soil consists of brown, fine grained sand and silt overlying grey, clayey silt. The lithology is consistent with alluvial deposition within the San Gabriel River Flood Plain.

Based on information obtained from the USDA Natural Resources Conservation Service Web Soil Survey online database, the subject property is mapped as Urban land-Hueneme, drained-San Emigdio complex, 0 to 2 percent slopes (#1000). The landform is described as alluvial fans and the parent material is described as discontinuous human-transported material over mixed alluvium derived from granite and/or sedimentary rock.

### *2.4.4 Flood Zone Information*

Partner performed a review of the Flood Insurance Rate Map, published by the Federal Emergency Management Agency (FEMA). According to Community Panel Number 06037C1840F dated September 26, 2008, the subject property is mapped as located in Zone X, an area of 0.2 percent annual chance flood hazard.

A copy of the reviewed flood map is included in Appendix B of this report.

# 3.0 HISTORICAL INFORMATION

Partner obtained historical use information about the subject property from a variety of sources. A chronological listing of the historical data found is summarized in the table below:

| *Historical Use Information* | | |
|---|---|---|
| **Period/Date** | **Source** | **Description/Use** |
| 1896-1902 | Topographic Maps | Possible Small Farm House |
| 1928-1947 | Aerial Photographs, Previous Reports | Agricultural |
| 1951-Present | Aerial Photographs, City Directories, Topographic Maps, Previous Reports, Assessor's Records | Kirkhill Rubber Mfg/Industrial Usage |

According to available historical sources, the subject property was formerly open farm land going back to at least 1928 until it was developed in 1951. The property appeared to be row crops with no farm structures identified in aerial photographs; however, the property may have been developed in the late 19th Century with a farm home as shown on topographic maps, which had been removed by 1923. Anecdotally, farmers in the Downey area typically grew grain, corn, castor beans, and fruit, and by 1935, Downey was characterized as an orange-grove town.

Occupants of the subject property have included Kirkhill Inc. (et.al, including Kirkhill Chemical) on the southern/manufacturing areas of the subject property, as well as tenants including Charcoal Masters International, Immanuel Industries Inc., Source One Staffing, Felchco Investment Group LLC, Cal Pipe Industries Inc., Cal Pipe Manufacturing Inc., Carnaval Access, Discount Advertising Xpress, Ikeep Inventing Corporation, Kollaborator Productions, Inc., Monster Sells, Hector Moran, Nomad Trading, Perimeter Defense Tech Inc., PTG International Inc., Standard industries and Kong Pet Toys on the warehouse/northern portions. Based on interviews with the site contact, it appears that the northern side of the subject property was leased at various times for warehouse and office space.

## 3.1 Aerial Photograph Review

Partner obtained available aerial photographs of the subject property and surrounding area from Environmental Data Resources (EDR). The following observations were noted to be visible on the subject property and adjacent properties during the aerial photograph review:

| *Date: 1928, 1938, and 1947* | *Scale: 1"=500'* |
|---|---|
| **Subject Property:** | The subject property was depicted as open agricultural land planted with row crops with no structures present. Woodruff Avenue and Washburn Road were both present at that time. |
| **North:** | Agricultural land with no structures present |
| **South:** | Agricultural land with no structures present |
| **East:** | Agricultural land with no structures present |
| **West:** | Agricultural land with no structures present |

| *Date: 1953* | *Scale: 1"=500'* |
|---|---|
| **Subject Property:** | The subject property was constructed with approximately half the square footage of the current building primarily in the center and north side of the parcel and appeared as separate structures adjoined at the corners. The west side of the |

| ***Date: 1953*** | ***Scale: 1"=500'*** |
|---|---|
| | property was undeveloped land that may have remained agricultural, as it looked similar to the surrounding farm land that was present to the north and west |
| **North:** | Agricultural land with no structures present |
| **South:** | The existing Arc-Southeast Industries at 9501 Washburn Road was present that was constructed in 1952, per Assessor's records |
| **East:** | The area was developed with a large manufacturing facility with several long rectangular buildings and a rail spur that entered the property from the east. According to city directories, this facility was occupied by Darnell Corporation that developed the facility in 1951 for the manufacture of casters and rubber products such as bumpers and extrusions. The area closest to the subject property was a parking lot |
| **West:** | Agricultural land with no structures present |

| ***Date: 1963*** | ***Scale: 1"=500'*** |
|---|---|
| **Subject Property:** | The subject property building had expanded to the west and south since the 1953 photograph. The west side of the property remained undeveloped with no apparent usage. The southern and eastern portions of the property appeared to be used for parking |
| **North:** | Undeveloped land covered with vegetation that did not appear to be cultivated |
| **South:** | An additional development was present from 1953 at 9545 Washburn Road that was constructed in 1957 as well as the building at 9459 Washburn Road built in 1958 |
| **East:** | No significant changes noted |
| **West:** | The existing industrial buildings currently occupied by Stud Welding Products were present that were constructed in 1959 and 1960, per Assessor's records |

| ***Date: 1970*** | ***Scale: 1"=500'*** |
|---|---|
| **Subject Property:** | The southern portion subject building had expanded slightly to the west with two new building extensions in the center of the building. The west side of the property remained undeveloped covered with vegetation with no apparent usage. |
| **North:** | Undeveloped land that may have been used for off road recreation due to the presence of dirt paths and possible vehicles parked on the property |
| **South:** | The current existing buildings appear to be present. The building located at 12049 Woodruff Avenue was constructed in1963 |
| **East:** | The current large facility was first present |
| **West:** | The current existing industrial buildings appear to be present |

| ***Date: 1972*** | ***Scale: 1"=500'*** |
|---|---|
| **Subject Property:** | Additions had been added to the western and eastern ends of the northern building, as well as a central building (to the west); the west side of the property was fully developed with existing building space and pavement used for parking and exterior storage |
| **North:** | No significant changes noted |
| **South:** | No significant changes noted |
| **East:** | No significant changes noted |
| **West:** | No significant changes noted |

| *Date: 1983* | *Scale: 1"=500'* |
|---|---|
| **Subject Property:** | The subject property building appeared similar to its current configuration, with additions on the eastern and western sides of the southern building. |
| **North:** | The existing buildings were present that were constructed in 1978 and 1980 |
| **South:** | No significant changes noted |
| **East:** | No significant changes noted |
| **West:** | No significant changes noted |

| *Date: 1989* | *Scale: 1"=500'* |
|---|---|
| **Subject Property:** | No significant changes noted |
| **North:** | No significant changes noted |
| **South:** | No significant changes noted |
| **East:** | The property had been redeveloped into the existing industrial buildings that consisted of four new large buildings on one parcel constructed in 1988. The main address for this parcel is 12000 Woodruff Avenue and also includes 12020 Woodruff Avenue |
| **West:** | No significant changes noted |

| *Date: 1994 to 2016* | *Scale: 1"=500'* |
|---|---|
| **Subject Property:** | No significant changes noted |
| **North:** | No significant changes noted |
| **South:** | No significant changes noted |
| **East:** | No significant changes noted |
| **West:** | No significant changes noted |

Copies of reviewed aerial photographs are included in Appendix B of this report.

## 3.2 Fire Insurance Maps

Sanborn map coverage was not available for the subject property. A copy of the "No Coverage" letter is attached in Appendix B.

## 3.3 City Directories

Partner reviewed historical city directories obtained from EDR for past names and businesses that were listed for the subject property and adjacent properties. The findings are presented in the following table:

| *City Directory Search for 12021 and 12023 Woodruff Avenue (Subject Property)* | |
|---|---|
| **Year(s)** | **Occupant Listed** |
| 1953 | Kirkhill Inc. (12021) – no listing for 12023 |
| 1961 | Kirkhill Chemical (12021) – no listing for 12023 |
| 1964 | Kirkhill Inc. (12021) – no listing for 12023 |
| 1971 | Kirkhill Inc. (12021) – no listing for 12023 |
| 1975 | Kirkhill Inc. (12021) – no listing for 12023 |
| 1980 | Kirkhill Inc. (12021) – no listing for 12023 |
| 1985 | Kirkhill Inc. (12021) – no listing for 12023 |
| 1992 | Kirkhill Inc. (12021) – no listing for 12023 |
| 1995 | Kirkhill Inc. (12021) – no listing for 12023 |

***City Directory Search for 12021 and 12023 Woodruff Avenue (Subject Property)***

| Year(s) | Occupant Listed |
|---|---|
| 2000 | Charcoal Masters International, Immanuel Industries Inc., Source One Staffing (12021) – no listing for 12023 |
| 2005 | Source One Staffing (12021) and Felchco Investment Group LLC (12023). Kong Pet Toys, a distributor of chewable pet toys, was also reported as a tenant in a prior report prepared by Orswell & Kasman Inc., dated 2005 |
| 2010 | Cal Pipe Industries Inc., Cal Pipe Manufacturing Inc., Carnaval Access, Discount Advertising Xpress, Ikeep Inventing Corporation, Kollaborator Productions Inc., Monster Sells, Hector Moran, Nomad Trading, Perimeter Defense Tech Inc., PTG International Inc, Source One Staffing, Standard Industries (12021) – no listing for 12023 |
| 2014 | Perimeter Defense Tech Inc. (12021) – no listing for 12023 |

According to the city directory review, the subject property has been occupied by Kirkhill since 1953 then additional tenants appeared to lease part of the building starting in 2000 that appeared to be primarily office and warehouse with the exception of Cal Pipe Manufacturing. The specific use of Cal Pipe Manufacturing was not available to Partner at the time of this assessment; however, it is noted that CERS documentation indicated that Cal Pipe Industries reported hazardous materials and hazardous waste that included various compressed gases, alkaline soap solution, waste oil, lubricating oil, lacquer thinner, and Stoddard solvent in 55-gallon drum.

***City Directory Search for Adjacent Properties***

| Year(s) | Occupant Listed |
|---|---|
| 1953 | Darnell Corporation Ltd., molders (12000 Woodruff) |
| 1961 | Darnell Corporation (12000 Woodruff); California Mayflower Moving & Storage (9453 Washburn); RF Dickson Sweeping Service (9455 Washburn); Swenson Manufacturing Metal Stamping (9459 Washburn); Aerojet receiving (9501 Washburn); California Crane & Equipment Corporation (9545 Washburn) |
| 1964 | Darnell Corporation Ltd. (12000 Woodruff); Western Spring & Manufacturing Company (9451 Washburn); California Mayflower Moving & Storage (9453 Washburn); RF Dickson Company Inc. (9455 Washburn); Swenson Manufacturing Company (9459 Washburn) |
| 1971 | Darnell Corporation Ltd. (12000 Woodruff); United Drill Bushing (12049 Woodruff); Tassos Drive In (12050 Woodruff); Western Spring & Manufacturing Company (9451 Washburn); Aero Mayflower Moving, California Mayflower Moving, Mayflower Moving (9455 Washburn); Swenson Manufacturing Company (9459 Washburn); SE Work Training Center (9501 Washburn); Ace Screw Machine Products (9545 Washburn) |
| 1975 | XXXX (12000 Woodruff); United Drill Bushing (12049 Woodruff); Western Spring & Manufacturing Company (9451 Washburn); XXXX (9455 Washburn); Swenson Manufacturing Company (9459 Washburn); Southeast Association, Southeast Work Training Center, Value Vlg Pickups (9501 Washburn); Ace Screw Machine Products (9545 Washburn) |
| 1980 | Darnell Corporation Ltd. (12000 Woodruff); Best Tank, Downey Texaco, House of Hmr Office and warehouse, Mobile Electronics (12001 Woodruff); United Drill Bushing (12049 Woodruff); Tassos Drive In (12050 Woodruff); Western Spring & Manufacturing Company (9451 Washburn); XXXX (9455 Washburn); Swenson Manufacturing Company (9459 Washburn); Southeast Association, Southeast Work Training Center, Value Vlg Pickups (9501 Washburn) |

*City Directory Search for Adjacent Properties*

| Year(s) | Occupant Listed |
|---|---|
| 1985 | Darnell Corporation Ltd. (12000 Woodruff); Chart Masters Print, Don Hampton Blowers, House of Humor Nvty, HRS Inc., J&J Showers Pans, Mainland Products (12001 Woodruff); Lumex Inc. (12003 Woodruff); Association Retarded (12049 Woodruff); Western Spring & Manufacturing Company (9451 Washburn); XXXX (9455 Washburn); American Graphics (9459 Washburn); Southeast Work Training Center (9501 Washburn); XXXX (9531 Washburn); Association Retarded (9555 Washburn) |
| 1992 | Linear Inc. (12000 Woodruff); Morris House of Humor, National Sanitary Supply Company (12001 Woodruff); Lumex Inc., Ward Manufacturing Inc. (12003 Woodruff); Industrial Paper Distributors (12005 Woodruff); Storopack Inc. (12007 Woodruff); Association (12049 Woodruff); restaurant (12050 Woodruff); Western Spring & Manufacturing Company (9451 Washburn); William Gardner (9453 Washburn); Qualls Stud Welding Products (9455 Washburn); American Peg Board Printing (9459 Washburn); Association (9501 Washburn) |
| 1995 | Downey Family YMCA, Downey Service & Performance Center, Roger Morgan, Torrance Heat Treating (12000 Woodruff); Morris Costumes Inc., National Sanitary Supply Company, Vac Man Sweeper Company (12001 Woodruff); Lumex Inc., Ward Manufacturing Inc. (12003 Woodruff); Storopack Inc. (12005 and 12007 Woodruff); Gelber Industries, Inc., Hsin Rong Imports, RCM Trucking, State Industries Inc. (12010 Woodruff); Anaba International (12020 Woodruff); Association (12049); Silkscreening by Classic Graphix (9459 Washburn); Association (9501); Association for Retarded (9555 Washburn) |
| 2000 | Negev Wires USA Inc, Rotatech International Company (12000 Woodruff); Mika C Cross, PR Productions (12001 Woodruff); EPM Marketing Inc. (12003 Woodruff); Storopack Inc. (12007 Woodruff); Kuka Valve Company Inc., Luigi & Sons Inc., State Industries Inc. (12010 Woodruff); Interparts Industries Inc. (12020 Woodruff); Association for Retarded (12049 Woodruff); Eagle Springs (9453 Washburn); Terry Acker, Qualls Stud Welding Products (9455 Washburn); Silkscreening by Classic Graphix (9459 Washburn); Arc Southbay (9555 Washburn) |
| 2005 | Phoenician Stone Imports, Young Mens Christian Association of LA (12000 Woodruff); Duane Ely (12001 Woodruff); Velocity (12003 Woodruff); Storopack Inc. (12007 Woodruff); Makaha Industries Inc., Pro Nine (12010 Woodruff); Gralen Company (12020 Woodruff); Arc Southeast Los Angeles County, Association for Retarded Citizen, Southeast Employment Center (12049 Woodruff); Qualls Stud Welding Products (9455 Washburn); Silkscreening by Classic Graphix (9459 Washburn); Arc Southeast Los Angeles County, Association for Retarded Citizen (9501 Washburn) |
| 2010 | Century Traders, El Amigo (12000 Woodruff); Vend Natural (12001 Woodruff); Richard Taylor, Velocity Express Corporation, Vulcan Casters (12003 Woodruff); Storopack Inc. (12007 Woodruff); Arc Southeast Los Angeles County, Association for Retarded Citizen, Southeast Employment Center (12049 Woodruff); restaurant (12050 Woodruff); Terry Acker, Sow A Seed Inc. (9455 Washburn); Qualls Stud Welding Products (9459 Washburn); Arc Southeast Los Angeles County (9501 Washburn); Arc Southeast Day Act Training Center (9555 Washburn) |
| 2014 | Dan Jumper (12001 Woodruff); Vulcan Casters (12003 Woodruff); Storopack Inc. (12007 Woodruff); Fei 2758 TPW Down, Ferguson Enterprises Inc. (12010 Woodruff); Monggo America Inc. (12020 Woodruff); Arc Southeast Los Angeles County, Association for Retarded Citizen, Southeast Employment Center, Just a Buck 19 (12049 Woodruff); restaurant (12050 |

***City Directory Search for Adjacent Properties***

| Year(s) | Occupant Listed |
|---|---|
| | Woodruff); American PVD Coatings LLC (9451 Washburn); Sow A Seed Inc. (9455 Washburn); Classic Graphix, Qualls Stud Welding Products (9459 Washburn); Arc Southeast Los Angeles County (9501 Washburn); Arc Southeast Day Act Training Center (9555 Washburn) |

* XXXX= A phone number is present but is not registered to a tenant or is disconnected

According to the city directory review, the adjacent properties have been occupied by various industrial manufacturing tenants since their development. Based on the city directory review, no environmentally sensitive listings were identified for the adjacent property addresses.

Copies of reviewed city directories are included in Appendix B of this report.

## 3.4 Historical Topographic Maps

Partner reviewed historical topographic maps obtained from EDR. No pits, ponds, lagoons, or areas of obvious fill were noted in the mapping. The following observations were noted to be depicted on the subject property and adjacent properties during the topographic map review:

***Date: 1896, 1899, 1902***

| | |
|---|---|
| **Subject Property:** | The subject property was depicted as primarily undeveloped land that may have had a small structure present along the north side that was most likely a residence or farm structure. Woodruff Avenue and Washburn Road were present at that time |
| **North:** | Undeveloped land with no apparent usage |
| **South:** | Undeveloped land with no apparent usage |
| **East:** | Woodruff Avenue was depicted followed by undeveloped land with the San Gabriel River depicted beyond |
| **West:** | Undeveloped land with no apparent usage |

***Date: 1923, 1925, 1936, 1942, 1943, 1947, 1949, 1951/1952***

| | |
|---|---|
| **Subject Property:** | The subject property was depicted as undeveloped land with no apparent usage. The topographic map may not depict agricultural land where it is present |
| **North:** | Undeveloped land with no apparent usage |
| **South:** | Undeveloped land followed by Washburn Crossing Road as it was named at that time. |
| **East:** | Undeveloped land with no apparent usage |
| **West:** | Undeveloped land with no apparent usage |

***Date: 1964/1965, 1972,1981***

| | |
|---|---|
| **Subject Property:** | The subject property was depicted as developed with the original buildings in 1964 with subsequent building additions. |
| **North:** | Undeveloped land until 1981 when industrial development was depicted |
| **South:** | The existing industrial buildings were depicted with subsequent additions |
| **East:** | The Darnell Corporation manufacturing facility was depicted during this time period |
| **West:** | The existing industrial buildings were depicted during this time period |

Copies of reviewed topographic maps are included in Appendix B of this report.

# 4.0 REGULATORY RECORDS REVIEW

## 4.1 Regulatory Agencies

### *4.1.1 State Department*

| ***Regulatory Agency Data*** | |
|---|---|
| **Name of Agency:** | California Environmental Protection Agency (Cal EPA) California Department of Toxic Substances Control (DTSC) |
| **Source:** | http://www.envirostor.dtsc.ca.gov/public/<br>http://hwts.dtsc.ca.gov/report_search.cfm?id=5<br>https://siteportal.calepa.ca.gov |
| **Agency Address:** | Headquarters: 1001 I Street, Sacramento, CA 95814 |
| **Agency Phone Number:** | (800) 728-6942 |
| **Date of Contact:** | September 2018 |
| **Method of Communication:** | Online Database Search |
| **Summary of Communication:** | The EnviroStor database is the DTSC's data management system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. No records were identified for the subject property on the EnviroStor database.<br><br>In addition, the DTSC Hazardous Waste Tracking System (HWTS) was researched for hazardous waste manifest data submitted to the California DTSC. The subject property was identified on the HWTS database going back to 1997, which was the first year to show California Waste Codes by Year, which was under the name of Kirkhill Manufacturing Inc. Since 2013 to 2018, the waste codes listed for the subject property included waste oil and mixed oil, oil/water separation sludge, and other organic solids. This is consistent with copies of hazardous waste manifests reviewed from the subject property. Three hazardous waste manifests were reviewed dated July, August, and September 2018 that listed Non-RCRA hazardous waste liquid (waste oil) 590 gallons; Non-RCRA hazardous waste liquid (waste oil) 1,900 gallons; and Non-RCRA hazardous waste solid (oily debris) in 26 55-gallon drums. The manifests all list Express Oil Company as the transporter.<br><br>Earlier hazardous waste manifest data dated between 1997 and 2013 listed six waste codes as other inorganic solid waste, unspecified solvent mixture, waste oil and mixed oil, oil/water separation sludge, off-spec, aged, or surplus organics, other organic solids. These materials were not necessarily generated on a consistent yearly basis but depicted as periodic yearly disposal events.<br><br>Partner reviewed the CalEPA California Environmental Reporting System (CERS) database in which Kirkhill Inc. and Kirkhill |

Manufacturing Company have profile listings; however, only Kirkhill Manufacturing reports chemical storage. Kirkhill Manufacturing currently lists up to 38 chemical components that included solid raw materials such as custom polymers, talc, neoprene, carbon black, monomers, and zinc stored in 55-gallon drums and larger totes up to 300 gallons. Kirkhill uses various polymers of different grades for custom orders, which are reflected in the CERS inventory. Hazardous liquids include petroleum hydrocarbons as lubricating oils, waste lubricating oil, and the process oil is classified as solvent refined in regulatory records. Process oils are currently stored in three interior aboveground storage tanks (ASTs) (two 3,000-gallon ASTs and one 4,000-gallon AST) within the manufacturing area; see Section 6.2.2. Various compressed gasses (oxygen, propane, argon, acetylene) are also listed. The noted materials in CERS and HWTS are consistent with Partner's visual observations at the subject property.

Under the compliance tab in CERS were listed eight evaluations and violations dated 2015, all of which appear to have returned to compliance by 2016. The violations included the failure to update Hazardous Materials Business Plan (HMBP) and chemical inventory and electronically submit information to CERS. No CERS submittal was on file at the time of February 18, 2015, inspection. It was noted that the business recently assumed control of entire building complex and will have to amend site map/floor plan. Inspection found fire code violations requiring further corrective action also, which were also corrected per the City Fire Department (see Section 4.1.4). By May 2015, it was reported that all violations were abated. HMBP updated and electronically submitted to CERS. No further action was required at that time.

It was also reported in the Compliance section of CERS that Kirkhill returned to compliance on April 11, 2016. Observation: 44 x 55 gallon drums of waste oil were reported. The correction action was reported as: immediately label the containers and ensure that all hazardous waste containers are marked with all the required information.

CERS also reported a profile for the former tenant Cal Pipe Industries, which listed an Environmental Interest Start Date of July 2013 and last inspection of January 2015. No Compliance information was reported other than routine inspections were done by local agency including the Downey Fire Department. The Cal Pipe chemical storage inventory listed 13 items that included various compressed gases (acetylene, argon and carbon dioxide in helium, argon, nitrogen, oxygen, propane, helium), alkaline soap solution,

| *Regulatory Agency Data* | |
|---|---|
| | waste oil, lubricating oil, lacquer thinner, and Stoddard solvent in 55-gallon drums. The amount of Stoddard solvent was reported as 12 to 59 gallons on average daily amount. |

Copies of pertinent files are attached in Appendix B of this report.

### *4.1.2 Regional Water Quality Agency*

| *Regulatory Agency Data* | |
|---|---|
| **Name of Agency:** | Los Angeles Regional Water Quality Control Board (RWQCB) via GeoTracker |
| **Source:** | http://geotracker.waterboards.ca.gov/default.asp |
| **Agency Address:** | 320 West Fourth Street, Suite 200, Los Angeles, California |
| **Agency Phone Number:** | (213) 576-6600 |
| **Date of Contact:** | September 2018 |
| **Method of Communication:** | Online Database Search |
| **Summary of Communication:** | GeoTracker is the State Water Boards' data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, such as Leaking Underground Storage Tank (LUST) Sites, Department of Defense Sites, and Cleanup Program Sites. GeoTracker also contains records for various unregulated projects as well as permitted facilities including: Irrigated Lands, Oil and Gas production, operating Permitted USTs, and Land Disposal Sites. GeoTracker portals retrieve records and view integrated data sets from multiple State Water Board programs and other agencies.<br><br>The subject property is listed on the GeoTracker database under the name of Kirkhill Inc. at 12021 Woodruff Avenue for the investigation and cleanup of its former USTs. The status is listed as Case Closed dated August 6, 1992, which is consistent with the closure letter issued by the Los Angeles County Department of Public Works, Waste Management Division (now Environmental Programs Division) with the same date. GeoTracker reported that the case was associated with a tank closure and was a soil case. No remedial actions were entered. |

Copies of pertinent files are attached in Appendix B of this report.

### *4.1.3 Air Pollution Control Agency*

| *Regulatory Agency Data* | |
|---|---|
| **Name of Agency:** | South Coast Air Quality Management District (AQMD) |
| **Source:** | http://www.aqmd.gov/home/tools/public/find |
| **Agency Address:** | 21865 Copley Dr., Diamond Bar, CA |
| **Agency Phone Number:** | (909) 396-3700 |

| *Regulatory Agency Data* | |
|---|---|
| **Date of Contact:** | September 2018 |
| **Method of Communication:** | Online Facility INformation Detail (FIND) database |
| **Summary of Communication:** | According to records reviewed, the subject property maintains active air quality permits for several pieces of equipment including one or more of the following: baghouse, rubber blending, rubber roll mills, a boiler, and rubber presses/molds with ram diameter greater than 26 inches. The property is listed as having inactive permits for the same equipment including a rubber extruder and three diesel fuel oil storage tanks. No outstanding violations are reported at this time as it pertains to the active permits. The subject property was cited in the past at least six times between 2004 and 2010 for various emissions-related items including, but not limited to, baghouse connections, baghouse permitting, boiler testing and permitting, and production records, which have been corrected and brought into compliance shortly thereafter. |

Copies of pertinent files are attached in Appendix B of this report.

### *4.1.4 City of Downey Fire Department*

| *Regulatory Agency Data* | |
|---|---|
| **Name of Agency:** | City of Downey Fire Department |
| **Source/Point of Contact:** | Lee Kirby, HazMat Specialist/Fire Prevention Officer |
| **Agency Address:** | 11111 Brookshire Avenue, Downey, CA 90241 |
| **Agency Phone Number:** | (562) 904-7345 |
| **Date of Contact:** | September 2018 |
| **Method of Communication:** | In Person, Email Public Records Request, Telephone |
| **Summary of Communication:** | According to records reviewed, the most recent fire-hazmat code compliance inspection at the Kirkhill Manufacturing plant (12023 Woodruff) took place on February 19, 2015. All documented violations were satisfactorily abated and facility return-to-compliance on June 17, 2015. The violations noted pertained to labeling, height limits, evacuation plans, egress obstruction, fire lanes, securing compressed gases, and abatement of electrical hazards. The inspection report did not note spills, leaks, secondary containment violations, or other significant issues pertaining to possible environmental concerns.<br><br>This agency also provided CERS documentation for Kirkhill (2018) and former Cal Pipe Industries (2013). Cal Pipe Industries reported hazardous materials and hazardous waste that included various compressed gases, alkaline soap solution, waste oil, lubricating oil, lacquer thinner, and Stoddard solvent in 55-gallon drum. Photos were included with the documentation that depicted an oil spill/stain near one or more exterior bins, one of which had absorbent material over the spill. |

Copies of pertinent files are attached in Appendix B of this report.

### *4.1.5 Los Angeles County Department of Public Works*

| ***Regulatory Agency Data*** | |
|---|---|
| **Name of Agency:** | Los Angeles County Department of Public Works, Environmental Programs Division (LACEPD) |
| **Source:** | http://ladpw.org/epd/cleanla/OpenFileReview.aspx |
| **Agency Address:** | 900 S. Fremont Avenue, Alhambra, CA 91803 |
| **Agency Phone Number:** | (626) 458-5100 |
| **Date of Contact:** | September 2018 |
| **Method of Communication:** | In Person File Review, Online Database Search, Telephone |
| **Summary of Communication:** | The LACEPD maintains the UST program for the subject property. This agency had one file pertaining to the historical USTs operated at the subject property. According to reviewed information from this agency and other sources, a total of four steel USTs were formerly operated at the subject property, three of which contained diesel to fuel the boilers associated with rubber molding, and one of which contained naphthene oil (process oil). Three of the USTs (Tanks 1, 2 and 3) were located along the exterior south side of the subject property that were removed in 1989. A fourth UST (Tank 4 containing diesel) was abandoned in place in the central courtyard area in or around 1989. During the removal of Tanks 1 through 3, soil samples from beneath the tanks were tested and some contamination was found; therefore, additional site investigation, excavation, and remediation work was performed in this area under the oversight of the Los Angeles County Department of Public Works. Due to this remediation work, the LARWQCB was copied on the correspondence and therefore was placed in the on-line GeoTracker database (also attached in Appendix B in previous reports and discussed in Section 5.2.6).<br><br>A No Further Action (NFA) letter was issued for Closure Permit Number 5999B by the Los Angeles County Department of Public Works, Waste Management Division (LACDPW) (currently Environmental Programs Division) dated August 6, 1992, which pertains to the three exterior removed USTs. The abandoned in-place UST had a different Closure Permit Number of 6000B, which was not listed on the NFA letter. However, based on preliminary conversations with LACDPW, this appears to be an error in which Tank 4 should have been noted, and it appears that all four USTs have been closed under this NFA letter. |

Copies of pertinent files are attached in Appendix B of this report.

### 4.1.6 Los Angeles County Sanitation District

| *Regulatory Agency Data* | |
|---|---|
| **Name of Agency:** | Los Angeles County Sanitation District, Industrial Waste Section |
| **Source:** | https://www.lacsd.org/wastewater/industrial_waste/permit.asp |
| **Agency Address:** | 1955 Workman Mill Road, Whittier, CA 90601 |
| **Agency Phone Number:** | (562) 908-4288 x2900 – Industrial Waste Section |
| **Date of Contact:** | September 2018 |
| **Method of Communication:** | Email Public Records Request |
| **Summary of Communication:** | The Los Angeles County Sanitation District, Industrial Waste Section is the lead oversight agency as it pertains to the issuance of industrial waste discharge permits for the subject property. According to records reviewed, an active industrial waste discharge permit dated 2017 is on file for the subject property for discharges reported as calcium stearate water (a surfactant containing stearic acid and calcium oxide), cooling tower bleed off, boiler blowdown, household washers, rinse water from molding wash rack, lab sinks, self-regenerating water softener backflush, and floor scrubber. The earliest industrial waste discharge permit identified was issued to Kirkhill Inc. dated 1979 which listed the wastewater producing operations as blow down and bleed water from boilers and cooling tower, cleanup and floor wash down. The constituents of wastewater discharges were listed solely as water. The rate of flow as reported as 1,752 gallons per day at that time. |

Copies of pertinent files are attached in Appendix B of this report.

### 4.1.7 Building Department

| *Regulatory Agency Data* | |
|---|---|
| **Name of Agency:** | City of Downey Building & Safety |
| **Source:** | City Clerk |
| **Agency Address:** | 11111 Brookshire Avenue, Downey, CA 90241 |
| **Agency Phone Number:** | (562) 904-7142 |
| **Date of Contact:** | September 6, 2018 |
| **Method of Communication:** | In Person, Email, Telephone |
| **Summary of Communication:** | Partner visited the City of Downey Building Department on September 6, 2018, to review available building and mechanical permits issued to the subject property, which were found to be on microfiche. Several sheets of microfiche records were identified; however, the reader machine was not operational. Therefore, a written public records request was submitted with the City Clerk for copies to be emailed when possible, to which the City has not responded (although with an initial information request submitted in July 2018). |

| *Regulatory Agency Data* | |
|---|---|
| | The public records are pending as of the date of this report and will be forwarded should pertinent information be identified that would change the conclusions of this report. |

A copy of pertinent documents is included in Appendix B of this report.

### *4.1.8 Planning Department*

| *Regulatory Agency Data* | |
|---|---|
| **Name of Agency:** | City of Downey Planning Department |
| **Source:** | N/A |
| **Agency Address:** | 11111 Brookshire Avenue, Downey, CA 90241 |
| **Agency Phone Number:** | (562) 869-7331 |
| **Date of Contact:** | September 2018 |
| **Method of Communication:** | Online |
| **Summary of Communication:** | The subject property is zoned M-2 for industrial development by the City of Downey. |

A copy of pertinent records is attached in Appendix B of this report.

### *4.1.9 Oil & Gas Exploration*

| *Regulatory Agency Data* | |
|---|---|
| **Name of Agency:** | California Division of Oil, Gas and Geothermal Resources (DOGGR) |
| **Source:** | http://maps.conservation.ca.gov/doms/index.html |
| **Agency Address:** | Headquarters: 801 K Street, MS 24-01, Sacramento, CA 95814 |
| **Agency Phone Number:** | (916) 322-1080 |
| **Date of Contact:** | September 2018 |
| **Method of Communication:** | Online Database Search |
| **Summary of Communication:** | According to DOGGR, no oil or gas wells are located on or immediately adjacent to the subject property. Also, the subject property is not located within a designated oil field. |

A copy of pertinent records is attached in Appendix B of this report.

### *4.1.10 Assessor's Office*

| *Regulatory Agency Data* | |
|---|---|
| **Name of Agency:** | Los Angeles County Assessor |
| **Source:** | http://maps.assessor.lacounty.gov/mapping/viewer.asp |
| **Agency Address:** | 500 West Temple Street Room 225, Los Angeles, CA 90012 |
| **Agency Phone Number:** | (213) 974-3211 |
| **Date of Contact:** | September 2018 |
| **Method of Communication:** | Online |
| **Summary of Communication:** | According to the Los Angeles County Assessor, the subject property is associated with Assessor's Parcel Number 6284-025-018 and is legally described as: Rancho Santa Gertrudes Sections, Township and |

| *Regulatory Agency Data* | |
|---|---|
| | Range Lot (Ex of St) Com N 175 feet from Southeast Corner of NE ¼ of Section 10 T3S R12W Th N 432.15 feet Th W 686.27 feet Th S to a line parallel ¼ of NE ¼ of Lot 10. According to Environmental Lien & AUL Report prepared by AFX Research LLC, ownership is currently vested in Felchco Investment Group LLC since 2013. |

A copy of pertinent records is attached in Appendix B of this report.

## 4.2 Mapped Database Records Search

Information from standard federal, state, county, and city environmental record sources was provided by EDR. Data from governmental agency lists are updated and integrated into one database, which is updated as these data are released. The information contained in this report was compiled from publicly available sources and the locations of the sites are plotted utilizing a geographic information system, which geocodes the site addresses. The accuracy of the geocoded locations is approximately +/-300 feet.

Using the ASTM definition of migration, Partner considers the migration of hazardous substances or petroleum products in any form onto the subject property during the evaluation of each site listed on the radius report, which includes solid, liquid, and vapor.

### *4.2.1 Regulatory Database Summary*

*Radius Report Data*

| Database | Search Radius (mile) | Subject Property | Adjacent Properties | Sites of Concern |
|---|---|---|---|---|
| Federal NPL or Delisted NPL Site | 1.00 | N | N | N |
| Federal CERCLIS Site | 0.50 | N | N | N |
| Federal CERCLIS-NFRAP Site | 0.50 | N | N | N |
| Federal RCRA CORRACTS Facility | 1.00 | N | N | N |
| Federal RCRA TSDF Facility | 0.50 | N | N | N |
| Federal RCRA Generators Site (LQG, SQG, CESQG) | 0.25 | **Y** | **Y** | N |
| Federal IC/EC Registries | 0.50 | N | N | N |
| Federal ERNS Site | Subject Property | N | N | N |
| State/Tribal Equivalent NPL | 1.00 | N | N | N |
| State/Tribal Equivalent CERCLIS | 1.00 | N | N | N |
| State/Tribal Landfill/Solid Waste Disposal Site | 0.50 | N | N | N |
| State/Tribal Leaking Storage Tank Site | 0.50 | **Y** | N | N |
| State/Tribal Registered Storage Tank Sites (UST/AST) | 0.25 | N | N | N |
| State/Tribal Voluntary Cleanup Sites (VCP) | 0.50 | N | N | N |
| State/Tribal Spills | 0.50 | N | N | N |
| State HazNet Manifest Data | Varies | **Y** | N | N |
| Emissions | Varies | **Y** | N | N |
| Federal Brownfield Sites | 0.50 | N | N | N |

| *Radius Report Data* | | | | |
|---|---|---|---|---|
| **Database** | **Search Radius (mile)** | **Subject Property** | **Adjacent Properties** | **Sites of Concern** |
| State Brownfield Sites | 0.50 | N | N | N |
| Los Angeles County HMS/CIWQS | Varies | **Y** | **Y** | N |
| EDR MGP | Varies | N | N | N |
| EDR US Hist Auto Station | Varies | N | N | N |
| EDR US Hist Cleaners | Varies | N | N | N |
| Historical UST | Varies | **Y** | **Y** | N |
| Other (ECHO/FINDS/Hist Cortese) | Varies | **Y** | **Y** | N |

### *4.2.2 Subject Property Listings*

The subject property is identified in the EDR regulatory database report, as discussed below:

- The subject property, identified as Kirkhill Inc. and Kirkhill Rubber Inc., at 12021 Woodruff Avenue, is listed on several state and local regulatory databases, where much of the information was previously discussed in Section 4.1. Kirkhill Inc. was listed on the Resource Conservation and Recovery Act (RCRA_-Small Quantity Generator (SQG), LUST, Historical UST, Facility Index (FINDS), Enforcement Compliance History On-line (ECHO), HazNet, Emissions (EMI), California Integrated Waster Quality System (CIWQS), Los Angeles County HMS (Hazardous Waste and Industrial Sites), and RGA LUST databases.

  The Historical UST database listed four historical USTs described as Tank 1 10,000-gallons installed in 1967 containing aliphatic hydrocarbons (process oil); Tank 2 10,000 gallons installed in 1973 containing diesel for boiler fuel; Tank 3 10,000 gallons installed in 1976 containing diesel for boiler fuel; and Tank 4 7,500 gallons installed in 1953 containing diesel for boiler fuel. Based on regulatory database (and state file review) information, the USTs have been either removed or closed in place and received NFA from the local oversight agency, see Section 4.1.5. The closure of the four USTs is also related to the LUST listing that was discussed in Section 4.1.2 as reported on the GeoTracker database, which involved some remediation of diesel and oil impacted soils identified during UST removal between 1989 and 1992 (26 years ago). Kirkhill Inc. is listed on the State HazNet database for hazardous waste manifest data, which was discussed in Section 4.1.1, and on the Emissions database as described in the SCAQMD Section 4.1.3.

- Cal Conduit Products, at 12021 Woodruff Avenue, appears to have been a former tenant of the subject building and was listed on the State HazNet database for the year 2009 only for generating 0.95 tons of waste oil and mixed oil. No additional information was identified for this former tenant. This listing is not expected to represent a significant environmental concern.

### *4.2.3 Adjacent Property Listings*

Four adjacent addresses were identified in the EDR regulatory database report, as discussed below:

- The property, identified as Classic Graphix at 9459 Washburn Road, is located adjacent to the west (cross gradient) of the subject property and is listed as a RCRA-SQG, FINDS, ECHO, Haznet and Los Angeles HMS property. This is a historical listing, as this property is currently occupied by

Stud Welding Products. This former tenant is listed as a hazardous waste generator and as having been inspected for storm water by the Los Angeles County Environmental Programs Division in 2000 and 2001. No SWPPP was reportedly needed. No USTs or releases were reported. Based on this information, this listing is not expected to represent a significant environmental concern, and it is unlikely that a regulatory file review for this site would alter the findings of this assessment.

- The property, identified as Fuji Photo Film USA Inc., at 12010 Woodruff Avenue, Suite A, is located adjacent to the east (cross gradient) of the subject property and listed as a RCRA No Longer Registered (NLR) site, FINDS, ECHO, and Haznet associated with photodeveloping. This appears to be a historical listing based upon the dates listed on the HazNet database of 2003. This (former) tenant is listed as a hazardous waste generator and a RCRA Non-Generator. No USTs or releases were reported in connection with this listing. Based on this information, this listing is not expected to represent a significant environmental concern, and it is unlikely that a regulatory file review for this site would alter the findings of this assessment.
- The property, identified as Darnell Corporation at 12000 Woodruff Avenue, is located adjacent to the east (cross gradient) of the subject property and is listed on the SWEEPS UST, RCRA NLR, FINDS, ECHO, and Los Angeles County HMS databases. This is a historical listing, as this property was redeveloped in 1988 (30 years ago) from the former manufacturing site operated by Darnell. This former tenant was reported as a hazardous waste generator and operator of nine USTs. No releases, investigations or remediation were reported. Based on this information, and since this property is cross gradient with respect to the subject property, this listing is not expected to represent a significant environmental concern, and it is unlikely that a regulatory file review for this site would alter the findings of this assessment.
- The property, identified as Stud Welding Products Inc. at 9455 Washburn Road, is located adjacent to the west (cross gradient) of the subject property and listed on the RCRA-SWG, FINDS, ECHO, Haznet and Los Angeles County HMS databases. Stud Welding appears to occupy two adjacent buildings at 9455 and 9459 Washburn Road. This tenant is listed as a hazardous waste generator and as having been inspected for storm water by the Los Angeles County Environmental Programs Division. No SWPPP was reportedly needed. No USTs or releases were reported at this location. Based on this information, this listing is not expected to represent a significant environmental concern, and it is unlikely that a regulatory file review for this site would alter the findings of this assessment.

Based on the findings, vapor migration is not expected to represent a significant environmental concern at this time.

### *4.2.4 Sites of Concern Listings*

No sites of concern are identified in the EDR regulatory database report that warrant discussion in this section.

Based on the findings, vapor migration is not expected to represent a significant environmental concern at this time.

### *4.2.5 Orphan Listings*

Two unmapped "orphan" listings were presented in the database report that were not specifically plotted due to poor or inadequate address information. These sites are listed as Star Cleaners at 8020 Stewart and Gray Road (over one mile) and the Stonewood Shopping Center located over one-half mile north. Based upon the distance of these sites, they are not expected to represent a significant environmental concern.

A copy of the regulatory database report is included in Appendix C of this report.

# 5.0 USER PROVIDED INFORMATION AND INTERVIEWS

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *Brownfields Amendments*), the *User* must conduct the following inquiries required by 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31. The *User* should provide the following information to the *environmental professional*. Failure to provide this information could result in a determination that *all appropriate inquiries* is not complete. The *User* is asked to provide information or knowledge of the following:

- Review Title and Judicial Records for Environmental Liens and AULs
- Specialized Knowledge or Experience of the User
- Actual Knowledge of the User
- Reason for Significantly Lower Purchase Price
- Commonly Known or *Reasonably Ascertainable* information
- Degree of Obviousness
- Reason for Preparation of this Phase I ESA

Fulfillment of these user responsibilities is key to qualification for the identified defenses to CERCLA liability. Partner requested our Client to provide information to satisfy User Responsibilities as identified in Section 6 of the ASTM guidance.

Pursuant to ASTM E1527-13, Partner requested the following site information from Prologis, Inc. (User of this report).

| ***User Responsibilities*** | | | | |
|---|---|---|---|---|
| **Item** | **Provided By User** | **Not Provided By User** | **Discussed Below** | **Does Not Apply** |
| Environmental Pre-Survey Questionnaire | | **X** | **X** | |
| Title Records, Environmental Liens, and AULs | **X** | | **X** | |
| Specialized Knowledge | **X** | | **X** | |
| Actual Knowledge | **X** | | **X** | |
| Valuation Reduction for Environmental Issues | | **X** | **X** | |
| Identification of Key Site Manager | **Section 5.1.3** | | **X** | |
| Reason for Performing Phase I ESA | **Section 1.1** | | **X** | |
| Prior Environmental Reports | **X** | | **X** | |
| Other | **X** | | **X** | |

## 5.1 Interviews

### *5.1.1 Interview with Owner*

Mr. Mike Kilroy, Operations, Sales & Marketing Manager of Kirkhill (assumed to be related to the property owner of record, Felchco Investment Group LLC) and subject property owner representative, was not aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the subject property; any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the subject property; or any notices from a governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.

Mr. Kilroy further stated that there are no active USTs, on-going investigations, open violations, or groundwater monitoring wells associated with the subject property to the best of his knowledge.

### *5.1.2 Interview with Report User*

Please refer to Section 5.2 below for information requested from the Report User. The information requested was not received prior to the issuance of this report. It is understood that the Report User would not have knowledge of the property that would significantly impact our ability to satisfy the objectives of this assessment. The lack of this information is not considered to represent a significant data gap.

### *5.1.3 Interview with Key Site Manager*

Mr. Mike Kilroy also acted as key site manager, as discussed above in Section 5.1.1.

### *5.1.4 Interviews with Past Owners, Operators and Occupants*

Interviews with past owners, operators, and occupants were not conducted since information regarding the potential for contamination at the subject property was obtained from other sources.

### *5.1.5 Interview with Others*

As the subject property is not an abandoned property as defined in ASTM 1527-13, interview with others were not performed.

## 5.2 User Provided Information

### *5.2.1 Title Records, Environmental Liens, and Activity and Use Limitations (AULs)*

At the request of the User, Partner contracted AFX Research LLC to perform an Environmental Lien and AUL search for the subject property. No environmental liens or AULs were identified for the subject property. The owner was reported as Felchco Investment Group LLC at this time (assumed to be related to Kirkhill).

Copies of pertinent pages are included in Appendix B of this report.

### 5.2.2 Specialized Knowledge

The User did not have specialized knowledge of environmental conditions associated with the subject property at the time of the assessment.

### 5.2.3 Actual Knowledge of the User

The User was not aware of environmental liens and/or AULs encumbering the subject property or in connection with the subject property at the time of the assessment.

### 5.2.4 Valuation Reduction for Environmental Issues

No knowledge of valuation reductions associated with the subject property was provided by the User at the time of the assessment.

### 5.2.5 Commonly Known or Reasonably Ascertainable Information

The User did not provide information that is commonly known or *reasonably ascertainable* within the local community about the subject property at the time of the assessment.

### 5.2.6 Previous Reports and Other Provided Documentation

The following information was provided to Partner for review during the course of this assessment:

*Environmental Audit Report,* Tetra Tech Inc., February 1990 (was included as an Appendix to PIC Environmental Services August 2013 report)

At the time of the assessment, the property was owned by Kirkhill, Inc. and was operated as a plumbing rubber goods manufacturing plant. The subject property was described as having five major operations conducted in the building as: office, warehouse/storage, manufacturing, packaging, and printing. The report briefly discussed the removal and closure of the former USTs as three former 10,000-gallon USTs on site (2 diesel and one oil). The tanks were located just south of the building in the parking lot area. The three tanks were removed in August 1989 by Tank Protect Engineering (TPE). A fourth 7,500-gallon diesel tank located in the courtyard was abandoned in place. Tetra Tech reported that contaminated soil was encountered during the site investigation and soil sampling activities performed. The report indicated that identified contaminated soil was excavated and disposed of. The excavation was backfilled with clean imported soil material and the area paved over.

Tetra Tech described chemicals and hazardous substances used or stored on site as oils, inks, lubricants, solvents, paints, and rubber type substances. Chemicals stored at the subject property were aboveground and generally kept in their original factory containers, primarily 55-gallon drums for liquids or 60-lb sacks on wooden pallets for dry bulk chemicals. There was one aboveground 750-gallon AST which contained Edgeflex CX100 oil. This tank did not have secondary containment. Some minor spills were noticed near the chemical drum storage area in the courtyard, near the air compressors, and adjacent to the high pressure machinery. These spills were being contained and cleaned-up by using standard absorbent-type material. Disposal of this absorbent material is done by the hazardous waste hauler Cosby-Overton. The amount disposed of is generally limited to one or two 55-gallon barrels every year. The floor of the

building showed little or no staining. The tool and die machinery have their own oil sumps and recirculation system. Minor staining of the floor near the tool and die equipment was also observed.

The electrical station and transformers on site were reported to have been replaced in 1974 and do not contain any PCBs. There were two boilers, four rubber rolling mills and a basic dry filter baghouse (to remove air particulates) on site. Permits from SCAQMD to operate these equipment were identified. During the site inspections several items and materials were noticed that potentially contain asbestos.

Tetra Tech concluded that they did not discover any activities presently conducted on-site which may be a source of significant soil, groundwater, or surface contamination. Some minor surface contamination was evident near the chemical drum storage area, the air compressors, and the high pressure machinery. The location of the chemical drum storage area was not noted in the report, and the site contact reported to Partner that no centrailized drum storage area is present at the subject property. Tetra Tech noted that good housekeeping practices and prompt cleanup of any spills should minimize any impact to local environment, but secondary containment in these areas should be constructed.

*Phase I ESA,* Orswell & Kasman, Inc., August 10, 2005

This report was prepared on behalf of the Olsen Family Trust. At the time of the assessment, the subject property was occupied by Kong Pet Toys, a distributor of chewable pet toys, located on the northern portion of the subject property building and Kirkhill Manufacturing Company located on the southern portion of the subject property building The report identified RECs including visible oil stains on the paved surface and exterior wall near the AST oil storage tank within the southern portion of the building (assumed to be the process oil AST area observed by Partner during the site visit) and on pavement near the cooling tower system in the open area near the center of the building. A historical REC was reported pertaining to the closure of the USTs at the subject property. It was recommended that samples be obtained in the area of the process oil storage tank and in the area of the cooling system to determine of soil has been impacted. It was also recommended that better housekeeping practices be employed to prevent spills in the outdoor storage areas from being washed into the local stormwater runoff system.

*Supplemental Phase II Environmental Audit,* GeoScience Analytical, Inc. (GSA), September 14, 2005

This assessment was conducted to define an arsenic anomaly that was previously identified in the central courtyard area near the clarifier. Partner notes that previous investigation reports were not available to Partner, but noted in the 2013 Phase I (described below) as prepared by Tank Protect Engineering and Converse Consultants. The GSA assessment included reviewing prior sampling reports pertaining to arsenic sampling and the advancement of four soil borings in the area of concern to a depth of 6 feet bgs. Soils from depths of 2 feet and 6 feet bgs were analyzed for total arsenic (TTLC), which identified concentrations ranging from <0.5 to 90 milligrams per kilogram (mg/kg). Maximum arsenic concentrations were identified at 2 feet. All TTLC arsenic concentrations were significantly below regulatory thresholds. Additional characterization of soil at Boring GSA-4, which identified the highest concentration of total arsenic at 2 feet (90 mg/kg), was advanced with soluble arsenic (STLC), which was found to be slightly above the regulatory level threshold of 5.0 mg/L at 7.3 mg/kg. Based on the available

analytical data, the maximum volume of soil potentially containing arsenic in excess of STLC concentrations for disposal purposes was estimated to be 3 to 6 cubic yards. The GSA report concluded that the subject property contains *total arsenic* within allowable limits; however, within a small area of the subject property in the immediate vicinity of the clarifier, *soluble arsenic* is present at a concentration slightly above threshold limits. Based upon the small volume of arsenic expected to be present under a capped surface, no remediation or further investigation was recommenced.

*Phase II Environmental Assessment Report of Findings,* S&S Commercial Environmental Services, Inc., November 9, 2005

S&S Commercial prepared this report on behalf of Foothill Independent Bank. The assessment was conducted to better qualify the findings from two previous Phase II investigations pertaining to arsenic concentrations, which concluded that the arsenic impact comprised a small area (3 to 6 cubic yards) and existed slightly above Cal-Hazardous levels. The investigation identified high concentrations of diesel range and oil range petroleum in the soil to a maximum depth of 20 feet in the courtyard area. The investigation included 14 soil borings in the central courtyard area of the building adjacent to the clarifier/discharge channel and cooling tower. Concentrations of diesel were as high as 54,100 mg/kg at 5 feet bgs and 21,300 mg/kg at 20 feet bgs at Boring SS-5 location. No volatile organic compounds (VOCs) (as analyzed via Environmental Protection Agency (EPA) Method 8260B) or semi-VOCs (via EPA Method 8270B) were detected at SS-5 (the only boring analyzed for VOCs).

The arsenic investigation included eight soil borings labeled (SS1 through SS8) located in the courtyard area near the cooling tower and clarifier/channel with samples collected at 0.5 foot, 1 foot and 2 feet bgs, for a total of 24 soil samples. Concentrations of arsenic were detected in all soil samples ranging from 3.5 to 71.3 mg/kg. In a majority of the borings, the concentration of arsenic increased from 1 to 2 feet bgs. It was concluded that arsenic was detected at concentrations slightly above Cal-Hazardous levels, which was later determined to be an isolated area of 3 to 6 cubic yards of soluble arsenic above threshold limits that was left in place due to the presence of a capped surface.

In addition, the diesel and oil impacted soils were left in place and not remediated due to a reported clean earth interval between the last identified diesel impacted soil at 20 feet bgs and the maximum depth explored to 45 feet bgs. This clean earth interval was evaluated at only one boring location (SS-5 Alt).

*Phase I and Phase II ESA Report,* PIC Environmental Services (PIC), August 30, 2013

PIC Environmental Services (PIC) was contracted by KMC and/or Kirkhill, Inc. The subject property was occupied by Kirkhill Inc. and Cal Pipe at the time of the assessment with Cal Pipe located in the northern portion of the building and Kirkhill in southern portion of the building. Cal Pipe was described as a conducting pipe threading; however, a description of further activities was not included. Kirkhill was reported as a rubber manufacturer and metal fabricator.

The Phase II site investigation operations were conducted on August 13, 2013, and included the advancement of a total of seven soil borings (PIC-1 through PIC-7). Boring locations were selected on the basis of proximity to historic potential sources of petroleum or hazardous materials contamination (i.e. former UST #1 and existing oil-water separator). Soil samples were recovered at five feet intervals in each

boring, which were cored to depths ranging from 5 to 50 feet below surface. A total of 25 soil samples were recovered and selectively analyzed for petroleum, metals, and volatile contaminants at Cal Tech Environmental Laboratories. Perched groundwater was encountered in two borings on the subject property. According to the investigation, groundwater was reported at approximately 45 feet bgs at the subject property.

A total of 25 soil samples were recovered during coring operations on August 13, 2013. All 25 soil samples were transported to Cal Tech Environmental Laboratories (Paramount). Twenty-one soil samples recovered from PIC-1 - PIC-7 were quantitatively analyzed for total petroleum hydrocarbons (gasoline, diesel, and oil) by EPA Method 8015. In addition, ten soil samples were analyzed for total volatiles (fuel oxygenates and solvents) by EPA Method 8260B, and six soil samples were analyzed for total metals by EPA Method 6010.

The laboratory results measured no detectable, subsurface soil contamination by petroleum hydrocarbons or volatile organic compounds in the samples. All metals concentrations were measured at non-detectable to background concentrations. All measured concentrations are well below regulatory action levels.

The assessment concluded the following:

1. One documented, historic occurrence of petroleum hydrocarbon contamination (environmental impairment) was discovered at the subject property. In 1989, diesel and oil contamination in soil was discovered during UST removal operations. PIC noted that after successful completion of site assessment and soil remediation requirements, Los Angeles County Department of Public Works awarded regulatory closure in correspondence dated August 6, 1992;

2. PIC concluded that potential historic onsite sources of petroleum or hazardous materials contamination were adequately investigated by Phase ll Testing operations. More specifically, several subsurface investigations were conducted onsite from 1989 through 2013 by Tank Protect Engineering, Converse Consultants, GeoScience Analytical, S & S Environmental Services, and PIC Environmental Services. Within the "courtyard" area, adjacent to the oil-water separator, some near surface soil above a depth of five feet was found to contain slightly elevated concentrations of arsenic. In addition, S & S Environmental measured elevated concentrations of nonvolatile, petroleum hydrocarbons as deep as 20 feet southeast of the oil-water separator. PIC's recent confirmation testing near and within the same location measured no detectable petroleum contaminants below a depth of five feet. PIC concurs with previous investigations that the occurrences of elevated arsenic and nonvolatile petroleum are very limited and do not warrant remedial action or further investigation;

3. PIC concluded that the site lacks significant environmental impairments (Recognized Environmental Conditions); and

4. PIC recommended no further investigation.

Copies of pertinent pages reviewed of the above reports are included in Appendix B of this report.

# 6.0 SITE RECONNAISSANCE

The weather at the time of the site visit was sunny and clear. Refer to Section 1.5 for limitations encountered during the field reconnaissance and Sections 2.1 and 2.2 for subject property operations. The table below provides the site assessment details:

| *Site Assessment Data* | |
|---|---|
| **Site Assessment Performed By:** | Margaret Thomas and Kathy Lehnus |
| **Site Assessment Conducted On:** | September 6, 2018 |

The table below provides the subject property personnel interviewed during the field reconnaissance:

| *Site Visit Personnel for 12021 and 12023 Woodruff Avenue (Subject Property)* | | | |
|---|---|---|---|
| **Name** | **Title/Role** | **Contact Number** | **Site Walk* Yes/No** |
| Mr. Mike Kilroy | Key Site Manager | (562) 803-1117 | Yes |

* Accompanied Partner during the field reconnaissance activities and provided information pertaining to the current operations and maintenance of the subject property

Environmental concerns were identified during the onsite reconnaissance related to current and/or former manufacturing activities and the use, storage, and generation of hazardous substances, wide spread surface oil staining, trenches, and other subsurface conduits, as further discussed in Sections 6.1 and 6.2.

## 6.1 General Site Characteristics

### *6.1.1 Solid Waste Disposal*

Solid waste generated at the subject property is disposed of in large bins located on the exterior southwest side of the subject property. An independent solid waste disposal contractor removes solid waste from the subject property. According to property personnel, only inert trash is collected in the on-site solid waste dumpsters. No evidence of illegal dumping of solid waste was observed during the Partner site reconnaissance.

### *6.1.2 Sewage Discharge and Disposal*

Sanitary discharges on the subject property are directed into the municipal sanitary sewer system. The City of Downey services the subject property vicinity. No septic systems are observed or reported on the subject property. The subject property has an active industrial waste discharge permit associated with a clarifier that is further discussed in Section 6.2.7.

### *6.1.3 Surface Water Drainage*

Storm water is removed from the subject property primarily by sheet flow action across the paved surfaces, which is directed toward the southwest side of the subject property via a drainage culvert that runs along the west side of the property. Storm water ultimately enters the public right of way and storm drain system. Site storm water from roofs, landscaped areas, and paved areas is directed to the public right of way and to on-site storm water drains identified in select areas. The subject property is connected to a municipal owned and maintained sewer system.

The subject property does not appear to be a designated wetland area, based on information obtained from the United States Fish & Wildlife Service; however, a comprehensive wetlands survey would be required in order to formally determine actual wetlands on the subject property. No surface impoundments, wetlands, natural catch basins, settling ponds, or lagoons are located on the subject property. No drywells were identified on the subject property.

### *6.1.4 Source of Heating and Cooling*

Heating and cooling systems as well as domestic hot water equipment are fueled by electricity and/or natural gas provided by Southern California Edison and Southern California Gas Company. The mechanical system is comprised of rooftop-mounted packaged HVAC units that serve the office and laboratory areas. Large mechanical systems are present at the subject property that include a cooling tower and steam boilers that area associated with the manufacturing system and not the HVAC system.

### *6.1.5 Wells and Cisterns*

No aboveground evidence of wells or cisterns was observed during the site reconnaissance.

### *6.1.6 Wastewater*

Domestic wastewater generated at the subject property is disposed by means of the sanitary sewer system. Industrial processes are currently performed at the subject property as further discussed in Section 6.2.7.

### *6.1.7 Septic Systems*

No septic systems were observed or reported on the subject property.

### *6.1.8 Additional Site Observations*

No additional general site characteristics were observed during the site reconnaissance.

## 6.2 Potential Environmental Hazards

### *6.2.1 Hazardous Substances and Petroleum Products Used or Stored at the Site*

Partner identified hazardous substances used, stored, and generated on the subject property. In general, the materials appeared to be properly labeled and stored at the time of the assessment with no signs of major leaks, stains, or spills (and secondary containment was noted on many of the raw materials). Kirkhill maintains several regulatory permits for the operation of equipment, storage of hazardous materials and hazardous waste generation and industrial waste discharges to the municipal sewer system. The subject property reports its hazardous substances stored at the subject property through the CERS, which most recently listed up to 38 chemical components that included solid raw materials such as custom polymers, talc, neoprene, carbon black, monomers, and zinc stored in 55-gallon drums and larger totes up to 300 gallons. Kirkhill uses several different polymers of different grades for custom orders. Hazardous liquids include petroleum hydrocarbons as lubricating oils, waste lubricating oil, and the process oil is classified as solvent refined in regulatory records. Process oils are currently stored in three interior aboveground storage tanks (ASTs) (two 3,000-gallon ASTs and one 4,000-gallon AST) within the manufacturing area; see Section 6.2.2. Various compressed gasses (oxygen, propane, argon, acetylene) are also listed.

Open violations for hazardous materials storage was not reported at this time by the City of Downey Fire Department, by site personnel or reported through the CERS database. In addition, site personnel are not aware of any environmental impacts, enforcement orders or ongoing environmental investigations at the subject property at this time.

Based on the nature of use, presence of secondary containment, and lack of violations on-file with the City fire department, these materials are not expected to represent a significant environmental concern at this time.

### *6.2.2 Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs/USTs)*

Partner observed four ASTs at the subject property used for the storage of process oils, one of which was empty (2,000 gallons). The ASTs are located inside the building in the main manufacturing area. The three active ASTs contain various grades of petroleum-based process oil, which include two 3,000-gallon ASTs and one 4,000-gallon AST. The ASTs appear to be double-walled systems with internal secondary containment safeguards. No environmental concerns were noted or reported with the ASTs.

No active USTs are present at the subject property. One abandoned in-place UST is present within the courtyard area of the subject property that formerly contained diesel fuel for the boilers. The UST is 7,500 gallons in size, was installed in 1953, and was filled with slurry in approximately 1989.

Copies of pertinent documents are included in Appendix B of this report.

### *6.2.3 Evidence of Releases*

The floor in the manufacturing areas is stained with oil due to years of operating hydraulic equipment, small surface spills, and general industrial usage over time. It does not appear that a large release event occurred but rather a slow general staining of the area. The dark staining may also be a result of the rubber polymers including carbon black.

### *6.2.4 Polychlorinated Biphenyls (PCBs)*

Older transformers and other electrical equipment could contain PCBs at a level that subjects them to regulation by the U.S. EPA. PCBs in electrical equipment are controlled by United States Environmental Protection Agency regulations 40 CFR, Part 761. Under the regulations, there are three categories into which electrical equipment can be classified: 1) Less than 50 parts per million (ppm) of PCBs – "*Non-PCB;*" 2) 50 ppm-500 ppm – "*PCB-Contaminated;*" and, 3) Greater than 500 ppm – "*PCB-Containing.*" The manufacture, process, or distribution in commerce or use of any PCB in any manner other than in a totally enclosed manner was prohibited after January 1, 1977.

The on-site reconnaissance addressed indoor and outdoor transformers that may contain PCBs. The subject property operates a small electrical substation that includes one large pad-mounted transformer and additional electrical equipment situated within a chain link fence within the central courtyard, with apparent associated equipment on the interior adjacent wall. The transformer was not labeled indicating PCB content. The electrical equipment is not original and has been replaced at least once or twice. No staining or leakage was observed in the vicinity of the transformer equipment; however based on the use

of multiple generations of electrical equipment in this area, the sub-station is a REC for the subject property.

According to a prior Environmental Audit Report prepared by Tetra Tech Inc. dated February 1990, the electrical station and transformers on site in 1990 were replaced in 1974 and reportedly did not contain PCBs. As such, it appears that electrical upgrades have occurred since 1974.

In addition, other historical sources of PCBs may be present at the subject property that include older hydraulic presses, interior transformers, possible oil-filled switches, hoists, dock levelers, or other equipment.

### *6.2.5 Strong, Pungent or Noxious Odors*

No unusual strong, pungent, or noxious odors were evident during the site reconnaissance other than the expected odor of rubber manufacturing and oil.

### *6.2.6 Pools of Liquid*

No pools of liquid were observed on the subject property during the site reconnaissance.

### *6.2.7 Drains, Sumps, Trenches, and Clarifiers*

The manufacturing areas includes an internal hydraulic system comprised of a network of below-grade trenches and overhead piping that deliver a recirculated water and hydraulic oil mixture to the presses and molding machines.

In addition, a central clarifier is present that is used primarily for boiler blowdown and cooling tower discharges. The clarifier previously received rinse water from a former tank wash out area that included acid and caustic tanks and rinse water tanks, which was used to clean molds, as the molds would get covered with rubber and need to be washed, which then discharged through the clarifier. This operation is no longer conducted and all former wash tanks are gone. The earliest industrial waste discharge permit identified was issued to Kirkhill Inc. dated 1979 which listed the wastewater producing operations as blow down and bleed water from boilers and cooling tower, cleanup and floor wash down. The constituents of wastewater discharges were listed solely as water. The rate of flow as reported as 1,752 gallons per day at that time. The active 2017 permit reported discharges as calcium stearate water, cooling tower bleed off, boiler blowdown, household washers, rinse water from molding wash rack, lab sinks, self-regenerating water softener backflush, and floor scrubber.

According to provided information, the trenches are cleaned out (of sludge build-up) approximately every five years.The clarifier has the potential to impact the subsurface of the subject property should the system become compromised.

### *6.2.8 Pits, Ponds and Lagoons*

No pits, ponds, or lagoons were observed on the subject property.

### *6.2.9 Stressed Vegetation*

No stressed vegetation was observed on the subject property.

### *6.2.10 Additional Potential Environmental Hazards*

No additional environmental hazards, including landfill activities or radiological hazards, were observed.

## 6.3 Non-ASTM Services

### *6.3.1 Asbestos-Containing Materials (ACMs)*

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101 requires certain construction materials to be presumed to contain asbestos, for purposes of this regulation. All thermal system insulation (TSI), surfacing material, and asphalt/vinyl flooring that are present in a building constructed prior to 1981 and have not been appropriately tested are "presumed asbestos-containing material" (PACM).

The subject property building was constructed in 1951 with subsequent additions through the 1970s. A prior survey conducted in 1990 (Environmental Audit report by Tetra Tech February 1990) identified asbestos in drywall next to the cooling tower and office ceiling tiles (1,360 SF of material). The amount of asbestos containing drywall was not reported.

Partner has conducted a limited, visual evaluation of accessible areas for the presence of suspect ACMs at the subject property. The objective of this visual survey was to note the presence and condition of suspect ACM observed. Please refer to the table below for identified suspect ACMs:

***Suspect ACMs***

| Suspect ACM | Location | Friable Yes/No | Physical Condition |
|---|---|---|---|
| Drywall Systems | Throughout Building Interior | No | Good |
| Flooring Materials | Throughout Building Interior | No | Good |
| Flooring Mastic | Throughout Building Interior | No | Good |
| Acoustical Ceiling Panels | Throughout Office | No | Good |
| Roofing Materials | Throughout Building Interior | No | Good |
| Mechanical Systems/Conduits | Throughout Building | No | Good |

The limited visual survey consisted of noting observable materials (materials which were readily accessible and visible during the course of the site reconnaissance) that are commonly known to potentially contain asbestos. This activity was not designed to discover all sources of suspect ACM, PACM, or asbestos at the site; or to comply with any regulations and/or laws relative to planned disturbance of building materials such as renovation or demolition, or any other regulatory purpose. Rather, it is intended to give the User an indication if significant (significant due to quantity, accessibility, or condition) potential sources of ACM or PACM are present at the subject property. Additional sampling, assessment, and evaluation will be warranted for any other use.

According to the US EPA, ACM and PACM that is intact and in good condition can, in general, be managed safely in-place under an Operations and Maintenance (O&M) Program until removal is dictated by renovation, demolition, or deteriorating material condition.

### 6.3.2 Lead-Based Paint (LBP)

Lead is a highly toxic metal that affects virtually every system of the body. LBP is defined as any paint, varnish, stain, or other applied coating that has 1 mg/cm$^2$ (or 5,000 µg/g or 0.5% by weight) or more of lead. Congress passed the Residential Lead-Based Paint Hazard Reduction Act of 1992, also known as "Title X," to protect families from exposure to lead from paint, dust, and soil. Under Section 1017 of Title X, intact LBP on most walls and ceilings is not considered a "hazard," although the condition of the paint should be monitored and maintained to ensure that it does not become deteriorated. Further, Section 1018 of this law directed the Housing and Urban Development (HUD) and the US EPA to require the disclosure of known information on LBP and LBP hazards before the sale or lease of most housing built before 1978.

Based on the age of the subject property building (pre-1978), there is a potential that LBP is present. Interior and exterior painted surfaces were observed in good condition and therefore not expected to represent a "hazard," although the condition of the paint should be monitored and maintained to ensure that it does not become deteriorated.

Actual material samples would need to be collected in order to determine if LBP is present.

### 6.3.3 Radon

Radon is a colorless, odorless, naturally occurring, radioactive, inert, gaseous element formed by radioactive decay of radium (Ra) atoms. The US EPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, according to the table below:

| *EPA Radon Zones* | | |
|---|---|---|
| **EPA Zones** | **Average Predicted Radon Levels** | **Potential** |
| Zone 1 | Exceed 4.0 pCi/L | Highest |
| Zone 2 | Between 2.0 and 4.0 pCi/L | Moderate |
| Zone 3 | Less than 2.0 pCi/L | Low |

It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the US EPA recommends site-specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures.

Radon sampling was not conducted as part of this assessment. Review of the US EPA Map of Radon Zones places the subject property in Zone 2. Based upon the radon zone classification, radon is not considered to be a significant environmental concern.

### 6.3.4 Lead in Drinking Water

According to available information, a public water system operated by the City of Downey Department of Public Works serves the subject property vicinity. According to the City of Downey 2017 Annual Water Quality Report, water supplied to the subject property is in compliance with all State and Federal

regulations pertaining to drinking water standards, including lead and copper. Water sampling was not conducted to verify water quality.

### *6.3.5 Mold*

Molds are microscopic organisms found virtually everywhere, indoors and outdoors. Mold will grow and multiply under the right conditions, needing only sufficient moisture (e.g., in the form of very high humidity, condensation, or water from a leaking pipe, etc.) and organic material (e.g., ceiling tile, drywall, paper, or natural fiber carpet padding).

Partner observed accessible, interior areas for the subject property building for significant evidence of mold growth with the exceptions detailed in Section 1.5 of this report; however, this ESA should not be used as a mold survey or inspection. Additionally, this limited assessment was not designed to assess all areas of potential mold growth that may be affected by mold growth on the subject property. Rather, it is intended to give the client an indication as to whether or not conspicuous (based on observed areas) mold growth is present at the subject property. This evaluation did not include a review of pipe chases, mechanical systems, or areas behind enclosed walls and ceilings.

No obvious indications of water damage or mold growth were observed during Partner's visual assessment.

## 6.4 Adjacent Property Reconnaissance

The adjacent property reconnaissance consisted of observing the adjacent properties from the subject property premises. No items of environmental concern were identified on the adjacent properties during the site assessment, including hazardous substances, petroleum products, ASTs, USTs, evidence of releases, PCBs, strong or noxious odors, pools of liquids, sumps or clarifiers, pits or lagoons, stressed vegetation, or any other potential environmental hazards.

# 7.0 FINDINGS AND CONCLUSIONS

### Findings

A *recognized environmental condition (REC)* refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The following was identified during the course of this assessment:

- All or part of the subject property building has been occupied by Kirkhill, a manufacturer of custom rubber products, since initial construction in 1951, utilizing raw materials including polymers, talc, neoprene, carbon black, monomers, and zinc as well as petroleum hydrocarbons as lubricating oils, waste lubricating oil, and the process oils (classified as solvent refined in regulatory records). Process oils are currently stored in three interior ASTs (two 3,000-gallon ASTs and one 4,000-gallon AST) within the manufacturing area. In addition, the manufacturing area includes an internal hydraulic system comprised of a network of below-grade trenches and overhead piping that deliver a recirculated water and hydraulic oil mixture to the rubber presses and molding machines. Additionally, a central clarifier is present that is used primarily for boiler blowdown and cooling tower discharges. The clarifier previously received rinse water from a former tank wash out area that included acid and caustic tanks and rinse water tanks, which were used to clean molds, as the molds would get covered with rubber and need to be washed, which then discharged through the clarifier. The subject property operates a small electrical substation that includes one large pad-mounted transformer and additional electrical equipment situated within a chain link fence within the central courtyard, with apparent associated equipment on the interior adjacent wall. The transformer was not labeled indicating PCB content. The electrical equipment is not original and has been replaced at least once or twice. No staining or leakage was observed in the vicinity of the transformer equipment.

  A prior Phase II ESA was conducted at the subject property by S&S Commercial Environmental Services, Inc., dated November 9, 2005, that identified high concentrations of diesel range and oil range petroleum in the soil located in the courtyard area to a maximum depth of 20 feet. The investigation included the advancement of 14 soil borings in the central courtyard area adjacent to the clarifier/discharge channel and cooling tower. Concentrations of diesel were reported as high as 54,100 milligrams per kilogram (mg/kg) at 5 feet bgs and 21,300 mg/kg at 20 feet bgs at the Boring SS-5 location. No VOCs or semi-VOCs were detected at SS-5 (the only boring analyzed for VOCs). Arsenic was detected at concentrations slightly above Cal-Hazardous levels, which was later determined to be an isolated area of 3 to 6 cubic yards of soluble arsenic above threshold limits that was left in place due to the presence of a capped surface. Additionally, the diesel and oil impacted soils were left in place and not remediated due to a reported clean earth interval between the last identified diesel impacted soil at 20 feet bgs and the maximum depth explored to 45 feet bgs.

Due to the known release of petroleum in the courtyard area and the number of years the subject property has operated as a rubber manufacturing plant. including the presence of subsurface conduits/trenches that carry a petroleum based cutting fluid and a clarifier that was previously used for wash down of rubber residues, soil beneath the concrete slab may be impacted with petroleum-based cutting oils or other constituents. Of note, polychlorinated biphenyls (PCBs) may be associated with historical usage of hydraulic equipment and electrical transformers on the subject property.

A *controlled recognized environmental condition (CREC)* refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following was identified during the course of this assessment:

- Partner did not identify controlled recognized environmental conditions during the course of this assessment.

A *historical recognized environmental condition (HREC)* refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The following was identified during the course of this assessment:

- A total of four steel USTs were formerly operated at the subject property, three of which contained diesel to fuel the two boilers associated with rubber molding (when the rubber products produced were volcanized), and one of which contained naphthene cutting oil. Three of the USTs (Tanks 1, 2, and 3) were located along the exterior south side of the subject property and were removed in 1989. A fourth UST (Tank 4 containing diesel) was abandoned in place in the central courtyard area in or around 1989. During the removal of Tanks 1 through 3, soil samples from beneath the tanks were tested and a release was detected; therefore, additional site investigation, excavation, and remediation work was performed in this area under the oversight of the (LACDPW. Subsequently, a NFA letter was issued for Closure Permit Number 5999B by the Los Angeles County Department of Public Works, Waste Management Division (currently Environmental Programs Division) dated August 6, 1992, which pertains to the three exterior removed USTs. The abandoned in-place UST was assigned a separate Closure Permit Number of 6000B, which was not listed on the NFA letter. However, based on preliminary conversations with LACDPW staff, this appears to be an error in which Tank 4 should have been noted, as all four USTs appear to have been closed under this NFA letter.

An *environmental issue* refers to environmental concerns identified by Partner, which do not qualify as RECs; however, warrant further discussion. The following was identified during the course of this assessment:

- Partner noted exterior storage at the subject property including raw materials (covered) and unused hydraulic equipment, as well as approximately eight 55-gallon drums with no secondary containment, predominantly on the exterior west side of the building. Due to the presence of excessive storage covered with plastic sheeting (to protect raw material from sun exposure), this area was not fully accessed and evaluated by Partner. Partner noted that the observed drums were labelled as Non-RCRA hazardous waste solid, which is an oily debris, and Non-RCRA liquid waste oil. Minor oil staining was observed on the pavement under one of the drums that was covered with an absorbent material. According to site personnel, the waste is routinely collected by Express Oil Company, a third party vendor, on a regular basis. Based on the nature of the reported contents issuance of a Stormwater Pollution Prevention Plan (SWPPP), and lack of violations noted, the exterior storage is not expected to represent a significant environmental concern;
- The subject property formerly operated printing machinery, which is no longer conducted. The printing area was located in the southeast portion of the building that was constructed in 1973. This area is used for general storage at this time. According to reported information in a prior Environmental Audit Report dated 1990, small amounts of oil-based ink and MEK (35 gallons/year) were used. No drains or other subsurface conduits are located in this area. Former printing operations are not expected to present a significant environmental concern;
- Due to the age of the subject property buildings, there is a potential that ACM and/or LBP are present. Overall, all suspect ACMs and painted surfaces were observed in fair to good condition and do not pose a health and safety concern to the occupants of the subject property at this time. The identified suspect ACMs would need to be sampled to confirm the presence or absence of asbestos prior to any renovation or demolition activities to prevent potential exposure to workers and/or building occupants. A prior survey conducted in 1990 (Environmental Audit report by Tetra Tech February 1990) identified asbestos in drywall next to the cooling tower and office ceiling tiles (1,360 SF of material). The amount of asbestos containing drywall was not reported.

**Conclusions, Opinions and Recommendations**

Partner has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of 12021 and 12023 Woodruff Avenue in the City of Downey, Los Angeles County, California (the "subject property"). Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This assessment has revealed evidence of a recognized environmental condition and environmental issues in connection with the subject property. Based on the conclusions of this assessment, Partner recommends the following:

- A limited subsurface investigation should be conducted in order to determine the presence or absence of soil and/or soil vapor contamination due to the current and historical use of the subject property;

- A Soil Management Plan (SMP) should be prepared to appropriately handle the known oil releases at the subject property and any unknown releases associated with the current and former industrial use;
- The NFA letter dated August 6, 1992, pertaining to the historical USTs at the subject property should be revised to clearly include Closure Permit Number 6000B for the abandoned in-place UST to avoid confusion in the future as to whether it was officially closed.
- An asbestos survey conducted in 1990 identified asbestos in the subject property building. It is not known if the survey was conducted for all equipment and building materials at the time; therefore, an asbestos survey should be performed and known ACM should be abated or removed for safety purposes (or an Operations and Maintenance (O&M) Program should be implemented in order to safely manage the known and suspect ACMs located at the subject property).

# 8.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Partner has performed a Phase I Environmental Site Assessment of the property located at 12021 and 12023 Woodruff Avenue in the City of Downey, Los Angeles County, California in general conformance with the scope and limitations of the protocol and the limitations stated earlier in this report. Exceptions to or deletions from this protocol are discussed earlier in this report.

By signing below, Partner declares that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR §312. Partner has the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. Partner has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Prepared By:



Margaret Thomas
Project Assessor

Reviewed By:



Kathy Lehnus
Project Manager/Senior Author

# 9.0 REFERENCES

**Reference Documents**

American Society for Testing and Materials, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM Designation: E1527-13

Department of Conservation, Division of Oil, Gas and Geothermal Resources, Well Finder Database, accessed via internet, September 2018

Environmental Data Resources (EDR), Radius Report, September 2018

Federal Emergency Management Agency, Federal Insurance Administration, National Flood Insurance Program, Flood Insurance Map, accessed via internet, September 2018

United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, accessed via the internet, September 2018

United States Department of Fish and Game, National Wetlands Inventory database, accessed via the internet, September 2018

United States Environmental Protection Agency, EPA Map of Radon Zones (Document EPA-402-R-93-071), accessed via the internet, September 2018

United States Geological Survey, accessed via the Internet, September 2018

United States Geological Survey Topographic Map, 7.5-minute series, EDR Historical Topo Map Report, September 2018

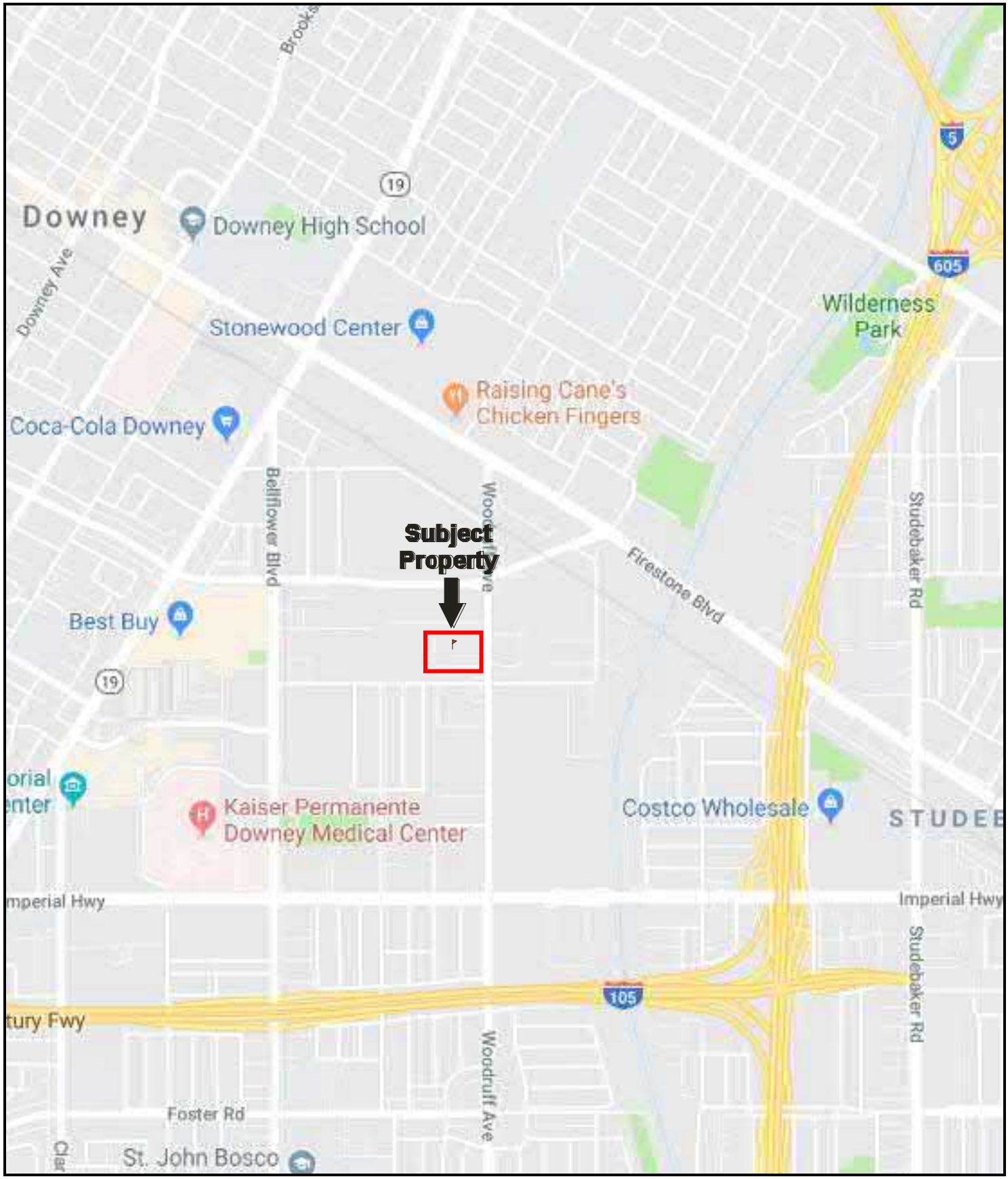
# FIGURES

1 SITE LOCATION MAP

2 SITE PLAN

3 TOPOGRAPHIC MAP

PARTNER




N

Drawing Not To Scale

KEY:
Subject Property

**FIGURE 1: SITE LOCATION MAP**
**Project No. 18-220634.1**

PARTNER




**FIGURE 2: SITE PLAN**

**Project No. 18-220634.1**

PARTNER




N

USGS 7.5 Minute *Whittier, California* Quadrangle
Created: 2012

KEY:
Subject Property

**FIGURE 3: TOPOGRAPHIC MAP**
**Project No. 18-220634.1**

PARTNER

# APPENDIX A: SITE PHOTOGRAPHS




1. View of the front east side of the subject property looking west




2. View of the front east side of the subject property looking west



3. View of the east side of the subject property looking northwest from the southeast corner




4. View of the east side of the subject property looking southwest from the northeast corner




5. View of the south entrance looking northwest



6. View of the exterior south side of the building and exterior storage looking northwest



7. View of the exterior south side of the property looking west



8. View of the exterior south side of the property looking east



9. View of the exterior rear west side of the subject property looking northeast



10. View of exterior storage along the exterior west side looking northeast



11. View of storm water channel along the west side of the property looking due west



12. View of raw materials stored on the exterior west side of the property looking west-northwest



13. View of the exterior west side of the subject property looking north



14. View of the exterior west side of the property looking south



15. View of exterior storage on the exterior west side of the property looking east-northeast



16. View of hazardous waste drums on the exterior west side of the building on pallets looking east



17. View of empty containers for disposal at the southwest corner of the property looking west



18. View of same empty containers for disposal at the southwest corner of the property



19. View of municipal waste bins located at the southwest corner of the property looking due west



20. View of exterior west side of the property looking north



21. View of exterior northwest corner of the subject property and raw materials looking north



22. View of raw materials stored on the north side of the property looking east-northeast



23. View of exterior north side of the property looking west



24. View of exterior north side of the property and equipment looking east



25. View of exterior raw materials stored on the north side of the building looking west



26. View of the north side of the property looking east



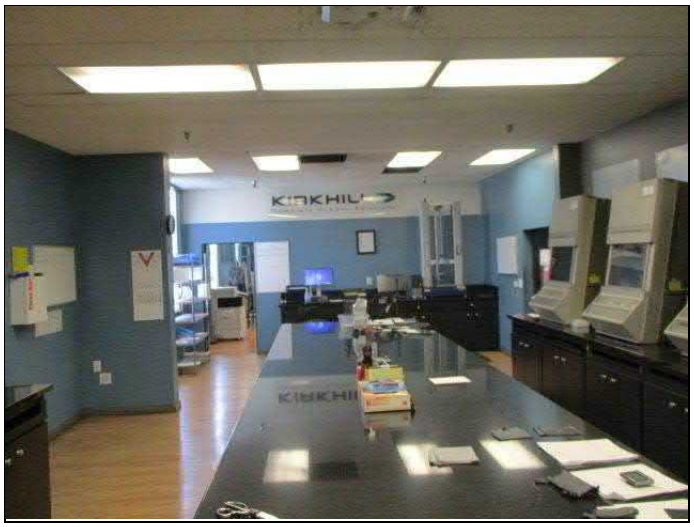

27. View of lobby



28. View of office hallway



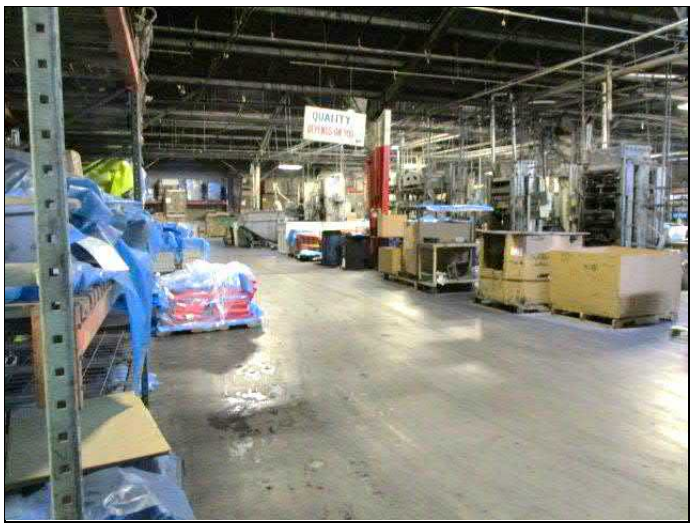
29. View of testing laboratory adjacent to office area



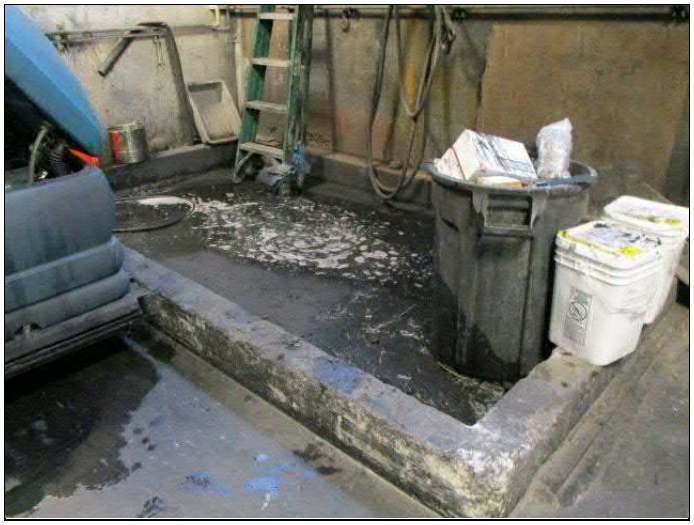
30. View of same laboratory looking east



31. View of laboratory testing equipment located just outside the lab in the warehouse



32. View of manufacturing area looking southwest



33. View of wash out area that drains through the clarifier



34. View of same wash out area that drains through the clarifier



35. View of racks of rubber molds adjacent to wash out area looking northwest



36. View of racks of rubber molds adjacent to wash out area looking north



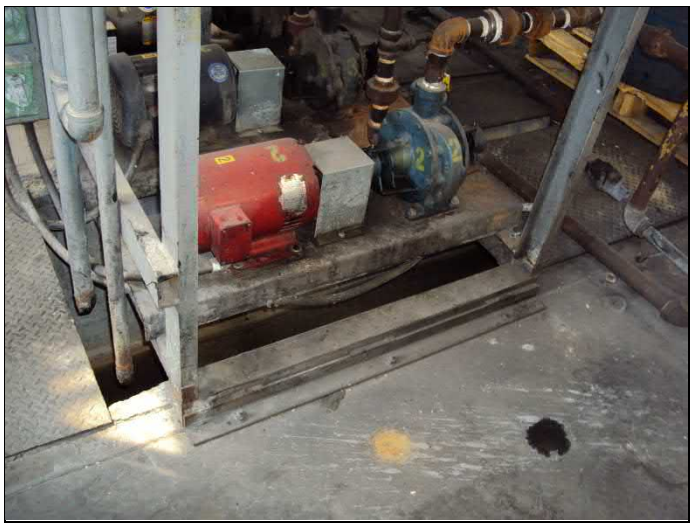
37. View of general shop area near the wash out area looking east



38. View of general shop area near the wash out area



39. View of clarifier equipment within the courtyard area



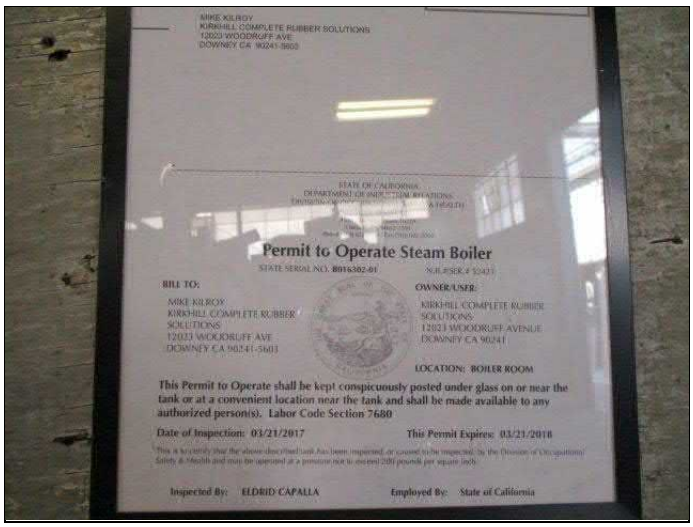
40. View of clarifier equipment



41. View of steam boilers



42. View of steam boilers looking north




43. Copy of Permit to Operate Steam Boiler on the wall adjacent to boilers



44. View of boiler



45. View of trench leaving the boiler room looking west



46. View of boiler room equipment



47. View of washer and dryer near the boilers



48. View of water softener unit near the boilers




49. View of equipment in the courtyard



50. View looking west toward cooling tower in the courtyard area



51. View of pump equipment next to cooling tower looking west



52. View of area adjacent to the cooling tower looking west



53. View of trench next to cooling tower



54. View of water trench adjacent to cooling tower in courtyard area



55. View of recirculating process oil equipment for hydraulic presses



56. View of recirculating process oil equipment



57. View of recirculating process oil equipment



58. View of recirculating process oil equipment



59. View of 55-gallon drums of fresh oil looking east



60. View of courtyard looking east



61. View of oil storage area within the courtyard looking east



62. View of open courtyard looking east



63. View of electrical substation within the courtyard looking southwest



64. View of electrical substation within the courtyard



65. View of large baghouse in the courtyard looking southwest



66. View looking up at same baghouse



67. View of manufacturing area looking south



68. View of interior electrical equipment in the manufacturing area



69. View looking across manufacturing area looking east



70. View looking across manufacturing area



71. View looking up in same area as photos #69 and #70



72. View of roll mixer in the manufacturing area



73. View of roll mixer



74. View of mixing machines



75. View of typical trenching system across the manufacturing floor



76. View of raw materials and mixing machines



77. View of rubber equipment and rubber



78. View of trenching



79. Interior manufacturing area along the general south side of the building



80. Interior manufacturing area



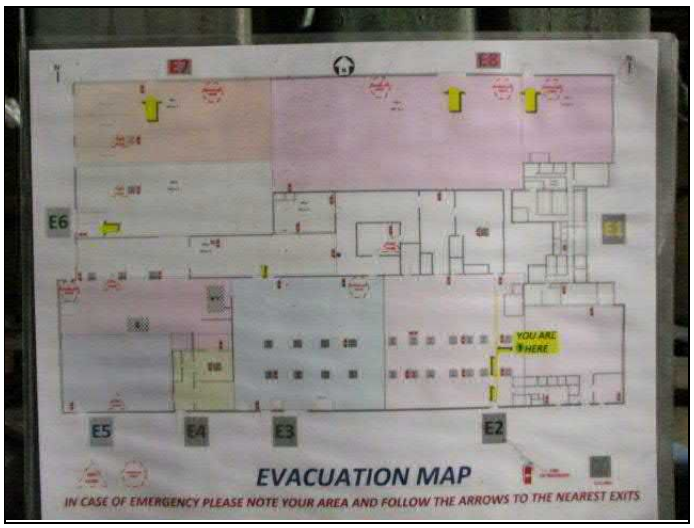
81. Trenching



82. Trenching next to hydraulic equipment



83. Trenching




84. Site plan on wall




85. Idle equipment stored at the southeast side of the building (former printing area)



86. Idle equipment stored at the southeast side of the building (former printing area) looking east



87. Manufactured product (scuba fins)



88. Manufacturing area toward northeast side of the building



89. Newer section of building along the north side and large mixing equipment looking west



90. Mixer along north side of the building



91. Mixing area along the north side of the building looking west



92. Batch off equipment looking northwest



93. Finished product storage



94. Finished product storage



95. View of loading dock near the northwest corner of the building looking northwest



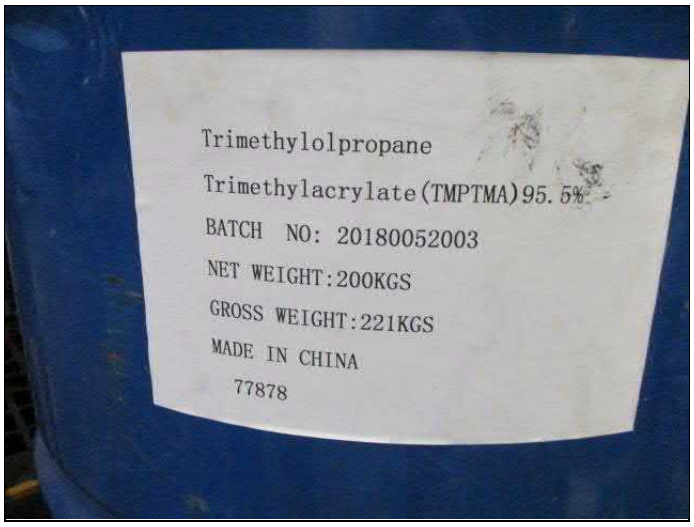
96. View of scale in the shipping area near the northwest side of the building



97. View of raw materials on secondary containment



98. View of raw materials on secondary containment




99. Label on 55-gallon drums in photo #97




100. Label on 55-gallon drum in photo #98



101. View of ASTs in manufacturing area



102. View of bottom of Raffene Oil AST



103. View of south side manufacturing area




104. View of cold room storage near the south side of the building



105. View of the south side of the building looking west



106. View of the south side manufacturing area looking north



107. View looking east along the south side of the building with AST on right, see #108



108. AST of process oil on the south side of the building




109. View of process oil AST along the south side of the building



110. Equipment along the south side of the manufacturing area looking northeast



111. View of general raw materials storage area toward the southern half of the building



112. View of raw material (talc in sacs)



113. View of mixing equipment toward the south central area of the building



114. View of mixing equipment toward the south central area of the building



115. View of adjacent property to the south of the property looking north from Washburn Road




116. View of adjacent property to the south of the property looking north from Washburn Road



117. View of adjacent property to the south of the property looking north from Washburn Road



118. View of adjacent industrial building to the east looking east across Woodruff Avenue




119. View of adjacent building to the north looking west from Woodruff Avenue



120. View of adjacent property to the north looking west-southwest

# APPENDIX B: HISTORICAL/REGULATORY DOCUMENTATION

PARTNER

**Kirkhill**

12021 Woodruff Avenue

Downey, CA 90242

Inquiry Number: 5408632.8

August 30, 2018

# The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Aerial Photo Decade Package

08/30/18

**Site Name:**

Kirkhill
12021 Woodruff Avenue
Downey, CA 90242
EDR Inquiry # 5408632.8

**Client Name:**

Partner Engineering and Science, Inc.
2154 Torrance Blvd, Suite 200
Torrance, CA 90501-0000
Contact: Colleen Tubridy

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

***Search Results:***

| Year | Scale | Details | Source |
|---|---|---|---|
| 1928 | 1"=500' | Flight Date: January 01, 1928 | USGS |
| 1938 | 1"=500' | Flight Date: May 24, 1938 | USDA |
| 1947 | 1"=500' | Flight Date: June 18, 1947 | USGS |
| 1953 | 1"=500' | Flight Date: October 19, 1953 | USDA |
| 1963 | 1"=500' | Flight Date: February 28, 1963 | USGS |
| 1970 | 1"=500' | Flight Date: February 17, 1970 | USGS |
| 1972 | 1"=500' | Flight Date: October 30, 1972 | USGS |
| 1983 | 1"=500' | Flight Date: November 19, 1983 | USGS |
| 1989 | 1"=500' | Flight Date: August 22, 1989 | USDA |
| 1994 | 1"=500' | Acquisition Date: May 31, 1994 | USGS/DOQQ |
| 2002 | 1"=500' | Flight Date: June 11, 2002 | USDA |
| 2005 | 1"=500' | Flight Year: 2005 | USDA/NAIP |
| 2009 | 1"=500' | Flight Year: 2009 | USDA/NAIP |
| 2012 | 1"=500' | Flight Year: 2012 | USDA/NAIP |
| 2016 | 1"=500' | Flight Year: 2016 | USDA/NAIP |

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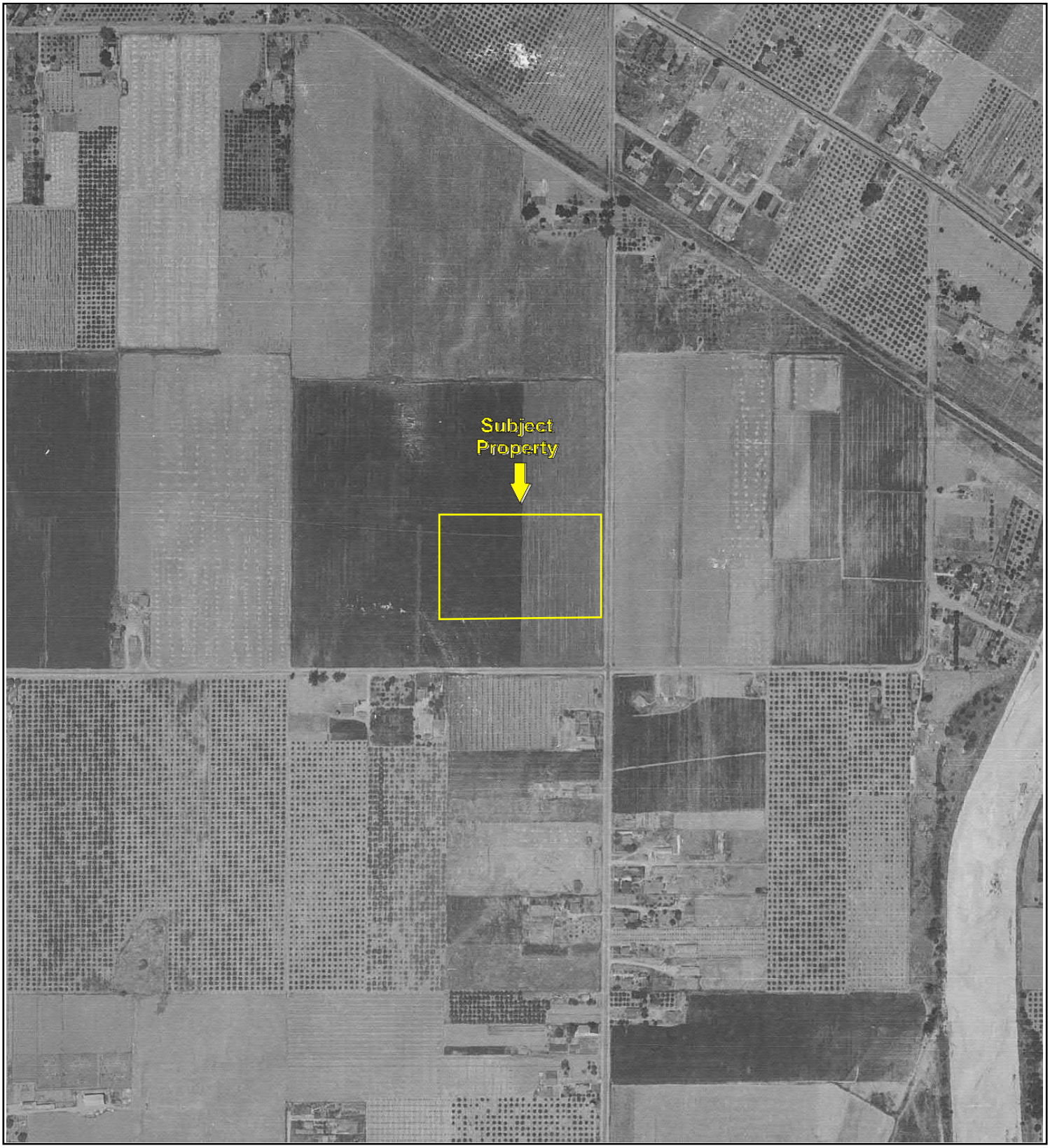
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500 1000 2000

N

Key: Subject Property




500 1000 2000

N

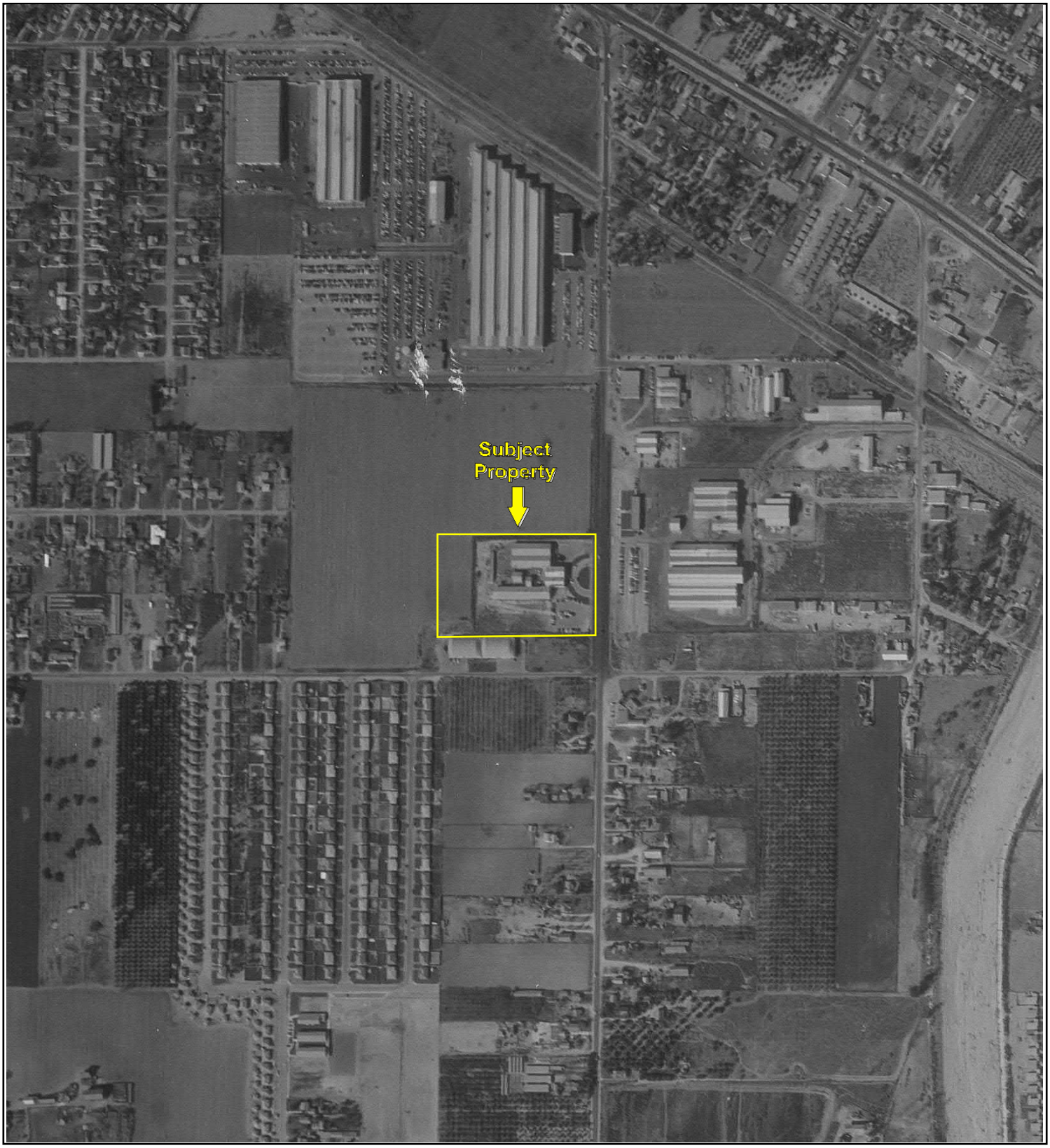
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500 1000 2000

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Key: Subject Property




500 1000 2000

N

Key: Subject Property




500 1000 2000

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Key: Subject Property




500 1000 2000

N

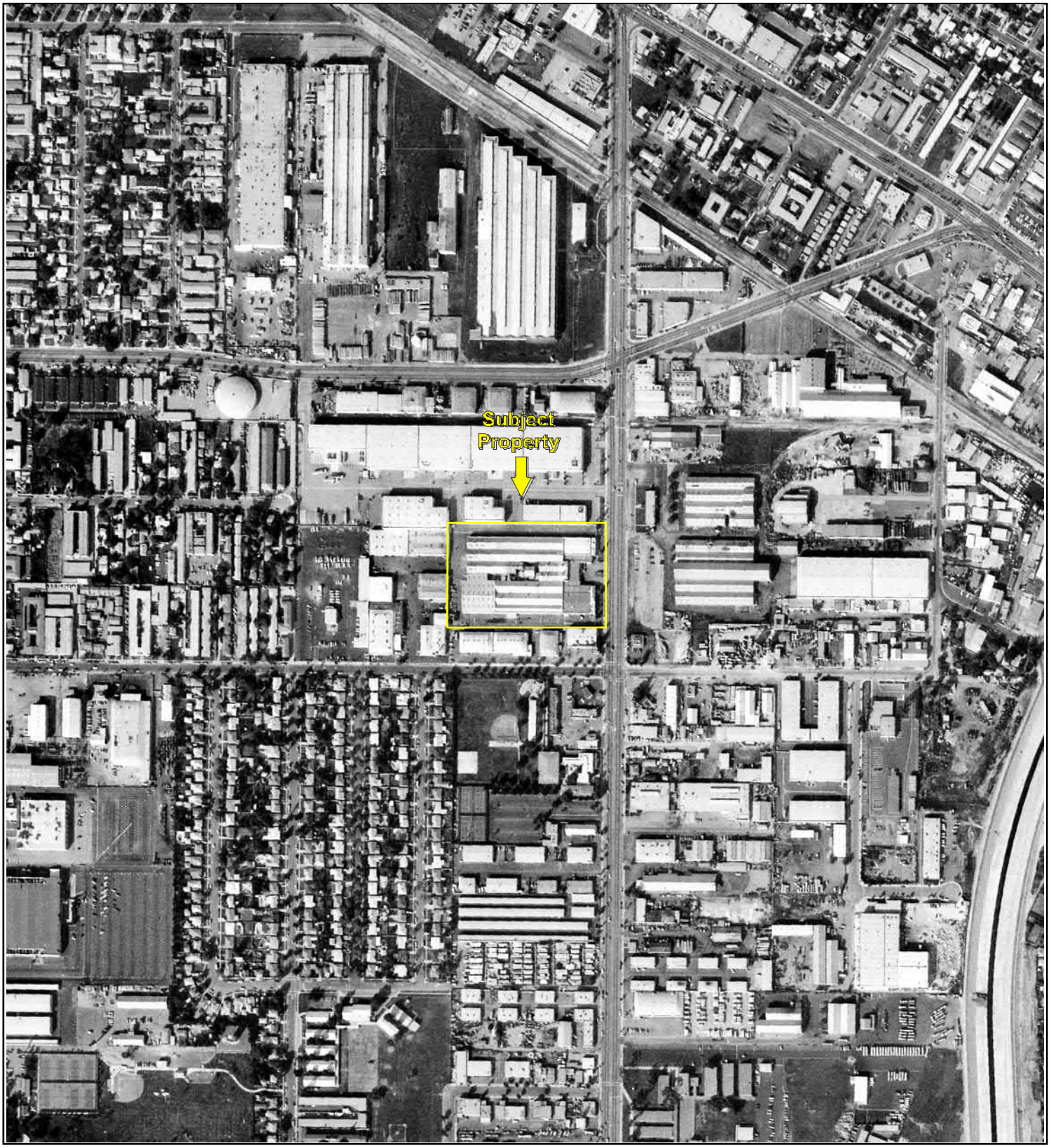
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Key: Subject Property




500 1000 2000

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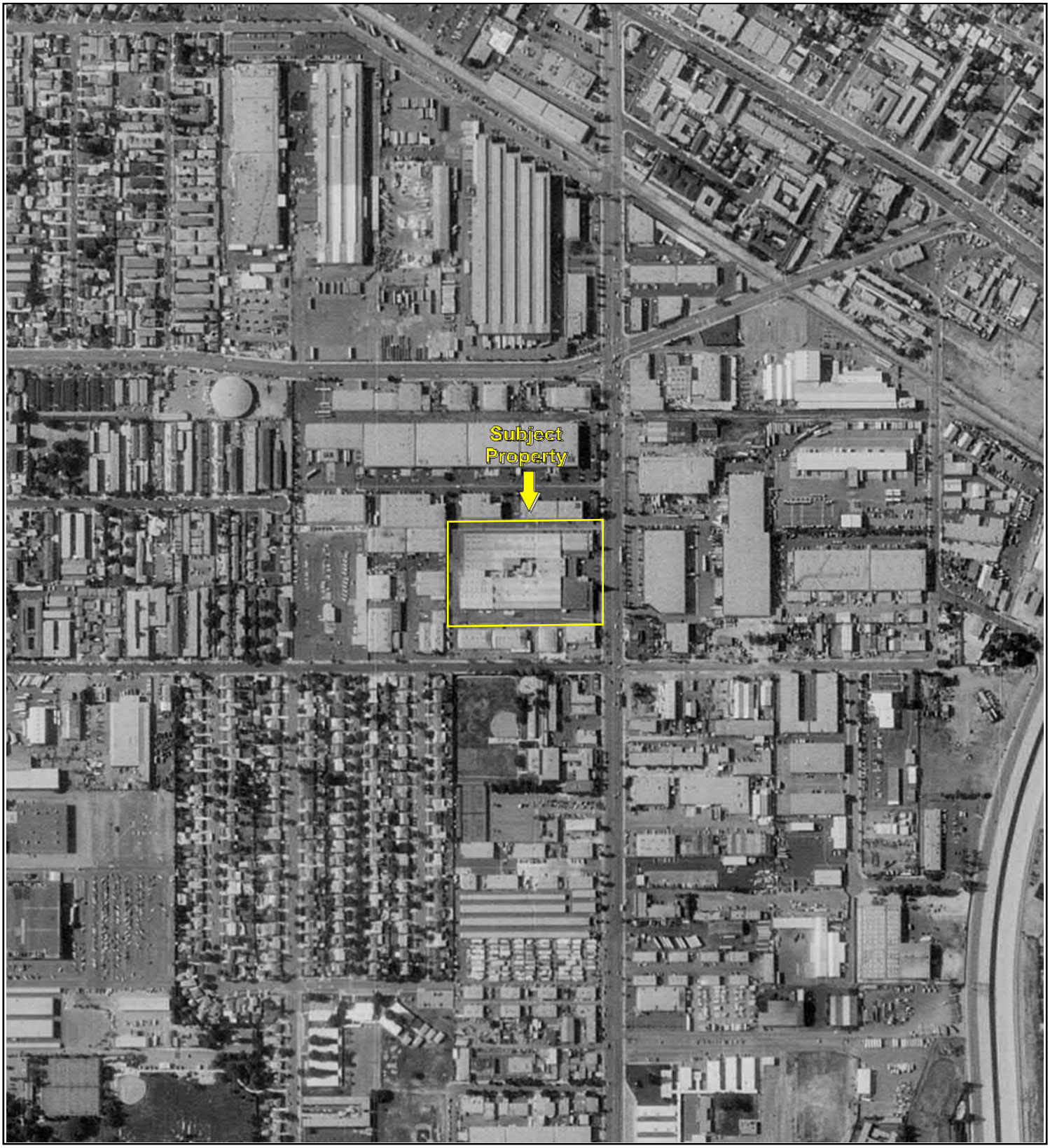
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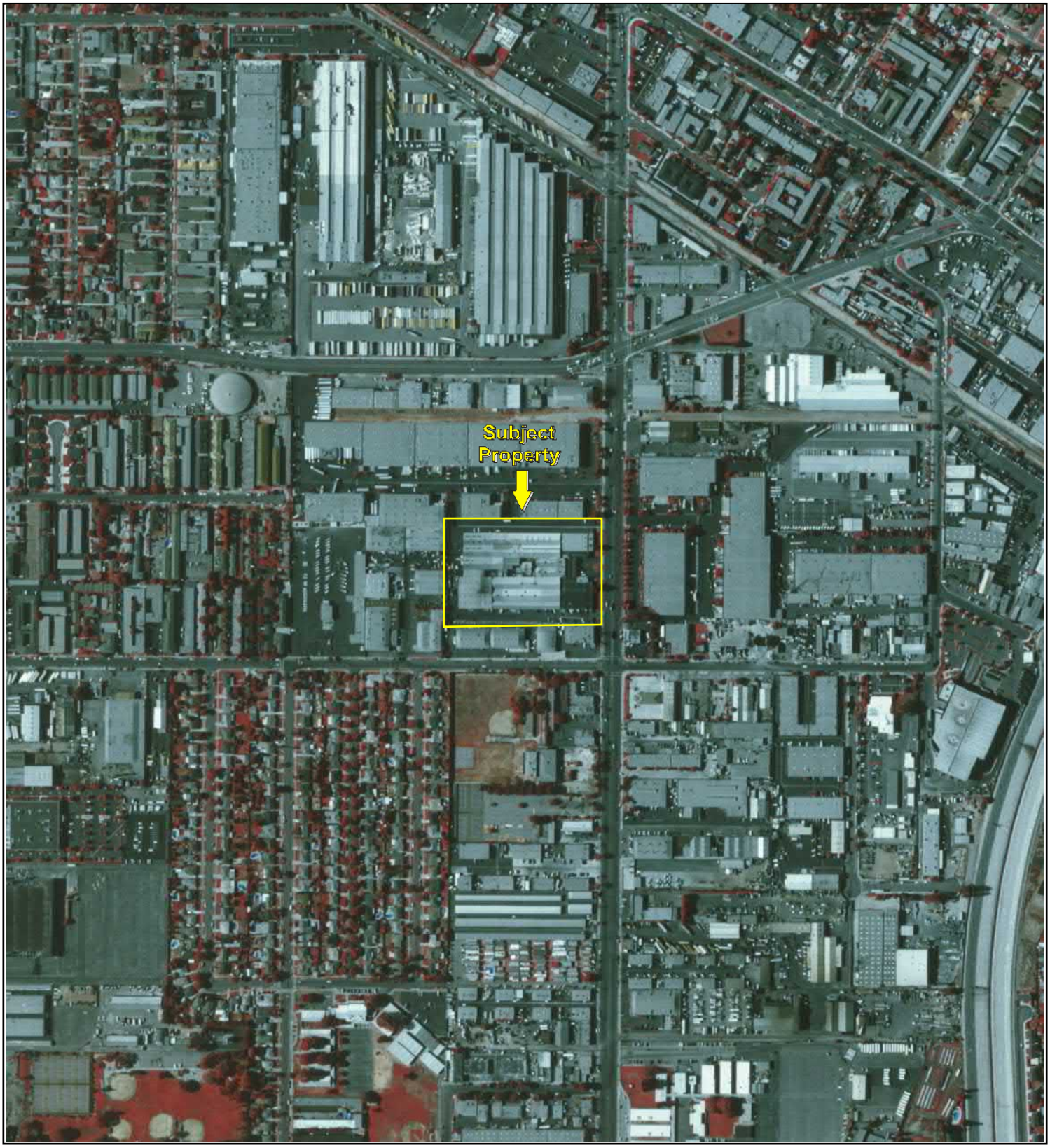
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Key: Subject Property




500 1000 2000

N

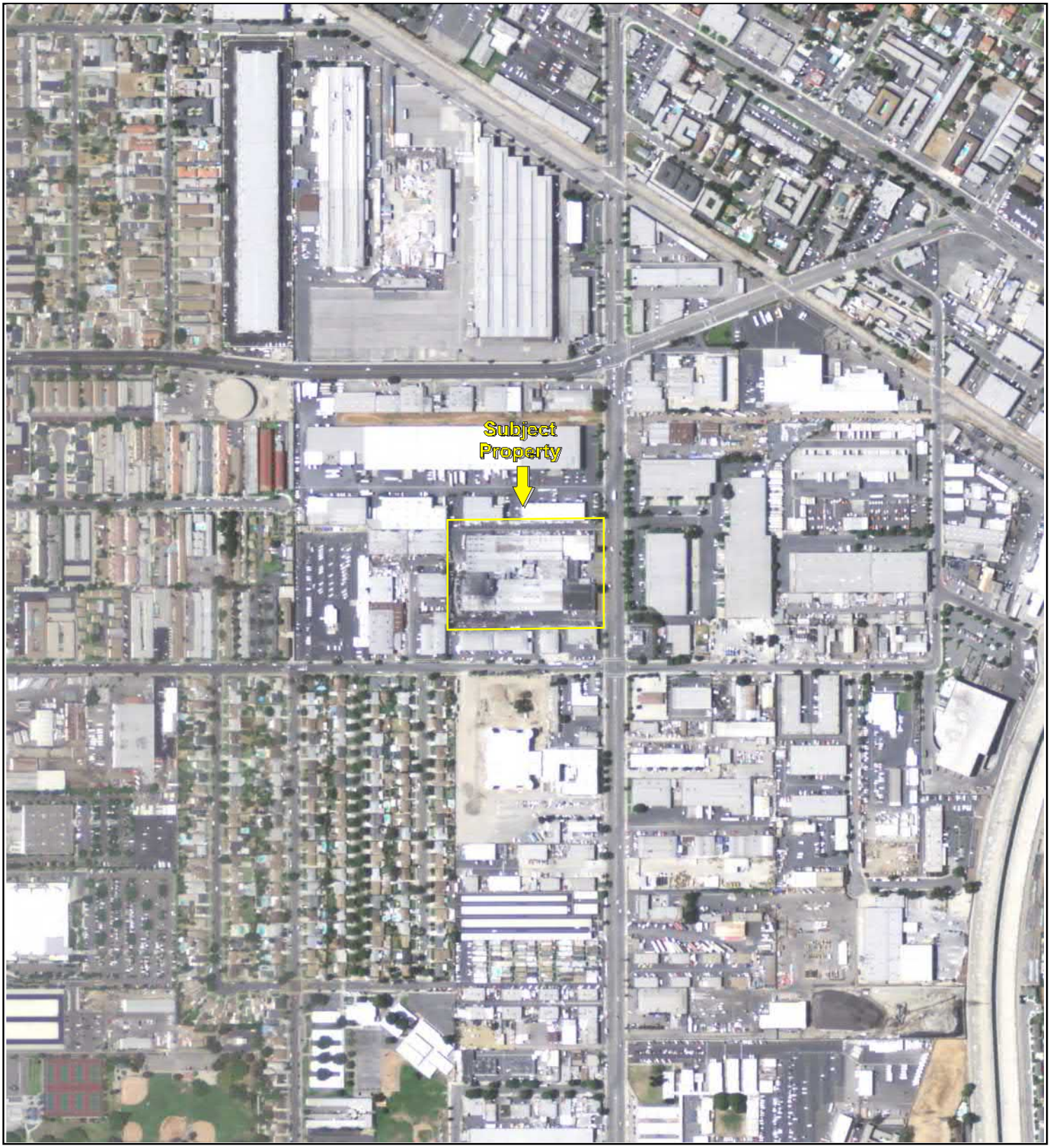
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N

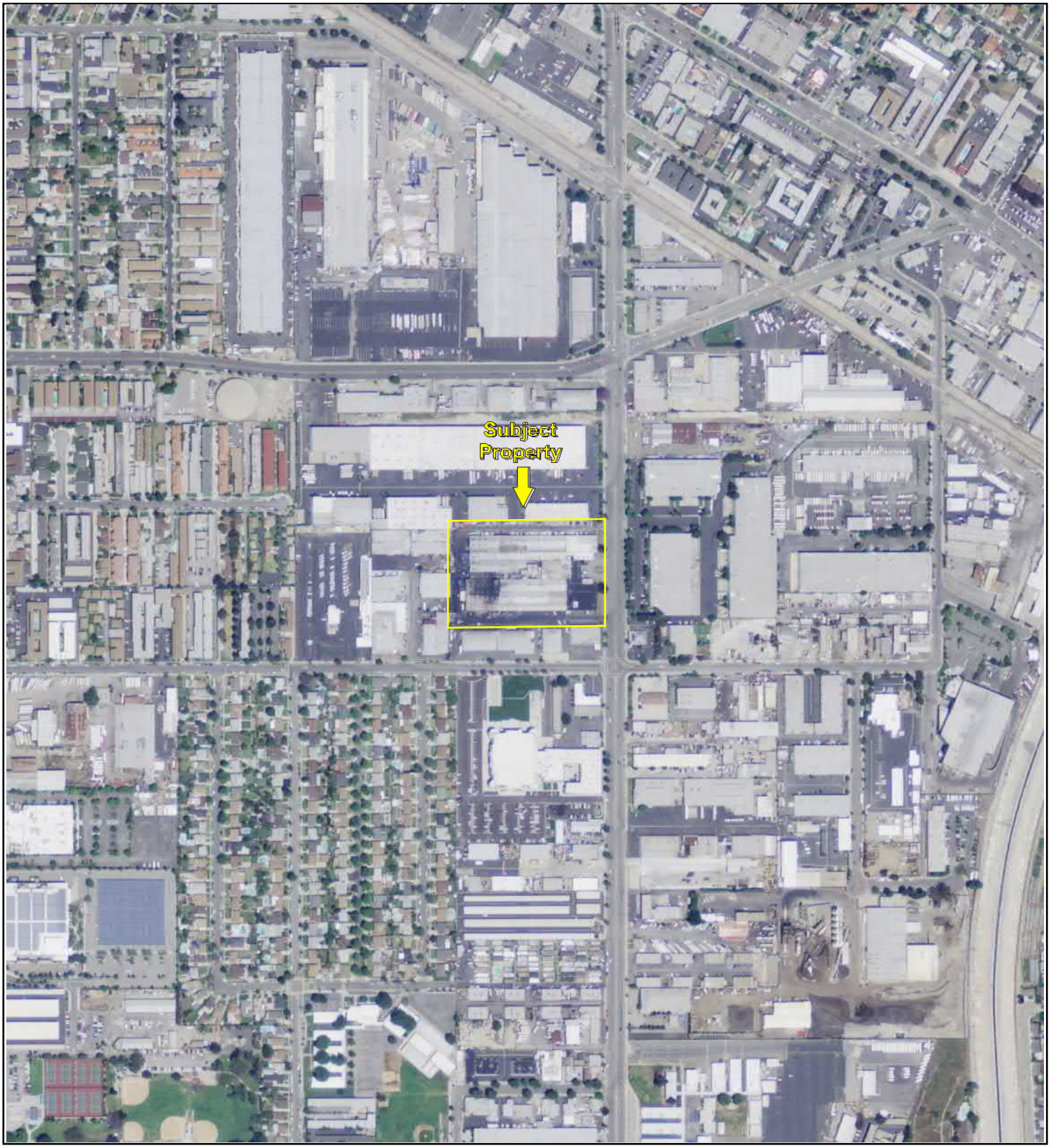
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N

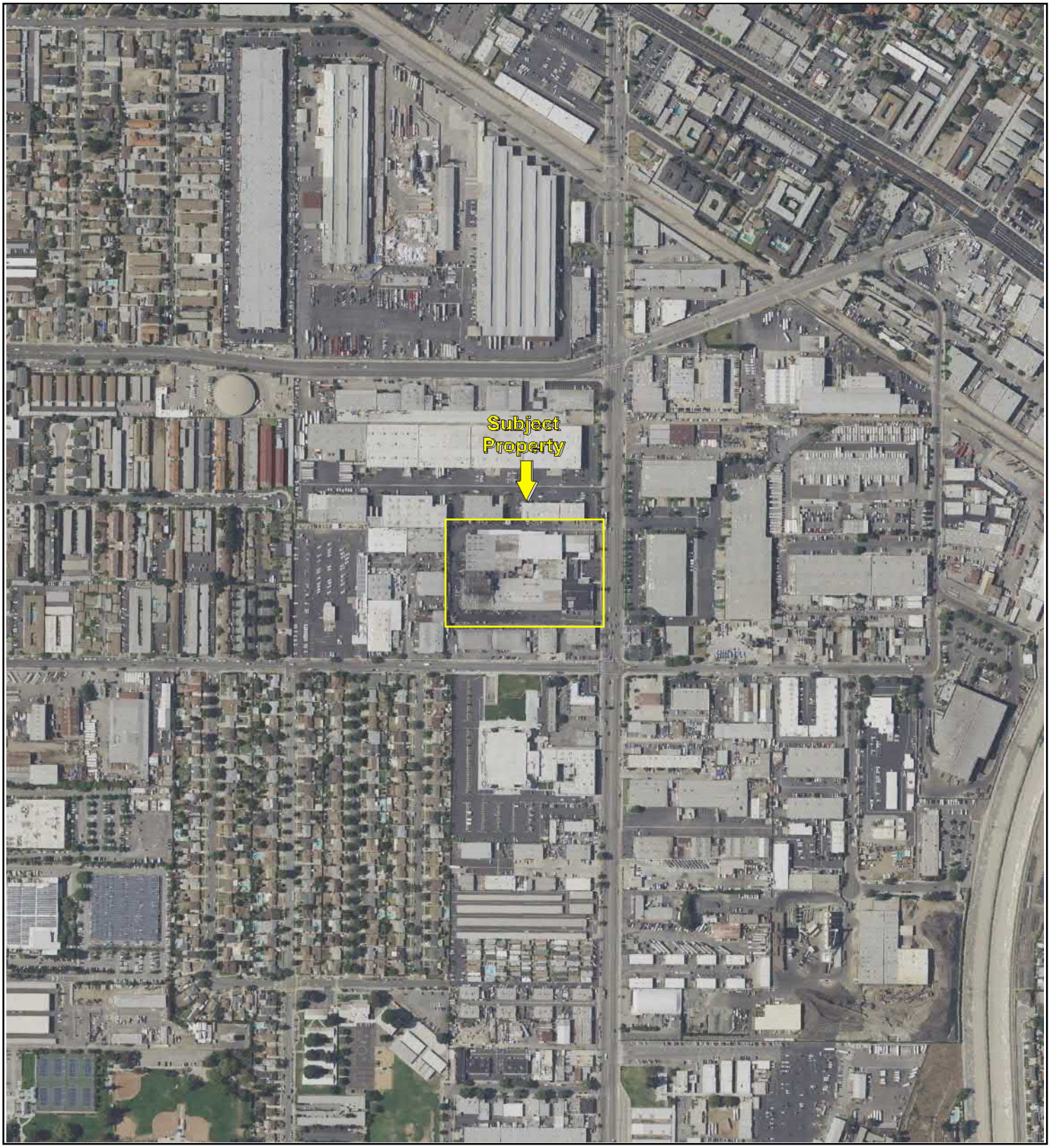
Key: Subject Property




500 1000 2000

N

Key: Subject Property




500 1000 2000

N

Key: Subject Property

Kirkhill
12021 Woodruff Avenue
Downey, CA 90242

Inquiry Number: 5408632.3
August 29, 2018

# Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

08/29/18

**Site Name:**

Kirkhill
12021 Woodruff Avenue
Downey, CA 90242
EDR Inquiry # 5408632.3

**Client Name:**

Partner Engineering and Science, Inc.
2154 Torrance Blvd, Suite 200
Torrance, CA 90501-0000
Contact: Colleen Tubridy

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Partner Engineering and Science, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## *Certified Sanborn Results:*

**Certification #** 0FB2-4DAB-A307

**PO #** NA

**Project** 18-220634.1

### UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 0FB2-4DAB-A307

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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**Kirkhill**
12021 Woodruff Avenue
Downey, CA 90242

Inquiry Number: 5408632.5
September 07, 2018

# The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

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# EXECUTIVE SUMMARY

## DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

## RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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## RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

| *Year* | *Target Street* | *Cross Street* | *Source* |
|---|---|---|---|
| 2014 | ☑ | ☑ | EDR Digital Archive |
| 2010 | ☑ | ☑ | EDR Digital Archive |
| 2005 | ☑ | ☑ | EDR Digital Archive |
| 2000 | ☑ | ☑ | EDR Digital Archive |
| 1995 | ☑ | ☑ | EDR Digital Archive |
| 1992 | ☑ | ☑ | EDR Digital Archive |
| 1985 | ☑ | ☑ | Haines Criss-Cross Directory |
| 1980 | ☑ | ☑ | Haines Criss-Cross Directory |
| 1975 | ☑ | ☑ | Haines Criss-Cross Directory |
| 1971 | ☑ | ☑ | Haines Criss-Cross Directory |
| 1964 | ☑ | ☐ | Lusky Brothers |
| 1961 | ☑ | ☐ | Lusky Brothers |
| 1953 | ☑ | ☐ | TLM Publishing Co |

# FINDINGS

## TARGET PROPERTY STREET

12021 Woodruff Avenue
Downey, CA 90242

| *Year* | *CD Image* | *Source* |
|---|---|---|
| **WOODRUFF AVE** | | |
| 2014 | pg A3 | EDR Digital Archive |
| 2010 | pg A6 | EDR Digital Archive |
| 2005 | pg A10 | EDR Digital Archive |
| 2000 | pg A13 | EDR Digital Archive |
| 1995 | pg A16 | EDR Digital Archive |
| 1992 | pg A19 | EDR Digital Archive |
| 1985 | pg A22 | Haines Criss-Cross Directory |
| 1980 | pg A25 | Haines Criss-Cross Directory |
| 1975 | pg A29 | Haines Criss-Cross Directory |
| 1971 | pg A32 | Haines Criss-Cross Directory |
| 1964 | pg A37 | Lusky Brothers |
| 1961 | pg A42 | Lusky Brothers |
| 1953 | pg A45 | TLM Publishing Co |

# FINDINGS

## CROSS STREETS

| *Year* | *CD Image* | *Source* |
|---|---|---|

## STEWART AND GRAY RD

| | | |
|---|---|---|
| 2014 | pg. A1 | EDR Digital Archive |
| 2010 | pg. A4 | EDR Digital Archive |
| 2005 | pg. A7 | EDR Digital Archive |
| 2000 | pg. A11 | EDR Digital Archive |
| 1995 | pg. A14 | EDR Digital Archive |
| 1992 | pg. A17 | EDR Digital Archive |
| 1985 | pg. A20 | Haines Criss-Cross Directory |
| 1980 | pg. A23 | Haines Criss-Cross Directory |
| 1975 | pg. A26 | Haines Criss-Cross Directory |
| 1975 | pg. A27 | Haines Criss-Cross Directory |
| 1971 | pg. A30 | Haines Criss-Cross Directory |
| 1964 | pg. A33 | Lusky Brothers |
| 1964 | pg. A34 | Lusky Brothers |
| 1961 | pg. A38 | Lusky Brothers |
| 1961 | pg. A39 | Lusky Brothers |
| 1953 | pg. A43 | TLM Publishing Co |

## WASHBURN RD

| | | |
|---|---|---|
| 2014 | pg. A2 | EDR Digital Archive |
| 2010 | pg. A5 | EDR Digital Archive |
| 2005 | pg. A8 | EDR Digital Archive |
| 2000 | pg. A12 | EDR Digital Archive |
| 1995 | pg. A15 | EDR Digital Archive |
| 1992 | pg. A18 | EDR Digital Archive |
| 1985 | pg. A21 | Haines Criss-Cross Directory |
| 1980 | pg. A24 | Haines Criss-Cross Directory |
| 1975 | pg. A28 | Haines Criss-Cross Directory |
| 1971 | pg. A31 | Haines Criss-Cross Directory |
| 1964 | pg. A35 | Lusky Brothers |
| 1964 | pg. A36 | Lusky Brothers |
| 1961 | pg. A40 | Lusky Brothers |
| 1961 | pg. A41 | Lusky Brothers |

# FINDINGS

| ***Year*** | ***CD Image*** | ***Source*** |
|---|---|---|
| 1953 | pg. A44 | TLM Publishing Co |

# City Directory Images

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

# STEWART AND GRAY RD 2014

| | |
|---|---|
| 9252 | DOWNEY WATER DEPT |
| 9253 | CRANEY, MICHAEL M |
| 9255 | LOPEZ, JOSE A |
| | OCCUPANT UNKNOWN, |
| 9257 | WATKINS, CLAUDIA M |
| 9301 | GLENBANK INC |
| | J F DUNCAN INDUSTRIES INC |
| | OMNIMET INDUSTRIES INC |
| | SILVA BRIDGEWATER |
| 9333 | ACCESS INGREDIENTS LLC |
| | BADGER DAYLIGHTING INC |
| | SK LOGISTICS INC |
| | UNIFIED AUTO TRANS CORP |
| | WPP GROUP USA INC |
| 9340 | CPL EXPRESS |
| 9355 | HYDROQUIP PUMP & DEWATERING |
| 9399 | 88 TRANSPORTATION INC |
| 9426 | HARTWICK COMBUSTION TECH INC |
| 9505 | RELIABLE POWDER COATING |
| 9520 | CUMMINS PACIFIC LLC |
| 9525 | HIDDEN CREST REAL ESTATE INC |
| | SOCAL DOCKWORKS |
| | SR MAINTENANCE & MGT SVCS INC |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

# WASHBURN RD 2014

| | |
|---|---|
| 9355 | BARRAZA, JOEL |
| | JULIAN, HILAINE L |
| | KUFCHAK, GARY C |
| | LEIVA, MARIA D |
| | MADRID, FRANK |
| | MANIAGO, ROGER R |
| | VELAZQUEZ, EDA |
| 9361 | BENAVIDEZ, CESAR E |
| | CHAVEZ, MIGUEL |
| | ELMWOOD VILLA APTS |
| | ESPARZA, IGNACIO I |
| | RAMIREZ, MARIA L |
| | REYES, EVANGELINA |
| | SANCHEZ, OLEGARIO L |
| 9367 | ALVAREZ, JOANNA |
| | FRAGOSO, LORENA |
| | GARAY, MARTIN |
| | LIZARRAGA, ANTONIO V |
| | LOPEZ, VELIA |
| | MATANOVICH, MASSIEL |
| | SANTANA, VICTOR |
| 9441 | LIBERTY AMBULANCE LLC |
| 9443 | AUTO-CHLOR SYSTEM WASH INC |
| 9445 | AMERICAN PWDR COATING PNTG INC |
| | CALIFORNIA SPECIALTY PAINTING |
| 9451 | AMERICAN PVD COATINGS LLC |
| 9455 | SOW A SEED INC |
| 9459 | CLASSIC GRAPHIX |
| | QUALLS STUD WELDING PDTS INC |
| 9501 | ARC SOUTHEAST LOS ANGELES CNTY |
| 9555 | ARC SE DAY ACT TRNG CTR |
| 9625 | LA QUILTING INC |
| 9634 | 1 800 RADIATORS OF DOWNEY |
| | CLEAN AIR & HOME SOLUTIONS |
| | RAPID O PRINT |
| 9644 | GREAT AMERICAN ROLLING INC |
| 9645 | ASSOC READY MIXED CONCRETE |
| 9650 | BEYOND STEEL INC |
| | INDUSTRIAL RECOVERY GROUP |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | EDR Digital Archive |

# WOODRUFF AVE 2014

| | |
|---|---|
| 11899 | ARGO ELECTRIC |
| | RAYTHEON COMPANY |
| 11902 | L A SIGNS INC |
| 11904 | GAMMA PLUMBING HEATING AND AC |
| | SCOTCH CARE CARPET SERVICE |
| 11908 | J D POLISHING |
| | PRIMO MACHINE INC |
| 11912 | CAL WEST LIGHTING SERVICES INC |
| | IDEAL LIGHTING SUPPLY INC |
| 11926 | A & G SALES |
| 11929 | IPS INTERNATIONAL INC |
| | REYNALDOS MEXICAN FOOD CO INC |
| 11933 | C M J BROTHERS CORP |
| | JOBBERS WHOLESALE INC |
| 11939 | QZINA SPCLTY FOODS NA INC |
| | QZINA SPECIALTY FOODS |
| 11941 | ALLSTATES TRANSPORTATION CO |
| 12001 | DAN JUMPER |
| 12003 | VULCAN CASTERS |
| 12007 | STOROPACK INC |
| 12010 | FEI 2758 TPW DOWN |
| | FERGUSON ENTERPRISES INC |
| 12020 | MONGGO AMERICA INC |
| 12021 | PERIMETER DEFENSE TECH INC |
| 12049 | A R C STHEAST LOS ANGELES CNTY |
| | ASSOCIATION FOR RETARDED CITZN |
| | JUST A BUCK 19 |
| | SOUTHEAST EMPLOYMENT CENTER |
| 12050 | PETES BURGERS |
| 12083 | OROPEZA, ALMA |
| 12101 | ERIC LOPEZ |
| | J C RUANO SERVICES |
| | MOLINA RX PHARMACY |
| 12107 | MAJESTIC TROPHY & AWARDS |
| 12111 | CONECCION ARTISTICA |
| | PROMOTIONAL IMAGE PRODUCTS |
| 12112 | EAST DOWNEY CONGREGTN OF JEHOV |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

## STEWART AND GRAY RD 2010

| | |
|---|---|
| 9232 | GRAVES, TIMOTHY A |
| 9252 | DOWNEY WATER DEPT |
| 9253 | CRANEY, OCTAVIA C |
| 9255 | LOPEZ, JOSE A |
| 9257 | WATKINS, CLAUDIA M |
| 9301 | ABRAMS & TANAKA ASSOC INC |
| | BARING INDUSTRIES INC |
| | DURAY INC |
| | GLENBANK INC |
| | J F DUNCAN INDUSTRIES INC |
| | OMNIMET INDUSTRIES INC |
| | SILVA BRIDGEWATER |
| 9355 | HYDROQUIP PUMP & DEWATERING |
| 9505 | RELIABLE POWDER COATING |
| 9525 | HIDDEN CREST REAL ESTATE INC |
| | SOCAL DOCKWORKS |
| | SR MAINTENANCE & MGT SVCS INC |
| 9540 | WENDEL GANN CORPORATION |
| 9600 | COLUMBIA SPECIALTY COINC |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

## WASHBURN RD 2010

| | |
|---|---|
| 9355 | KUFCHAK, GARY C |
| | TREJO, CELINA |
| 9361 | AVILA, E |
| | BENAVIDEZ, CESAR |
| | ELMWOOD VILLA APTS |
| | ESPARZA, IGNACIO I |
| | REYES, EVANGELINA |
| | RIVAS, VICTOR H |
| | SANCHEZ, MELISSA |
| 9367 | DELAROSA, AMBER J |
| | FRAGOSO, LORENA |
| | GARRIDO, ERNESTO |
| | GUASTALLI, R |
| | LANGHAM, STEPHANIE |
| | LIZARRAGA, LUCIA |
| | LOPEZ, VELIA |
| | SALAS, ALEJANDRO A |
| | SANDERS DRYWALL |
| 9407 | SOUTHERN CALIFORNIA GAS CO |
| 9443 | AUTO-CHLOR SYSTEM WASH INC |
| 9445 | AMERICAN PWDR COATING PNTG INC |
| 9455 | ACKER TERRY |
| | SOW A SEED INC |
| 9459 | QUALLS STUD WELDING PRODUCTS |
| 9501 | ARC SOUTHEAST LOS ANGELES CNTY |
| 9555 | ARC SE DAY ACT TRNG CTR |
| 9625 | LA QUILTING INC |
| 9634 | 1 800 RADIATORS OF DOWNEY |
| | B HAYES INC |
| | BL HAYES INC |
| | COSMOLARA INC |
| | HEALTH SPECIALTY |
| 9644 | GREAT AMERICAN ROLLING INC |
| 9645 | ASSOC READY MIXED CONCRETE |
| 9650 | INDUSTRIAL RECOVERY GROUP |
| | JCA ENTERPRISES |
| | RB METAL SHEET CREATIONS INC |
| 9700 | MEISTER MANUFACTURING CO |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | EDR Digital Archive |

# WOODRUFF AVE 2010

| | |
|---|---|
| 11904 | SCOTCH CARE CARPET SERVICE |
| 11908 | J D POLISHING |
| | PRIMO MACHINE INC |
| 11911 | PAIS GOLDEN SEA INC |
| 11912 | CAL WEST LIGHTING SERVICES INC |
| | IDEAL LIGHTING SUPPLY INC |
| 11916 | NEVAREZ JOSE |
| 11926 | A & G SALES |
| 11929 | IPS INTERNATIONAL INC |
| | KONG COMPANY |
| | KVP |
| 11933 | JOBBERS WHOLESALE INC |
| 11941 | FFE TRANSPORTATION SVCS INC |
| | FROZEN FOOD EXPRESS INDS INC |
| 12000 | CENTURY TRADERS |
| | EL AMIGO |
| | TRI STATE EXPRESS A BUSINESS E |
| 12001 | VEND NATURAL |
| 12003 | TAYLOR RICHARD |
| | VELOCITY EXPRESS CORPORATION |
| | VULCAN CASTERS |
| 12007 | STOROPACK INC |
| 12021 | CAL PIPE |
| | CAL PIPE INDUSTRIES INC |
| | CAL PIPE MANUFACTURING INC |
| | CARNAVAL ACCESS |
| | DISCOUNT ADVERTISING XPRESS |
| | IKEEP INVENTING CORPORATION |
| | KOLLABORATOR PRODUCTIONS INC |
| | MONSTER SELLS |
| | MORAN HECTOR |
| | NOMAD TRADING |
| | PERIMETER DEFENSE TECH INC |
| | PTG INTERNATIONAL INC |
| | SOURCE ONE STAFFING |
| | STANDARD INDUSTRIES |
| 12049 | A R C STHEAST LOS ANGELES CNTY |
| | ASSOCIATION FOR RETARDED CITZN |
| | SOUTHEAST EMPLOYMENT CENTER |
| 12050 | CARHOPS FOOD SERVICES INC |
| | MISTER PETES BURGERS |
| | STATHOULIS TAKIS |
| 12107 | MAJESTIC TROPHY & AWARDS |
| | PIZZA PLUS CHICKEN |
| 12111 | ARAUJO DEVELOPERS & INVESTERS |
| | PROMOTIONAL IMAGE PRODUCTS |
| 12119 | UNIVERSAL MUSIC SCHOOLS |
| 12121 | CO EAST |
| | RANDALLS DENTAL LAB |
| 12123 | GEORGES ORTHODONTIC LAB |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

# STEWART AND GRAY RD 2005

| | |
|---|---|
| 9232 | GRAVES, TIM A |
| 9252 | DOWNEY WATER DEPT |
| 9253 | CRANEY, OCTAVIA C |
| 9255 | LOPEZ, JOSE A |
| 9301 | ABRAMS & TANAKA ASSOC INC |
| | DURAY INC |
| | J F DUNCAN INDUSTRIES INC |
| 9333 | BAXTER & ASSOC |
| | WESTERN PACIFIC PULP AND PAPER |
| 9355 | HYDROQUIP PUMP & DEWATERING |
| 9363 | BETH/MORE METAL PRODUCTS INC |
| 9420 | REBECCA CUMMINGS A CORP |
| | SIGIFREDO VARGAS |
| | VARGUS CUTTING & FUSING |
| 9426 | DOC SLEEP FURNITURE CENTER |
| | DREAM CHASERS INC |
| | WW FURNITURE |
| 9505 | RELIABLE POWDER COATING |
| 9520 | REGENT INTERNATIONAL |
| | RELIABLE ARCFT MAINT PDTS INTL |
| 9525 | SOCAL DOCKWORKS |
| | WALLYS FENCE & IRON |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

## WASHBURN RD 2005

| | |
|---|---|
| 9307 | CONTINENTAL TAX & MULTISERVICE |
| | JJ HEATING & COOLING |
| | NAVAS JOVITA |
| 9316 | M & M CUTOMATIC SAWING INC |
| 9325 | MORENO GUSTAVO |
| 9335 | DELPOZO, MARIA C |
| | EBY, BYRON E |
| | MEDINA, GABRIEL |
| | ORTIZ, AIDA |
| | SANCHEZ, BRENDA |
| | URTAEVA, RAESA |
| 9343 | GARCIA, MARIA D |
| 9345 | GABRIEL, MARGUIRET |
| | OCCUPANT UNKNOWN, |
| 9351 | APPLE NETWORK SERVICES |
| | BLAS, BERTHA |
| | CARMONA, FERNANDO |
| | CARMONA, INEZ |
| | DAMOUR, PAUL B |
| | GOMEZ, ALMA |
| | GONZALEZ, GERMAN |
| | KIM, S |
| | LATINO CRECE CONSULTING INC |
| | LOPEZ, CEASAR A |
| | MENDOZA, VERONICA |
| | MONTANEZ, EMMA |
| | MONTOYA, YENNY D |
| | MORCOS, MAKRAM A |
| | PEREZ, ROSA |
| | ROBERTS, BUTLER D |
| | SANCHEZ, VICTOR M |
| | TECHNO ONE SERVICES |
| | TITTELFITZ, JOSEPH |
| | VASQUEZ, JOSE |
| | WILSON, ANTHONY |
| 9355 | ALVARADO, CARLOS |
| | ANDERSON, KORY K |
| | BROOKS, EDWARD |
| | KUFCHAK, GARY C |
| | LARGAESPADA, CAROLINA |
| 9361 | ELMWOOD VILLA APTS |
| | ESPARZA, IGNACIO |
| | HERRERA, YOAN |
| | ORTIZ, M |
| | RIVAS, VICTOR M |
| | SALAZAR, JUAN |
| | SANCHEZ, OLEGARIO |
| 9367 | BONILLA, ERIKA |
| | DELAROSA, AMBER J |
| | GARRIDO, ERNESTO |

| Target Street | Cross Street | Source |
|---|---|---|
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## WASHBURN RD 2005 (Cont'd)

| | |
|---|---|
| 9367 | HENSON, ROBERT R |
| | HERRERA, ROXANNA |
| | OJEDA, ALICIA |
| | PERONA, URSULA G |
| | PLASCENCIA, JOSE |
| | YANEZ, ARMANDO |
| 9407 | SOUTHERN CALIFORNIA GAS CO |
| 9441 | RITE ENGINEERING & MFG CORP |
| 9443 | AUTO CHLOR SYSTEM OF WASH |
| 9445 | AMERICAN POWDER COATING & PNTG |
| 9455 | QUALLS STUD WELDING PRODUCTS |
| 9459 | SILKSCRNING BY CLASSIC GRAPHIX |
| 9501 | ARC SOUTHEAST LOS ANGELES CNTY |
| | ASSOCIATION RETARDED CITZNS LA |
| 9625 | LA QUILTING |
| 9634 | BROOKS BUNK BEDS |
| | MEPCO SERVICES INC |
| 9644 | GREAT AMERICAN ROLLING |
| | GREAT AMERICAN ROLLING INC |
| 9645 | ASSOC READY MIXED CONCRETE |
| 9650 | CAL PIPE MANUFACTURING INC |
| | INDUSTRIAL RECOVERY GROUP |
| | RB WHOLESALE SUPPLY |
| 9700 | MEISTER MANUFACTURING CO |
| | MEISTER MFG CO |
| 9707 | PANAMENO, RUBIA |

| Target Street | Cross Street | Source |
|---|---|---|
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# WOODRUFF AVE 2005

| | |
|---|---|
| 11904 | GAMMA HEATING & AC |
| | GAMMA PLUMBING HEATING AND AC |
| | SCOTCH CARE CARPET SERVICE |
| 11906 | BMF SUPER CYCLE INC |
| | SOLS MANUFACTURING LESSEE |
| 11908 | HOSPITALITY DATA SRV INC A COR |
| | JD POLISHING |
| | PRIMO MACHINE |
| 11911 | GREAT EARTH LLC |
| | PAIS GOLDEN SEA INC |
| 11912 | CAL WEST LIGHTING SERVICES |
| | IDEAL LIGHTING SUPPLY INC |
| 11926 | A & G SALES |
| 11929 | REYNALDOS MEXICAN FOOD COMPANY |
| | REYNALDOS MEXICAN FOOD MFR |
| | RFP DISTRIBUTION INC |
| 11933 | C R COURIER |
| | ILLINOIS TOOL WORKS INC |
| | LOGISTICS OPTICAL MANAGEMENT I |
| 11937 | AUSTIN PANG GLOVES MFG USA |
| 11939 | SAMSUNG AUTO PARTS INC |
| 11941 | FFE TRANSPORTATION |
| | FROZEN FOOD EXPRESS INDUSTRIES |
| 12000 | PHOENICIAN STONE IMPORTS |
| | YOUNG MENS CHRSTN ASSN OF LA |
| 12001 | ELY DUANE |
| 12003 | VELOCITY |
| 12007 | STOROPACK INC |
| 12010 | MAKAHA INDUSTRIES INC |
| | PRO, NINE |
| 12020 | GRALEN COMPANY |
| 12021 | SOURCE ONE STAFFING |
| 12023 | FELCHCO INVESTMENT GROUP LLC |
| 12049 | A R C STHEAST LOS ANGELES CNTY |
| | ARC SOUTHEAST LOS ANGELES CNTY |
| | ASSOCIATION FOR RETARDED CITZN |
| | SOUTHEAST EMPLOYMENT CENTER |
| 12050 | FRISCO BURGERS DOWNEY INC |
| | STATHOULIS TAKIS |
| 12101 | CORDOVA, ART I |
| | EDDY, DEBORAH S |
| | STEWART, JOYCE I |
| 12107 | MAJESTIC TROPHY & AWARDS |
| 12111 | PROMOTIONAL IMAGE PRODUCTS |
| 12117 | DEL RIO BRIDGE CLUB |
| 12119 | UNIVERSAL MUSIC SCHOOLS |

| Target Street | Cross Street | Source |
|---|---|---|
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## STEWART AND GRAY RD 2000

| | |
|---|---|
| 9220 | GARCIA, SERGIO |
| | HEREDIA, ADAN |
| | MENDEZ, LEIDY |
| | PERALES, MANUEL |
| 9228 | DOMENZAIN, RICARDO |
| 9229 | TRILEK ELECTRIC INC |
| 9252 | DOWNEY WATER DEPT |
| 9301 | DURAY/JF DUNCAN INC |
| | J F DUNCAN INDUSTRIES INC |
| 9333 | BAXTER & ASSOC |
| | WESTERN PACIFIC PULP AND PPR |
| | XTRA LEASE INC |
| 9355 | HYDROQUIP PUMP & DEWATERING |
| 9420 | INTEGRA MARKETING INC |
| 9426 | PERKINS CRAIG |
| 9505 | BRECHT MANUFACTURING INC |
| 9520 | RAMP INTERNATIONAL |
| | RELIABLE ARCFT MAINT PDTS INTL |
| 9525 | SOCAL DOCKWORKS |
| | WALLYS FENCE & IRON |

| Target Street | Cross Street | Source |
|---|---|---|
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## WASHBURN RD 2000

| | |
|---|---|
| 9316 | M & M CUT-O-MATIC SAWING INC |
| 9335 | EBY, BYRON |
| | GUZMAN, SELVIN |
| | HERNANDEZ, SANDRA D |
| 9343 | SANCHEZ, VICTOR M |
| | VALENZUELA, SOCORRO |
| 9345 | STUDER, L H |
| 9349 | GUTIERREZ, KEARI A |
| 9351 | ANDRES, A |
| | CARMONA, F |
| | HERNANDEZ, R |
| | KOWALSKI, SYLVIA M |
| | PEREZ, ROSA |
| | WARD, ANTHONY |
| 9355 | HERNANDEZ, JOSE L |
| | QUINTANA, MARK H |
| 9361 | COOK, JEAN T |
| | ESPARZA, IGNACIO |
| | MILAN, J |
| 9367 | BELYEU, KEVIN |
| | PENA, HECTOR |
| 9407 | SOUTHERN CALIFORNIA GAS CO |
| 9441 | RITE ENGINEERING & MFG CORP |
| 9443 | AUTO CHLOR SYSTEM OF WASH |
| 9445 | AMERICAN POWDER COATING & PNTG |
| 9453 | EAGLE SPRINGS |
| 9455 | ACKER TERRY |
| | QUALLS STUD WELDING PRODUCTS |
| 9459 | SILKSCRNING BY CLASSIC GRAPHIX |
| 9555 | ARC SOUTHBAY |
| 9625 | LA QUILTING |
| 9634 | A&B FURNITURE RESTORATION CTR |
| | RN MILLER INC |
| 9645 | ASSOC READY MIXED CONCRETE |
| 9660 | ALS METAL FINISHING |
| 9700 | MEISTER MANUFACTURING CO |
| | MEISTER MFG CO |

| Target Street | Cross Street | Source |
|---|---|---|
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# WOODRUFF AVE 2000

| | |
|---|---|
| 11904 | GAMMA HEATING & AC |
| | GAMMA PLUMBING HEATING AND AC |
| | SCOTCH CARE CARPET SERVICE |
| 11906 | BMF SUPER CYCLE INC |
| 11908 | TOYLAND MAJOR DEPARTMENT |
| 11911 | PAIS GOLDEN SEA INC |
| 11912 | IDEAL LIGHTING SUPPLY INC |
| 11916 | CAL WEST LIGHTING SERVICES |
| | LIGHTHOUSE INDUSTRIES |
| 11926 | A & G SALES |
| 11929 | BETHANY CHRISTIAN SERVICES |
| | MAVERICK SALES |
| 11933 | HOBART BROTHERS |
| | MILLER ELECTRIC MFG CO |
| 11937 | AUSTIN PANG GLOVES MFG (USA) |
| 11939 | SAMSUNG AUTO PARTS INC |
| 11941 | KIRK DISTRIBUTION INC |
| | MARATHON EXPRESS INC |
| 12000 | NEGEV WIRES USA INC |
| | ROTATECH INTERNATIONAL CO |
| 12001 | CROSS, MIKA C |
| | PR PRODUCTIONS |
| 12003 | E P M MARKETING INC |
| 12007 | STOROPACK INC |
| 12010 | KUKA VALVE COMPANY INC |
| | LUIGI & SONS INC |
| | STATE INDUSTRIES INC |
| 12020 | INTERPARTS INDUSTRIES INC |
| 12021 | CHARCOAL MASTERS INTERNATIONAL |
| | IMMANUEL INDUSTRIES INC |
| | SOURCE ONE STAFFING |
| 12049 | ASSOCIATION FOR RETARDED |
| 12050 | STATHOULIS TAKIS |
| 12101 | DUMAS PROPERTY LOANS |
| | GUCCIONE, SUSAN |
| | ORTEGA, ALMA D |
| | STEWART VELMA JOYCE |
| 12107 | MAJESTIC TROPHY |
| 12111 | PROMOTIONAL IMAGE PRODUCTS |
| 12117 | DEL RIO BRIDGE CLUB |
| 12119 | UNIVERSAL MUSIC SCHOOLS |

| Target Street | Cross Street | Source |
|---|---|---|
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## STEWART AND GRAY RD 1995

| | |
|---|---|
| 8320 | FOUNTAIN SQUARE LIQUOR |
| 8328 | MR STEVES HAIRSTYLIST |
| | MR STEVES HARI STYLIST |
| 8330 | SIZZLING THAI KITCHEN |
| 9160 | VILLA DOWNEY |
| 9301 | DURAY INC |
| | GLENBANK INC |
| | J F DUNCAN INDUSTRIES INC |
| | OMNIMENT INDUSTRIES INC |
| 9333 | XTRA LEASE INC |
| 9355 | HYDROQUIP PUMP & DEWATERING |
| 9368 | COAST POLYERS INC |
| | INTERSYSTEMS INC |
| 9408 | LEADWAY PLASTICS CORPORATION |
| 9420 | INTEGRA MARKETING INC |
| 9426 | SPACE TECH INSTALLATIONS SVCS |
| 9505 | BRECHT MANUFACTURING INC |
| 9520 | RELIABLE ARCFT MAINT PDTS INTL |
| 9540 | WENDEL GANN CORPORATION |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

# WASHBURN RD 1995

| | |
|---|---|
| 9316 | JOMIT EQUIPMENT RENTAL |
| 9335 | AMAYA, JUAN M |
| | EBY, BYRON |
| | PITTMAN, JOHN |
| | RIVERA, KANDI |
| | VALENZUELA, BERTHA |
| 9337 | OCCUPANT UNKNOWNN |
| 9343 | KIM, HA |
| 9351 | CASANOVA, JIM |
| | CORRAL, CECILIA |
| | DONINI, FRANK |
| | VARGAS, JOHNNY |
| | WIBOWO, PINTORO |
| 9355 | ARREOLA, G L |
| | COMSA, PAUL |
| | FARRINGTON, GOLDIE |
| | KELLOGG, E |
| | RACHMAN, CHRIS |
| 9361 | LEMONS, JAMES |
| | MUNTEANV, VIOREL |
| | RIVAS, VICTOR |
| 9367 | ARRASMITH, JAMES |
| | CRAM, MARTHA A |
| | OJEDA, SAUL |
| 9407 | SOUTHERN CALIFORNIA GAS CO |
| 9441 | RITE ENGINEERING & MFG CORP |
| 9443 | AUTO CHLOR SYSTEMS OF WASH |
| 9445 | AMERICAN POWDER CO INC |
| | AMERICAN POWDER COATING & PNTG |
| 9459 | BATHURST, B |
| | SILKSCRNING BY CLASSIC GRAPHIX |
| 9501 | ASSOCIATION |
| 9555 | ASSOCIATION FOR RETARDED |
| 9625 | LA QUILTING |
| 9634 | RN MILLER INC |
| 9650 | VIMAR INC |
| 9660 | AUTOMATED VALVE SYSTEMS INC |
| 9700 | MEISTER MANUFACTURING CO |
| | MEISTER MFG CO |

| Target Street | Cross Street | Source |
|---|---|---|
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# WOODRUFF AVE 1995

| | |
|---|---|
| 11904 | SCOTCH CARE CARPET SERVICE |
| 11906 | ACTIVE FORKLIFT SERVICE |
| | SUPRA PRECISION MACHINE PROD |
| 11911 | LA VISTA PRODUCTS INC |
| 11912 | TAMSHELL CORP |
| | WET N WILD RENTALS INC |
| 11926 | A & S AIR CONDITIONING |
| 11933 | K W SALES CO INC |
| | SIERRA INDUSTRIAL ENGRG CO |
| 11939 | NOVEL TEEZ DESIGNS INC |
| | OXFORD INDUSTRIES INC |
| 11941 | INCO EXPRESS INC |
| 12000 | DOWNEY FAMILY YMCA |
| | DOWNEY SERVICE & PERFORM CTR |
| | MORGAN ROGER |
| | TORRANCE HEAT TREATING |
| 12001 | MORRIS COSTUMES INC |
| | NATIONAL SANITARY SUPPLY CO |
| | VAC MAN SWEEPER CO |
| 12003 | LUMEX INC |
| | WARD MANUFACTURING INC |
| 12005 | STOROPACK INC |
| 12007 | STOROPACK INC |
| 12010 | GELBER INDUSTRIES INC |
| | HSIN RONG IMPORTS |
| | RCM TRUCKING |
| | STATE INDUSTRIES INC |
| 12020 | ANABA INTERNATIONAL |
| | ANABA INTERNATL |
| 12021 | KIRKHILL INC |
| 12049 | ASSOCIATION |
| 12050 | STATHOULIS TAKIS |
| 12101 | CORDOVA ART |
| | SANCHEZ, LOUIS E |
| | SCHNYDER VOLLMER & ASSOCIATES |
| 12107 | PIZZA PLUS CHICKEN |
| 12109 | RULLO DEVELOPMENT CO INC |
| 12115 | AUDIO STUFF |
| | KIMS PAINTING CO |
| 12121 | B&B MAINTENANCE CO |
| | GARDNER WILLIAM |
| | OCCUPANT UNKNOWNN |
| | RANDALL DENTAL LAB |

| Target Street | Cross Street | Source |
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## STEWART AND GRAY RD 1992

8259 CHONGS APPLIANCE REPAIR
8300 CB REAL ESTATE INC
8306 HOME LOANS OF AMERICA
8320 FOUNTAIN SQUARE LIQUOR
8328 MR STEVES HARI STYLIST
9301 OMNIMENT INDUSTRIES INC
9355 HYDRO QUIP INC
HYDROQUIP PUMP & DEWATERING
9505 BRECHT MFG INC
9540 GANN PRODUCTS COMPANY INC

| Target Street | Cross Street | Source |
|---|---|---|
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# WASHBURN RD 1992

| | |
|---|---|
| 9316 | JOMIT EQUIPMENT RENTAL |
| 9335 | EBY, BYRON |
| | LUCIER, ARMAND |
| | SALCIDO, ANA |
| 9355 | COSMA, PAUL |
| | SMELSER, JANINE |
| 9361 | MUNTEANV, VIOREL |
| 9407 | SOUTHERN CALIFORNIA GAS CO |
| 9441 | RITE ENGINEERING & MFG CORP |
| 9443 | AUTO CHLOR SYSTEMS OF WASH |
| 9445 | AMERICAN POWDER COATING & PNTG |
| 9451 | WESTERN SPRING & MFG CO |
| 9453 | GARDNER WILLIAM |
| 9455 | QUALLS STUD WELDING PRODUCTS |
| 9459 | AMERICAN PEG BOARD PRINTING |
| 9501 | ASSOCIATION |
| 9602 | ERHART CATERING |
| 9634 | R N MILLER INC |
| | RUDYS ELECTRIC |
| 9645 | DOWNEY BUILDING MATL INC |
| | DOWNEY TRANSIT MIX INC |
| 9650 | VIMAR INC |
| 9660 | AUTOMATED VALVE SYSTEMS INC |
| 9700 | MEISTER MANUFACTURING CO |

| Target Street | Cross Street | Source |
|---|---|---|
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# WOODRUFF AVE 1992

| | |
|---|---|
| 11904 | REES FLOORCOVERING |
| 11906 | GONZALES, CARLOS |
| | PUIG MAGIN |
| | SELECT MACHINE WORKS |
| | SOLS MFG INC |
| 11908 | ACTIVE FORKLIFT |
| 11911 | LA VISTA PRODUCTS INC |
| 11912 | TAMSHELL CORP |
| 11926 | A&S AIR CONDITIONING |
| 11929 | PELLA ARCHITECTURAL PRODUCTS |
| 11933 | K W SALES CO INC |
| | SIERRA INDUSTRIAL ENGRG CO |
| 11939 | OXFORD INDUSTRIES INC |
| 11941 | INCO EXPRESS INC |
| 12000 | LINEAR INC |
| 12001 | MORRIS HOUSE OF HUMOR |
| | NATIONAL SANITARY SUPPLY CO |
| 12003 | LUMEX INC |
| | WARD MANUFACTURING INC |
| 12005 | INDUSTRIAL PAPER DISTRIBUTORS |
| 12007 | STOROPACK INC |
| 12010 | GELBER INDUSTRIES INC |
| 12021 | KIRKHILL INC |
| 12049 | ASSOCIATION |
| 12050 | FRISCO BURGER 2 |
| | FRISCOS CAR HOP DRIVE |
| | TASSOS DRIVE IN |
| 12101 | DANGERFIELD SUSAN |
| | DANGERFIELD, SUSAN |
| | GOOD NEWS PRINTING CENTER |
| 12107 | NAZIR A & NAZIR B CHAUDHR |
| 12115 | MOTEL VINCENT A JR |
| 12117 | RANDOLPH INDUSTRIES INC |
| 12120 | MORGAN WHOLESALE ELECTRIC |
| 12121 | AYUDA, LEGAL |

| Target Street | Cross Street | Source |
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## STEWART AND GRAY RD 1985

| | | | |
|---|---|---|---|
| 9228 | HYNES ROSENA J | 923-0230 | +5 |
| | RAMIREZ MARYLIN I | 862-4188 | +5 |
| 9229 | REHN HAROLD K | 861-2830 | 4 |
| 9301 | DURAY INC | 862-4269 | 8 |
| | IMPERIAL INSTLLTN | 923-9667 | 0 |
| 9303 | XXXX | 00 | |
| 9333 | FLEXI VAN TRAILERS | 862-6502 | 4 |
| 9333½ | CRAIG ROBT CORP | 869-8164 | +5 |
| 9335 | BRIDGEWATER ASSOC | 923-0941 | +5 |
| 9355 | COCHRAN C H | 862-5320 | |
| 9363 | XXXX | 00 | |
| 9368 | PLASTIC MOLDED PROD | 803-3307 | 3 |
| 9375 | XXXX | 00 | |
| 9379 | XXXX | 00 | |
| 9408 | XXXX | 00 | |

| Target Street | Cross Street | Source |
|---|---|---|
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## WASHBURN RD 1985

| | | | |
|---|---|---|---|
| 9355 | BRUST STEVEN | 923-3154 | 2 |
| | JOLLEY CATHLEEN | 923-9574 | 4 |
| | ROSENBERG PHILLIP | 923-7830 | 3 |
| 9361 | COX W J | 923-3613 | +5 |
| 9367 | SANTOS EFRAIN | 862-3373 | +5 |
| | SHEVETTE GREG | 869-4111 | +5 |
| 9441 | RITE ENGR&MFG CORP | 862-2135 | |
| 9443 | AUTO CHLOR SYSTEM | 923-6767 | +5 |
| 9445 | XXXX | 00 | |
| 9451 | WESTERN SPRING&MFG | 923-7272 | |
| 9455 | XXXX | 00 | |
| 9459 | AMER GRAPHICS | 869-5366 | 3 |
| 9501 | SE WRK TRAINING CTR | 803-1556 | 3 |
| 9531 | XXXX | 00 | |
| 9555 | ASSOCTN RETARDED CT | 803-3391 | 3 |

# ZIP CODE 90241

| | | | |
|---|---|---|---|
| 9602 | LOYDS CATERING | 803-3591 | 4 |
| | WOOD L J | 803-3772 | 4 |
| 9634 | BLACK DIAMOND BLADE | 803-1571 | 3 |
| | CUTTING EDGE SUPPLY | 803-1571 | 3 |
| 9644 | ARTECH INDUSTRIES | 803-3713 | 4 |
| | BEE WIRE&CABLE INC | 803-4373 | 3 |
| 9645 | DOWNEY BLDNG MTRLS | 861-6704 | |
| | DOWNEY READY MIX | 861-1278 | |
| 9650 | VIMAR INC | 803-4388 | 3 |

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## WOODRUFF AVE 1985

| | | | |
|---|---|---|---|
| 11902 | WINDOW WORLD | 803-3394 | 4 |
| 11904 | ALLEE REES CO INC | 803-3566 | 3 |
| 11906 | XXXX | 00 | |
| 11911 | ROYAL H M INC | 803-4651 | 3 |
| 11912 | PACIFIC FABRICATORS | 803-3554 | 3 |
| 11916 | B&F INDUSTRIES | 803-3435 | 3 |
| 11929 | XXXX | 00 | |
| 11933 | CASIO INC | 803-3411 | 3 |
| 11937 | CA STOCK TAB | 803-1411 | 3 |
| 11939 | METALSOURCE | 803-3311 | 3 |
| 11941 | INCO EXPRESS INC | 803-3366 | 3 |
| 12000 | DARNELL CORP LTD | 923-9373 | +5 |
| 12001 | CHART MASTERS PRINT | 803-4663 | 3 |
| | HAMPTON DON BLOWERS | 866-9453 | 2 |
| | HOUSE OF HUMOR NVTY | 803-3374 | 3 |
| | HOUSE OF HUMOR NVTY | 803-3500 | 3 |
| | HRS INC | 803-5315 | +5 |
| | J&J SHOWERS PANS | 803-1205 | 4 |
| | MAINLAND PRODUCTS | 803-1968 | 4 |
| 12003 | LUMEX INC | 803-4634 | 3 |
| 12021 | KIRKHILL INC | 803-3421 | 3 |
| 12049 | ASSOCTN RETARDED | 803-4606 | 3 |
| 12050 | TASSOS DRIVE IN | 803-1513 | 3 |
| 12101 | RAFFAELE SV CO | 803-1949 | 3 |
| 12107 | KENTUCKY FRIED CHKN | 803-4656 | 3 |
| 12109 | XXXX | 00 | |
| 12111 | XXXX | 00 | |
| 12112 | LLOYDS SMORGASBORD | 803-9000 | |
| | LOYDS CATERING | 803-9000 | |
| | LOYDS SMORGASBORD | 803-9000 | 4 |

| Target Street | Cross Street | Source |
|---|---|---|
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## STEWART AND GRAY RD 1980

| | | |
|---|---|---|
| 9255 | XXXX | 00 |
| 9257 | DARIO BILL | 869-0820 +0 |
| 9258 | REIDHAMMER C | 862-6871 9 |
| 9301* | DURAY INC | 862-4269 8 |
| * | IMPERIAL INSTLLTN | 923-9667+0 |
| 9303* | ALPINE ANIMAL CNTRS | 923-7113+0 |
| 9333* | COX TRUCKING | 862-8626+0 |
| * | COX TRUCKING CO | 923-9090+0 |
| 9355 | COCHRAN C H | 862-5320 2 |
| 9363* | ALL WESTRN PALLET | 862-1196 3 |
| 9368* | PLASTIC MOLDED PROD | 869-1505 3 |
| 9375* | BOWMAN PLASTICS | 862-1511 2 |
| * | HUBBARD CARPETS | 923-3397 8 |
| 9379 | XXXX | 00 |
| 9408 | XXXX | 00 |

| Target Street | Cross Street | Source |
|---|---|---|
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## WASHBURN RD 1980

| | | | |
|---|---|---|---|
| 9355 | MCCRORY LORAN | 923-8832 | +0 |
| | PARDO STAN | 861-9680 | +0 |
| | RIHEL TERRYC | 923-3787 | +0 |
| 9361★ | ELMWOOD VILLA | 861-2387 | +0 |
| | FEATHERSTONE D | 862-3985 | +0 |
| | FORD DALE | 923-1794 | 9 |
| 9367 | FISH C E | 923-5366 | 9 |
| | VILLAGRANA ERNIE | 923-2360 | 9 |
| 9441★ | RITE ENGR&MFG CORP | 862-2135 | |
| 9443★ | MAGNA TANK&HEATER | 861-0379 | |
| 9445★ | WESTGATE LIGHTING | 869-1196 | +0 |
| 9451★ | WESTERN SPRING&MFG | 923-7272 | |
| 9455 | XXXX | 00 | |
| 9459★ | SWENSON MFG CO INC | 861-0935 | |
| 9501★ | SOUTHEAST ASN RTRD | 861-0998 | |
| ★ | SOUTHEAST WORK TRNG | 861-0996 | |
| ★ | VALUE VLG PICKUPS | 869-5023 | 5 |
| 9531 | XXXX | 00 | |

## ZIP CODE 90241

| | | | |
|---|---|---|---|
| 9602 | WOOD L J | 869-3772 | +0 |
| 9634★ | BLACK DIAMOND BLADE | 862-3054 | |
| ★ | CUTTING EDGE SUPPLY | 862-3054 | |
| 9644 | XXXX | 00 | |
| 9645★ | DOWNEY BLDNG MTRLS | 861-6704 | |
| ★ | DOWNEY RDY MX CNCRT | 861-1278 | 2 |
| 9650★ | VIMAR INC | 923-9208 | 2 |
| 9660★ | ALPASE INC | 923-4541 | 5 |

| Target Street | Cross Street | Source |
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## WOODRUFF AVE 1980

| | | | |
|---|---|---|---|
| 11902* | WINDOW WORLD | 869-4034 | +0 |
| 11904* | A&A GRINDING | 862-7415 | |
| 11906* | RETECO BROACH CO | 869-1524 | 2 |
| 11908* | ECONOMY EQUIPMNT | 923-1279 | +0 |
| 11911* | ROYAL H M INC | 861-0371 | |
| 11916* | B&F INDUSTRIES | 860-3309 | +0 |
| 11929* | SIDEX FURNTIURE | 862-9606 | +0 |
| 11939* | METALSOURCE | 861-9971 | +0 |
| 11941* | INCO EXPRESS INC | 861-0965 | +0 |
| 12000* | DARNELL CORP LTD | 923-9373 | 9 |
| 12001* | BEST TANK | 862-9674 | +0 |
| * | DOWNEY TEXACO | 923-5486 | +0 |
| * | HOUSE OF HMR OFC | 862-4400 | +0 |
| * | HOUSE OF HMR WRHSE | 862-1164 | +0 |
| * | MOBILE ELECTRONICS | 923-5486 | +0 |
| 12021* | KIRKHILL INC | 862-1941 | 8 |
| 12049* | UNITED DRILL BUSHNG | 923-9701 | 9 |
| 12050* | TASSOS DRIVE IN | 861-8223 | |
| 12101* | CALS EXXON SERVICE | 923-7049 | 8 |
| * | CASHS CAR CORNER | 923-7049 | 4 |
| * | EXXON PRODUCTS | 923-7049 | 4 |
| 12107* | COLONEL SANDRS CHKN | 861-2213 | |
| * | KENTUCKY FRIED CHKN | 861-2213 | 8 |
| 12109 | XXXX | 00 | |
| 12111 | XXXX | 00 | |
| 12112* | LLOYDS SMORGASBORD | 923-9100 | |
| * | LOYDS SMORGASBOARD | 923-9100 | |

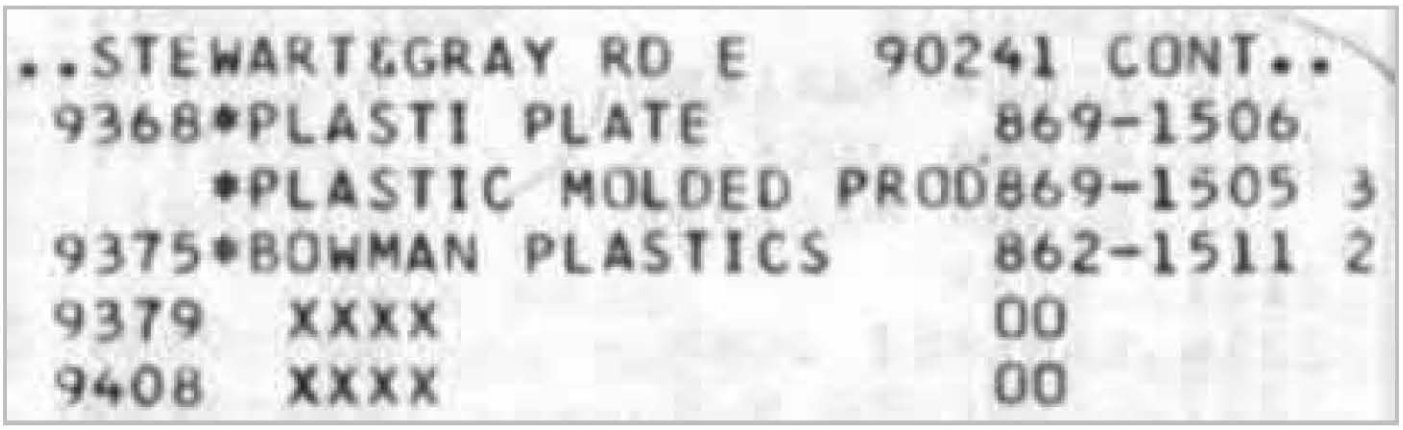
| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | Haines Criss-Cross Directory |

## STEWART AND GRAY RD 1975

| | | |
| --- | --- | --- |
| 9229 | REHN HAROLD K | 861-8853 2 |
| 9232 | ROBUCK ROBT | 862-9226+5 |
| 9251 | DARLO BILL | 869-0820+5 |
| 9253 | XXXX | OO |
| 9255 | SANTIAGO D | 869-5653+5 |
| 9301 | *MINIBUS INC | 862-1972+5 |
| 9355 | COCHRAN C H | 862-5320 2 |
| 9363 | *ALL WESTERN PALLET | 862-1196 3 |
| | *I N P S PRINTING CO | 861-7710 4 |

| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | Haines Criss-Cross Directory |

## STEWART AND GRAY RD 1975



..STEWART&GRAY RD E 90241 CONT..
9368*PLASTI PLATE 869-1506
*PLASTIC MOLDED PROD 869-1505 3
9375*BOWMAN PLASTICS 862-1511 2
9379 XXXX 00
9408 XXXX 00

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Haines Criss-Cross Directory |

## WASHBURN RD 1975

```
 9355 GAMBOA B                 861-4937+5
    C SALAS ERNIE N            923-6973 4
    G KRAMER MORRIS            869-2777 2
9361....APARTMENTS
      HERRERA LINDA            869-4897+5
      MATLACK PAMELA           869-7938+5
      RASCON ALFRED            862-5311+5
      ROBINSON C J             923-9598+5
    D JOHNSON RICHARD W        862-8843 4
    D JOHNSON SHERRY           862-8843 4
9361.........................
 9367  XXXX                    OO
 9441*CLEAN AIR ENGRG CO      869-4067+5
     *RITE ENGR&MFG CORP       862-2135
 9443*MAGNA TANK&HEATER        861-0379
 9445*DYNA MFG CO INC          861-2840+5
 9451*WESTRN SPRING&MFG        923-7272
 9455  XXXX                    OO
 9459*SWENSON MFG CO INC       861-0935
 9501*SOUTHEAST ASN RTRTD      861-0996+5
     *SOUTHEST WORK TRNG       861-0996 3
     *VALUE VLG PICKUPS        869-5023+5
 9545*ACE SCREW MACH PROD      861-0748

ZIP CODE 90241

 9602 WOOD LLOYD J             869-3772
 9634*BLACK DIAMOND BLADE      862-3054
     *CUTTING EDGE SUPPLY      862-3054
 9644*SUN AVIATION CORP        861-1610 4
 9645*DOWNEY BLDG MATRIAL      861-1278 2
     *DOWNEY BUILDNG MTRL      861-6704
     *DOWNEY RDY MX CNCRT      861-1278 2
 9650*VIMAR INC                923-9208 2
 9660*ALPASE INC               923-4541+5
```

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

## WOODRUFF AVE 1975



```
11902  XXXX                    UO
11904*A&A GRINDING             862-7415
11906*RETECO BROACH CO         869-1524 2
11908*HOUSE HUMOR NOVLTY       862-1164 4
11911*ROYAL H M INC            861-0371
11916*RASMUSSEN SCRW PROT      869-0717
12000  XXXX                    OO
12021*KIRKHILL INC             862-1141
12049*UNITED DRILL BUSHNG      923-9701
12050*TASSOS DRIVE IN          861-8223
12101*BOBS EXXON PROD SV       923-7049 4
      *CASHS CAR CORNER        923-7049 4
      *EXXON PRODUCTS          923-7049 4
12107*COL SANDERS KY CHKN      861-2213
12109*CATTANI SALES CTR        923-7914+5
12111*CERRITOS PET CENTER      869-5902+5
     A*S P C PEDIGREE SV       869-5902+5
     A*STONEWOOD PET CNTR      869-5902+5
12112*LLOYDS SMORGASBORD       923-9100
      *LOYDS SMORGASBOARD      923-9100
```

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Haines Criss-Cross Directory |

# STEWART AND GRAY RD 1971

| | | |
|---|---|---|
| 9211 | OTTEN RENO L | 861-3094 |
| 9212.. | APARTMENT | |
| | RAINS SCOTT E | 861-9503 |
| A | LEWIS EDWARD | 923-0437 |
| B | WATKINS ERIC C | 862-7654 |
| B | KOGER EDW T | 923-3308 |
| E | CAMPOS ROSE MARY | 861-5022 |
| F | MONCRIEF ANNA L | 869-9573 |
| J | MCADAM DENNIS W | 861-1174 |
| 9212..... | | |
| 9216 | CARTER DONALD H | 869-0634 |
| | SMALLEY B L | 923-4735 |
| | TROWER R W | 862-0028 |
| 9217 | GRIFFEY JOHN | 869-9595 |
| | OCHOA RAYMOND | 869-5869 |
| | SPENCER JULYAN W | 869-9479 |
| 9220.... | VILLA SORRENTO APTS | |
| | ALSUP WALTER H | 861-3151 |
| 4 | BARAUSKAS STAN | 923-2534 |
| 6 | ISHINO YUSEI | 862-6666 |
| 7 | MADICK LARRY | 923-3091 |
| 8 | MURAVIOV K M | 869-8205 |
| 1 | OIEN CLARK A | 861-1690 |
| 2 | SHIFFRIN LUCY A | 869-9877 |
| 1 | *VILLA SORRENTO | 861-8351 |
| | WALTON WM | 862-4102 |
| 5 | YOUNT IRENE | 861-5732 |
| 9220..... | | |
| 9228 | GOINS RICHARD T | 862-4537 |
| | PHELPS GEO A | 869-3789 |
| | REYNOLDS ROBT | 869-7152 |
| 9251 | MCCORD ELIZABETH D | 923-4977 |
| | MCCORD MARY | 862-6292 |
| 9355 | COCHRAN C H | 862-5320 |
| 9368 | *INTRCNTNTL SPLY&MFG | 869-1508 |
| | *PLASTIC MOLDED PRD | 869-1505 |
| | *PLASTI PLATE | 869-1506 |
| | *PLASTI PLATE | 869-1507 |
| 9408 | *FRYE TRUCKING | 923-0704 |
| 9426 | *BOMAN ASTROSONIX | 923-9846 |
| | *CALIF AUTO RADIO | 923-9846 |
| 9605 | *BRECHT MFG CO | 861-1237 |
| | * 45 BUS 622 RES | 0 NEW |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Haines Criss-Cross Directory |

## WASHBURN RD 1971

9355 TRUJILLO CARLOS 861-7935
9361 BOU FRANCISCO 862-7677
FREEMAN WALTER 869-7841
9367 EVANS DIXIE 923-4062
9441*BOILER ENGINEERS CO862-1103
*RITE ENGR&MFG CORP 862-2135
9443*MAGNA TANK&HEATER 861-0379
9445*DONALD F MASON INC 862-8157
*MASON DONALD F INC 862-8157
9451*WESTRN SPRING&MFG 923-7272
9455*AERO MAYFLOWER MVNG923-4593
*CALIF MAYFLWR MOVNG923-4593
*MAYFLOWER MOVING 923-4593
9459*SWENSON MFG CO INC 861-0935
9501*SE WORK TRAING CNTR869-6096
9545*ACE SCREW MACH PROD861-0748

ZIP CODE 90241

9602 WOOD JANET E 869-1909
WOOD LLOYD J 869-3772
9634*BLACK DIAMOND BLADE862-3054
*CUTTING EDGE SUPPLY862-3054
9644*SUN AVIATION CORP 862-8885
9645*DOWNEY BUILDNG MTRL861-6704
*DOWNY RDY MIX CNCRT861-1278
9660*ALPASE DIV 923-4541
9705*DEBROUWER BROS RFNG862-8133

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

## WOODRUFF AVE 1971

| | | |
|---|---|---|
| 11814 | DOORMASTERS H | 861-2518 |
| | *HARRISON DOORMASTER | 861-2518 |
| 11902 | *WITTMAN SHETT METAL | 869-7212 |
| 11904 | *A&A GRINDING | 862-7415 |
| 11908 | *RETECO BROACH CO | 869-1524 |
| 11911 | *ROYAL H M INC | 861-0371 |
| 11916 | *RASMUSSEN SCRW PRDT | 869-0717 |
| 12000 | *DARNELL CORP LTD | 862-2121 |
| 12021 | *KIRKHILL INC | 862-1141 |
| 12049 | *UNITED DRILL BUSHNG | 923-9701 |
| 12050 | *TASSOS DRIVE IN | 861-8223 |
| 12101 | *BOBS ENCO PRODS STN | 923-7049 |
| | *ENCO PRODUCTS | 923-7049 |
| 12107 | *COL SANDERS KY CHKN | 861-2213 |
| | *KENTUCKY FRD CHICKN | 861-2213 |
| 12111 | *LYLE WOOD&ASSOC INC | 869-3328 |
| | *WOOD LYLE&ASSOC INC | 869-3328 |
| 12112 | *LLOYDS SMORGASBORD | 923-9100 |
| | *LOYDS SMORGASBOARD | 923-9100 |
| 12115 | *RUTHIES DRESS SHPPE | 862-5043 |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Lusky Brothers |

## STEWART AND GRAY RD 1964

9216 *DeMott Fay .....861-2177
9216 Apartments
1 Brewer Chuck
2 Elliott Jas
3 Radbill JR
4 Noble BL 2 ..... 861-8351
5 Maddox PJ ..... 862-0028
6 Flores Norma
7 Smith Jos
8 Soares Carmela ..... 923-2955
9 Seifert Helen
10 Ace ML
9220 Apartments
1 Cannon RL

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Lusky Brothers |

## STEWART AND GRAY RD 1964

2 Mitchell DJ 1
3 David Lance
4 Danner Jo
5 Bench JR
6 Furnish Diane
7 Overly Judy
8 Nichols JW 2
9 Claxton GL
10 Young H
9228 Apartments
3 Flore AN .....869–0456
7 Eberhart WS .....923–7453
8 Cerquettini Tony ..... 861–3814
9 Smith CA
9229 *Rehn HK 2 ..... 862–8936
9232 Woodrome EV..... 923–2749
9251 *Howard PD .....869–0017

**S Coldbrook Av Ints**

9253 Bishop TH .....923–8023
9355 Cochran CH Tractor Serv .... 862–5320
9255½ Drotter JR 1
9368 Plastic Molded Products .....923–1751
**9408 Triangle Distribtng. . .862–1613**
9408 Triangle Distributing Co.....862–1613
9426 Golden West Pipe & Supply Co . 869–0961

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Lusky Brothers |

# WASHBURN RD 1964

9345 Hunter Frances .....861–4268
9345½ Chapman Donald 1 ..... 923–2677
9345¾ McCombs HA Jr 2 ..... 923–4107
9355 Apartments
A Splawn Floyd .....861–7935
B Edwards NE 1 .....861–5327
C Tallini Glovanni 1 ..... 869–0851
D Watson R
E Michalak DW 2
F Troyer TH
G Manewal J ..... 923–7340
H Ferrante Santo 4
9361 Ackerman Wm 3..... 861–3197
9361 Apartments
A Patterson RM 2 .....923–8912
C Edmundson KR 1 ..... 923–4803
D Erlandson Rod.....861–4352
F Male Chas 2.....869–6346
H Thomas RF 3 ..... 869–4490
9367 *Bettinger LM..... 923–4028

**Dunrobin Av Ints**

9407 Safety Council ..... 923–6551
9407 McLaughlin John..... 923–6551

**S Eastbrook Av Ints**

9441 Rite Engineering & Mfg Co ..862–2135

**S Cornuta Av Ints**

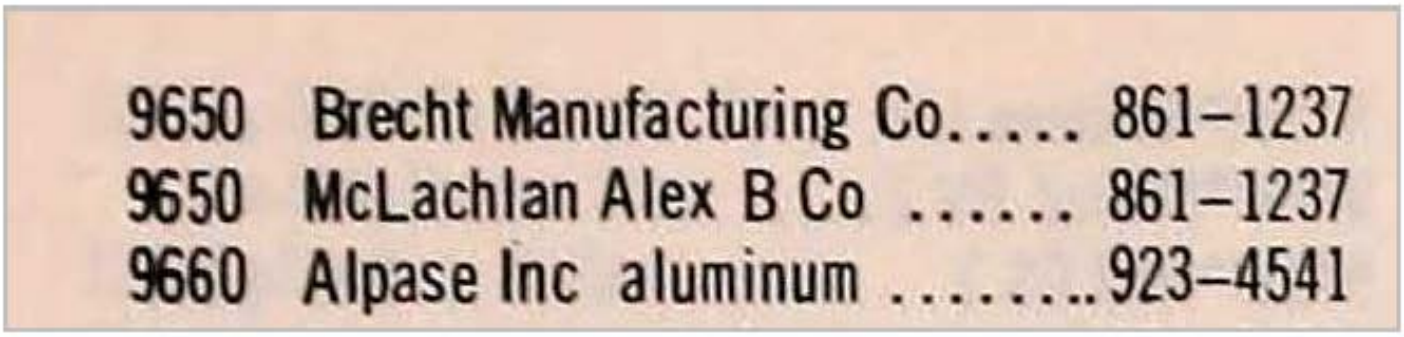
9451 Western Spring & Mfg Co..... 923–7272
9453 Cal Mayflower Moving & Storage 923–4593
9455 Dickson RF Co Inc ..... 923–5441
9459 Swenson Manufacturing Co ...861–0935

**S Woodruff Av Ints**

9602 Wood LJ 2 ..... 869–3772
9616 West DD .....862–8261
9616½ Mason RL.....862–4350
9634 Cutting Edge Supply.....862–3054
9644 Sun Aviation Corp ..... 862–8885
9645 Consolidated Rock Products.. 861–5213

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Lusky Brothers |

## WASHBURN RD 1964



| Target Street | Cross Street | Source |
|---|---|---|
| ✔ | - | Lusky Brothers |

## WOODRUFF AVE 1964



1711 Aerojet General Corp .....923–7511

**E CeeBee Dr Ints**

**1902 WittmanSht Mtl Inc.. 869–7212**

**1902 WittmanSht Mtl Inc... 869–4116**

1902 Wittman Sheet Metal Inc ... 869–7212

1902 *Wittman AW 2 .....869–4116

1908 Downey Grinding Co ..... 861–6796

1911 Royal HM Inc mfrs agent ... 861–0371

1916 Rasmussen Screw Products ..869–0717

1920 Bazz-Houston Co mtl stamping .861–9701

2000 Darnell Corp Ltd..... 862–2121

2021 Kirkhill Inc ..... 862–1141

**E Washburn Rd Ints**

**2101 Bob's Signal Service 923–7049**

2101 Bob's Signal Service station ..923–7049

**2107 Harris Bros Furn ... 923–9521**

2107 Harris Bros Furniture Store ...923–9521

**2107½ Bochard's Poodle.. 869–6741**

2107½ Bochard's Poodle Grooming...869–6741

2111 Edsco..... 861–9249

**2112 Loyd's Coffee Shp...869–5614**

2112 Loyd's Coffee Shop .....869–5614

2112 Wood LJ..... 869–5614

2114 Signal Market

2115 Felts LW Realty ..... 861–0188

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✔ | Lusky Brothers |

## STEWART AND GRAY RD 1961

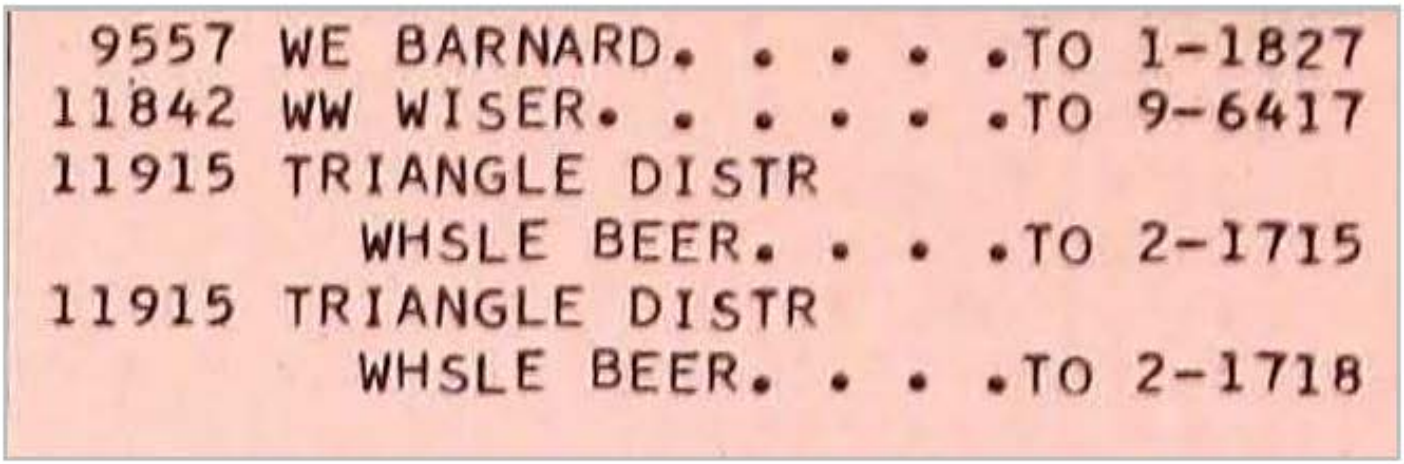
9217 EL RODEN. . . . . .WA 3-5133
9220 JT BARRY
9220 G BROADWELL
9220 R ELLIOT
9220 ND ENGEMAN. . . . . .TO 1-9591
9220 G HASTINGS
9220 NA KARSON . . . . . .WA 3-2314
9220 K SCHWARTZ
9228 TM ALLENSWORTH
9228 FL CROSS
9228 RT LAN
9228 M SUDOL
9229 HK REHN
9232 EL CARROLL. . . . . .TO 2-8705

COLDBROOK AV
INTS

9255 RL YOUNG. . . . . .TO 1-4922
9355 CH COCHRAN
MACH RNTLS. . . . .TO 2-5320
9366 KIRKHILL CHEM . . . .SP 3-3492
9368 INTERCONTINEN-
TAL SUP & MFG . . .WA 3-3512
9368 PLASTIC MOLDED
PRODTS. . . . . .WA 3-1751

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Lusky Brothers |

## STEWART AND GRAY RD 1961



| Target Street | Cross Street | Source |
|---|---|---|
| - | ✔ | Lusky Brothers |

## WASHBURN RD 1961

9351*RC WESTCOTT
9355 JW BRETT. . . . . .TO 9-6142
9355 DN COX. . . . . .TO 1-1470
9355 NE EDWARDS. . . . .TO 1-3527
9355 RL FAIRBANKS. . . .TO 1-0124
9355 CD HALVERSTADT. . .TO 2-1622
9355 ER HICKEY . . . . .TO 1-0095
9355 HJ MOSS
9355 WE SLATON
9361 LH GAUTHIER
9361 D GRUNDY PAPER
HNGR. . . . . .WA 3-2586
9361 D GRUNDY . . . . .WA 3-2586
9361 DR LORENZEN
9361 CJ MCGUIRE. . . . .TO 1-0204
9361 WW PORTER . . . . .WA 3-1036
9361 JS SZYMANSKI. . . .WA 3-3688
9361 IM WHEELER. . . . .TO 9-4871
9367 JM BETTINGER. . . .WA 3-4028

DUNROBIN AV INTS

9407 SOU CALIF GAS
(PLANT) . . . . .TO 1-0311

EASTBROOK AV
INTS

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Lusky Brothers |

# WASHBURN RD 1961

9441 RITE ENG & MFG
CORP. . . . . .TO 2-2135
9441 RITE ENG & MFG
CORP. . . . . .SP 3-2877

CORNUTA AV INTS

9453 CALIF MAYFLOWER
MOVING & STGE . .WA 3-4593
9455 DICKSON R F
SWEEPING SERV . .SP 3-3855
9455 DICKSON R F
SWEEPING SERV . .WA 3-5441
9459 SWENSON MFG
MTL STAMPING. . .TO 1-0935
9501 AEROJET (RECEIV-
ING
9543 VACANT
9545 CALIF CRANE &
EQUIP CORP. . . .TO 1-3423
9545 CALIF CRANE &
EQUIP CORP. . . .SP 3-2112

WOODRUFF AV INTS

9634 CUTTING EDGE SUP. .TO 1-8421
9634 CUTTING EDGE SUP. .TO 1-9425
9634 CUTTING EDGE SUP. .TO 2-3054
9644 SUN AVIATION
CORP AIRCRFT
PTS . . . . . .TO 2-8885
9645 VACANT
9650 BRECHT MFG . . . .TO 1-1237
9660 ALPASE INC . . . .WA 3-3317
9734 STEELMASTERS CO . .TO 1-8261

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Lusky Brothers |

## WOODRUFF AVE 1961

11908 ARTESANOS . . . . .WA 3-4395
11908 DNY GRINDING . . .TO 1-6796
11911 ROYAL H M CHEM. . .TO 1-0371
11913 GOLDEN WEST
PIPE & SUP. . . .TO 9-0961
11916 RASMUSSEN SCREW
PRODTS. . . . . .SP 3-2774
11916 RASMUSSEN SCREW
PRODTS. . . . . .TO 9-0717
11917 INTERCONTINEN-
TAL SUP MFG . . .WA 3-3512
11926 SUPREME MTL
FAB . . . . . .TO 2-9684
12000 DARNELL CORP . . .TO 2-2121
12021 KIRKHILL CHEM . . .TO 2-1141
12021 KIRKHILL CHEM . . .SP 3-3492

WASHBURN CROSS-
ING RD INTS

12107 ALL-BRITE TV . . .TO 1-1713
12107 FELTS LEE RL
EST BRKR. . . . .TO 1-0188
12109 COML PHOTO
ENTERPRISES . . .TO 1-9919
12112 LOYDS COFFEE
SHOP. . . . . .TO 9-5614
12114 SIGNAL MKT . . . .TO 1-7317
12115 ACCENT FLOOR
COVERING. . . . .TO 2-6829
12117 RED CIR PET
STORE . . . . . .TO 1-8591

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | TLM Publishing Co |

## STEWART AND GRAY RD 1953

| | |
|---|---|
| 8677 | Under Construction |
| 8683 | Under Construction |
| 8689 | Under Construction |
| 8693 | Under Construction |
| 8697 | Under Construction |
| 8866 | Vacant |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✔ | TLM Publishing Co |

## WASHBURN RD 1953

9319 * Protzman F W.....9-7846
9325 * Duerden R A.....2-7634
9331 * Colley R R.....2-0955
9349 * Ferdig Wayne.....9-6580
9357 * Scnear F R.
9367 * Bettinger L M

WOODRUFF INTERSECTS

9602 * Stockton N H.....2-8261
9616 Brown R G
Triska C J
9650 Brecht Mfg Co.....9-6719
9660 Under Construction
9744 Vacant
9748 Conway C C.....2-8619

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | TLM Publishing Co |

## WOODRUFF AVE 1953

| | | |
|---|---|---|
| 11242 | | Transient |
| 11710 | * | Hirdler H A.....2-4552 |
| 11711 | | Rheem Mfg Co.....2-1171 |
| 11852 | | Million Dollar Sprinkler Co 2-1105 |
| 11908 | | Alloy Mfg Co.....2-6374 |
| 11926 | | Supreme Mtl Fabricating Co 2-9684 |
| 12000 | | Darnell Corp Ltd molders...2-2121 |
| 12021 | | Kirkhill Inc.....2-1141 |
| | | WASHBURN CROSSING INTERSECTS |
| 12112 | | Inez Cafe |
| 12114 | | Stockton's Market.....9-9221 |
| 12115 | * | McCahill J A.....2-2512 |
| 12122 | * | Mason R L.....2-4350 |
| 12125 | | Pair Incinerator Co.....2-4173 |
| 12140 | * | Singler J A elec contr.....2-5308 |
| | | rear-Houghton Alvin |

Kirkhill

12021 Woodruff Avenue

Downey, CA 90242

Inquiry Number: 5408632.4

August 29, 2018

# EDR Historical Topo Map Report

## with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Historical Topo Map Report

08/29/18

**Site Name:**

Kirkhill
12021 Woodruff Avenue
Downey, CA 90242
EDR Inquiry # 5408632.4

**Client Name:**

Partner Engineering and Science, Inc.
2154 Torrance Blvd, Suite 200
Torrance, CA 90501-0000
Contact: Colleen Tubridy

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Partner Engineering and Science, Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

***Search Results:***

**P.O.#** NA
**Project:** 18-220634.1

***Coordinates:***

| | |
|---|---|
| **Latitude:** | 33.925395 33° 55' 31" North |
| **Longitude:** | -118.117903 -118° 7' 4" West |
| **UTM Zone:** | Zone 11 North |
| **UTM X Meters:** | 396671.42 |
| **UTM Y Meters:** | 3754446.61 |
| **Elevation:** | 104.00' above sea level |

**Maps Provided:**

| | |
|---|---|
| 1896 | 1947 |
| 1899 | 1949 |
| 1902 | 1951, 1952 |
| 1923 | 1964, 1965 |
| 1925 | 1972 |
| 1936 | 1981 |
| 1942 | 2012 |
| 1943 | |

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## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1896 Source Sheets



Downey
1896
15-minute, 62500

### 1899 Source Sheets



Downey
1899
15-minute, 62500

### 1902 Source Sheets



Downey
1902
15-minute, 62500

### 1923 Source Sheets



Bell
1923
7.5-minute, 24000



Whittier
1923
7.5-minute, 24000

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1925 Source Sheets



Whittier
1925
7.5-minute, 24000



Bell
1925
7.5-minute, 24000

### 1936 Source Sheets



Bell
1936
7.5-minute, 24000

### 1942 Source Sheets



Downey
1942
15-minute, 62500

### 1943 Source Sheets

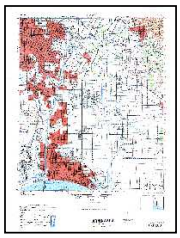


Downey
1943
15-minute, 62500
Aerial Photo Revised 1939

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1947 Source Sheets



DOWNEY
1947
15-minute, 50000

### 1949 Source Sheets



South Gate
1949
7.5-minute, 24000
Aerial Photo Revised 1947



Whittier
1949
7.5-minute, 24000
Aerial Photo Revised 1947

### 1951, 1952 Source Sheets



Whittier
1951
7.5-minute, 24000
Aerial Photo Revised 1947



SOUTH GATE
1952
7.5-minute, 24000

### 1964, 1965 Source Sheets



South Gate
1964
7.5-minute, 24000
Aerial Photo Revised 1963



Whittier
1965
7.5-minute, 24000
Aerial Photo Revised 1963

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1972 Source Sheets



South Gate
1972
7.5-minute, 24000
Aerial Photo Revised 1972



Whittier
1972
7.5-minute, 24000
Aerial Photo Revised 1972

### 1981 Source Sheets



South Gate
1981
7.5-minute, 24000
Aerial Photo Revised 1978



Whittier
1981
7.5-minute, 24000
Aerial Photo Revised 1978

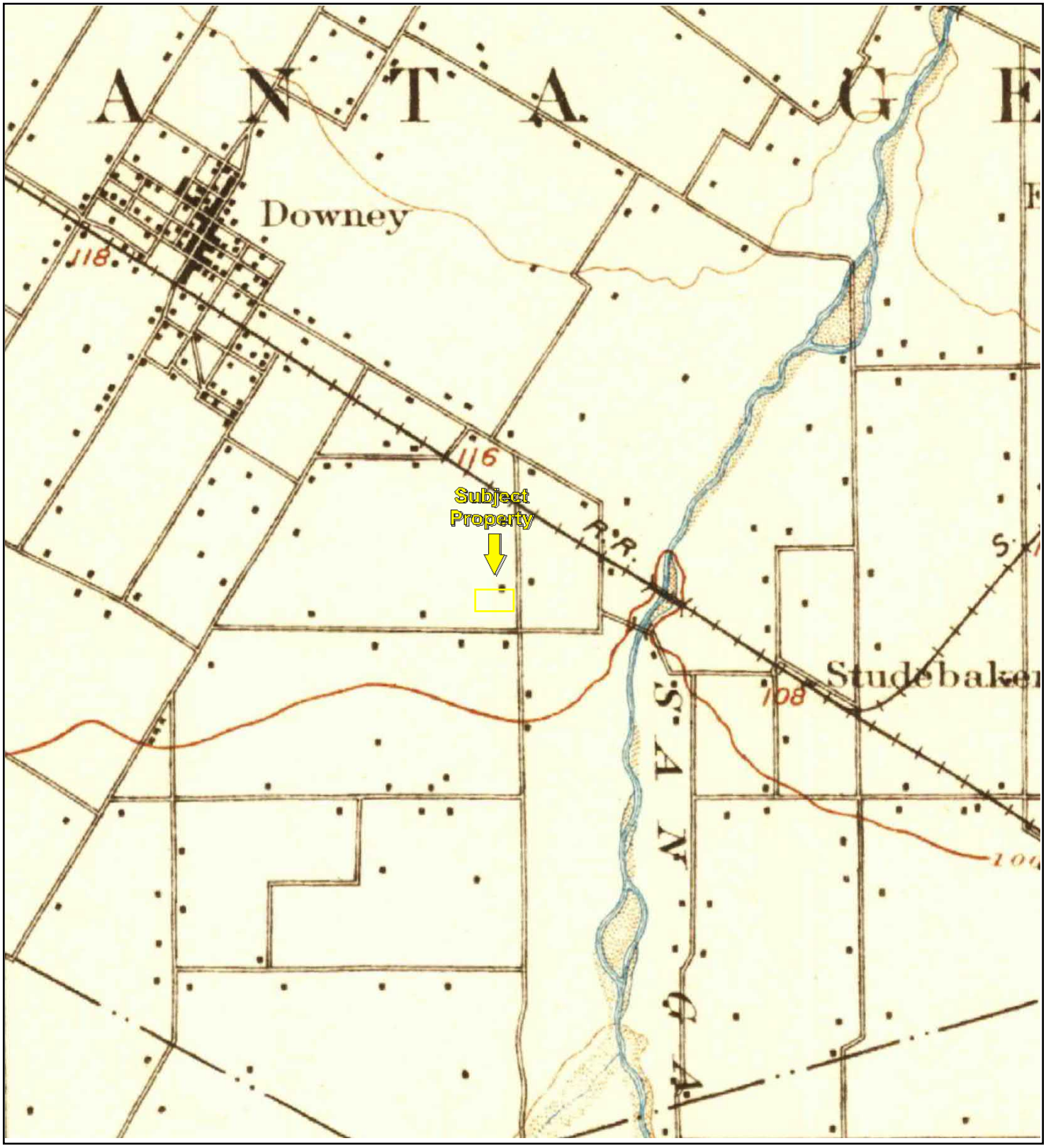
### 2012 Source Sheets



South Gate
2012
7.5-minute, 24000



Whittier
2012
7.5-minute, 24000




TP, Downey, 1896, 15-minute

0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property

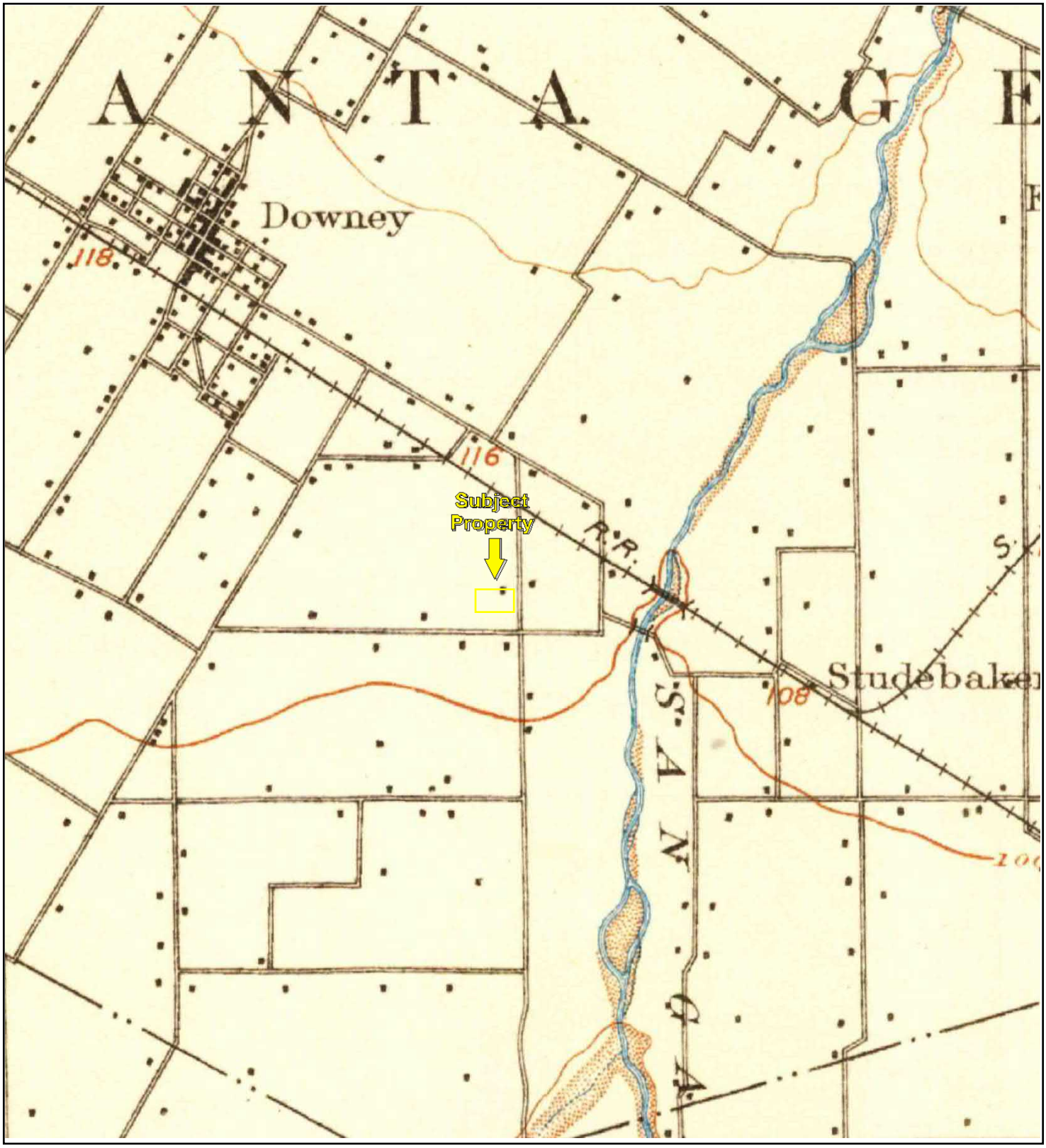



TP, Downey, 1899, 15-minute

0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property

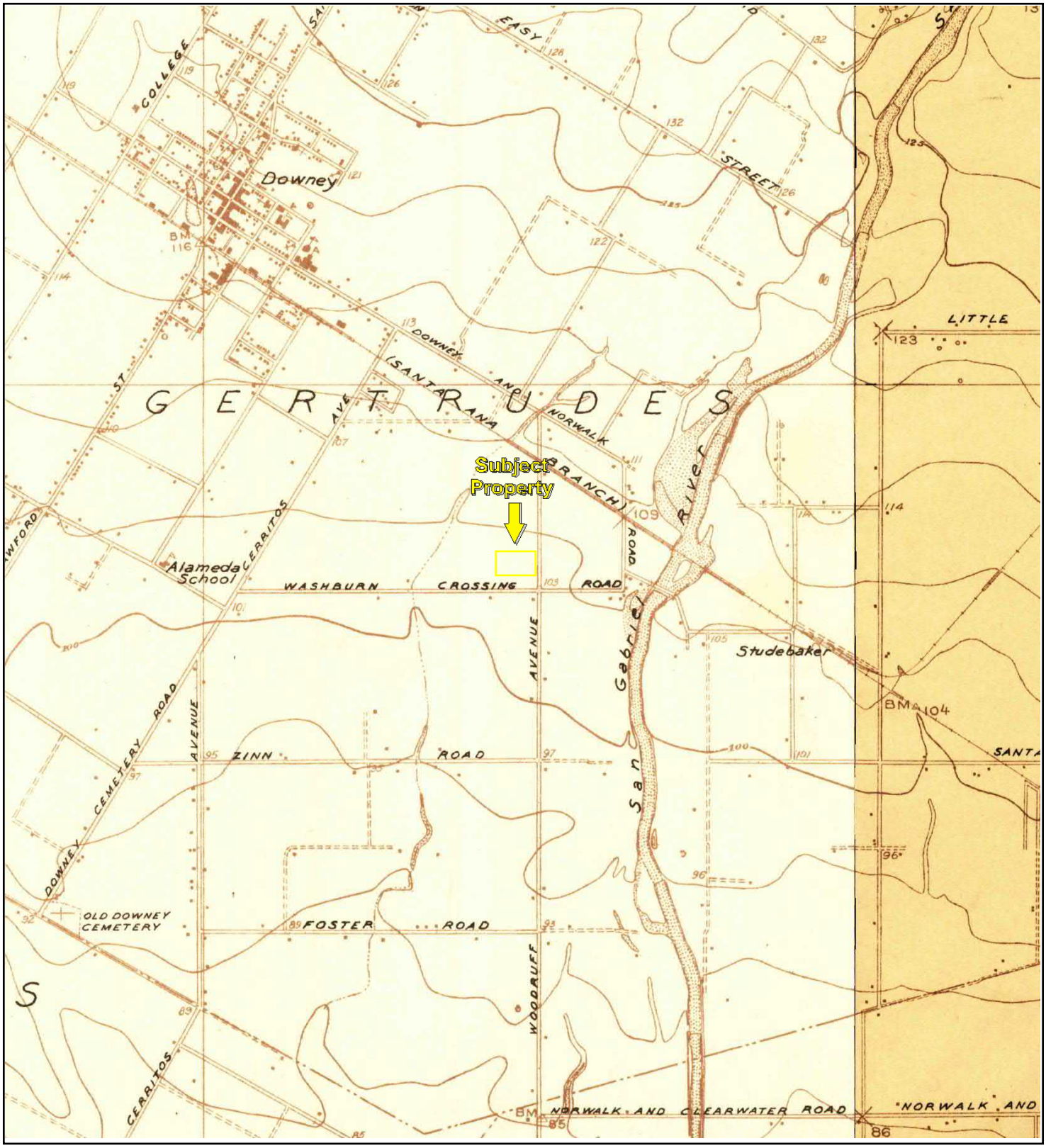



TP, Downey, 1902, 15-minute

0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property




TP, Bell, 1923, 7.5-minute
NE, Whittier, 1923, 7.5-minute

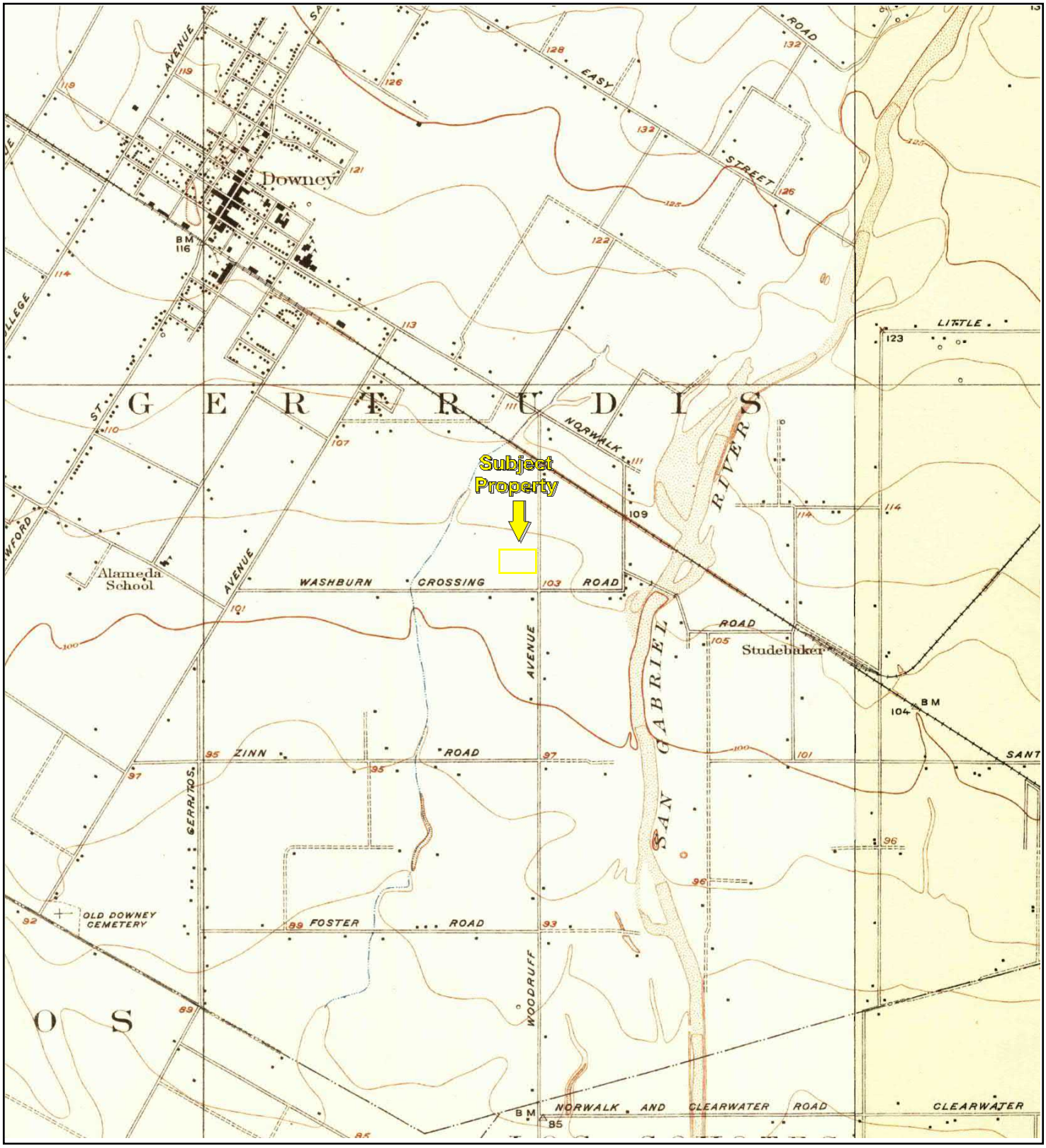
0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property

**APPENDIX B: Topographic Maps**

**Project No. 18-220634.1**

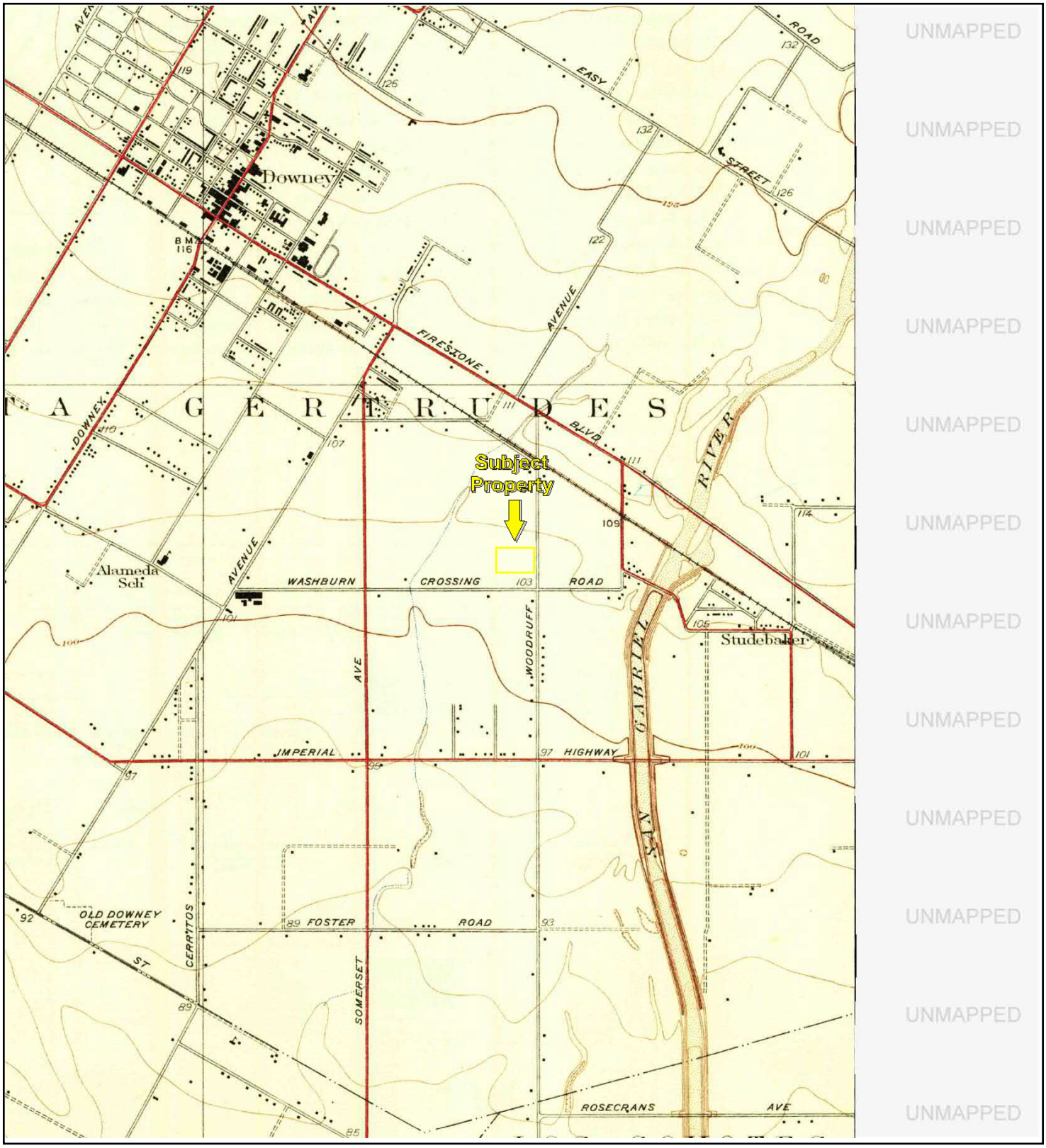



TP, Bell, 1925, 7.5-minute
NE, Whittier, 1925, 7.5-minute

0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property

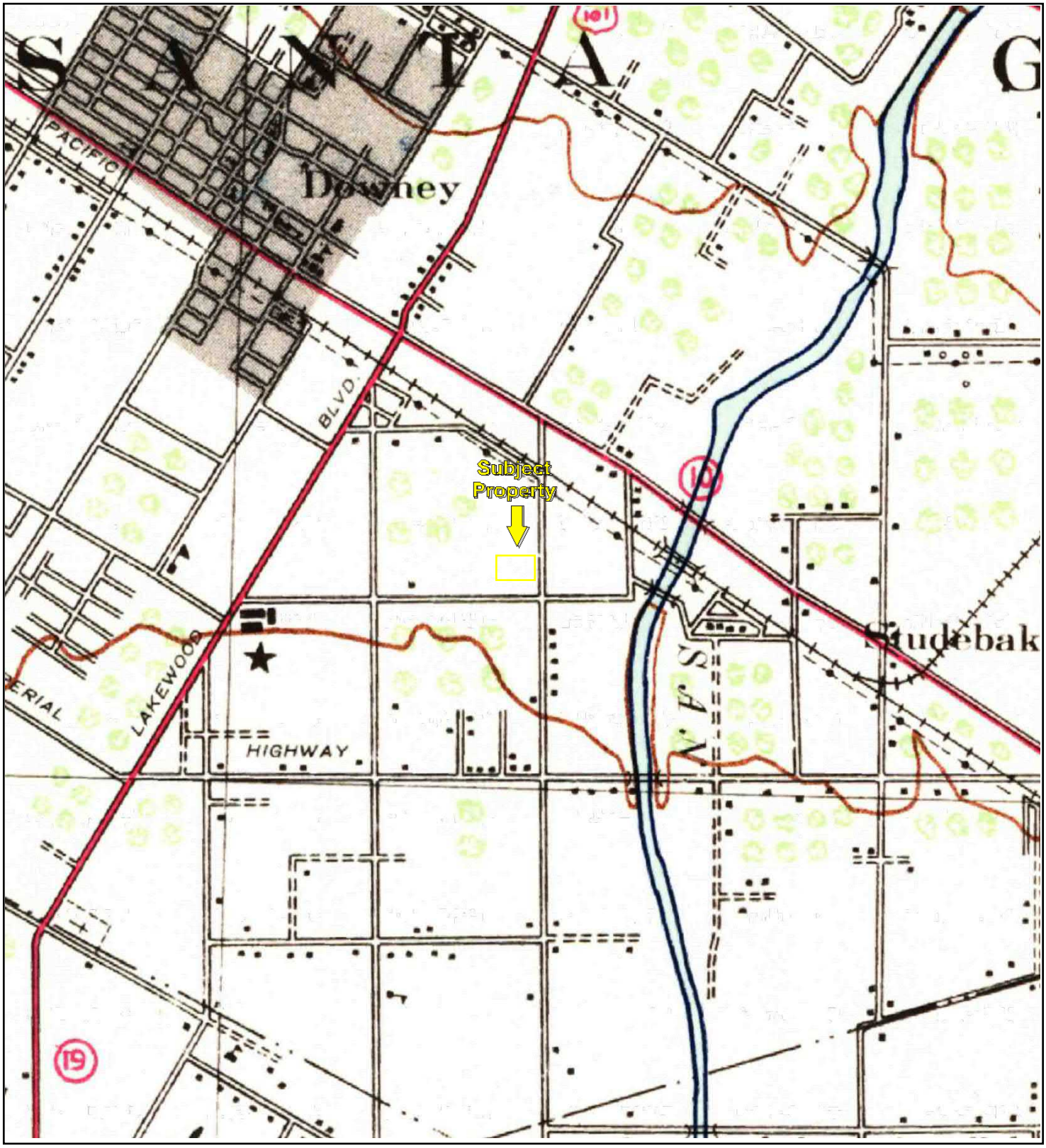



TP, Bell, 1936, 7.5-minute

0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property

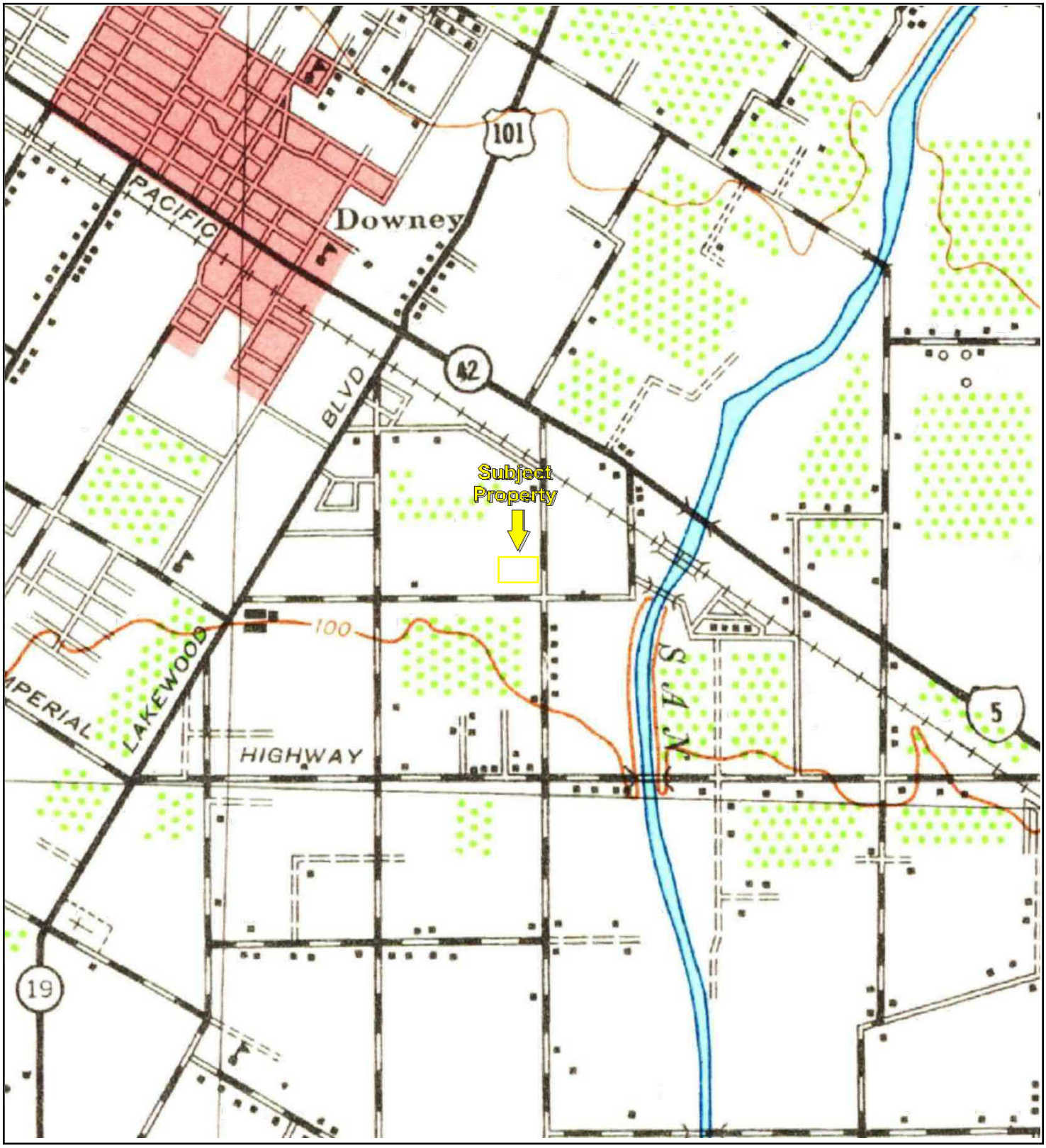



TP, Downey, 1942, 15-minute

0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property

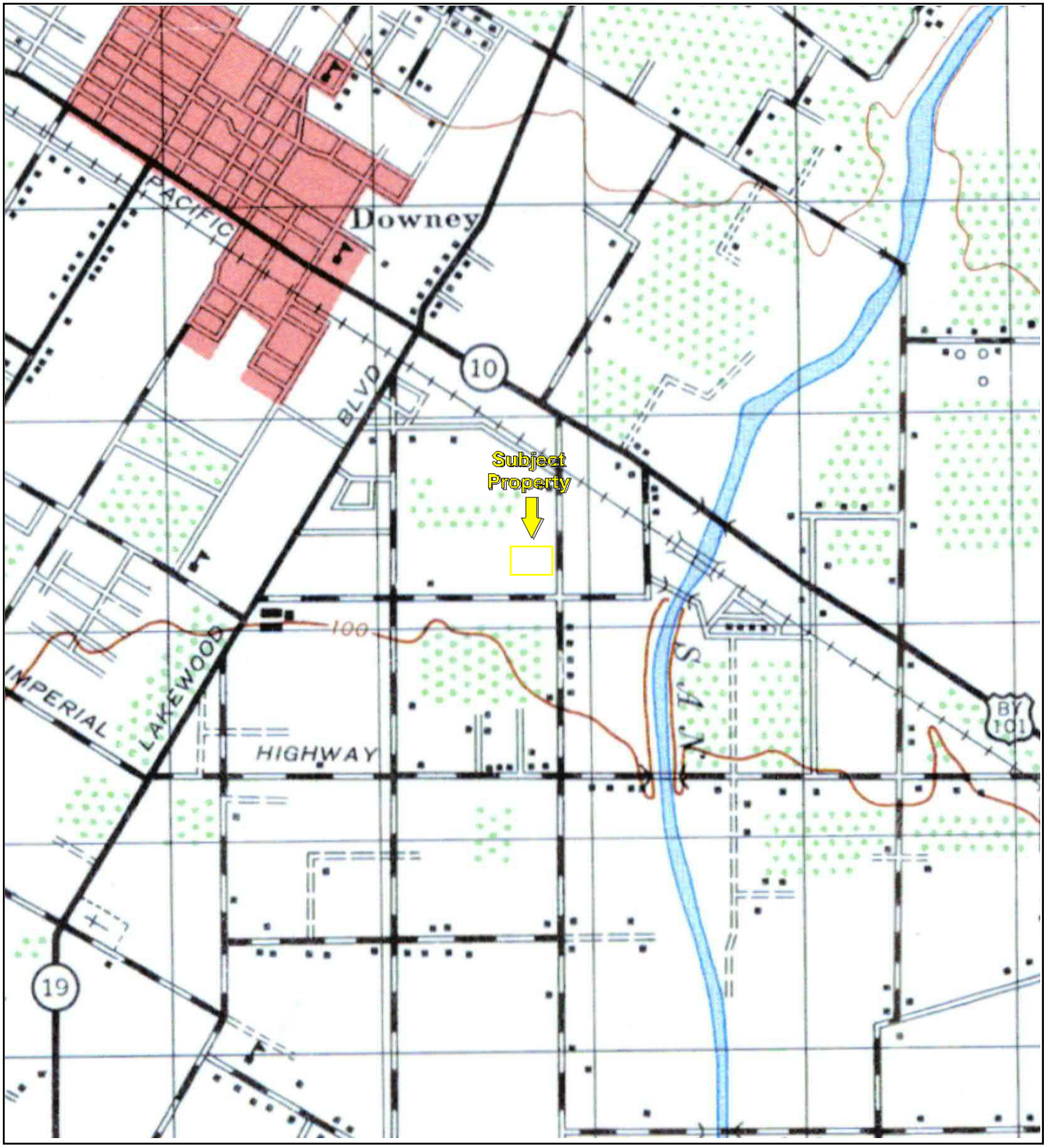



TP, Downey, 1943, 15-minute

0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property

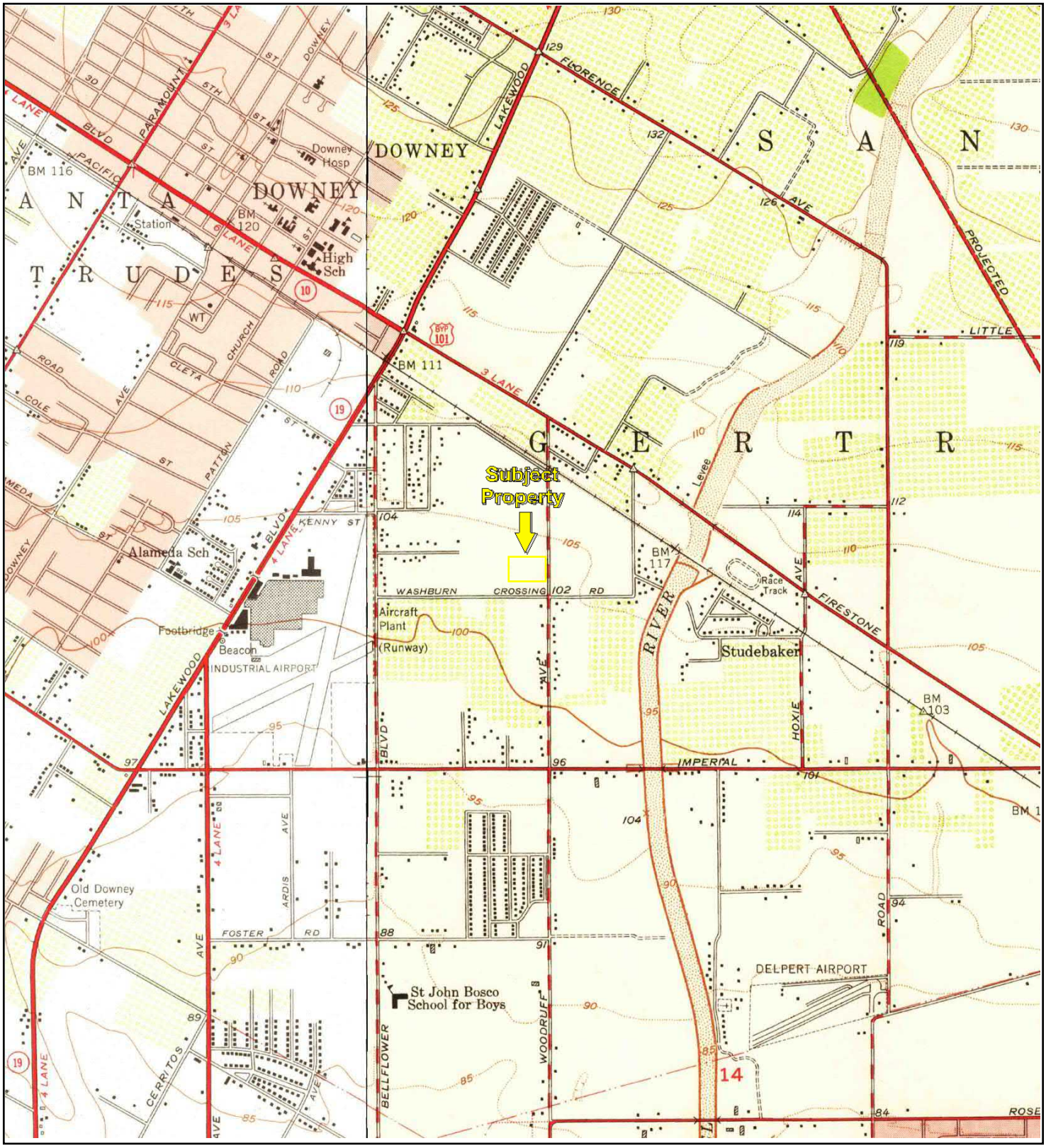



TP, DOWNEY, 1947, 15-minute

0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property




TP, Whittier, 1949, 7.5-minute
W, South Gate, 1949, 7.5-minute

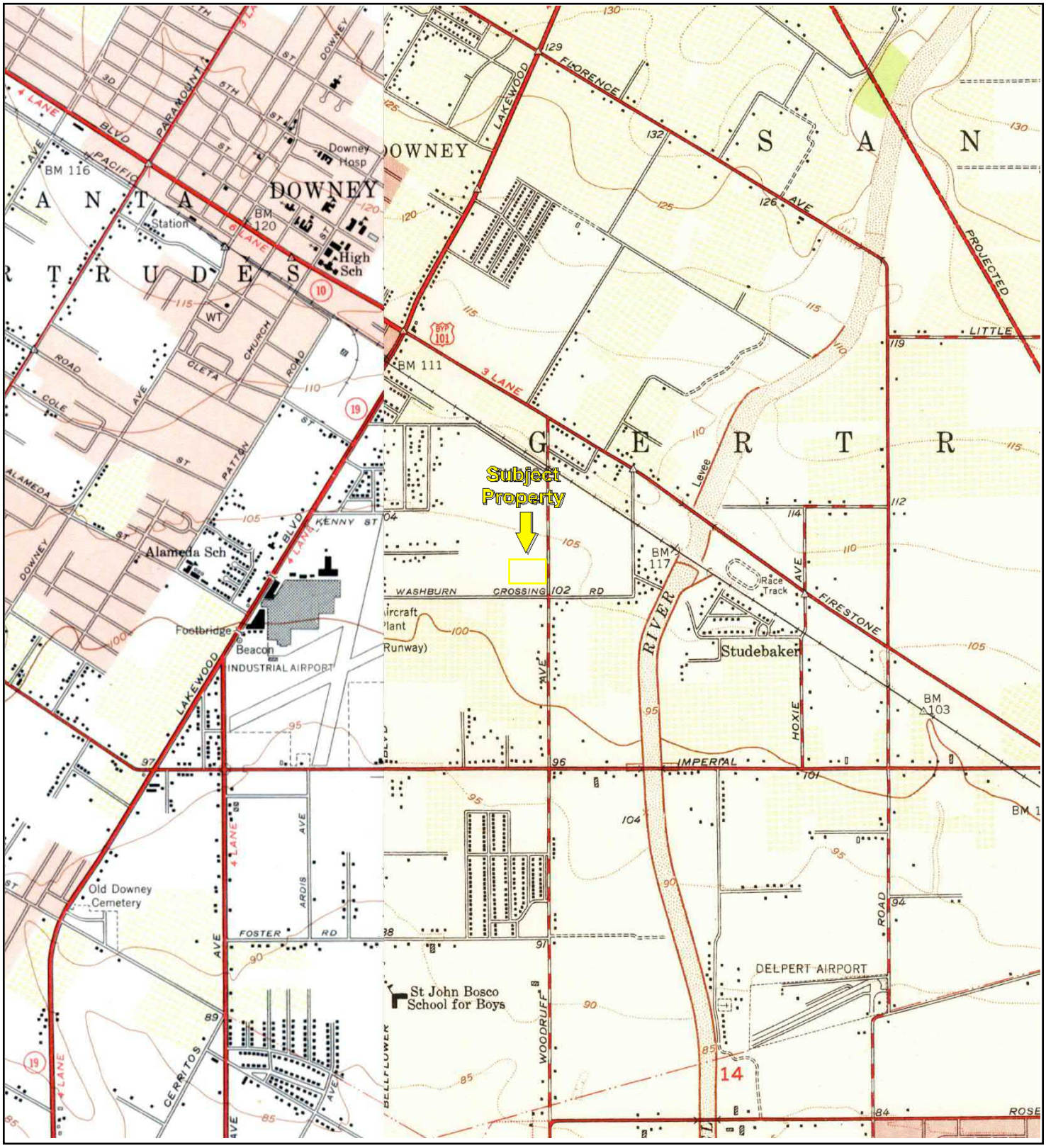
0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property

**APPENDIX B: Topographic Maps**

**Project No. 18-220634.1**

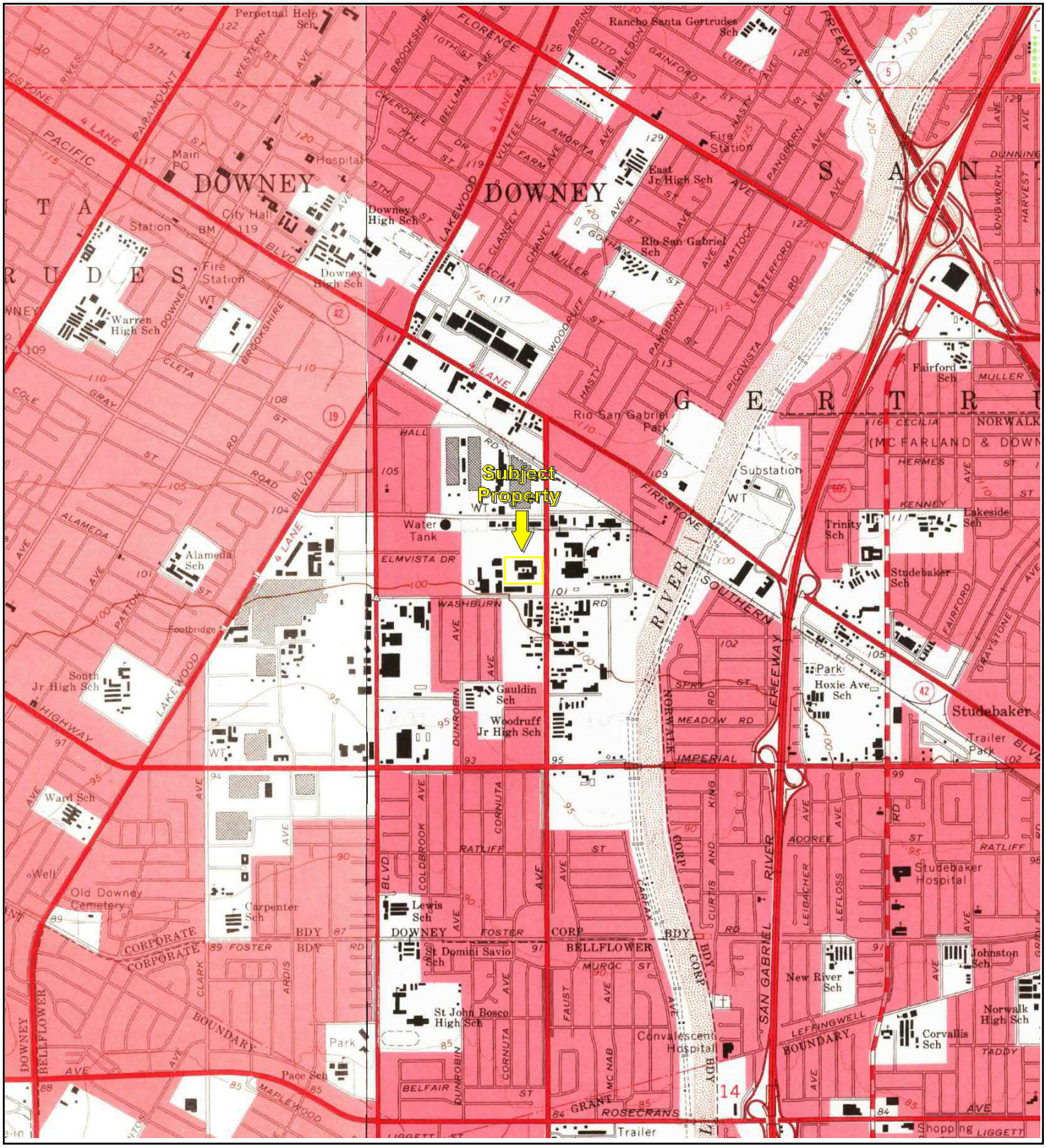



TP, Whittier, 1951, 7.5-minute
W, SOUTH GATE, 1952, 7.5-minute

0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property




TP, Whittier, 1965, 7.5-minute
W, South Gate, 1964, 7.5-minute

0 Miles 0.25 0.5 1 1.5

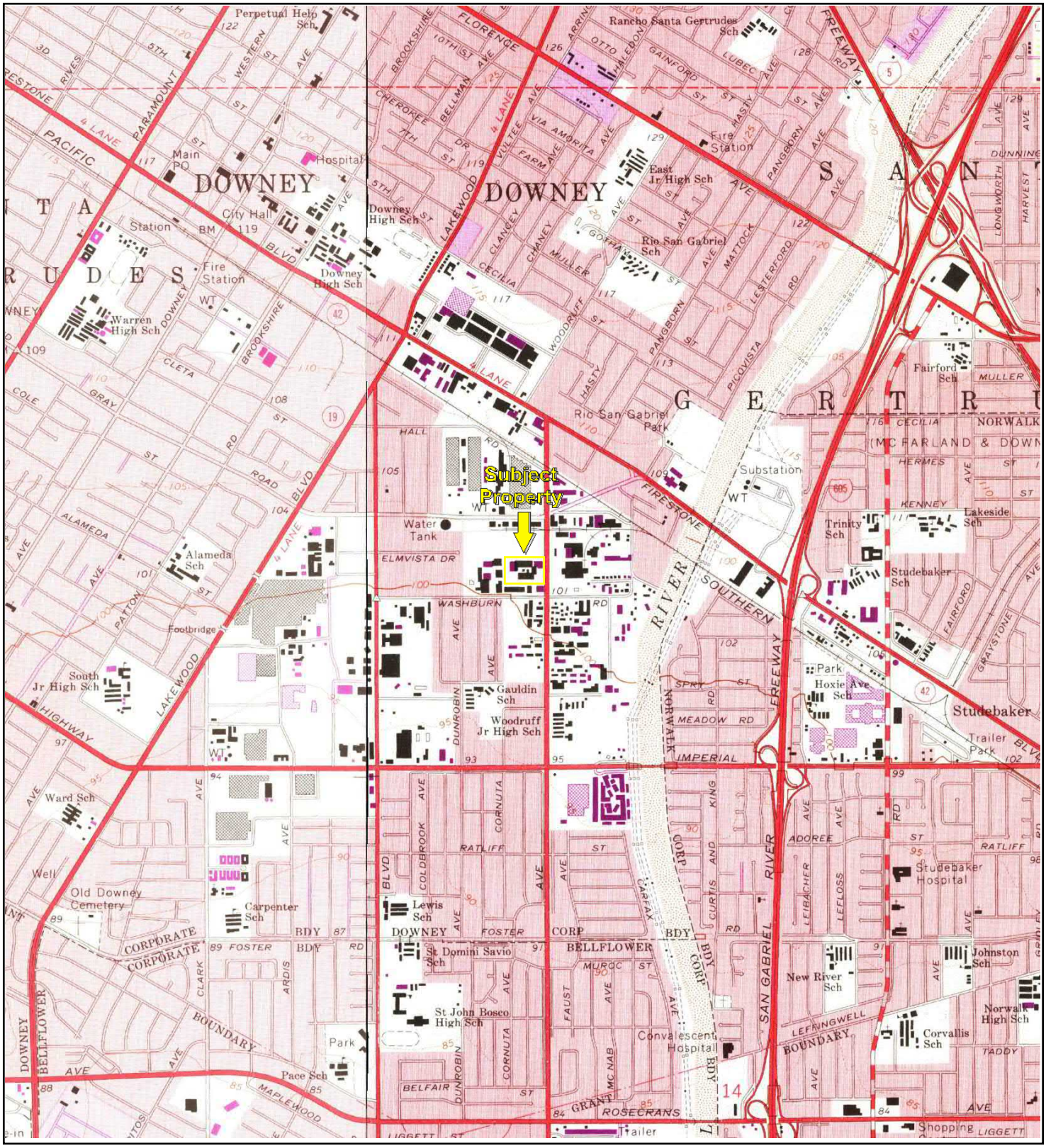
N

Key: Subject Property

**APPENDIX B: Topographic Maps**

**Project No. 18-220634.1**

PARTNER




TP, Whittier, 1972, 7.5-minute
W, South Gate, 1972, 7.5-minute

0 Miles 0.25 0.5 1 1.5

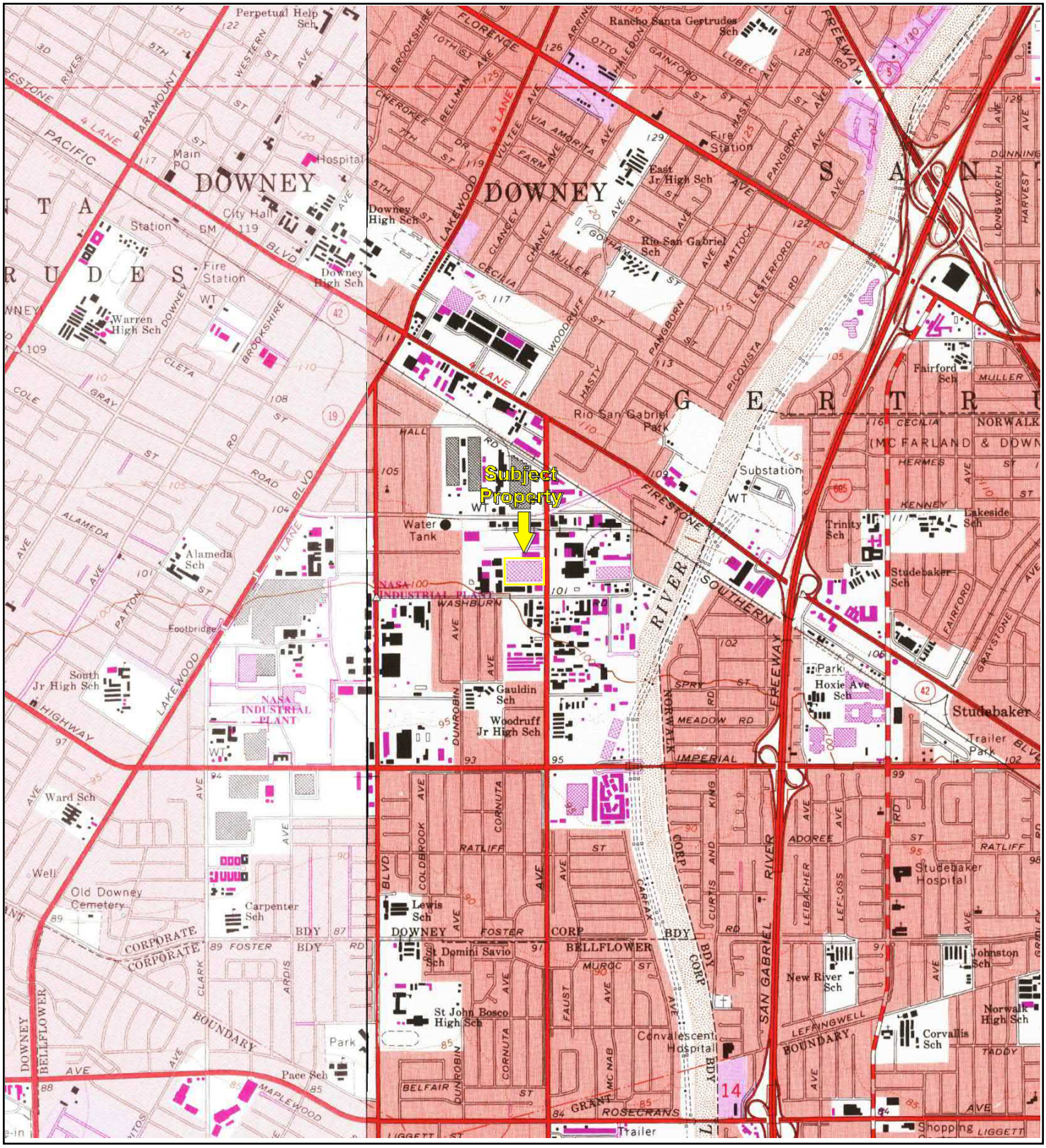
N

Key: Subject Property

**APPENDIX B: Topographic Maps**

**Project No. 18-220634.1**

PARTNER




TP, Whittier, 1981, 7.5-minute
W, South Gate, 1981, 7.5-minute

0 Miles 0.25 0.5 1 1.5

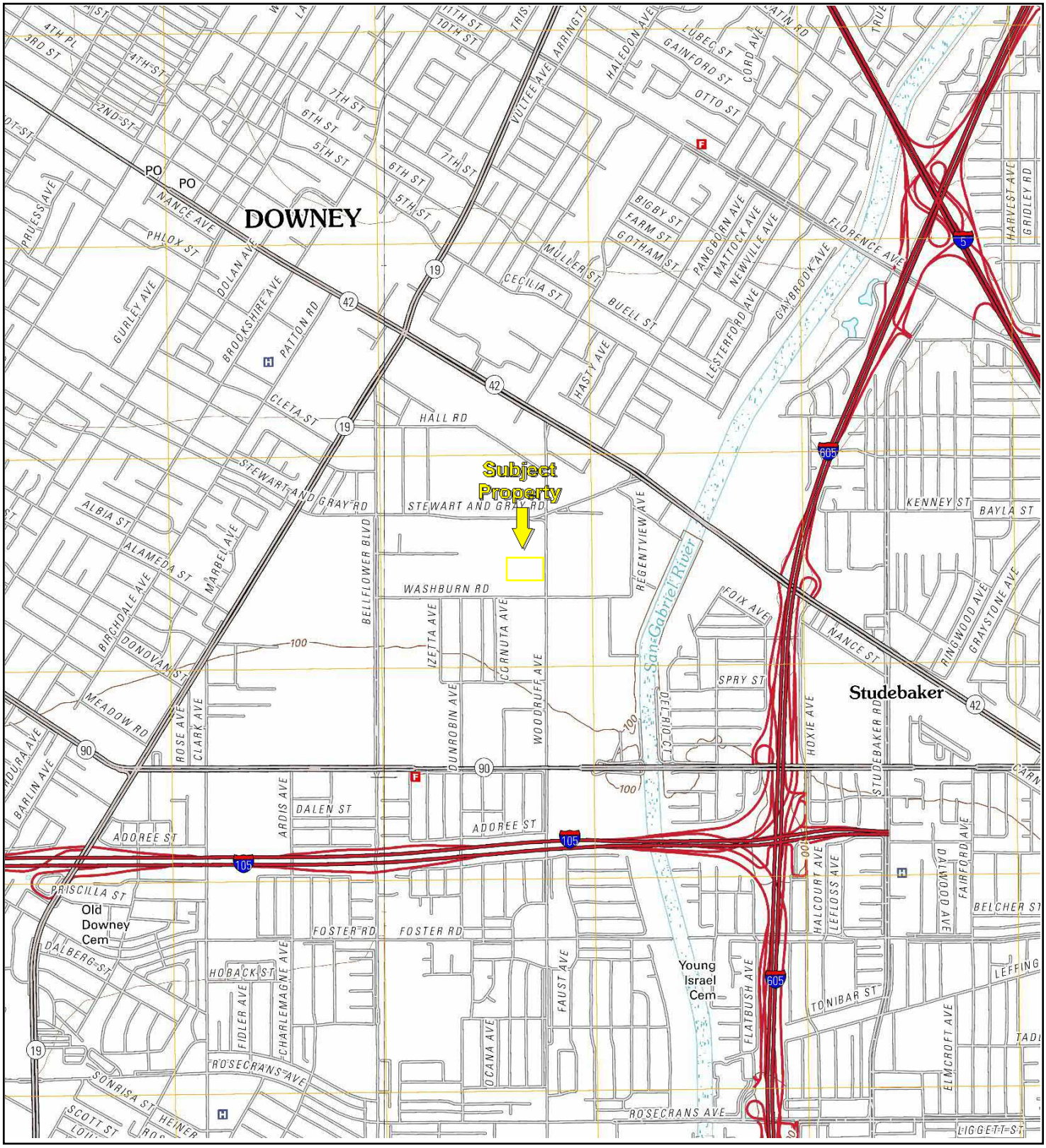
N

Key: Subject Property

**APPENDIX B: Topographic Maps**

**Project No. 18-220634.1**

PARTNER




TP, Whittier, 2012, 7.5-minute
W, South Gate, 2012, 7.5-minute

0 Miles 0.25 0.5 1 1.5

N

Key: Subject Property

**APPENDIX B: Topographic Maps**

**Project No. 18-220634.1**

PARTNER

Matthew Rodriquez
Secretary for
Environmental Protection

# Department of Toxic Substances Control

Barbara A. Lee , Director
1001 I Street
P.O. Box 806
Sacramento , CA 958120806

Edmund G. Brown Jr.
Governor

## EPA ID PROFILE

Map

| | | | |
|---|---|---|---|
| **ID Number:** | CAC002326801 | **Status:** | INACTIVE |
| **Name:** | KIRKHILL MANUFACTURING INC | **Inactive Date:** | 6/11/2001 12:00:00 AM |
| **County:** | LOS ANGELES | **Record Entered:** | 9/28/2000 12:00:00 AM |
| **NAICS:** | N/A | **Last Updated:** | 6/11/2001 12:00:00 AM |

| | Name | Address | City | State | Zip Code | Phone |
|---|---|---|---|---|---|---|
| **Location** | KIRKHILL MANUFACTURING INC | 12023 WOODRUFF AVE | DOWNEY | CA | 902410000 | |
| **Mailing** | | 12023 WOODRUFF AVE | DOWNEY | CA | 902410000 | |
| **Owner** | KIRKHILL MFTG INC | 12023 WOODRUFF AVE | DOWNEY | CA | 902410000 | 0000000000 |
| **Operator/Contact** | MIKE KILROY/PURCH MGR | 12023 WOODRUFF AVE | DOWNEY | CA | 902410000 | 5628031117 |

**Based Only Upon ID Number:** **CAC002326801**

| Calif. Manifests? | Non Calif. Manifests? | Transporter Registration? |
|---|---|---|
| Yes | N/A | N/A |

**California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page**

## Calif. Manifest Counts and Total Tonnage

Top line represents Manifest Count and Bottom line represents Total Tonnage

| Year | Generator | Trans. 1 | Trans. 2 | TSDF | ALT. TSDF |
|---|---|---|---|---|---|
| 2000 | 2<br>3.70210 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2001 | 1<br>1.47200 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2003 | 3<br>26.42000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2004 | 1<br>2.27265 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2005 | 1<br>6.25500 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2006 | 1<br>1.90000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |

## Non California Manifest Total Tonnage

**No Records Found**

| Waste Code Matrix | | | | | |
|---|---|---|---|---|---|
| California | Generator | Trans. 1 | Trans. 2 | TSDF | Alt. TSDF |
| RCRA | Generator | Trans. 1 | Trans. 2 | TSDF | Alt. TSDF |

Waste Code Matrix as a spreadsheet

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

**Report Generation Date:** 09/18/2018

# California Waste Code by Year Matrix

**ID Number:** CAC002326801
**Entity Type:** Generator

2000 ▾ 2018 ▾ Select Years

| Calif. Code | Description | 2000 | 2001 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|
| 221 | WASTE OIL AND MIXED OIL | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 1.90000 |
| 222 | OIL/WATER SEPARATION SLUDGE | 0.00000 | 0.00000 | 15.84600 | 0.00000 | 0.00000 | 0.00000 |
| 223 | UNSPECIFIED OIL-CONTAINING WASTE | 2.70210 | 1.47200 | 10.57400 | 2.27265 | 6.25500 | 0.00000 |
| 352 | OTHER ORGANIC SOLIDS | 1.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| | **Grand Totals** | **3.70210** | **1.47200** | **26.42000** | **2.27265** | **6.25500** | **1.90000** |



The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

**Report Generation Date:** 09/18/2018

# Department of Toxic Substances Control

Matthew Rodriquez
Secretary for
Environmental Protection

Barbara A. Lee , Director
1001 I Street
P.O. Box 806
Sacramento , CA 958120806

Edmund G. Brown Jr.
Governor

## EPA ID PROFILE

Map

| | | | |
|---|---|---|---|
| **ID Number:** | CAD008255648 | **Status:** | INACTIVE |
| **Name:** | KIRKHILL INC | **Inactive Date:** | 6/30/1998 12:00:00 AM |
| **County:** | LOS ANGELES | **Record Entered:** | 7/23/1982 12:00:00 AM |
| **NAICS:** | 3133 | **Last Updated:** | 4/1/1999 12:00:00 AM |

| | Name | Address | City | State | Zip Code | Phone |
|---|---|---|---|---|---|---|
| **Location** | KIRKHILL INC | 12021 WOODRUFF AVE | DOWNEY | CA | 902410000 | |
| **Mailing** | | 225 S LAKE AVE | PASADENA | CA | 911013005 | |
| **Owner** | KIRKHILL INC | -- | -- | 99 | -- | 0000000000 |
| **Operator/Contact** | DAVID PAUL | INACT PER NONDEL 98VQ FINAL | -- | 99 | -- | 3108033421 |

**Based Only Upon ID Number:** **CAD008255648**

| Calif. Manifests? | Non Calif. Manifests? | Transporter Registration? |
|---|---|---|
| N/A | Yes | N/A |

**California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page**

## Calif. Manifest Counts and Total Tonnage

**No Records Found**

# Non California Manifest Total Tonnage

| YEAR | GENERATOR | TRANS. 1 | TRANS. 2 | TSDF |
|---|---|---|---|---|
| 1995 | 0.45870 | 0.00000 | 0.00000 | 0.00000 |

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

**Report Generation Date:** 09/18/2018

Matthew Rodriquez
Secretary for
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# Department of Toxic Substances Control

Barbara A. Lee , Director
1001 I Street
P.O. Box 806
Sacramento , CA 958120806

Edmund G. Brown Jr.
Governor

## EPA ID PROFILE

Map

| | | | |
|---|---|---|---|
| **ID Number:** | CAL000176097 | **Status:** | ACTIVE |
| **Name:** | KIRKHILL MANUFACTURING CO | **Inactive Date:** | |
| **County:** | LOS ANGELES | **Record Entered:** | 4/28/1997 12:00:00 AM |
| **NAICS:** | 326291 | **Last Updated:** | 7/7/2017 3:29:40 PM |

| | Name | Address | City | State | Zip Code | Phone |
|---|---|---|---|---|---|---|
| **Location** | KIRKHILL MANUFACTURING CO | 12023 WOODRUFF AVE | DOWNEY | CA | 902410000 | |
| **Mailing** | | 12023 WOODRUFF AVE | DOWNEY | CA | 902415603 | |
| **Owner** | KIRKHILL MANUFACTURING CO | 12023 WOODRUFF AVE | DOWNEY | CA | 902410000 | 5628031117 |
| **Operator/Contact** | M KILROY-CORPORATE SECRETARY | 12023 WOODRUFF AVE | DOWNEY | CA | 90241 | 5628031117 |

**Based Only Upon ID Number:** **CAL000176097**

| Calif. Manifests? | Non Calif. Manifests? | Transporter Registration? |
|---|---|---|
| Yes | N/A | N/A |

**California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page**

## Calif. Manifest Counts and Total Tonnage

Top line represents Manifest Count and Bottom line represents Total Tonnage

| Year | Generator | Trans. 1 | Trans. 2 | TSDF | ALT. TSDF |
|---|---|---|---|---|---|
| 1997 | 1<br>1.17450 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2006 | 8<br>24.38640 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2007 | 2<br>10.17480 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2009 | 1<br>1.90000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2011 | 10<br>40.30300 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2012 | 8<br>32.42500 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2013 | 8<br>37.80600 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2014 | 8<br>30.86680 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2015 | 3<br>13.50000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2016 | 4<br>21.75000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2017 | 3<br>16.40000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |
| 2018 | 2<br>9.75000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 | 0<br>0.00000 |

## Non California Manifest Total Tonnage

**No Records Found**

| Waste Code Matrix | | | | | |
|---|---|---|---|---|---|
| California | Generator | Trans. 1 | Trans. 2 | TSDF | Alt. TSDF |
| RCRA | Generator | Trans. 1 | Trans. 2 | TSDF | Alt. TSDF |

Waste Code Matrix as a spreadsheet

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

**Report Generation Date:** 09/18/2018

# California Waste Code by Year Matrix

**ID Number:** CAL000176097
**Entity Type:** Generator

2013 ▾ 2018 ▾ Select Years

| Calif. Code | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|
| 221 | WASTE OIL AND MIXED OIL | 4.25600 | 3.49600 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 222 | OIL/WATER SEPARATION SLUDGE | 0.00000 | 5.17080 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 352 | OTHER ORGANIC SOLIDS | 33.55000 | 22.20000 | 13.50000 | 21.75000 | 16.40000 | 9.75000 |
| | **Grand Totals** | **37.80600** | **30.86680** | **13.50000** | **21.75000** | **16.40000** | **9.75000** |

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

**Report Generation Date:** 09/18/2018

# California Waste Code by Year Matrix

**ID Number:** CAL000176097
**Entity Type:** Generator

1997 ▾ 2013 ▾ Select Years

| Calif. Code | Description | 1997 | 2006 | 2007 | 2009 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|
| 181 | OTHER INORGANIC SOLID WASTE | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 21.25000 | 7.75000 | 0.00000 |
| 214 | UNSPECIFIED SOLVENT MIXTURE | 0.01800 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 221 | WASTE OIL AND MIXED OIL | 1.14000 | 11.62800 | 0.00000 | 1.90000 | 8.83500 | 6.17500 | 4.25600 |
| 222 | OIL/WATER SEPARATION SLUDGE | 0.00000 | 10.50840 | 10.17480 | 0.00000 | 1.66800 | 0.00000 | 0.00000 |
| 331 | OFF-SPEC, AGED, OR SURPLUS ORGANICS | 0.01650 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 352 | OTHER ORGANIC SOLIDS | 0.00000 | 2.25000 | 0.00000 | 0.00000 | 8.55000 | 18.50000 | 33.55000 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Grand Totals** | **1.17450** | **24.38640** | **10.17480** | **1.90000** | **40.30300** | **32.42500** | **37.80600** |

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

**Report Generation Date:** 09/18/2018

Matthew Rodriquez
Secretary for
Environmental Protection

# Department of Toxic Substances Control

Barbara A. Lee , Director
1001 I Street
P.O. Box 806
Sacramento , CA 958120806

Edmund G. Brown Jr.
Governor

## Facility Search Results

**Selection Criteria:**

**Facility:** KIRKHILL
**Search on:** Physical Address
**Status:** Active and Inactive
**Sort Direction:** asc
**Sorted By:** EPA ID
**Records Found:** 12

| EPA ID Number | Name | Address | City | Zip |
|---|---|---|---|---|
| CAC000199973 | 1X KIRKHILL, INC. | -- | DOWNEY | 902410000 |
| CAC000535728 | 1X KIRKHILL INC | 12021 WOODRUFF AVE | DOWNEY | 902410000 |
| CAC002326801 | KIRKHILL MANUFACTURING INC | 12023 WOODRUFF AVE | DOWNEY | 902410000 |
| CAD008255168 | KIRKHILL RUBBER CO | 300 CYPRESS ST | BREA | 926000000 |
| CAD008255648 | KIRKHILL INC | 12021 WOODRUFF AVE | DOWNEY | 902410000 |
| CAD981449614 | KIRKHILL INC | 300 E CYPRESS AVE | BREA | 926220000 |
| CAL000176097 | KIRKHILL MANUFACTURING CO | 12023 WOODRUFF AVE | DOWNEY | 902410000 |
| CAL000270877 | KIRKHILL-TA CO | 331 CLIFFWOOD PARK ST | BREA | 92821 |
| CAL000297945 | KIRKHILL-TA SFS DIVISION | 13767 FREEWAY DR | SANTA FE SPRINGS | 90670 |
| CAR000116152 | KIRKHILL T A C S E DIVISION | 14910 CARMENITA RD | NORWALK | 906505233 |
| CAX000034447 | KIRKHILL RUBBER CO. | 300 EAST CYPRESS AVE | BREA | 926210000 |
| MAD099415820 | KIRKHILL-TA | 336 WEIR ST | TAUNTON | 027800000 |

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**Report Generation Date:** 09/18/2018

**KIRKHILL MANUFACTURE CO** 12023 WOODRUFF AVE, DOWNEY, CA 90241

Filter Chemicals By Name | Expand/Collapse All

**REPORT PERIOD: 2014**
**SUBMITTED 5/11/2015**

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|
| **1,3-Butadiene, 2-methyl-, homopolymer** | 9003-31-0 | | 10000-24999 Pounds |

| Common Name | NATURAL RUBBER/NR |
|---|---|
| CAS Number | 9003-31-0 |
| Max Daily Amount / Unit | 75000-99999 Pounds |
| Avg Daily Amount / Unit | 10000-24999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

| | | | |
|---|---|---|---|
| **1,3-Butadiene, 2-methyl-, polymer with 2-methyl-1-propene** | 9010-85-9 | | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|
| **Common Name** | BUTYL | | |
| CAS Number | 9010-85-9 | | |
| Max Daily Amount / Unit | 5000-9999 Pounds | | |
| Avg Daily Amount / Unit | 1000-4999 Pounds | | |
| Days Onsite | 0 | | |
| Physical State(s) | Solid, Pure | | |
| Health Effect(s) | Acute Health | | |
| ▾ **1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene** | 9011-17-0 | | 500-999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | FKM |
|---|---|
| CAS Number | 9011-17-0 |
| Max Daily Amount / Unit | 1000-4999 Pounds |
| Avg Daily Amount / Unit | 500-999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

| | Chemical Mixes |
|---|---|
| **Component** | Polyvinylidenefluoride/hexafluoropropane |
| CAS Number | 9011-17-0 |
| Percentage by Weight | 98.00 |
| Is EHS | False |
| **Component** | Barium Sulfate |
| CAS Number | 7727-43-7 |
| Percentage by Weight | 2.00 |
| Is EHS | False |

| | | | |
|---|---|---|---|
| ▾ **2-Benzothiazolesulfenamide, N-(1,1-dimethylethyl)-** | 95-31-8 | | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|
| **Common Name** | TBBS | | |
| CAS Number | 95-31-8 | | |
| Max Daily Amount / Unit | 5000-9999 Pounds | | |
| Avg Daily Amount / Unit | 1000-4999 Pounds | | |
| Days Onsite | 0 | | |
| Physical State(s) | Solid, Pure | | |
| Health Effect(s) | Acute Health | | |
| ▼ **2-Propenenitrile, polymer with 1,3-butadiene** | 9003-18-3 | | 10000-24999 Pounds |
| **Common Name** | NBR | | |
| CAS Number | 9003-18-3 | | |
| Max Daily Amount / Unit | 25000-49999 Pounds | | |
| Avg Daily Amount / Unit | 10000-24999 Pounds | | |
| Days Onsite | 0 | | |
| Physical State(s) | Solid, Pure | | |
| Health Effect(s) | Acute Health | | |
| ▼ **2-Propenenitrile, polymer with 1,3-butadiene, hydrogenated** | 88254-10-8 | | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|
| **Common Name** | HNBR | | |
| CAS Number | 88254-10-8 | | |
| Max Daily Amount / Unit | 1000-4999 Pounds | | |
| Avg Daily Amount / Unit | 1000-4999 Pounds | | |
| Days Onsite | 0 | | |
| Physical State(s) | Solid, Pure | | |
| Health Effect(s) | Acute Health | | |
| ▾ **2-Propenoic acid, 2-methyl-, polymer with 1,3-butadiene and 2-propenenitrile** | 9010-81-5 | | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | XNBR |
|---|---|
| CAS Number | 9010-81-5 |
| Max Daily Amount / Unit | 1000-4999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

**Chemical Mixes**

| Component | 4-Vinyl Cyclohexen |
|---|---|
| CAS Number | 100-40-3 |
| Percentage by Weight | 0.10 |
| Is EHS | False |

| | | | |
|---|---|---|---|
| **Acetylene** | 74-86-2 | Fire, Sudden Release of Pressure, Reactivity | 0-2599 Cubic Feet |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Acetylene |
|---|---|
| Hazard Type(s) | Fire, Sudden Release of Pressure, Reactivity |
| DOT Hazard Class | 2.1 - Flammable Gases |
| CAS Number | 74-86-2 |
| Max Daily Amount / Unit | 0-2599 Cubic Feet |
| Avg Daily Amount / Unit | 0-2599 Cubic Feet |
| Days Onsite | 0 |
| Physical State(s) | Gas, Pure |
| Health Effect(s) | Acute Health |

**Acrylonitrile-Butadiene/Polyvinylchloride Blend** — 10000-24999 Pounds

| Common Name | OZO |
|---|---|
| Max Daily Amount / Unit | 25000-49999 Pounds |
| Avg Daily Amount / Unit | 10000-24999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Mix |
| Health Effect(s) | Acute Health |

**Antimony oxide (Sb2O3)** — 1309-64-4 — 1000-4999 Pounds

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Antimony trioxide |
|---|---|
| CAS Number | 1309-64-4 |
| Max Daily Amount / Unit | 1000-4999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Delayed Health, Acute Health |

| | | | |
|---|---|---|---|
| ▾ **Argon Compressed** | 7440-37-1 | Sudden Release of Pressure | 0-2599 Cubic Feet |

| Common Name | Argon Compressed |
|---|---|
| Hazard Type(s) | Sudden Release of Pressure |
| CAS Number | 7440-37-1 |
| Max Daily Amount / Unit | 0-2599 Cubic Feet |
| Avg Daily Amount / Unit | 0-2599 Cubic Feet |
| Days Onsite | 0 |
| Physical State(s) | Gas, Pure |
| Health Effect(s) | Acute Health |

| | | | |
|---|---|---|---|
| ▾ **Benzene, ethenyl-, polymer with 1,3-butadiene** | 9003-55-8 | | 25000-49999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | SBR |
|---|---|
| CAS Number | 9003-55-8 |
| Max Daily Amount / Unit | 75000-99999 Pounds |
| Avg Daily Amount / Unit | 25000-49999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

| | | | |
|---|---|---|---|
| **Bicyclo[2.2.1]hept-2-ene, 5-ethylidene-, polymer with ethene and 1-propene** | 25038-36-2 | | 25000-49999 Pounds |

| Common Name | EPDM |
|---|---|
| CAS Number | 25038-36-2 |
| Max Daily Amount / Unit | 75000-99999 Pounds |
| Avg Daily Amount / Unit | 25000-49999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

| | | | |
|---|---|---|---|
| **Bis(2-ethylhexyl)phthalate** | 117-81-7 | Fire | 120-599 Gallons |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|
| **Common Name** | DOP/DEHP | | |
| Hazard Type(s) | Fire | | |
| CAS Number | 117-81-7 | | |
| Max Daily Amount / Unit | 1200-2999 Gallons | | |
| Avg Daily Amount / Unit | 120-599 Gallons | | |
| Days Onsite | 0 | | |
| Physical State(s) | Liquid, Pure | | |
| Health Effect(s) | Acute Health | | |
| **Bis(dimethylthiocarbamyl)disulfide** | 137-26-8 | | 1000-4999 Pounds |
| **Common Name** | TMTD | | |
| CAS Number | 137-26-8 | | |
| Max Daily Amount / Unit | 1000-4999 Pounds | | |
| Avg Daily Amount / Unit | 1000-4999 Pounds | | |
| Days Onsite | 0 | | |
| Physical State(s) | Solid, Pure | | |
| Health Effect(s) | Acute Health | | |
| **Blend of Zinc Soaps** | | Fire | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Chemlube L |
|---|---|
| Hazard Type(s) | Fire |
| Max Daily Amount / Unit | 1000-4999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Mix |

| | | | |
|---|---|---|---|
| ▾ **Decanedioic acid, 1,10-bis(2-ethylhexyl) ester** | 122-62-3 | Fire | 60-119 Gallons |

| Common Name | DOS |
|---|---|
| Hazard Type(s) | Fire |
| CAS Number | 122-62-3 |
| Max Daily Amount / Unit | 600-1199 Gallons |
| Avg Daily Amount / Unit | 60-119 Gallons |
| Days Onsite | 0 |
| Physical State(s) | Liquid, Pure |

| | | | |
|---|---|---|---|
| ▾ **Distillates (petroleum), hydrotreated heavy naphthenic** | 64742-52-5 | Fire | 12-59 Gallons |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | LUBRICATING OILS (MACHINERY) |
|---|---|
| Hazard Type(s) | Fire |
| CAS Number | 64742-52-5 |
| Max Daily Amount / Unit | 60-119 Gallons |
| Avg Daily Amount / Unit | 12-59 Gallons |
| Days Onsite | 0 |
| Physical State(s) | Liquid, Mix |

| | | | |
|---|---|---|---|
| ▾ **Distillates (petroleum), hydrotreated heavy naphthenic** | 64742-52-5 | Fire | 12-59 Gallons |

| Common Name | WASTE LUBRICATING OILS (MACHINERY) |
|---|---|
| Hazard Type(s) | Fire |
| CAS Number | 64742-52-5 |
| Max Daily Amount / Unit | 60-119 Gallons |
| Avg Daily Amount / Unit | 12-59 Gallons |
| Days Onsite | 0 |
| Physical State(s) | Liquid |

| | | | |
|---|---|---|---|
| ▾ **Distillates (petroleum), solvent-refined heavy naphthenic** | 64741-96-4 | Fire | 1200-2999 Gallons |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|
| **Common Name** | Process Oil | | |
| Hazard Type(s) | Fire | | |
| CAS Number | 64741-96-4 | | |
| Max Daily Amount / Unit | 6000-8999 Gallons | | |
| Avg Daily Amount / Unit | 1200-2999 Gallons | | |
| Days Onsite | 0 | | |
| Physical State(s) | Liquid, Pure | | |
| ▾ **Ethylene/Methyl Acrylate Copolymer** | | | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | VAMAC/AEM |
|---|---|
| Max Daily Amount / Unit | 5000-9999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

| Chemical Mixes | |
|---|---|
| **Component** | Methyl Acrylate |
| CAS Number | 96-33-3 |
| Percentage by Weight | 1.50 |
| Is EHS | False |
| **Component** | Methyl Alcohol |
| CAS Number | 67-56-1 |
| Percentage by Weight | 0.50 |
| Is EHS | False |

| | | | |
|---|---|---|---|
| ▾ **Fatty acids, C8-18 and C18-unsatd., zinc salts** | 67762-34-9 | | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | ZINC STEARATE |
|---|---|
| CAS Number | 67762-34-9 |
| Max Daily Amount / Unit | 5000-9999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

| | | | |
|---|---|---|---|
| ▼ **Hexanedioic acid, 1,6-bis[2-(2-butoxyethoxy)ethyl] ester** | 141-17-3 | Fire | 120-599 Gallons |

| Common Name | DBEEA |
|---|---|
| Hazard Type(s) | Fire |
| CAS Number | 141-17-3 |
| Max Daily Amount / Unit | 120-599 Gallons |
| Avg Daily Amount / Unit | 120-599 Gallons |
| Days Onsite | 0 |
| Physical State(s) | Liquid, Pure |

| | | | |
|---|---|---|---|
| ▼ **Kaolin** | 1332-58-7 | | 25000-49999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Kaolin |
|---|---|
| CAS Number | 1332-58-7 |
| Max Daily Amount / Unit | 25000-49999 Pounds |
| Avg Daily Amount / Unit | 25000-49999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |

| ▾ **Lampblack** | 1333-86-4 | Fire | 25000-49999 Pounds |
|---|---|---|---|

| Common Name | Carbon black |
|---|---|
| Hazard Type(s) | Fire |
| CAS Number | 1333-86-4 |
| Max Daily Amount / Unit | 100000-499999 Pounds |
| Avg Daily Amount / Unit | 25000-49999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Delayed Health |

| ▾ **Neoprene** | 126-99-8 | | 50000-74999 Pounds |
|---|---|---|---|

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Neoprene |
|---|---|
| CAS Number | 126-99-8 |
| Max Daily Amount / Unit | 100000-499999 Pounds |
| Avg Daily Amount / Unit | 50000-74999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Mix |
| Health Effect(s) | Acute Health |

**Chemical Mixes**

| Component | Neoprene |
|---|---|
| CAS Number | 126-99-8 |
| Percentage by Weight | 98.00 |
| Is EHS | False |
| **Component** | Talc |
| CAS Number | 14807-96-6 |
| Percentage by Weight | 1.00 |
| Is EHS | False |
| **Component** | Water |
| CAS Number | 7732-18-5 |
| Percentage by Weight | 1.00 |
| Is EHS | False |

| | | | |
|---|---|---|---|
| ▼ **Oxirane, 2-(chloromethyl)-, polymer with oxirane** | 24969-10-6 | | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | HYDRIN/ECO |
|---|---|
| CAS Number | 24969-10-6 |
| Max Daily Amount / Unit | 5000-9999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

| Chemical Mixes | |
|---|---|
| **Component** | Ethylidene Oxide |
| CAS Number | 75-21-8 |
| Percentage by Weight | 0.50 |
| Is EHS | False |

| | | | |
|---|---|---|---|
| **Oxybis(benzenesulfonylhydrazide** | 80-51-3 | Fire | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | CELOGEN OT |
|---|---|
| Hazard Type(s) | Fire |
| CAS Number | 80-51-3 |
| Max Daily Amount / Unit | 1000-4999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

| | | | |
|---|---|---|---|
| ▾ **Oxygen** | 7782-44-7 | Fire, Sudden Release of Pressure | 0-2599 Cubic Feet |

| Common Name | Oxygen |
|---|---|
| Hazard Type(s) | Fire, Sudden Release of Pressure |
| DOT Hazard Class | 2.2 - Nonflammable Gases |
| CAS Number | 7782-44-7 |
| Max Daily Amount / Unit | 0-2599 Cubic Feet |
| Avg Daily Amount / Unit | 0-2599 Cubic Feet |
| Days Onsite | 0 |
| Physical State(s) | Gas, Pure |

| | | | |
|---|---|---|---|
| ▾ **Petroleum Hydrocarbons** | | Fire | 120-599 Gallons |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Lubricating Oil |
|---|---|
| Hazard Type(s) | Fire |
| Max Daily Amount / Unit | 120-599 Gallons |
| Avg Daily Amount / Unit | 120-599 Gallons |
| Days Onsite | 0 |
| Physical State(s) | Liquid, Mix |

| Chemical Mixes | |
|---|---|
| **Component** | Petroleum Hydrocarbons |
| CAS Number | 64742-54-7 |
| Percentage by Weight | 85.00 |
| Is EHS | False |
| **Component** | Additives |
| Percentage by Weight | 15.00 |
| Is EHS | False |

▼ **Pine Tar** 600-1199 Gallons

| Common Name | Pine Tar |
|---|---|
| Max Daily Amount / Unit | 6000-8999 Gallons |
| Avg Daily Amount / Unit | 600-1199 Gallons |
| Days Onsite | 0 |
| Physical State(s) | Liquid, Mix |
| Health Effect(s) | Acute Health |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|
| **Propane** | 74-98-6 | Fire, Sudden Release of Pressure | 12-59 Gallons |

**Chemical Mixes**

| | |
|---|---|
| **Component** | Rosin Oil |
| CAS Number | 68425-08-1 |
| Percentage by Weight | 9.20 |
| Is EHS | False |
| **Component** | Tall Oil Pitch |
| CAS Number | 8016-81-7 |
| Percentage by Weight | 65.20 |
| Is EHS | False |
| **Component** | Crude Tall Oil |
| CAS Number | 8002-26-4 |
| Percentage by Weight | 5.50 |
| Is EHS | False |
| **Component** | No.2 Diesel Oil |
| CAS Number | 68476-34-6 |
| Percentage by Weight | 20.10 |
| Is EHS | False |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Liquefied Petroleum Gas (lpg) |
|---|---|
| Hazard Type(s) | Fire, Sudden Release of Pressure |
| DOT Hazard Class | 2.1 - Flammable Gases |
| CAS Number | 74-98-6 |
| Max Daily Amount / Unit | 60-119 Gallons |
| Avg Daily Amount / Unit | 12-59 Gallons |
| Days Onsite | 0 |
| Physical State(s) | Gas, Pure |
| Health Effect(s) | Acute Health |

| | | |
|---|---|---|
| ▾ **Talc (Mg3H2(SiO3)4)** | 14807-96-6 | 1000-4999 Pounds |

| Common Name | Talc |
|---|---|
| CAS Number | 14807-96-6 |
| Max Daily Amount / Unit | 10000-24999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Delayed Health, Acute Health |

| | | |
|---|---|---|
| ▾ **Tetraethylthiuram Disulfide** | 97-77-8 | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | TETD |
|---|---|
| CAS Number | 97-77-8 |
| Max Daily Amount / Unit | 1000-4999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Delayed Health, Acute Health |

| | | | |
|---|---|---|---|
| **Tetraflluoroethylene Monomer** | 9002-84-0 | | 100-499 Pounds |

| Common Name | PTFE |
|---|---|
| CAS Number | 9002-84-0 |
| Max Daily Amount / Unit | 1000-4999 Pounds |
| Avg Daily Amount / Unit | 100-499 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

| | | | |
|---|---|---|---|
| **Thiodicarbonic diamide ([(H2N)C(S)]2S), N,N,N',N'-tetramethyl-** | 97-74-5 | Fire | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | TMTM |
|---|---|
| Hazard Type(s) | Fire |
| CAS Number | 97-74-5 |
| Max Daily Amount / Unit | 1000-4999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

| | | | |
|---|---|---|---|
| ▾ **Wollastonite (Ca(SiO3))** | 13983-17-0 | | 1000-4999 Pounds |

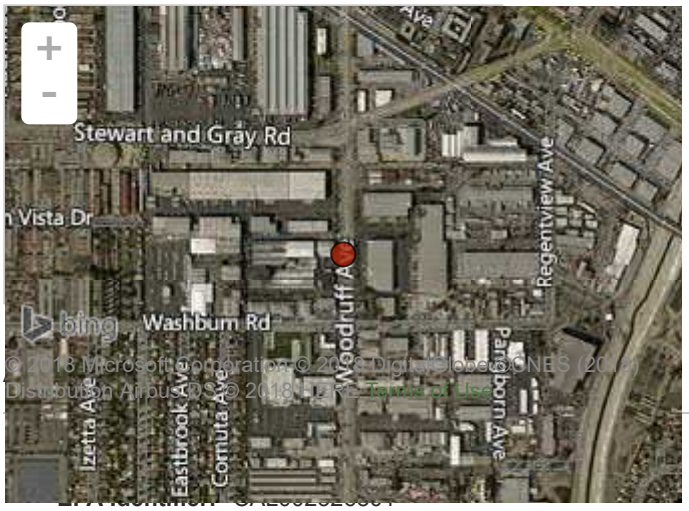
| Common Name | Wollastonite |
|---|---|
| CAS Number | 13983-17-0 |
| Max Daily Amount / Unit | 1000-4999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

| | | | |
|---|---|---|---|
| ▾ **Zinc dibutyldithiocarbamate** | 136-23-2 | | 1000-4999 Pounds |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | ZDBC |
|---|---|
| CAS Number | 136-23-2 |
| Max Daily Amount / Unit | 1000-4999 Pounds |
| Avg Daily Amount / Unit | 1000-4999 Pounds |
| Days Onsite | 0 |
| Physical State(s) | Solid, Pure |
| Health Effect(s) | Acute Health |

**KIRKHILL MANUFACTURE CO** 12023 WOODRUFF AVE, DOWNEY, CA 90241




**Facility Identifier:** LACoFA0030310

## Industry Codes

**SIC:** 3069 - Fabricated rubber products, n.e.c.

## î€’ Geopolitical Data

**County:** Los Angeles County
**CalEnviroscreen 2.0 Percentile Range:** 91-95%

## î€• Regulatory Programs

### Chemical Storage Facilities î□§

**Environmental Interest Start Date:** 7/10/2013
**Last Inspected:** 7/2/2015

**Source System:** California Environmental Reporting System
**Source System ID:** 10303885

### Hazardous Waste Generator î□§

**Environmental Interest Start Date:** 7/10/2013
**Last Inspected:** 7/2/2015

**Source System:** California Environmental Reporting System
**Source System ID:** 10303885

**KIRKHILL MANUFACTURE CO** 12023 WOODRUFF AVE, DOWNEY, CA 90241

**Time Frame:** All years ▼ **Expand/Collapse All**

## Evaluations

**7/2/2015 Hazardous Waste Generator - Compliance Evaluation Inspection**

**Type:** Routine done by local agency
**Notes:** An inspection consent was granted by Mike Kilroy(Operations, sales,& Marketing Manager)

**5/11/2015 Hazardous Materials Release Response Plans (HMRRP) - Other/Unknown**

**Type:** Other, not routine, done by local agency
**Notes:** Re-inspection conducted by HMS L. Kirby. All violations abated. HMBP updated and electronically submitted to CERS. No further action required at this time.

**4/1/2015 Hazardous Materials Release Response Plans (HMRRP) - Other/Unknown**

**Type:** Other, not routine, done by local agency
**Notes:** Re-inspection conducted by HMS L. Kirby. Facility complied and uploaded CERS submittal. However, submittal NOT APPROVED upon review as incomplete hazmat inventory and submittal missing emergency response/contingency plan. Notification made to complete required submittal elements and re-submit HMBP.

**2/18/2015 Hazardous Materials Release Response Plans (HMRRP) - Compliance Evaluation Inspection**

**Type:** Routine done by local agency
**Notes:** HMRRP inspection conducted by HMS L. Kirby. NOV issued for failure to update HMBP and chemical inventory, and electronically submit information to CERS. No CERS submittal on file at time of inspection. Business recently assumed control of entire building complex and will have to amend site map/floor plan. Inspection found fire code violations requiring further corrective action.

## Violations

**7/2/2015 Hazardous Waste Generator - Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.**

**Citations:**

- 22 CCR 12 66262.34(f): California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)

**Notes:** Returned to compliance on 04/11/2016. OBSERVATION: 44 x 55 gallon drums of waste oil. All hazardous waste containers shall be marked with the following information: 1) the words "Hazardous Waste"; 2) name and address of generator; 3) hazardous properties; 4) physical state; 5) composition (contents); 6) accumulation start date. CORRECTIVE ACTION: Immediately label these containers and ensure that all hazardous waste containers are marked with all the required information.

**2/18/2015 Hazardous Materials Release Response Plans (HMRRP) - Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.**

**Citations:**

- HSC 6.95 25508(c): California Health and Safety Code, Chapter 6.95, Section(s) 25508(c)
- HSC 6.95 25508.2: California Health and Safety Code, Chapter 6.95, Section(s) 25508.2

**Notes:** Returned to compliance on 04/01/2015.

**2/18/2015 Hazardous Materials Release Response Plans (HMRRP) - Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.**

**Citations:**

- 19 CCR 6.95 25505: California Code of Regulations, Title 19, Chapter 6.95, Section(s) 25505
- HSC 6.95 25508(a)(1): California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
- HSC 6.95 25508(d): California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)

**Notes:** Returned to compliance on 04/01/2015.

## Enforcement Actions

**2/18/2015 Hazardous Materials Release Response Plans (HMRRP) - Notice of Violation**

**Type:** Notice of Violation (Unified Program)

**CAL PIPE INDUSTRIES** 12021 WOODRUFF AVE, DOWNEY, CA 90241

**Time Frame:** All years **Expand/Collapse All**

## Evaluations

**1/7/2015 Hazardous Waste Generator - Compliance Evaluation Inspection**

**Type:** Routine done by local agency

**3/25/2013 Hazardous Materials Release Response Plans (HMRRP) - Compliance Evaluation Inspection**

**Type:** Routine done by local agency
**Notes:** Inspection by HMS L. Kirby (Downey FD)

## Violations

## Enforcement Actions

**CAL PIPE INDUSTRIES** 12021 WOODRUFF AVE, DOWNEY, CA 90241

Filter Chemicals By Name | **Expand/Collapse All**

**REPORT PERIOD: 2012**
**SUBMITTED 3/25/2013**

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|
| **Acetylene (Dissolved)** | 74-86-2 | Fire, Sudden Release of Pressure | 0-2599 Cubic Feet |

| **Common Name** | Acetylene |
|---|---|
| Hazard Type(s) | Fire, Sudden Release of Pressure |
| DOT Hazard Class | 2.1 - Flammable Gases |
| CAS Number | 74-86-2 |
| Max Daily Amount / Unit | 0-2599 Cubic Feet |
| Avg Daily Amount / Unit | 0-2599 Cubic Feet |
| Days Onsite | 365 |
| Physical State(s) | Gas, Pure |
| Health Effect(s) | Acute Health |

| | | | |
|---|---|---|---|
| **Argon and Carbon Dioxide in Helium** | | Sudden Release of Pressure | 0-2599 Cubic Feet |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Argon and Carbon Dioxide in Helium |
|---|---|
| Hazard Type(s) | Sudden Release of Pressure |
| Max Daily Amount / Unit | 0-2599 Cubic Feet |
| Avg Daily Amount / Unit | 0-2599 Cubic Feet |
| Days Onsite | 365 |
| Physical State(s) | Gas, Mix |
| Health Effect(s) | Acute Health |

| Chemical Mixes | |
|---|---|
| **Component** | Argon |
| CAS Number | 7440-37-1 |
| Percentage by Weight | 65.00 |
| Is EHS | False |
| **Component** | Carbon Dioxide |
| CAS Number | 124-38-9 |
| Percentage by Weight | 5.00 |
| Is EHS | False |
| **Component** | Helium |
| CAS Number | 7440-59-7 |
| Percentage by Weight | 30.00 |
| Is EHS | False |

| | | | |
|---|---|---|---|
| ▾ **Argon Compressed** | 7440-37-1 | Sudden Release of Pressure | 0-2599 Cubic Feet |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Argon Compressed |
|---|---|
| Hazard Type(s) | Sudden Release of Pressure |
| DOT Hazard Class | 2.2 - Nonflammable Gases |
| CAS Number | 7440-37-1 |
| Max Daily Amount / Unit | 0-2599 Cubic Feet |
| Avg Daily Amount / Unit | 0-2599 Cubic Feet |
| Days Onsite | 365 |
| Physical State(s) | Gas, Pure |

| | |
|---|---|
| **Argon, mixt. with carbon dioxide** | 0-2599 Cubic Feet |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Argon Co2 Mix |
|---|---|
| Max Daily Amount / Unit | 0-2599 Cubic Feet |
| Avg Daily Amount / Unit | 0-2599 Cubic Feet |
| Days Onsite | 365 |
| Physical State(s) | Gas, Mix |
| Health Effect(s) | Acute Health |

| Chemical Mixes | |
|---|---|
| **Component** | Argon |
| CAS Number | 7440-37-1 |
| Percentage by Weight | 75.00 |
| Is EHS | False |
| **Component** | Carbon Dioxide |
| CAS Number | 124-38-9 |
| Percentage by Weight | 25.00 |
| Is EHS | False |

**Cal 32 (Alkaline soap solution)** 12-59 Gallons

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Cal 32 (Alkaline soap solution) |
|---|---|
| Max Daily Amount / Unit | 12-59 Gallons |
| Avg Daily Amount / Unit | 12-59 Gallons |
| Days Onsite | 365 |
| Physical State(s) | Liquid, Mix |
| Health Effect(s) | Acute Health |

**Chemical Mixes**

| Component | Sodium Dodecylbenzene Sulfonate |
|---|---|
| CAS Number | 1886-81-3 |
| Percentage by Weight | 5.00 |
| Is EHS | False |
| **Component** | Sodium Metasilicate |
| CAS Number | 6834-92-0 |
| Percentage by Weight | 35.00 |
| Is EHS | False |

| | | | |
|---|---|---|---|
| ▾ **Helium** | 7440-59-7 | Sudden Release of Pressure | 0-2599 Cubic Feet |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Helium, Compressed |
|---|---|
| Hazard Type(s) | Sudden Release of Pressure |
| DOT Hazard Class | 2.2 - Nonflammable Gases |
| CAS Number | 7440-59-7 |
| Max Daily Amount / Unit | 0-2599 Cubic Feet |
| Avg Daily Amount / Unit | 0-2599 Cubic Feet |
| Days Onsite | 365 |
| Physical State(s) | Gas, Pure |
| Health Effect(s) | Acute Health |

| | | |
|---|---|---|
| ▾ **Laquer Thinner** | Fire | 12-59 Gallons |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| | |
|---|---|
| **Common Name** | Laquer Thinner |
| Hazard Type(s) | Fire |
| DOT Hazard Class | 3 - Flammable and Combustible Liquids |
| Max Daily Amount / Unit | 60-119 Gallons |
| Avg Daily Amount / Unit | 12-59 Gallons |
| Days Onsite | 365 |
| Physical State(s) | Liquid, Mix |

| Chemical Mixes | |
|---|---|
| **Component** | Acetone |
| CAS Number | 67-64-1 |
| Is EHS | False |
| **Component** | Toluene |
| CAS Number | 108-88-3 |
| Is EHS | False |
| **Component** | N-Butyl Acetate |
| CAS Number | 123-86-4 |
| Is EHS | False |

| | | |
|---|---|---|
| ▾ **Lubricating oils, used** | Fire | 12-59 Gallons |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Used lubricating oils |
|---|---|
| Hazard Type(s) | Fire |
| DOT Hazard Class | 3 - Flammable and Combustible Liquids |
| Max Daily Amount / Unit | 120-599 Gallons |
| Avg Daily Amount / Unit | 12-59 Gallons |
| Days Onsite | 365 |
| Physical State(s) | Liquid |

| Chemical Mixes | |
|---|---|
| **Component** | Petroleum Waste |
| Is EHS | False |

| | | | |
|---|---|---|---|
| ▾ **Nitrogen** | 7727-37-9 | Sudden Release of Pressure | 0-2599 Cubic Feet |

| Common Name | Nitrogen |
|---|---|
| Hazard Type(s) | Sudden Release of Pressure |
| DOT Hazard Class | 2.2 - Nonflammable Gases |
| CAS Number | 7727-37-9 |
| Max Daily Amount / Unit | 0-2599 Cubic Feet |
| Avg Daily Amount / Unit | 0-2599 Cubic Feet |
| Days Onsite | 365 |
| Physical State(s) | Gas, Pure |
| Health Effect(s) | Acute Health |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|
| ▾ Oxygen | 7782-44-7 | Sudden Release of Pressure, Reactivity | 0-2599 Cubic Feet |

| Common Name | Oxygen (Compressed) |
|---|---|
| Hazard Type(s) | Sudden Release of Pressure, Reactivity |
| DOT Hazard Class | 2.2 - Nonflammable Gases |
| CAS Number | 7782-44-7 |
| Max Daily Amount / Unit | 0-2599 Cubic Feet |
| Avg Daily Amount / Unit | 0-2599 Cubic Feet |
| Days Onsite | 365 |
| Physical State(s) | Gas, Pure |

| | | |
|---|---|---|
| ▾ **Petrolium Hydrocarbons** | Fire | 12-59 Gallons |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| Common Name | Lubricating Oils |
|---|---|
| Hazard Type(s) | Fire |
| DOT Hazard Class | 3 - Flammable and Combustible Liquids |
| Max Daily Amount / Unit | 120-599 Gallons |
| Avg Daily Amount / Unit | 12-59 Gallons |
| Days Onsite | 365 |
| Physical State(s) | Liquid, Mix |

| Chemical Mixes | |
|---|---|
| **Component** | Severely Hydrotreated Heavy Napthenic Distillates |
| CAS Number | 64742-52-5 |
| Is EHS | False |

| ▾ **Propane** | 74-98-6 | Fire, Sudden Release of Pressure | 0-2599 Cubic Feet |
|---|---|---|---|

| Common Name | Liquefied Petroleum Gas (lpg) |
|---|---|
| Hazard Type(s) | Fire, Sudden Release of Pressure |
| DOT Hazard Class | 2.1 - Flammable Gases |
| CAS Number | 74-98-6 |
| Max Daily Amount / Unit | 2600-12999 Cubic Feet |
| Avg Daily Amount / Unit | 0-2599 Cubic Feet |
| Days Onsite | 365 |
| Physical State(s) | Gas, Pure |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|
| **Chemical Mixes** | | | |
| **Component** | Propane | | |
| **Chemical Mixes** | | | |
| CAS Number | 74-98-6 | | |
| Percentage by Weight | 85.00 | | |
| Is EHS | False | | |
| **Component** | Ethane | | |
| CAS Number | 74-84-0 | | |
| Percentage by Weight | 7.00 | | |
| Is EHS | False | | |
| **Component** | Propylene | | |
| CAS Number | 115-07-01 | | |
| Percentage by Weight | 5.00 | | |
| Is EHS | False | | |
| **Component** | Butanes | | |
| CAS Number | 106-97-8 | | |
| Percentage by Weight | 2.00 | | |
| Is EHS | False | | |
| **Component** | Ethyl Mercaptan | | |
| CAS Number | 75-08-1 | | |
| Percentage by Weight | 1.00 | | |
| Is EHS | False | | |
| ▾ **Stoddard Solvent** | 8052-41-3 | Fire | 12-59 Gallons |

| CHEMICAL NAME | CAS NUMBER | HAZARD LABEL | AVERAGE DAILY AMOUNT RANGE |
|---|---|---|---|

| | |
|---|---|
| **Common Name** | Stoddard Solvent |
| Hazard Type(s) | Fire |
| DOT Hazard Class | 3 - Flammable and Combustible Liquids |
| CAS Number | 8052-41-3 |
| Max Daily Amount / Unit | 60-119 Gallons |
| Avg Daily Amount / Unit | 12-59 Gallons |
| Days Onsite | 365 |
| Physical State(s) | Liquid, Mix |
| Health Effect(s) | Acute Health |

**Chemical Mixes**

| | |
|---|---|
| **Component** | Stoddard Solvant |
| CAS Number | 8052-41-3 |
| Is EHS | False |

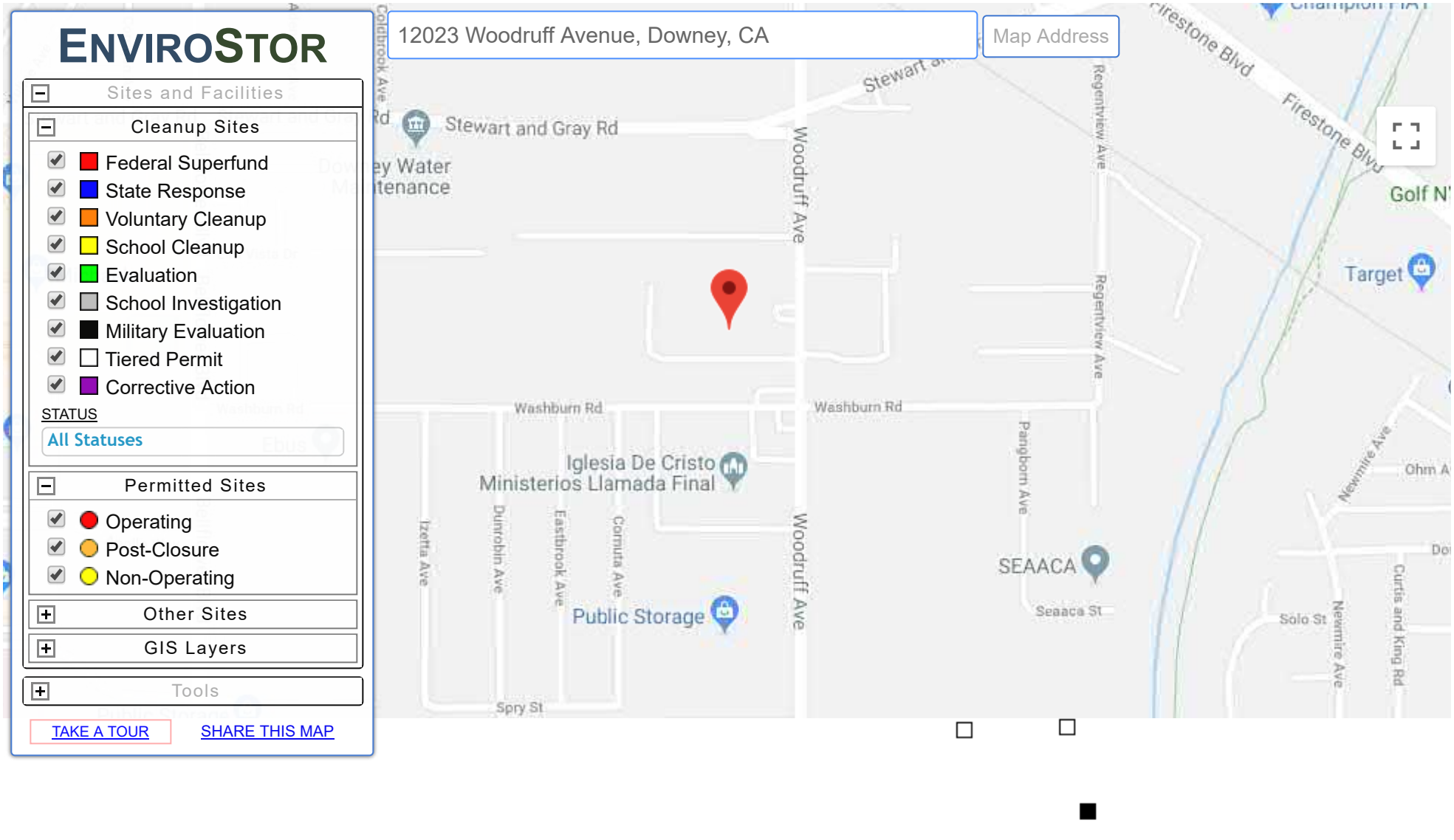
# ENVIROSTOR

12023 Woodruff Avenue, Downey, CA

Map Address

- Sites and Facilities
  - Cleanup Sites
    - Federal Superfund
    - State Response
    - Voluntary Cleanup
    - School Cleanup
    - Evaluation
    - School Investigation
    - Military Evaluation
    - Tiered Permit
    - Corrective Action
  - STATUS: All Statuses
  - Permitted Sites
    - Operating
    - Post-Closure
    - Non-Operating
  - Other Sites
  - GIS Layers
- Tools

TAKE A TOUR SHARE THIS MAP




SITES CURRENTLY VISIBLE ON MAP — 11 SITES LISTED — EXPORT THIS LIST TO EXCEL

| PROJECT NAME | STATUS | PROJECT TYPE | ADDRESS | CITY |
|---|---|---|---|---|
| AIR FORCE PLANT #16 (NASA) | INACTIVE - NEEDS EVALUATION | MILITARY EVALUATION | | DOWNEY |
| ARROW TRANSPORTATION CO., DOWNEY | REFER: OTHER AGENCY | TIERED PERMIT | 12328 WOODRUFF AVENUE | DOWNEY |
| DOWNEY FAMILY HOUSING | INACTIVE - NEEDS EVALUATION | MILITARY EVALUATION | | DOWNEY |
| MANUFACTURERS WIRE COMPANY | REFER: OTHER AGENCY | TIERED PERMIT | 12320 WOODRUFF AVENUE | DOWNEY |
| MONA'S CLEANERS | REFER: 1248 LOCAL AGENCY | EVALUATION | 11930 STUDEBAKER RD. | NORWALK |
| NASA INDUSTRIAL PLANT- KAISER | NO FURTHER ACTION | VOLUNTARY CLEANUP | 12214 LAKEWOOD BLVD. | DOWNEY |
| PRICE CLUB #410 | REFER: OTHER AGENCY | TIERED PERMIT | 12324 HOXIE AVENUE | NORWALK |

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

# CASE SUMMARY

REPORT DATE
3/15/1990

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?

**I. REPORTED BY -**
UNKNOWN

**CREATED BY**
UNKNOWN

**III. SITE LOCATION**

FACILITY NAME
KIRKHILL INC.

FACILITY ID

FACILITY ADDRESS
12021 WOODRUFF AVE
DOWNEY, CA 90241
LOS ANGELES COUNTY

ORIENTATION OF SITE TO STREET

CROSS STREET
IMPERIAL HWY.

**V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN**
DIESEL

**VI. DISCOVERY/ABATEMENT**

DATE DISCHARGE BEGAN

DATE DISCOVERED
3/12/1990

HOW DISCOVERED
Tank Closure

DESCRIPTION

DATE STOPPED
3/12/1990

STOP METHOD

DESCRIPTION

**VII. SOURCE/CAUSE**

SOURCE OF DISCHARGE
Other

CAUSE OF DISCHARGE
Unknown

DISCHARGE DESCRIPTION

**VIII. CASE TYPE**

CASE TYPE
Soil

**IX. REMEDIAL ACTION**
NO REMEDIAL ACTIONS ENTERED

**X. GENERAL COMMENTS**

**XI. CERTIFICATION**

**I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.**

**XII. REGULATORY USE ONLY**

LOCAL AGENCY CASE NUMBER

REGIONAL BOARD CASE NUMBER
I-12987

**LOCAL AGENCY**

| CONTACT NAME | INITIALS | ORGANIZATION_NAME | EMAIL ADDRESS |
|---|---|---|---|
| JOHN AWUJO | JOA | LOS ANGELES COUNTY | jawujo@dpw.lacounty.gov |

ADDRESS
900 S FREMONT AVE
ALHAMBRA, CA 91803

CONTACT DESCRIPTION

| PHONE TYPE | PHONE NUMBER | EXTENSION |
|---|---|---|
| PHONE | (626)-458-3507 | |

**REGIONAL BOARD**

| CONTACT NAME | INITIALS | ORGANIZATION_NAME | EMAIL ADDRESS |
|---|---|---|---|
| YUE RONG | YR | LOS ANGELES RWQCB (REGION 4) | yrong@waterboards.ca.gov |

ADDRESS
320 W. 4TH ST., SUITE 200
Los Angeles, CA 90013

CONTACT DESCRIPTION

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# CSM REPORT FOR PUBLIC NOTICING

## PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

| SITE NAME / ADDRESS | STATUS | STATUS DATE | RELEASE REPORT DATE | AGE OF CASE | CLEANUP OVERSIGHT AGENCIES |
|---|---|---|---|---|---|
| KIRKHILL INC. (Global ID: T0603704020)<br>12021 WOODRUFF AVE<br>DOWNEY, CA 90241 | Completed - Case Closed | 8/6/1992 | 3/15/1990 | 29 | LOS ANGELES COUNTY *(LEAD)*<br>***CASEWORKER:*** *JOHN AWUJO* - ***SUPERVISOR:*** *TIM SMITH*<br>LOS ANGELES RWQCB (REGION 4) - *CASE #: I-12987*<br>***CASEWORKER:*** *YUE RONG* - ***SUPERVISOR:*** *NONE SPECIFIED* |

**SITE HISTORY**

<NO SITE HISTORY ENTERED>

**CLEANUP ACTION INFO**

NO CLEANUP ACTIONS HAVE BEEN REPORTED

**RISK INFORMATION** VIEW CASE REVIEWS

| CONTAMINANTS OF CONCERN | CURRENT LAND USE | BENEFICIAL USE | DISCHARGE SOURCE | DATE REPORTED | STOP METHOD | NEARBY / IMPACTED WELLS |
|---|---|---|---|---|---|---|
| Diesel | | | Other | 3/15/1990 | | 0 |

| FREE PRODUCT | OTHER CONSTITUENTS | NAME OF WATER SYSTEM | LAST REGULATORY ACTIVITY | LAST ESI UPLOAD | LAST EDF UPLOAD | EXPECTED CLOSURE DATE | MOST RECENT CLOSURE REQUEST |
|---|---|---|---|---|---|---|---|
| | | | 1/1/1950 | | | | |

**CDPH WELLS WITHIN 1500 FEET OF THIS SITE**

| WELL NAME | STATE WELL # | STATUS | SOURCE | # TIMES SAMPLED | DIST TO WELL |
|---|---|---|---|---|---|
| WELL 24 (OLD PWC WELL 08B) | 1910034-025 | Active Raw | G | 118 | 535 feet |

**CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)**

**APN**
No APN Found

**GW BASIN NAME**
Coastal Plain Of Los Angeles - Central (4-011.04)

**WATERSHED NAME**
San Gabriel River - Lower San Gabriel - Central (Split) (405.15)

**COUNTY**
Los Angeles

**PUBLIC WATER SYSTEM(S)**

- **CENTRAL BASIN MWD** - 4128 SAN GABRIEL RIVER PKWY, PICO RIVERA, CA 90601
- **METROPOLITAN WATER DIST. OF SO. CAL.** - P.O. BOX 54153, LOS ANGELES, CA 90054
- **PARK WC - BELLFLOWER-NORWALK F** - 9750 WASHBURN ROAD, DOWNEY, CA 90241-700

**MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER** VIEW ESI SUBMITTALS

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

**MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL** VIEW ESI SUBMITTALS

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

**MOST RECENT GEO_WELL DATA** VIEW ESI SUBMITTALS

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

## Lehnus, Kathy

From: Lehnus, Kathy
Sent: Tuesday, July 3, 2018 8:48 AM
To: 'Pearce, Alexandria'
Cc: Info; Wert, Wendy
Subject: RE: routed: seeking database for Santiation Districts IW permits

Hi Alexandria!

Thanks very much—the address of this one is **12021 Woodruff Avenue in Downey**, and while I'm at it I will also ask for **2400 and 2410 E. Dominguez Street in Carson**.

Is this the method by which that we should request files? If so, you may be getting e-mails from me every couple of weeks with an address to search.

But before I start doing that--do you cover all the cities in LA County? When does someone obtain a permit form you guys versus the LA County Department of Public Works?

Let me know if you want to have a quick call so you don't have to write out a long e-mail…

Thanks,
Kathy

Kathy Lehnus, PG, LEP
Senior Project Manager

Partner Engineering and Science, Inc.
1761 East Garry Avenue, Santa Ana, CA 92705
P: (714) 477-8673 C: (657) 247-1304 | F: (949) 534-0566

Your Partner - Nationwide
Phase I ESAs/SBA I Phase II Subsurface Investigations I Remediation I
Asbestos, Lead, & Radon Surveys I Property Condition Assessments I
Seismic Evaluations I Geotechnical I ALTA Surveys I Structural Design

please consider the environment before printing this e-mail

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From: Pearce, Alexandria [mailto:alexandriapearce@lacsd.org]
Sent: Tuesday, July 3, 2018 8:36 AM
To: Lehnus, Kathy <KLehnus@partneresi.com>
Cc: Info <Info@lacsd.org>; Wert, Wendy <wwert@lacsd.org>
Subject: RE: routed: seeking database for Santiation Districts IW permits

Hi Kathy,

If you can provide me the address of the property, I can search our database for any existing permits associated with that site. If we have any PDF files available, I can email them to you. We may also have records on microfiche, which require an appointment to view.

Thank you,

ALEXANDRIA PEARCE | Senior Typist Clerk | Industrial Waste Section | 562.908.4288 x2928
**SANITATION DISTRICTS OF LOS ANGELES COUNTY** | 1955 Workman Mill Road, Whittier, CA 90601
*Converting Waste Into Resources* | www.LACSD.org

---

**From:** klehnus@partneresi.com [mailto:klehnus@partneresi.com]
**Sent:** Monday, July 02, 2018 8:15 PM
**To:** Info
**Subject:** Info Needed

Hello,

I am an environmental consultant and I do research on properties in LA County to understand their processes. Typically if I'm looking for discharge permits I review files at the LA County Department of Public Works (http://ladpw.org/epd/cleanla/OpenFileReview.aspx), but I just came across a property that had an industrial discharge through your department (and the LA County Department of Public Works noted no permits for the Site. Can you let me know who files permits with you and how we (the public) can search them?

Thanks,
Kathy
657-247-1304

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422

October 23, 1998
File: 02-98-6373
Acct. #1227752

Mr. Robert M. Brace
City of Downey
Engineering Div.
Caller No. 7016
Downey, CA 90241-7016

Dear Mr. Brace:

Industrial Wastewater Discharge Permit No. 6373

Kirkhill Inc.
12021 Woodruff Ave.
Downey, CA 90241

Effective immediately, Industrial Wastewater Discharge Permit No. 6373 is void for the following reason:

Change in ownership to Kirkhill Manufacturing Company (KMC). The new company has been issued Temporary Permit No. 14882.

Very truly yours,

Charles W. Carry

John D. Kilgore
Supervising Civil Engineer

JDK:ch

Recycled Paper

TO: Directo / Kilgore → C. Hamilton

THROUGH: Bill Garrett or ASI 8/17

FROM: T Stahl

Inspection date 6/22/98
Void request date 6/22/98
District 02
Inspection Area 201
C, 4

SUBJECT: PERMIT VOID REQUEST

Please void the Industrial Waste Discharge Permit of the company below for the reason(s) indicated.

A. COMPANY Kirkhill Inc

Situs address 12021 Woodruff Ave

Downey Situs zip code 90241

Mailing address Same

Permit No. 6373 Account No. 1227752

B. REASON FOR VOIDING

[ ] Facility demolished

[ ] Connection sealed

[ ] Property vacant

VOID [X] Change in ownership to Kirkhill Manufacturing Company (KMC)

[ ] Other

C. COMMENTS: (i.e. temporary permit issued, deadline for permit submittal, on-going discharge by new owner, how connection sealed, demolition accomplished)

New Co is continuing with same business, issued temp permit IW = 14882.

D. TO BE COMPLETED BY PERMIT GROUP

[ ] Void completed Date _____

[ ] Copy to Surcharge Date _____

[ ] Copy to local agency Date _____

[ ] Copy to voided permit holder Date _____

[ ] Computer/rolodex changed Date _____

[ ] Original to permit file Date _____

#6373

# COUNTY SANITATION DISTRICTS
## OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-4998
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (310) 699-7411, FAX: (310) 695-6139

CHARLES W. CARRY
*Chief Engineer and General Manager*

August 6, 1993
File:02-00.05-00/93-6373R
Acct. # 1227752

Mr. Sidnor A. Johnson
Kirkhill Inc
12021 Woodruff Ave
Downey, Ca, 90241

Dear Mr.Johnson:

Industrial Wastewater Discharge Permit No.6373

The Sanitation Districts' records indicate that a review of the above facility's Industrial Wastewater Discharge Permit has not been conducted since the original approval on January 29, 1978. Pursuant to recent amendments to federal regulations outlined in 40 CFR Part 403.8, all Industrial Wastewater Discharge Permits must be renewed every five (5) years. As such, a formal Industrial Wastewater Discharge Permit Submittal must be filed by" 30 days". Furthermore, please also be advised that Sanitation Districts inspection of your facility revealed the following deficiencies: a) lack of an adequate wastewater sampling point, and b) lack of ph monitoring equipment, such as a recording ph meter. Your company is required to propose the installation of a sampling box and recording ph meter equipment for your existing wastewater batch neutralization system. Four (4) sets of plans showing the location for the required sampling point (sampling box I-12 standard attached) and the ph recording probe and instrumentation equipment must be submitted to the Districts thru the City of Downey for approval prior to any installation.

The Submittal must contain all required supporting information and four (4) sets of plans as indicated above and as detailed in the enclosed Information and Instructions for Obtaining an Industrial Wastewater Discharge Permit. Please submit the requested documentation within 30 days to:

Mr. Robert M. Brace
City of Downey
Engineering Div
Caller No. 7016
Downey, CA 90241

If you have any questions concerning this requirement, please contact Tom Glasner of the Sanitation Districts' Industrial Waste Section at extension 2939.

Very truly yours,

Charles W. Carry

John D. Kilgore
Supervising Civil Engineer

JDK:TG:wh
cc: City of Downey

To: John Kilgore, Permit Supervisor → Glasrer

From: MARC S. BLACKMAN

Date: 8-4-92

Subject: Need for Permit Amendment or Revision

Pls determine appropriate charges & draft letter with new requirements. → Ask co to formally apply for a permit revision.

Company: KIRKHILL INC District: 02

Address: 12021 WOODRUFF AVE Situs Zip: 90241
DOWNEY, CA, 90241

IW No: 6373 Account No: 1227752

Last Evaluator: GLASNER

Please send letter, forms, BMR's etc. to subject company for submittal for revision/amendment based on the following:

✓ Reason for Revision/ Amendment

- ☐ Change in Operation
- ☐ Change in Location of Equipment
- ☐ Additional Equipment Acquired
- ☑ Change in Flow
- ☐ Change in EPA Catagorical Status
- ☐ Pretreatment Equipment Installed
- ☑ Spill Containment
- ☐ Rain Diversion
- ☑ Other

Explanation for each square checked:

ATTACHED is W/W FLOW Diagram. NO SAMPLE POINT FOR SAMPLE OF ACID AND CAUSTIC TANKS. PROCESS DRAIN INSIDE SPILL CONTAINMENT AREA. CO SAYS FLOW RATE/ OPERATION HAS DROPPED. NO SAMPLE PT. FOR TOTAL I.W. DISCHARGE.

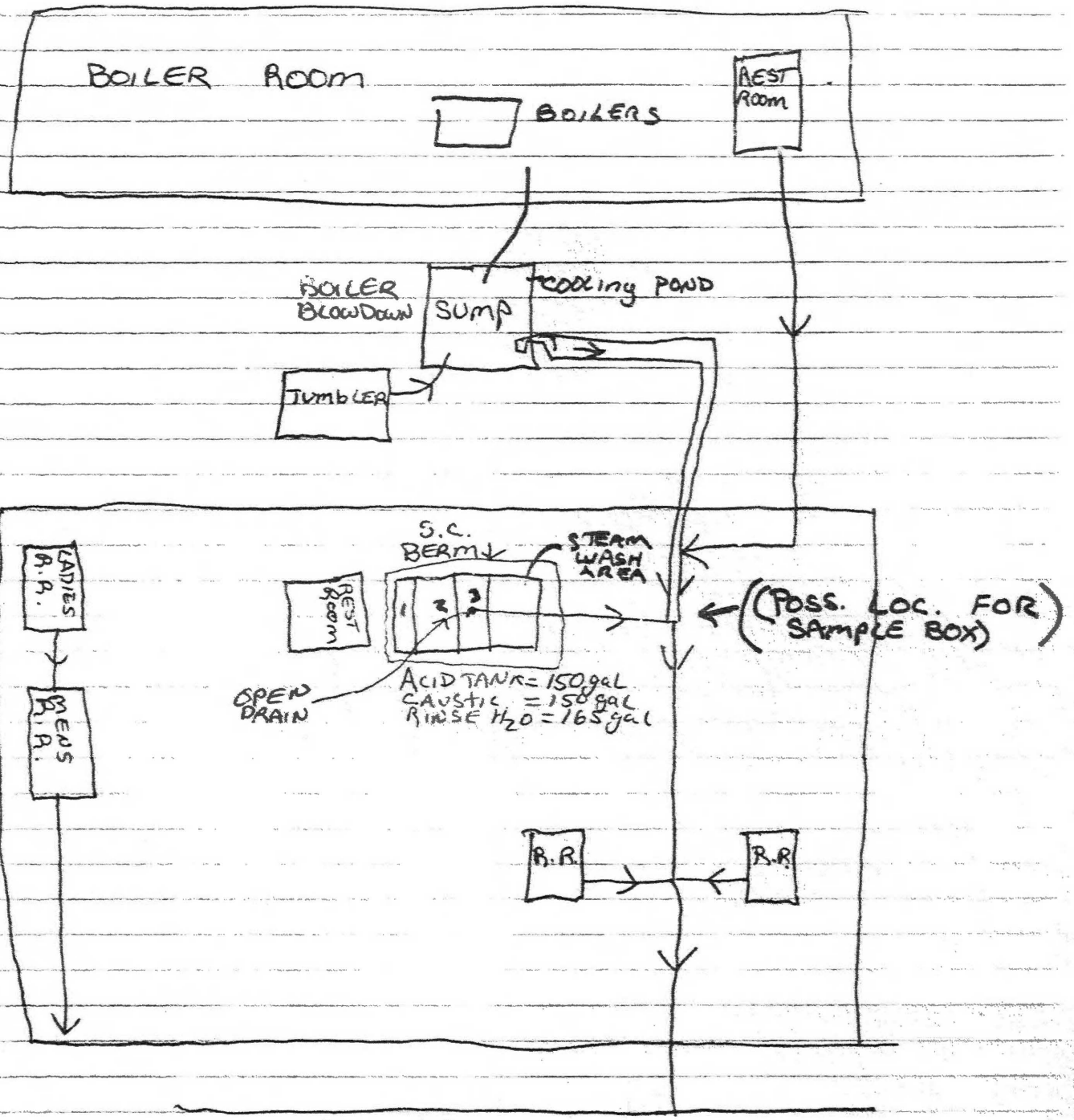
Permit Engineer Assigned: _____

Action Taken/date: _____

_____

Please return completed form to requester.

BG.for 12-2-91




FLOW
(schematic PROVIDED BY DAVE DAVIS - CO. CONTACT)

Laboratory Technical Data System 09/01/1992
SJC WQL Test Results Page 1

Sample No: SJ41154 Sample Location: 3-IW06-373

Requestor: MARTYN Completion Date: 08/17/92

Charge No: TS14905BI00 Approved By: EG Sample Type: IWS

Grab Date and Time: 07/27/92 11:00

Sample Description:
KIRKHILL, 12021 WOODRUFF AVE., DOWNEY 90241 (SUMP)

| No. | Test | Description | Result | Unit of Measure | | Footnote |
|---|---|---|---|---|---|---|
| 1. | 101 | PH | 8.96 | PH | | -- |
| 2. | 408 | OIL & GREASE | 93.7 | MG/L | EXTRACT | -- |
| 3. | 708 | CADMIUM | < 0.02 | MG/L | CD | -- |
| 4. | 709 | TOTAL CHROMIUM | < 0.05 | MG/L | CR | -- |
| 5. | 712 | COPPER | 0.07 | MG/L | CU | -- |
| 6. | 714 | LEAD | < 0.2 | MG/L | PB | -- |
| 7. | 718 | NICKEL | < 0.08 | MG/L | NI | -- |
| 8. | 722 | SILVER | < 0.2 | MG/L | AG | -- |
| 9. | 724 | ZINC | 0.15 | MG/L | ZN | -- |

Received in Sample Room By: [illegible]

Time Received in Laboratory: [illegible]

LABORATORY JOB NUMBER: 41154

**PRIORITY:**
☐ Routine (0) ☐ Expedite, 1 hr. (X)
☐ Rush, 1 day (R) ☐ Upset, 1 wk. (U)

PRIORITY AUTHORIZATION _____
Ext. _____

CHARLES W. CARRY
Chief Engineer and General Manager

SANITATION DISTRICTS OF LOS ANGELES COUNTY
P.O. Box 4998 Whittier, California 90607

For additional information regarding this analysis call (213) 699-7411 x 259

# INDUSTRIAL WASTE MONITORING RESULTS

**SAMPLE IDENTIFICATION** Surcharge Account Number: 1227752 I.W. Permit Number: 6373

Sample Source or Company Name: KIRKHILL INC
Address: 12021 WOODRUFF AVE DOWNEY 90241
Reason For Sampling: ☒ Routine ☐ Phase 1 ☐ Treatment Plant Upset ☐ Sewer System Problem ☐ Other: _____
**Monitoring Requested By:** *Nellor/Burch* BLACKMAN
Accounting Charges: ☒ For Routine Samples Taken By Inspectors: TS14905 BI ☐ For Routine Samples Taken By IWMC: TS14905 BM
☐ For All Special Investigation Samples: TS14905 B _____

**SAMPLE COLLECTION INFORMATION:**

* Sample Point:
☐ Sample Box ☐ Clarifier
☐ Manhole ☒ SUMP
☐ Valve ☐ CN Sample Point
☐ Clean-out _____

* Sample Method:
☒ Grab
☐ Composite-Timed With _____ minute intervals
☐ Composite-Flow With _____ x _____ gallons
Test aliquot volume _____ ml.

* Sample Date:
At/or From 1100 (HR. MIN) ☐ A.M. ☐ P.M. 7-27 (MONTH DAY) 19 92 (YEAR)
To _____ ☐ A.M. ☐ P.M. _____ 19 ____

* Observations: _____

* Sampled By: Blackman * Submitted To Laboratory By: Blackman * Contact Name: DAVE DAVIS * Title: MAINT
* Total Quantity of Sample Collected: 2 ℓ * Sample Container(s) Used: ☒ C/c: _____ Other: GLASS JAR * Split with Company? Y (N)
* Quantity Submitted to Lab: 2 ℓ * Split Given to: ☐ Contact
Sample Preservation Used: ☒ Ice ☐ CN: NaOH + Ascorbic Acid Other: _____ Other: _____
* Flow When Sampled:

| COMPOSITE SAMPLE | | CRAB SAMPLE |
|---|---|---|
| Period of Composite: _____ hours | | |
| Totalizer Readings: | Final: _____ | Flow Rate at Time of Sample: |
| | Initial: _____ | 0 gpm |
| | Difference: _____ | |
| | Multiplier: _____ | |
| | Total Flow: _____ gallons | |
| * Obtained From: ☒ Visual Estimate, ☐ Effluent Flow Meter, ☐ Influent Water Meter, ☐ Impossible To Tell if Flow Existed When Sampled | | |

**FIELD TEST RESULTS**
* pH 8.0 * Color _____ * Temperature _____ * Cyanide _____
* Odor _____
* Total Sulfide _____ * Dissolved Sulfide _____ * Other _____

**LABORATORY TESTS** NOTES TO ANALYSTS: _____

| | CONSTITUENT | CODE |
|---|---|---|
| ✓ | pH | 101 |
| | SUSPENDED SOLIDS, mg/l | 151 |
| | SUS. SOLIDS (a pH 7), mg/l | 150 |
| | COD, mg/l 0 | 403 |
| | | |
| | TOTAL DISS., SOLIDS (TDS), mg/l | 155 |
| | | |
| | AMMONIA NITROGEN, mg/l N | 201 |
| | SOLUBLE SULFIDE, mg/l S | 252 |
| | THIOSULFATE SULFUR, mg/l S | 253 |
| | SULFITE SULFUR, mg/l S | 254 |
| | SULFATE, mg/l $SO_4$ | 257 |
| | TOTAL PHENOLS, mg/l $C_6H_5OH$ | 312 |
| ✓ | OIL AND GREASE, mg/l | 408 |

| | CONSTITUENT | CODE |
|---|---|---|
| | TOTAL CYANIDE, mg/l CN | 206 |
| | CYANIDE AMENABLE TO Cl2 | 210 |
| | | |
| ✓ | TOTAL CADMIUM, mg/l Cd | 708 |
| ✓ | TOTAL CHROMIUM, mg/l Cr | 709 |
| ✓ | TOTAL COPPER, mg/l Cu | 712 |
| ✓ | TOTAL LEAD, mg/l Pb | 714 |
| ✓ | TOTAL NICKEL, mg/l Ni | 718 |
| ✓ | TOTAL SILVER, mg/l Ag | 722 |
| ✓ | TOTAL ZINC, mg/l Zn | 724 |
| | | |
| | TOTAL ARSENIC, mg/l As | 705 |
| | TOTAL MERCURY, mg/l Mg | 717 |

| | ADDITIONAL CONSTITUENTS | UNITS | CODE |
|---|---|---|---|
| | | | |
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**DISTRIBUTION:** Return this sheet to Industrial Waste Section Head after log-in.
* All information to be filled in by Field Collection Personnel

PAGE 1 SJC WQL TEST RESULTS Class 3 06/12/90

TO: M. NELLOR

LAB JOB NO. SJ96432

CHARGE NO. 1: TS14905BI00 2: 12277528000 3: TS000008000

REQUESTED BY: M. NELLOR SAMPLE VOLUME : 1.00 LITER

GRAB SAMPLE DATE AND TIME: 05/15/90 14:00

DESCRIPTION: KIRKHILL, 12021 WOODRUFF, DOWNEY (SUMP)

SAMPLE LOCATION: 3 - IW06 - 373 TYPE: IMS

RPT APPROVED BY: RB RPT COMPLETION DATE: 06/11/90

| TEST | DESCRIPTION | | RESULT | UNIT | FOOTNOTE |
|---|---|---|---|---|---|
| 1: | 101 - PH | | 8.58 | PH | |
| 2: | 151 - SUSPENDED SOLIDS | | 100 | MG/L | |
| 3: | 708 - CADMIUM | < | .02 | MG/L CD | 35 |
| 4: | 709 - TOTAL CHROMIUM | < | .05 | MG/L CR | 35 |
| 5: | 712 - COPPER | | .20 | MG/L CU | 35 |
| 6: | 714 - LEAD | < | .48 | MG/L PB | 35 |
| 7: | 718 - NICKEL | < | .08 | MG/L NI | 35 |
| 8: | 724 - ZINC | | .26 | MG/L ZN | 35 |

FOOTNOTE: 35: DUPLICATE SPIKE

NOTES : 101,151=LB

5/17/90

Received in Sample Room By: _____

Time Received in Laboratory _____

PRIORITY:
- ☐ Routine (0)
- ☐ Rush, * day (R)
- ☐ Expedite, 1 hr. (X)
- ☐ Upset, 1 wk. (U)

PRIORITY AUTHORIZATION _____

ext _____

LABORATORY JOB NUMBER: 96432

CHARLES W. CARRY
Chief Engineer and General Manager

SANITATION DISTRICTS OF LOS ANGELES COUNTY
P.O. Box 4998 Whittier, California 90607

For additional information regarding this analysis call (213) 699-7411 x 259

# INDUSTRIAL WASTE MONITORING RESULTS

## SAMPLE IDENTIFICATION

Surcharge Account Number: 12 752 | I.W. Permit Number: 6373

Sample Source or Company Name: Kirkhill

Address: 12021 Woodruff, Downey

Reason For Sampling: ☐ Routine ☒ Phase I ☐ Treatment Plant Upset ☐ Sewer System Problem ☐ Other: _____

Monitoring Requested By: Nellor / Hoekstra Ext. 2707 Sample To Be Saved After Analysis? _____

Accounting Charges: ☒ For Routine Samples Taken By Inspectors: TS14905 SI ☐ For Routine Samples Taken By IWMC: TS14905 BM

☐ For All Special Investigation Samples: TS14905 B _____

## SAMPLE COLLECTION INFORMATION

*Sample Taken From:
- ☐ Sample Box
- ☐ Clarifier
- ☐ Cleanout
- ☒ Other: Sump

*Sample Method:
- Aliquot volume _____ ml.
- ☐ Composite-Timed With _____ minute intervals.
- ☐ Composite-Flow With _____ x _____ gallons.
- ☒ Grab

*Sample Grab or Composite Times:

At/or From 2:00 (Hr. Min.) ☐ A.M. ☒ P.M. 5-15 (Month Day) 19 90 (Year)

To _____ (Hr. Min.) ☐ A.M. ☐ P.M. _____ (Month Day) 19 _____ (Year)

*Condition of Clarifier, Sample Box, Other Observations: _____

*Company Contact: Name: _____ Title: _____

*Sampled By: Hoekstra *Submitted To Laboratory By: Hoekstra

*Total Quantity of Sample Collected: 1 qt *Total Quantity of Composite Prepared: _____ *Total Quantity Submitted To Lab: 1 qt

*Sample Preservation Used: None *Sample Split With Company?: Y (N) Name: _____

*Flow When Sampled:

| COMPOSITE SAMPLE | GRAB SAMPLE |
|---|---|
| Period of Composite: _____ hours | |
| Totalizer Readings: Final: _____ | Flow Rate At Time of Sample: |
| Initial: _____ | _____ gpm |
| Difference: _____ | |
| Multiplier: _____ | |
| Total Flow: _____ gallons | |

*Obtained From: ☐ Visual Estimate, ☐ Effluent Flow Meter, ☐ Influent Water Meter, ☒ Impossible To Tell If Flow Existed When Sampled

## FIELD TEST RESULTS

*pH _____ *Temperature _____ *Color _____ *Cyanide _____

*Odor _____

*Total Sulfide _____ *Dissolved Sulfide _____ *Other _____

## LABORATORY TESTS

NOTES TO ANALYSTS: _____

Check Tests Requested

| | CONSTITUENT | RESULTS | CODE |
|---|---|---|---|
| ☒ | pH | | 101 |
| ☒ | SUSPENDED SOLIDS, mg/l | | 151 |
| | SUSPENDED SOLIDS (@ pH 7), mg/l | | 150 |
| | COD, mg/l O | | 403 |
| | | | |
| | TOTAL DISSOLVED SOLIDS (TDS), mg/l | | 155 |
| | | | |
| | SULFATE, mg/l $SO_4$ | | 257 |
| | AMMONIA NITROGEN, mg/l N | | 201 |
| | | | |
| | SOLUBLE SULFIDE, mg/l S | | 252 |
| | SULFITE SULFUR, mg/l S | | 254 |
| | THIOSULFATE SULFUR, mg/l S | | 253 |

| | CONSTITUENT | RESULTS | CODE |
|---|---|---|---|
| | TOTAL CYANIDE, mg/l CN | | 206 |
| | TOTAL ARSENIC, mg/l As | | 705 |
| ☒ | TOTAL CADMIUM, mg/l Cd | | 708 |
| ☒ | TOTAL CHROMIUM, mg/l Cr | | 709 |
| ☒ | TOTAL COPPER, mg/l Cu | | 712 |
| ☒ | TOTAL LEAD, mg/l Pb | | 714 |
| | TOTAL MERCURY, mg/l Hg | | 717 |
| ☒ | TOTAL NICKEL, mg/l Ni | | 718 |
| | TOTAL SILVER, mg/l Ag | | 722 |
| ☒ | TOTAL ZINC, mg/l Zn | | 724 |
| | | | |
| | TOTAL PHENOLS, mg/l $C_6H_5OH$ | | 312 |
| | OIL AND GREASE, mg/l | | 408 |
| | | | |

**DISTRIBUTION:** Return this sheet to Industrial Waste Section Head after log-in.

*All Information to be Filled in by Field Collection Personnel.

PLEASE TYPE OR PRESS HARD WHEN WRITING AND USE BALLPOINT PEN ON HARD SURFACE

APPLICATION NO. Z 02313

# EXISTING INDUSTRY
## PERMIT FOR INDUSTRIAL WASTEWATER DISCHARGE
## SANITATION DISTRICTS OF LOS ANGELES COUNTY

1955 Workman Mill Road / Whittier, Ca.
Mailing Address: / P.O. Box 4998, Whittier, California 90607
~~John R. Ferhurst~~, Chief Engineer and General Manager
WALTER E. GARRISON

PERMIT NO. 6313 6373

01 Downey, Calif.* 10/9/78 (MO. DAY YR.)

*APPLICATION IS HEREBY MADE BY* (PRINT) Kirkhill Inc. (FIRM NAME) A

03 (Mailing Address) 12021 Woodruff Ave. (STREET) C05 Downey (CITY) Ca. (STATE) 90241 (ZIP) E

07 Owner (OWNER, TENANT, ETC.) G of the property located at:

09 (Street) Same (PRINT) 11 (City) (Zip)
(ADDRESS OF PROPERTY PRODUCING WASTEWATER DISCHARGE)

*Assessors Map Book No.* 6284 Page No.* 025 Parcel No.* 018 K
(LEGAL ADDRESS OF PROPERTY PRODUCING WASTEWATER DISCHARGE)

PRINT Same
(LOCATION OF POINT OF WASTEWATER DISCHARGE TO SEWERAGE SYSTEM)

for a Permit for Industrial Wastewater Discharge to the sewerage system.

13 Type of Industry* Rubber Parts Manufacturer (GENERAL DESCRIPTION) 17 3069 (FEDERAL SIC NOS.) Q

19 Number of Employees (Full Time)* 200 (Part Time)* 0 S

21 Raw Materials Used* Rubber and rubber chemicals (solids). Water is not used in the manufacture. U
(GENERAL DESCRIPTION – ADD ADDITIONAL SHEETS AS NEEDED)

Products Produced Rubber Household items
(GENERAL DESCRIPTION – ADD ADDITIONAL SHEETS AS NEEDED)

Wastewater Producing Operations Blow down and bleed water from boilers and cooling tower.
(FULL DESCRIPTION – ADD ADDITIONAL SHEETS AS NEEDED)

31 Time of Discharge – * 6:00 AM/~~xx~~ to 2:30 xx PM. (WORKING DAY – CROSS OUT AM OR PM) Days per Week* 0 0 0 0 0 Sa Su (CIRCLE DAYS)

* Wastewater Flow Rate* 455,547 (gallons per year) AA (Gallons Per Day) 1752

Constituents of Wastewater Discharge Water
(GENERAL DESCRIPTION – ATTACH CHEMICAL ANALYSES RESULTS TO THIS APPLICATION)

Person in company responsible for industrial wastewater discharge:

41 Sidnor A. Johnson (PRINT NAME) Personnel-Safety Director (POSITION) 882-1941 x271 (TELEPHONE NUMBER) BB

I affirm that all information furnished is true and correct and that the applicant will comply with the conditions stated on the back of this permit form.

Date October 9, 19 78

Signature for Applicant (COMPANY ADMINISTRATIVE OFFICIAL) (NAME) President (POSITION)

Approved by City or County Official

Date

For Dept. of County Engineers ..... ☐

City of Downey ☒

Name Harald J. Henriksen
Harald J. Henriksen

Position City Engineer

Approved by Sanitation Districts of Los Angeles County

Date Jan. 29, 1979

~~John R. Ferhurst~~, Chief Engineer and General Manager
WALTER E. GARRISON

by Alfredo C. Reyes

Position Plan Eval. Engr.

Note: A permit fee may be required by the local City or County Agency.
This form when properly signed shall be a valid permit unless suspended or revoked.

PERMIT NO. 3073

# ADDITIONAL INFORMATION QUESTIONNAIRE FOR PERMIT APPLICANTS

SANITATION DISTRICTS OF LOS ANGELES COUNTY
1955 Workman Mill Rd., P.O. Box 4998, Whittier, CA. 90607
John D. Parkhurst, Chief Engineer and General Manager

Downey, Calif. 10 / 9 / 73
(MO. / DAY / YR.)

Name of Company Kirkhill Inc. S.I.C. No. 3069

Mailing Address (PRINT) 12021 Woodruff Ave. (STREET) Downey (CITY) Ca. (STATE) 90241 (ZIP)

Address of Wastewater Discharge (PRINT) Same (STREET) (CITY) (STATE) (ZIP)

Legal Address 6284 (MAP BOOK NO.) 025 (PAGE NO.) 018 (PARCEL NO.) Permit Application No. Z 02313

IF YOUR COMPANY DISCHARGES OR WILL DISCHARGE TO THE SEWER any of the wastewater constituents listed below, please check the appropriate box:

1. Flammable wastes (406A) ☐
2. Toxic or poisonous wastes (406B) ☐
3. Acidic materials (pH less than 6.0) (406C) ☐
4. Materials that could obstruct the sewer (406D) ☐
5. Rainwater (406E) ☐
6. Dilution water (406F) ☐
7. Petroleum based soluble cutting oils (406G) ☐
8. Any quantities of petroleum based oils (406H) ☐
9. Cyanide wastes (406J) ☐
10. Total dissolved solids above 5000 mg/1 (406K) ☐
11. Highly odorous wastes (406M) ☐
12. Dissolved sulfides over 0.1 mg/1 (406N) ☐
13. Basic materials (pH greater than 10.5) (406O) ☐
14. Toxic gases (406P) ☐
15. Temperature over 120° F. (406Q) ☐
16. Highly colored wastes (406V) ☐
17. Wastes larger than 3/8" in diameter (406W) ☐
18. Any arsenic, boron, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, tin, zinc, or other toxic materials (406X) ☐
19. Blow down or bleed water from cooling towers, boilers or evaporative coolers (406Y) ☒
20. Single pass cooling water (406Z) ☐
21. Radioactive materials (406AA) ☐
22. Recognizable portions of the human anatomy (406BB) ☐

NOTE: Numbers in parentheses refer to the designated section in the Districts' Industrial Waste Ordinance.

IF YOUR COMPANY HAS ANY OR WILL HAVE ANY OF THE FOLLOWING PRETREATMENT SYSTEMS for wastewater prior to disposal to the sewer, please check the appropriate box.

1. Interceptor, clarifier, sump or trap ☒
2. Screen or filter ☐
3. Centrifuge ☐
4. Cyclone ☐
5. Grit removal ☐
6. Grease or oil removal ☐
7. Solvent separation ☐
8. Acid or base neutralization ☐
9. Chemical coagulation or precipitation ☐
10. Cyanide destruction ☐
11. Chromium reduction ☐
12. Spill protection ☐
13. Rainwater diversion or storage system ☐
14. Grinder over 2 horsepower ☐
15. Air flotation ☐
16. Other _____ ☐
17. Other _____ ☐

I hereby affirm that all information furnished is true and correct to the best of my knowledge.

Date October 9, 1973

Signature for Applicant (COMPANY ADMINISTRATIVE OFFICIAL) [signature] (NAME) President (POSITION)

# PLAN EVALUATION FORM

| LOG NO. | CSD | DATE RECEIVED | AVG. DAILY FLOW |
|---|---|---|---|
| 1373 | 12 | 10 19 78 | 1,752 GPD |

455,547 gal/yr = 1752 gpd

COMPANY NAME

KIRKHILL INC

60D-5

| DATE | TO | STATUS/REMARKS | INITIAL |
|---|---|---|---|
| 1/18/79 | TG | Class I II III Critical ___ Non-Critical ✓<br>New Constr. ___ Existing Facility ___<br>Insp. Files: Violations None SIC = 3069<br>DEP/Region Date(s) 12/27/77<br>Acct # 1227252 Co is exempt<br>Surcharge OK | ✓ |

| Surcharge | Filed | 72-73 | 73-74 | 74-75 | 75-76 | 76-77 | 77-78 |
|---|---|---|---|---|---|---|---|
| | Yes | | | | | | |
| | No | | | | | | |

| | | |
|---|---|---|
| 1/17/79 | IW = | Trikes with S.A. Solution Co is not use Cr or Zn nor heavy metals base compounds for heat, cool. tower & boilers. - Have a recirculating syst for cool. waters. - serving roller mills. Only Blowdown & cool. tower bleedoff + one floor drain serving rubber molding operation clean up. & floor washdown. - |

TRANSMITTAL DATE ___ ___ ___

FOLLOW-UP DATE ___ ___ ___

6373

# COUNTY SANITATION DISTRICTS
## OF LOS ANGELES COUNTY

1955 Workman Mill Road / Whittier, California
Mailing Address: / P. O. Box 4998, Whittier, California 90607
Telephone: (213) 699-7411 / From Los Angeles (213) 685-5217

JOHN D. PARKHURST
*Chief Engineer and General Manager*

October 19, 1978

In reply, please refer to
File:02-00.05-00/78

11-19-78

Kirkhill, Inc.
12021 Woodruff Ave
Downey, CA 90241

Subject: Second Notification of Requirement to Obtain Industrial Wastewater Discharge Permit

Gentlemen:

In September, 1978, your company was sent a letter notifying you that a permit must be obtained by any company discharging industrial wastewater to the public sewers.

As yet, this office has not received any response from your company concerning this matter. The application form and required supporting information, as explained in the instruction booklet, must be submitted within 30 days of the date of this letter to the City of Downey. Enforcement actions may be implemented against your company if the application is not submitted within the stated time period.

If your application may be delayed for any reason, or if you have any questions concerning the permit application, please contact the Sanitation Districts' Industrial Waste Section at extension #261.

Very truly yours,

John D. Parkhurst

By Leon S. Directo
Leon S. Directo
Supervising Civil Engineer

LSD:FJ:tle

cc: City of Downey
8425 E. Second Street
Downey, CA 90241

Attn: H.J. Henricksen

WASTEWATER RECLAMATION
SOLID WASTE MANAGEMENT

# COUNTY SANITATION DISTRICTS
## OF LOS ANGELES COUNTY

1955 Workman Mill Road / Whittier, California
Mailing Address: / P. O. Box 4998, Whittier, California 90607
Telephone: (213) 699-7411 / From Los Angeles (213) 685-5217

JOHN D. PARKHURST
*Chief Engineer and General Manager*

September 8, 1978

In reply, please refer to
File: 02-00.05-00/78

Kirkhill, Inc.
12021 Woodruff Ave
Downey, CA 90241

10-8-78

Subject: Notification of Industrial Wastewater Discharge Permit and Surcharge Requirements

Dear Sir:

According to Sanitation Districts' records, your company has not yet applied for an Industrial Wastewater Discharge Permit. The Sanitation Districts' Ordinance, adopted April 1, 1972, requires that a permit be obtained by any company discharging industrial wastewater to the Districts' sewerage system. A Surcharge Statement must also be filed annually to reimburse the Districts for the costs of treatment of your industrial wastewater. The Ordinance establishes a deadline for filing of permit applications, which was April 1, 1976.

Since the deadline has passed for submittal of a permit application by your company, continued use of the sewerage system for disposal of industrial wastewater is technically illegal, and may be subject to interruption through Districts' enforcement actions. To avoid any such enforcement actions, you are advised to complete
* the enclosed permit application as soon as possible, in accordance
** with the requirements outlined in the Wastewater Ordinance and
*** permit instruction booklet which are also enclosed. Your completed application should be submitted, along with any necessary supporting information or plans to the local agency responsible for processing industrial waste permits. In your area, the responsible agency is:

City of Downey
8425 E. Second Street
Downey, CA 90241

Attention: H.J. Henricksen

# COUNTY SANITATION DISTRICTS
## OF LOS ANGELES COUNTY

1955 Workman Mill Road / Whittier, California
Mailing Address: / P. O. Box 4998, Whittier, California 90607
Telephone: (213) 699-7411 / From Los Angeles (213) 685-5217

JOHN D. PARKHURST
*Chief Engineer and General Manager*


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City of Downey
8425 E. Second Street
Downey, CA 90241

Attention: H.J. Henricksen

If you will be unable to submit your completed permit application within 30 days from the date of this letter or if you have any questions, you are urged to telephone the Industrial Waste Section of the Sanitation Districts at extension #261 so that any problems can be resolved. The information obtained through permit applications is use by the Sanitation Districts to determine the best means to maintain a clean environment at the least cost to the local community. Please help us to render this service.

Very truly yours,

John D. Parkhurst
Chief Engineer and
General Manager.

By Leon S. Directo
Leon S. Directo
Supervising Civil Engineer

LSD:FJ:tle

cc: City of Downey

Attn: H.J. Henricksen

Encls: *, **, ***

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

March 17, 2017
Facility ID:2024526

Dan Mueller
City of Downey
11111 Brookshire Ave.
Downey, CA 902417016

Dear Mr. Mueller:

Amendment to Industrial Wastewater Discharge Permit No. 014882

Kirkhill Manufacturing Company
12023 Woodruff Avenue
Downey, CA 90241

Enclosed are copies of the approved Industrial Wastewater Discharge Permit Amendment for the subject company. This permit amendment was submitted in accordance with Ordinance requirements. The approved permit amendment consists of this approval letter, the Industrial Wastewater Discharge Permit Requirement list, and the Industrial Wastewater Discharge Permit Data Sheet . Please review these for compliance with your requirements, and retain the copies you require for your files. The applicant's copy of this letter, data sheet, and requirement list, should be forwarded to the applicant. A copy of this letter is forwarded to the applicant as notification of the Districts' permit requirements, which are in force from the current date. If any additional permit requirements are issued to the applicant by your agency, copies should be forwarded to the Districts for our records.

Approval of the permit amendment is subject to compliance with all applicable Ordinance requirements, and upon the items indicated on the attached requirement list. Failure to comply with all items on the requirement list, including any deadline for submittal of approvable plans, invalidates this approval and the previously issued permit. Invalidation of the permit will result in the permittee being deemed to be operating without a valid permit and subject to immediate discontinuance of sewer services for industrial operations.

If you have any questions concerning these requirements, please call Fariba Saleminik of the Districts' Industrial Waste Section at extension 2916.

Very truly yours,

David B. Whipple P.E.
Senior Engineer

cc: Mr. Mike Kilroy
Manager
Kirkhill Manufacturing Company
12023 Woodruff Avenue
Downey, CA 90241

SANITATION DISTRICTS OF LOS ANGELES COUNTY

INDUSTRIAL WASTE SECTION
1955 Workman Mill Road
Whittier, CA 90601
P.O. Box 4998
Whittier, CA 90607-4998
(562) 699-7411 Ext. 2900
FAX: (562) 908-4224

# SANITATION DISTRICTS OF LOS ANGELES COUNTY
# INDUSTRIAL WASTEWATER DISCHARGE PERMIT DATA SHEET

## SECTION 1: *General Information*

| | | | |
|---|---|---|---|
| Permit Number | 014882 | Facility ID | 2024526 |
| Facility Name | Kirkhill Manufacturing Company | Parcel Number | 6284-025-018 |
| Facility Address | 12023 Woodruff Avenue<br>Downey, CA 90241 | District Number | 02 |
| | | Thomas Bros. Grid | 706/C7 |
| Facility Permit Contact | Mike Kilroy | Number of Employees | 109 |
| Telephone Number | 562-803-1117 | | |

| | |
|---|---|
| Local Agency: | City of Downey |
| Agency Adress: | 11111 Brookshire Ave.<br>Downey, CA 902417016 |

## SECTION 2: *Permit Status*

| | |
|---|---|
| Industrial Waste Discharge Permit Status | APPROVED |
| Approval Date | March 17, 2017 |
| Expiration Date | March 20, 2019 |

## SECTION 3: *Flow Stream Information*

| Name | Type | Direction | Federal Regulation | Local Regulation |
|---|---|---|---|---|
| **Sample Point:** 014882A | | | | |
| calcium sterate water, cooling tower bleed off, boiler blowdown, household washers, rinse water from molding wash tank, lab sinks, self-regenerating water softener backflush, and floor scrubber | Process Flow | Outgoing | 403 | IU Standard - All Others |

***Flow Stream Regulatory Notes:***

Federal Regulation: 40 CFR Part 403 General Pretreatment Regulations

Local Regulation: IU Standard - All Others

## SECTION 4: *Sample Point Information*

| Name | Description | Location Status | Location Type | Location Category |
|---|---|---|---|---|
| 014882A | Existing sample box located outside the lab area | Active-IW-Permit Required | Final Effluent | Noncategorical Significant |

**Point of Connection to Sewer:** Districts' trunk line in Woodruff Avenue

**Physical Location:** 12023 Woodruff Avenue, Downey, CA 90241

## SECTION 5: *Self Monitoring Report (SMR) Requirements*

**Sample Location:** 014882A (Existing sample box located outside the lab area)

| SMR Requirement | Frequency | Sample Method | Units |
|---|---|---|---|
| COD, Total | Semiannually | Composite | mg/L |
| pH | Semiannually | Grab | S.U. |
| Solids, Suspended | Semiannually | Composite | mg/L |
| Sulfide, Soluble | Semiannually | Grab | mg/L |

**Beginning date of next required SMR reporting period:** July 01, 2017

## SECTION 6: *Substance Limits*

**Sample Location:** 014882A (Existing sample box located outside the lab area)

| Substance Name | Regulation | Sample Method | At Any Time Maximum | At Any Time Minimum | Daily Average Maximum | Average Maximum - *(Monthly Unless Otherwise Indicated)* |
|---|---|---|---|---|---|---|
| pH | Federal | Composite | | 5.0 S.U. | | |
| pH | Federal | Grab | | 5.0 S.U. | | |
| pH | Local | Composite | | 6.0 S.U. | | |
| pH | Local | Grab | | 6.0 S.U. | | |
| Flash Point | Federal | Composite | | 60 Deg. C | | |
| Flash Point | Federal | Grab | | 60 Deg. C | | |
| Flash Point | Local | Composite | | 60 Deg. C | | |
| Flash Point | Local | Grab | | 60 Deg. C | | |
| Temperature | Local | Grab | 140 Deg. F | | | |
| Solids, Suspended | | | No Limit | | | |
| Solids, Total Dissolved | | | No Limit | | | |
| Total Cyanide | Local | Composite | 10 mg/L | | | |
| Total Cyanide | Local | Grab | 10 mg/L | | | |
| Sulfide, Soluble | Local | Grab | 0.1 mg/L | | | |
| Chloride | | | No Limit | | | |
| COD, Total | | | No Limit | | | |
| Calcium-Hardness, Total | | | No Limit | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Calcium, Total | | | No Limit | | | |
| Arsenic, Total | Local | Composite | 3 mg/L | | | |
| Arsenic, Total | Local | Grab | 3 mg/L | | | |
| Cadmium, Total | Local | Composite | 15 mg/L | | | |
| Cadmium, Total | Local | Grab | 15 mg/L | | | |
| Chromium, Total | Local | Composite | 10 mg/L | | | |
| Chromium, Total | Local | Grab | 10 mg/L | | | |
| Copper, Total | Local | Composite | 15 mg/L | | | |
| Copper, Total | Local | Grab | 15 mg/L | | | |
| Lead, Total | Local | Composite | 40 mg/L | | | |
| Lead, Total | Local | Grab | 40 mg/L | | | |
| Mercury, Total | Local | Composite | 2 mg/L | | | |
| Mercury, Total | Local | Grab | 2 mg/L | | | |
| Nickel, Total | Local | Composite | 12 mg/L | | | |
| Nickel, Total | Local | Grab | 12 mg/L | | | |
| Silver, Total | Local | Composite | 5 mg/L | | | |
| Silver, Total | Local | Grab | 5 mg/L | | | |
| Zinc, Total | Local | Composite | 25 mg/L | | | |
| Zinc, Total | Local | Grab | 25 mg/L | | | |
| Aldrin | Local | Composite | 10 ug/L | | | |
| Aldrin | Local | Grab | 10 ug/L | | | |
| Dieldrin | Local | Composite | 10 ug/L | | | |
| Dieldrin | Local | Grab | 10 ug/L | | | |
| Endrin | Local | Composite | 10 ug/L | | | |
| Endrin | Local | Grab | 10 ug/L | | | |
| Toxaphene | Local | Composite | 10 ug/L | | | |
| Toxaphene | Local | Grab | 10 ug/L | | | |
| Total HCH | Local | Composite | 10 ug/L | | | |
| Total HCH | Local | Grab | 10 ug/L | | | |
| Total Detected Chlordanes | Local | Composite | 10 ug/L | | | |
| Total Detected Chlordanes | Local | Grab | 10 ug/L | | | |
| Total Detectable DDT | Local | Composite | 10 ug/L | | | |
| Total Detectable DDT | Local | Grab | 10 ug/L | | | |
| Total Detectable PCBs | Local | Composite | 10 ug/L | | | |
| Total Detectable PCBs | Local | Grab | 10 ug/L | | | |

** *Indicates a 4 Day Average Limit*

| Summary Substances and Their Constituent Substances - No Limits on Constituents Unless Listed Above | | |
|---|---|---|
| **Sample Location: 014882A** | | |
| **Summary Substance: Total Detectable DDT** | | |
| p,p'-DDE | p,p'-DDD | p,p'-DDT |

| Summary Substance: Total Detectable PCBs | | |
|---|---|---|
| Aroclor 1242 | Aroclor 1254 | Aroclor 1016 |
| Aroclor 1221 | Aroclor 1232 | Aroclor 1248 |
| Aroclor 1260 | | |
| | | |

## SECTION 7: *Flow Limits*

**Sample Location:** 014882A (Existing sample box located outside the lab area)

| Limit Type | Flow Data Type | Start Time | End Time | Flow Limit Value | Flow Units |
|---|---|---|---|---|---|
| Daily Average Flow Limit | Average | | | 2200 | GPD |
| 5-minute Peak Flow Limit | Maximum | | | 6 | gpm |

## SECTION 8: *Pretreatment Equipment/Process*

**Pretreatment Process Name:** *Not Applicable*

| Equipment Name | Equipment Type |
|---|---|
| | |

## SECTION 9: *Program Requirements*

| Program Name | Status | Due Date | Approved Date | Plan Name |
|---|---|---|---|---|
| *No Programs Are Required* | | | | |

## SECTION 10: *Submissions/Completions Requirements*

| Required Submissions/Completions | Due Date |
|---|---|
| *Not Applicable* | |

Except as directed in permit requirement statements, all submissions and notifications of completions should be mailed to:

County Sanitation Districts of Los Angeles County
Industrial Waste Section
Fariba Saleminik
P.O. Box 4998
Whittier, CA 90607-4998

Permit related questions should be directed to:

Fariba Saleminik
562-908-4288 Ext. 2916
fsaleminik@lacsd.org

## SELF-MONITORING REPORTING SCHEDULE

Permittees required to submit self-monitoring reports per Section 5 of this Permit Data Sheet are subject to the following schedule:

| SELF-MONITORING REPORTING SCHEDULE[1] | | |
|---|---|---|
| **Analysis Frequency** | **Reporting Period** | **Due Date[2]** |
| Annually | July 1 - June 30 | July 15 (the following year) |
| Semi-annually | January 1 - June 30<br>July 1 - December 31 | July 15<br>January 15 |
| Quarterly | January 1 - March 31<br>April 1 - June 30<br>July 1 - September 30<br>October 1 - December 31 | April 15<br>July 15<br>October 15<br>January 15 |
| Monthly | Day 1 - Day 31 of the month | Day 15 (the following month) |

[1]The laboratory data sheet(s) for each analysis performed during the reporting period must be included with the Self - monitoring Report form. However, only the results from the most recent sample collected during the reporting period should be recorded on the Self-monitoring Report form.

[2]The Self-monitoring Report form may be submitted before the due date as long as the sample is taken during the appropriate reporting period.

## SURCHARGE TEST REQUIREMENTS

Industrial users participating in the Sanitation Districts' Surcharge Program may be subject to additional self-monitoring requirements besides those specified in the permit conditions. Surcharge testing parameters include Chemical Oxygen Demand (COD) and suspended solids (SS). For companies that file Long Form Surcharge Statements, the testing frequency for COD and SS is based on flow as shown in the table below. Surcharge wastewater analyses must adequately represent the average daily discharge to the sewer system and the results must be submitted annually with the wastewater treatment surcharge statement in accordance with each year's "Instruction for Filing a Long Form Wastewater Treatment Surcharge Statement." **Surcharge test requirements are independent of the self-monitoring report requirements**.

| SURCHARGE TESTING FREQUENCY FOR COD AND SS<br>(Must be 24-hour Composite Samples) | |
|---|---|
| **Yearly Cumulative Flow from Each Outlet (in million gallons)** | **Required Testing Frequency** |
| Less than 15.00 | 1 sample per 3 months |
| 15.01 to 40.00 | 1 sample per 2 months |
| 40.01 to 100.00 | 2 samples per month |
| 100.01 to 250.00 | 1 sample per week |
| More than 250.00 | 2 samples per week |

SANITATION DISTRICTS OF LOS ANGELES COUNTY

INDUSTRIAL WASTE
SECTION
1955 Workman Mill Road
Whittier, CA 90601
P.O. Box 4998
Whittier, CA 90607-4998
(562) 699-7411 Ext. 2900

# INDUSTRIAL WASTEWATER DISCHARGE PERMIT REQUIREMENT LIST

The approval and issuance of this permit is being made conditionally and subject to Kirkhill Manufacturing Company being in compliance with all indicated items on this list and accompanying data sheet. Satisfactory evidence of compliance with these conditions should be supplied to the Districts where requested. Satisfactory evidence will consist of a minimum of written notification signed by a responsible company official, and in some cases may involve the submission of additional drawings and data, or verification by a Districts representative. Failure to comply with all items on the requirement list, including all deadlines specified, invalidates this approval and issuance. Invalidation of this permit will result in Kirkhill Manufacturing Company being deemed to be operating without a valid permit and subject to immediate discontinuance of sewer services for industrial operations. Per Section 401 of the Districts' Wastewater Ordinance, this permit is not transferable.

| | |
|---|---|
| **FACILITY NAME** | Kirkhill Manufacturing Company |
| **FACILITY ID** | 2024526 |
| **PERMIT NUMBER** | 014882 |
| **DATE OF APPROVAL** | March 17, 2017 |
| **DATE OF EXPIRATION** | March 20, 2019 |

**1. Approval SIU (Rev 04-15-2013)**

This Industrial Wastewater Discharge Permit is issued only for the discharge of treated wastewater from the operations listed as "outgoing" in Section 3 of the Permit Data Sheet. This Permit will expire as shown in Section 2 of the Permit Data Sheet. The permittee must submit a permit application and supporting documents to the appropriate local agency at least six months prior to the expiration date. Failure to obtain a renewed permit by the expiration date will result in the permittee being deemed to be operating without a valid permit. As such, the expired permit may be voided and a temporary permit issued.

**2. Flow limitation**

The discharger shall not discharge more than two 55-gallon drums of the cooling water / mold release during each 8-hour discharge day. The discharge will be maintain at a flowrate of approximately 1 gallon/min to limit the strength of the wastewater being discharged at any one time.

**3. Log of each discharge**

A log documenting each of the discharges shall be kept by the company and made available to Districts IW Inspectors immediately upon request. The log shall contain the following information:
Date/Time of each discharge.
Total volume or number of drums discharged on each discharge day.
Initials of operator who conducted each discharge.

**4. Local Limits (Rev 10-02-2015)**

Numerical limits have been established by the Districts for the temperature, pH, flashpoint, and maximum concentrations of heavy metals and other toxic materials permissible in an industrial discharge to the public sewers. The limits are those shown in Section 6 of the Permit Data Sheet with the designation of Local in the Regulation column. In addition, applicable state and federal limits are shown in Section 6 of the Permit Data Sheet with the respective designations of State and Federal in the Regulation column. The permittee is advised that any discharge in excess of the limits shown in Section 6 of the Permit Data Sheet requires corrective action by the discharger. Penalties applicable to violations of these limits will be strictly enforced by the Districts.

**5. SMR (Rev 07-17-2015)**

Self-monitoring of the industrial wastewater must be performed at the intervals indicated in section 5 of the Permit Data Sheet and reported on the Self-Monitoring Report (SMR) form. The Districts will send the necessary SMR forms before each reporting period. All indicated analyses must be performed by a State or Districts' certified laboratory. The certification section of the SMR form must be completed and signed by a responsible company official. For each reporting period, the completed SMR form and the corresponding laboratory report must be submitted to the Districts' Industrial Waste Section no later than the due date indicated on the form. The wastewater samples must be analyzed in accordance with 40 CFR Part 136 and must be collected in such a way that they are representative of the total discharge generated by a typical day's operations. Each representative sample (composite and/or grab) should be collected over one 24-hour period and analyzed for all parameters in Section 5. A minimum of four grab samples must be taken for cyanide, total phenols, sulfides, volatile organics, and oil and grease if the parameter is subject to federal limitations. The samples may be analyzed separately or composited in accordance with acceptable procedures prior to analysis. Compositing of these grab samples may be conducted in a laboratory prior to analysis for all parameters; alternatively, cyanide, total phenol, and sulfides samples may be composited in the field. All representative samples must be submitted and meet all applicable limits. Violations of effluent limitations must be reported to the Districts within 24 hours of the discharger becoming aware of the violation at (562) 699-7411, extension 2907. Additional sampling and analysis must be conducted for all parameters in violation. The results of the repeat analysis must be submitted within 30 days of becoming aware of the violation.

**6. Records Retention (Rev 02-14-2011)**

The permittee shall maintain records of all information resulting from any monitoring activities required by 40 CFR 403.12, including self-monitoring reports, baseline monitoring reports, and documents associated with required best Management Practices. Such records shall include for all samples:

a) The date, exact place, method, and time of sampling and the name of the person or persons taking the samples;

b) The dates analyses were performed;

c) Who performed the analyses;

d) The analytical techniques/methods used; and

e) The results of such analyses.

The permittee is required to retain for a minimum of four years any records of monitoring activities and results (whether or not such monitoring activities are required by 40 CFR 403.12) and shall make such records available for inspection and copying by the Districts. This period of retention shall be extended during the course of any unresolved litigation regarding the permittee or when requested by the Districts.

**7. Sample Point (Rev 01-01-2007)**

The permittee's legal sampling point(s) are indicated in Section 4 of the Permit Data Sheet. The permittee is responsible for maintaining and cleaning the sampling point(s) to prevent any build-up of oil and grease, sediment or sludge; failure to do so does not invalidate sampling test results. Analytical results from samples taken from the location(s) according to accepted sampling procedures shall be accepted as binding. Safe and convenient access to the sampling point(s) must be provided for representatives of the Districts. Should Districts' staff determine that the sampling locations(s) are unsafe, difficult to access or require modification, the permittee must propose alternatives which will provide sampling point(s) acceptable to the Districts. If a locked security enclosure is necessary, a Districts' padlock shall be used to secure the sampling point area. The permittee must call (562) 699-7411, extension 2907 to make arrangements for installation of the lock.

**8. Split Sample (Rev 01-01-2007)**

The Districts' personnel may provide a split of any composite sample collected if sufficient sample volume is available. Districts' personnel may also provide split, concurrent, or sequential grab samples. These samples will be left with a designated company representative. If the designee is not available, these samples will be left with whoever is available.

The permittee is required to follow appropriate preservation techniques, analytical procedures, and holding periods specified in 40 CFR 136, if the analytical test results from these samples are to be used for compliance or surcharge reporting purposes. Failure to follow the prescribed procedures will invalidate the test results.

**9. Peak flow limit**

The discharge shall be made such that it flows through the company's legal sample point (existing sample box). The discharge shall not cause the flowrate as measured at the legal sample point to exceed the existing peak flow rate limit of 6 gallons/minute.

**10. Pretreatment Maintenance (Rev 01-01-2007)**

The permittee is required to have in place a program of regular pretreatment equipment maintenance and cleaning to prevent a build-up of grit, oil, or grease or other prohibited materials which may enter the sewer and to ensure compliance at all times with applicable industrial wastewater effluent limits. The permittee should also provide trained personnel for proper operation and regular maintenance of all components of the pretreatment system and should also maintain an adequate supply of treatment chemicals as well as replacement parts for key components of the pretreatment system.

**11. Floor Drains Advisory (Rev 01-01-2007)**

All floor drains shall have grated covers with 3/8" maximum openings to prevent larger particles from clogging the sewer.

**12. Bypass Notification (Rev 02-23-2012)**

In accordance with federal regulations found at 40 CFR Part 403.17, the permittee must not bypass required pretreatment equipment unless the bypass was unavoidable to prevent loss of life, personal injury or severe property damage and there were no feasible alternatives to the bypass and the permittee notified the Districts at least 10 days prior to an anticipated bypass or within 24 hours of an unanticipated bypass. Severe property damage does not include economic loss due to production delays. Feasible alternatives include use of auxiliary treatment facilities, retention of untreated wastes or cessation of production.

The permittee shall submit oral notice of an unanticipated bypass that exceeds effluent limitations to the Districts within 24 hours from the time the permittee becomes aware of the bypass.

A written submission shall also be provided within five days of the time that the permittee becomes aware of the bypass. The written submission shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times, and, if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. The Districts may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

The permittee may allow any bypass to occur which does not cause Pretreatment Standards or Requirements to be violated, but only if it also is for essential maintenance (i.e. pipe or pump failures) to assure efficient operation. However, routine maintenance should be conducted during normal periods of production downtime. Notification is not required for bypasses that do not result in federal categorical violations.

The Districts will determine whether the permittee has met all bypass criteria above thus avoiding enforcement action for violation of federal regulations. However, this does not relieve a discharger of the responsibility to comply with Districts' Ordinance or effluent limitations at all times. Any repair or maintenance costs to Districts' facilities associated with any bypass of pretreatment equipment will be borne by the permittee.

**13. Pretreatment**

The discharge from each drum shall be put through a 1/8" screen mesh filter to remove any large particles or solids prior to its discharge to the sewer. Additionally the discharge shall not be made directly into the existing sample box but instead into a drain located upstream of the sample box.

**14. Rainwater, General (Rev 01-01-2007)**

The Districts' policy on rainwater and stormwater is established under the provisions of Section 305 of the Wastewater Ordinance as amended November 1, 1989. Section 305 specifies that no rainwater or stormwater shall be discharged to the Districts' sewerage system, except where prior approval has been given by the Chief Engineer. As a general practice, the Districts require roofing or regrading of all open areas with exposed drains which discharge to the public sewer. This practice protects the Districts' sewerage system from excessive hydraulic loads that can be created by unwanted rainwater and stormwater runoff. Rainwater diversion systems shall divert any rainfall in excess of 0.1 inch to the storm drain. Diverted rainwater must meet any requirements of the Regional Water Quality Control Board. Any rainwater discharge to the sewer system must be in accordance with the Districts' "Guidelines for the Discharge of Rainwater, Stormwater, Groundwater and Other Water Discharges" available at http://www.lacsd.org/info/industrial_waste/forms/default.asp.

**15. Spill Containment, General (Rev 01-01-2007)**

Any industrial user with a significant potential to discharge restricted materials, as defined in the Districts' "Slug Discharge Control and Spill Containment Policy" available at http://www.lacsd.org/info/industrial_waste/policies/slugdischarge.asp, is required to install and maintain an adequate spill containment system.

**16. Spill Containment Logbook (Rev 01-01-2007)**

If the permittee has restricted materials which must be contained in spill containment areas, the permittee is required to maintain a log book that is available to Districts' employees upon request or during inspections. Any material that enters a spill containment area must be handled as a spill, including rainwater and any process wastewater that results from "normal" operations. All materials removed from spill containment areas, whether restricted or non-restricted as defined in the Districts' "Slug Discharge Control and Spill Containment Policy" (http://www.lacsd.org/info/industrial waste/policies/slugdischarge.asp) must be included in the log book. The log book must contain the following information:

a) Date and time

b) Identity of material (an analysis is required if the spill is of unknown origin to determine the type of treatment or remediation for proper disposal)

c) Quantity (volume)

d) Cause

e) Method of disposal (includes transfer to off-site treatment system)

f) Corrective action implemented to prevent spills from reoccurring

**17. Haul Untreated Spills (Rev 01-01-2007)**

Under no circumstances shall process solution spills be discharged directly to the sewer. Unreclaimed or untreated process solution spills shall be hauled to a legal disposal site.

**18. Manually Actuated Pump (Rev 01-01-2007)**

Spills may be pumped from containment areas to pretreatment systems for treatment prior to discharge after determining their treatability and entering the information into the required log book. Pumps used for this purpose must be manually actuated and there must be no other available access to the sewer.

**19. Slug Discharge Control Plan Adv (Rev 04-15-2013)**
Upon request by the Districts, the permittee may be required to develop a Slug Discharge Control Plan which complies with the Districts' "Slug Discharge Control and Spill Containment Policy" (available at http://www.lacsd.org/wastewater/industrial_waste/iwpolicies/slugdischarge.asp) and includes, at a minimum, the following elements:

a) Description of discharge practices, including non-routine batch discharges (non-routine batch discharges are not allowed unless specified as an approved discharge in the permit);

b) Description of stored chemicals;

c) Procedures for immediately notifying the Districts of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5(b), with procedures for follow-up written notification within five days;

d) Procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response;

e) This plan must be maintained at the discharge location and must be made available for review by Districts' personnel upon request.

**20. Slug Discharge Modification Adv (Rev 04-15-2013)**
The permittee is required to immediately notify the Districts if modifications from the approved discharge practices are expected that may affect the potential for a slug discharge. Slug discharges are any discharges of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violates regulations for the Districts' treatment plants or sewer collection system.

**21. Penalties (Rev 01-01-2007)**

Every person or permittee violating any provision of this Industrial Wastewater Discharge Permit (permit) or the Districts' *Wastewater Ordinance* (*Ordinance*) is guilty of a misdemeanor, and upon conviction is punishable as provided by law (California Health & Safety Code Section 4766 currently allows for a fine not to exceed $1,000, or imprisonment for not more than thirty days, or both. Misdemeanor violations of California Health & Safety Code Section 25189.5 currently allow for a fine not to exceed $100,000 and imprisonment not to exceed one year. Misdemeanor violations of the Clean Water Act, 33 USC 1319(c) currently allow for a fine not to exceed $25,000 and imprisonment not to exceed one year). Each day during which any violation continues shall constitute a separate offense. The Chief Engineer is authorized to seek, through the office of the District Attorney of Los Angeles County or other appropriated authority, prosecution of criminal charges against any person violating any provision of the permit or the *Ordinance*. Violations of discharge limitations established under this permit or the *Ordinance* may also be violations of state and federal environmental laws which may be punishable as felonies and which may also carry substantial fines and penalties (California Health & Safety Code 25189-5 currently allows for a fine not to exceed $100,000 (except the fine can be up to $250,000 for great bodily injury or substantial probability of death) and imprisonment up to three years and 33 USC Section 1319(c) currently allows for a fine not to exceed $1,000,000 for a first conviction and imprisonment of up to 15 years).

In addition, any person or permittee who violates any provision of the *Ordinance* or any term or condition of any permit issued pursuant to the *Ordinance* or plan approval that prohibits or limits the discharge of any waste or imposes any pretreatment requirement shall be civilly liable to the Districts in the maximum sum provided by law for each day in which such violation occurs (California Government Code Section 54740 currently allows for civil penalties which include, but are not limited to, a fine of up to $25,000 per day of violation).

**22. Additional Pretreatment Advisory (Rev 01-01-2007)**

The permittee is advised that additional industrial wastewater pretreatment equipment or other measures may be required if inspection or monitoring indicates prohibited materials are discharged. If such measures include installation of new pretreatment equipment, plans and necessary documentation for such added equipment must be submitted to the local permit agency and the Districts for approval prior to construction.

**23. Prohibited Discharge Notification (Rev 01-01-2007)**

In the event of the discharge of any prohibited waste, excessive quantities or concentrations of any restricted waste, or of the discharge of material not covered under this permit, the company must immediately notify the Districts by calling (562) 699-7411, extension 2907, during office hours or the Long Beach Pumping Plant, (562) 437-6520, during non-office hours.

The Districts must also be notified of any circumstances affecting plant processes or facility operations that may potentially result in the discharge of similarly prohibited or restricted wastes, including but not limited to the malfunction, upset or improper operation of plant processes, pretreatment systems, spill containment facilities, or diversion/bypass mechanisms. Failure to immediately notify the Districts of any such event or condition is a violation of the Wastewater Ordinance.

**24. Surcharge Testing (Rev 01-01-2007)**

If the permittee is required or chooses to file a Long Form Surcharge Statement, surcharge tests of the industrial wastewater must be performed at the intervals indicated on Table A of the Long Form Surcharge Statement booklet and submitted annually with the wastewater treatment surcharge statement. The company is reminded that the surcharge testing requirements are independent of the test for self-monitoring reports required in Section 5 of the Permit Data Sheet. For further information on surcharge testing requirements, please contact the Districts' Surcharge group at (562) 699-7411, extension 2600.

**25. Capacity Unit Increase Advisory (Rev 01-01-2007)**
If the wastewater flow rate and strength data indicate an increase in the sewerage capacity unit usage by 25% or more, the permittee may be required to revise its permit, and will be required to pay a corresponding connection fee should existing sewerage baseline capacity units be insufficient to accommodate discharge at that time.

**26. Status Change Notification (Rev 01-01-2007)**
The permittee is required to notify the Districts of any change in the status of the subject facility, if ownership or operating responsibility changes, or if the industrial waste connection is legally abandoned.

**27. 25 Percent Change - Rev Req (Rev 07-01-2011)**
A new permit application must be submitted when there is a significant change in wastewater quantity (more than 25 percent) or quality from that given in the approved permit information. The completed application must be submitted to the local governmental agency for initial processing prior to Districts' review. Approval must be obtained prior to any construction of new facilities.

**28. Waste Hauler Reports (Rev 01-01-2007)**
Waste hauler reports must be obtained and kept on file for a period of at least four years for any solid wastes from the wastewater pretreatment system and liquid wastes leaving the plant other than in the sewer system. These reports must be made available to representatives of the Districts upon request.

**29. Equipment Changes (Rev 01-01-2007)**
Engineering drawings for changes in equipment or processes must be submitted to the Districts through the local agency for approval before implementation.

**RECORDS REPORTS** *

- [x] Hazardous Materials Handler
- [x] Hazardous Waste Generator
- [x] Onsite Hazardous Waste Treatment
- [x] Aboveground Petroleum Tanks
- [x] California Accidental Release Prevention
- [x] Clean-up Oversight Reports
- [x] Incident Reports

**Incident Date (if known)**

**ENFORCEMENT RECORDS (Exempt from release if under investigation)**

- [ ] Adjudicated Reports

## ADDRESS OF REQUEST

** Must provide an address to process request. Multiple addresses may be requested. ** Only one zip code per request. Multiple zip code requests will be rejected.

**Postal Code**

90242

**City**

Downey

**Street Number**

12021

You may enter Street Number Range (e.g. 800 –

**Number Selection**

- ( ) All Numbers
- ( ) Even Numbers
- ( ) Odd Numbers

**Street Direction**

**Street**

Woodruff

**Street Type**

Avenue

# Downey Fire Department

11111 Brookshire Boulevard
Downey, California 90241
(562) 904-7345


## REQUEST FOR INFORMATION
## UNDER THE *COMMUNITY RIGHT-TO-KNOW* LAWS

The Emergency Planning & Community Right-to-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA), was signed into law on October 17, 1986 by Congress as national legislation on community safety. This law is designed to help local communities protect public health, safety, and the environment from chemical hazards.

The public has a right to know the chemical/hazardous materials information disclosed to the City of Downey Fire Department under the provisions of Title III of the Superfund Amendment and Reauthorization Act (SARA) of 1986, Chapter 6.95 of the California Health and Safety Code, and Title 27 of the California Code of Regulations.

To request information, please complete the *Information Request Form*, and contact:

Downey Fire Department
Hazardous Materials Section
11111 Brookshire Avenue
Downey, California 90241
(562) 904-7345

Please note the following conditions when requesting information:

1. A fee is assessed for request to access disclosure records. A **fee of $20.00 for the 1st request, and $10.00 for each additional request** will be assessed.
2. A separate request form is required for each facility
3. **Photo Identification Is Required Before Any Information Will Be Released.**
4. **Information indicating locations of hazardous materials storage/handling will NOT be released**
5. Information that is protected under the Privacy Act (i.e. home telephones) **will not** be released
6. Information that has been designated by the facility as a **trade secret**, requires additional time and procedures. The Hazardous Materials Section will advise you of these additional procedures.
7. If information requested is not available, you will be notified in writing.

Downey Fire Department
Hazardous Materials Section
Information Request Form

**RECORDS REQUEST LOCATION (Site)**

Business Site Address #1: 12021 Woodruff Avenue, Downey CA 90242

Business Site Address #2: _____

Business Name #1 (if applicable): Kirkhill

Business Name #2 (if applicable): _____

Information Requested:

X Chemical/Hazardous Materials Information
X Underground Tank Information
X Fire Code Information
X Aboveground Tank Information
X Spill/Release History
X Enforcement History

Purpose of your request:
Conducting a Phase I Environmental Site Assessment

**REQUESTER INFORMATION**

Name: Kathy Lehnus

Business Name: Partner Engineering
(EH&S Company)

Address: 1761 East Gary Avenue

City: Santa Ana State: CA Zip Code: 92705

Telephone No.: 657-247-1304 Fax No.: 949-534-0566

Email Address: klehnus@partneresi.com

Driver's License Number: Y3771906 State Issued: CA DOB: 8/1/75

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**OFFICIAL USE ONLY**

Information Supplied By (DFD Representative): _____ Date: _____

Photo ID: ☐ Driver License ☐ Government Issued ID ☐ Agency Issued ID ☐ Other ID _____

PAID!
09-06-2018/02:07 PM
USER:27 Total:$ 30.00
002-00648588

**City of Downey Fire Department**
11111 Brookshire Avenue
Downey, California 90241
(562) 904-7345 [Phone] • (562) 869-3994 [Fax]

## HAZARDOUS MATERIALS RECORDS REQUEST

The City of Downey Fire Department maintains records of the hazardous materials handled at regulated businesses within the community. Under Federal and State Law, Californians have the right to access this public information as to be informed of the chemical hazards in their community.

To request hazardous materials information, please *legibly* complete this form and submit to:

Downey Fire Department
Hazardous Materials Section
11111 Brookshire Avenue
Downey, California 90241
cityclerk@downeyca.org

Please note the following conditions when requesting information:

- A fee of $20.00 is assessed for the first requested addressed location, $10.00 for EACH additional location
- Records request are address specific. Please provide CORRECT address for EACH location. An application with a range of addresses will **NOT** be processed
- Information specifying the precise location of where hazardous materials are stored or handled, including site maps, will **NOT** be released per State Law [CA HSC 25509(b)]
- Information that is protected under the Privacy Act (i.e. home telephones) will **NOT** be released
- Information that has been designated by the facility as a **Trade Secret**, requires additional time and procedures The Fire Department's Hazardous Materials Section will advise you of these additional procedures

**LOCATION:** Kirkhill (Rubber mfg.)

Site Address: 12021 and 12023 Woodruff Ave., Downey

Business Name (if applicable): Kirkhill (rubber mfg.)

Information Requested: X Hazardous Materials/Chemical Information X Tank Information (AST/UST) X Spill / Release History

**REQUESTER INFORMATION**

Name: Margaret Thomas

Business Name: Partner Engineering and Science, Inc.

Address: 2154 Torrance Blvd.

City: Torrance State: CA Zip Code: 90501

Telephone No.: 310-927-5371 Email Address: mathomas@partneresi.com

Emil Files to

## Lehnus, Kathy

| | |
|---|---|
| From: | Lee Kirby <lkirby@downeyca.org> |
| Sent: | Tuesday, July 3, 2018 2:11 PM |
| To: | Lehnus, Kathy |
| Cc: | Charitye Cunningham |
| Subject: | RE: Records Request from Downey Fire Department |
| Attachments: | 12023 woodruff NOV Feb. 2015.pdf; 12021 Woodruff Ave - Cal Pipe Hazmat Inventory CERS 2013.pdf; 12021 Woodruff Ave - Cal Pipe HM Release Jan 2013.pdf; 12021 Woodruff Ave - Cal Pipe HM-Fire Inspection 2013.pdf; 12023 Woodruff - Kirkhill Hazmat Inventory CERS 2018.pdf |

Good day Ms. Lehnus,

A records search was undertaken for 12021 and 12023 Woodruff Ave. properties as to determine the site's history as it relates to the handling of hazardous materials subject to EPCRA reporting, the operation of underground storage tanks (USTs), and historical record of hazardous material releases and code violations.

Downey Fire's records indicate that 12023 Woodruff Ave., and the former 12021 Woodruff Ave., were locations handling reportable quantities of hazardous materials. These business operations established and filed the required hazardous materials business plans (HMBP) with the Fire Department in accordance with State Law. Please see attachments for further details.

Neither of the referenced locations have a history of UST operations. The only documented hazardous substances releases were for the former Cal Pipe Industries at 12021 Woodruff Ave. The release (petroleum hydrocarbon oil) was observed during a fire inspection on Jan. 29, 2013 (see attached photographs). The release and associated fire code violations were satisfactorily abated.

The most recent fire-hazmat code compliance inspection at the Kirkhill Manufacturing plant (12023 Woodruff) took place on 2/19/15. All documented violations were satisfactorily abated and facility return-to-compliance on 6/17/15.

Sincerely,

Lee Kirby
HazMat Specialist/Fire Prevention Officer
CityofDowney
11111 Brookshire Avenue
Downey, CA 90241
Office: (562) 904-7345
Email: lkirby@downeyca.org

---

**From:** Lehnus, Kathy [mailto:KLehnus@partneresi.com]
**Sent:** Tuesday, July 03, 2018 1:13 PM
**To:** Lee Kirby
**Subject:** RE: Records Request from Downey Fire Department

Hello,

**City of Downey Fire Department**
11111 Brookshire Avenue
Downey, California 90241
(562) 904-7345 [Phone] ● (562) 869-3994 [Fax]

February 19, 2015

John Doma
Chief Operating Officer
Kirkhill
12023 Woodruff Avenue
Downey, CA 90241

Re: **Fire-Life Safety & Hazardous Materials Inspection – Kirkhill, 12023 Woodruff Ave., Downey, CA**

Dear Mr. Doma:

Thank you for taking time out of your schedule to accompanying the Downey Fire Department on the safety inspection of Kirkhill Manufacturing. Again, the Downey Fire Department greatly appreciates the efforts Kirkhill has initiated to review, improve, and maintain its regulatory compliance and corporate safety.

As per the inspection of February 18, 2015, the following deficiencies were observed. Please undertake the necessary corrective action to satisfactorily abate these violations.

1. **Water-based Fire Protection Systems Maintenance** – water-based fire protection systems shall be inspected, tested and maintained in accordance with NFPA 25 (*Please ensure a sprinkler map is developed and posted with signs affixed to risers indicating zones they serve, provide signs to FDC, provide hydraulic calculation plates to sprinkler riser; cease placing covers to sprinkler heads in press area of south side of production floor).*
   Reference: NFPA 25, California Edition; California Code of Regulations Title 19

2. **Fire Protection Equipment Identification** - Fire protection equipment shall be identified in an *approved* manner. *Approved* signs required to identify fire protection equipment and equipment location shall be constructed of durable materials, permanently installed and readily visible (p*rovide required signage to identify sprinkler riser locations and areas (zones) in which they serve; provide fire protection equipment location and zone map to Downey FD)*
   Reference: California Fire Code § 509.1

3. **Electronic Submission of Hazardous Materials Business Plan –** handlers of hazardous materials shall electronically submit its business plan to the statewide information management system (CERS) for handling of substances in excess of 55 gallons of liquid; 500 pounds of solid; or 200 cubic feet of gas (*Electronically submit a business plan for the handling of reportable quantities of hazardous materials i.e. waste oil, process oil, rubber materials, compressed gases, etc.*)
   Reference: California Health & Safety Code § 25505 (a)(C); 25508 (a) (1)

4. **Means of Egress Obstructions** – maintain access to and exit discharge from man-door exits (emergency exits) on south side of plant (*cease placing equipment in exit discharge; maintain egress pathway free of obstructions*)
   Reference: California Fire Code § 1030.2

5. **Outside Combustible Storage** - Outside storage of combustible materials shall not be located within 10 feet of a property line (Exceptions: The separation distance is allowed to be reduced to 3 feet for storage not exceeding 6 feet in height) [*Cease storing rubber crumb and wood pallets along property lines; provide proper clearance to neighboring properties]*.
   Reference: California Fire Code § 315.3

6. **Hazard identification/Container Identification -** visible hazard identification signs as specified in NFPA 704 for the specific material contained shall be placed on stationary containers (i.e. drums, above-ground tanks) tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit (*provide approved labels/identification signs (NFPA) placard at north entrance; provide HMIS or other approved labels to drum and tote bins; provide labels to waste oil drums as necessary).*
   Reference: California Fire Code § 5003.5

7. **Empty containers Identification -** empty containers (i.e. drums, pails, tote bins) previously used for the storage of hazardous materials shall be free from residual material and vapor; and be properly stored as to be identified as empty (*provide sign/labels for empty drums and storage area*).
   Reference: California Fire Code § 5003.2.5

8. **High-piled storage height limits** – storage of combustible materials shall not exceed 12 feet in height; if height of storage to exceed 12 feet, high-pile storage permit shall be obtained from City of Downey Building & Safety Department.
   Reference: California Fire Code, Chp. 32

9. **Fire safety/Evacuation Plans -** Fire safety /evacuation plans shall be provided and posted in conspicuous locations as to include (but not limited) to the following:
   - Occupancy assembly point
   - Locations of fire protection equipment (i.e. fire sprinkler risers, portable extinguishers, pull stations, etc.)
   - Fire department vehicle access
   - Exits
   - Primary evacuation routes
   - Secondary evacuation routes
   - Accessible egress routes

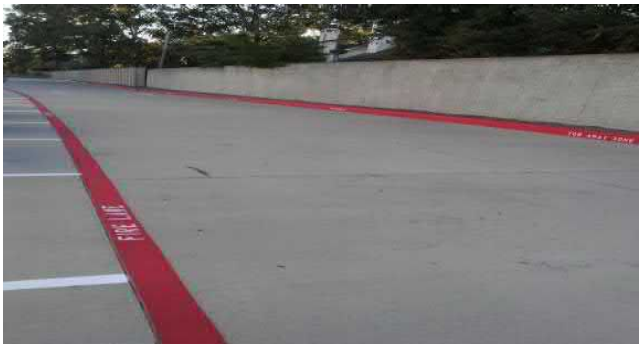
   Reference: California Fire Code § 404.3.2

10. **Obstruction of Fire Apparatus Access -** Fire apparatus access roads shall not be obstructed in any manner. The minimum widths and clearances of 20 – 26 feet wide shall be provided and maintained throughout the exterior of the entire complex (*cease storage of equipment, materials in fire access lanes; provide fire access around entire building*)
    Reference: California Fire Code § 503.4; D103.6.1

11. **Obstruction of Fire Apparatus Access -** Fire apparatus access roads shall not be obstructed in any manner. The minimum widths and clearances of 20 – 26 feet wide shall be provided and maintained throughout the exterior of the entire complex (*cease storage of equipment, materials in fire access lanes; provide fire access around entire building*)
    Reference: California Fire Code § 503.4; D103.6.1

12. **Fire Lane (access road) Marking –** post *approved* signs or other *approved* markings that include the words NO PARKING—FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof (*provide marking identifying fire lanes as to designate area that is to remain clear of any obstructions; and allow access to facility by fire apparatus*. *Signs shall read NO PARKING-FIRE LANE and shall be posted on one or both sides of the fire apparatus road. See sample images below*)
    Reference: California Fire Code § 503.3; D103.6




13. **Securing Compressed Gas Containers/Cylinders -** *Compressed gas* containers, cylinders and tanks shall be secured to prevent falling caused by contact, vibration or seismic activity (*provide additional means to properly secure Acetylene gas cylinders*)
    Reference: California Fire Code § 5303.5.3

14. **Abatement of Electrical Hazards.** Identified electrical hazards shall be abated [*provide breaker blanks to north (new operational area of former CalPipe) warehouse*].
    Reference: California Fire Code § 605.1

15. **Address Identification -** Existing buildings shall have *approved* address numbers, placed in a position that is plainly legible and visible from the street or road fronting the property (*remove additional, non-used address numerals from building exterior; building shall now be recognized by single approved address number of 12023 Woodruff Ave*.)

    Reference: California Fire Code § 505.1

Please ensure the Fire and Health & Safety Code violations listed in this report are satisfactorily abated by **March 30, 2015.** If further information or assistance is needed, feel free to call me at (562) 904-7348.

Sincerely,
**DOWNEY FIRE DEPARTMENT**

Lee Kirby
Hazardous Materials Specialist-Fire Inspector

C/c: Mike Kilroy, Operations Manager – Kirkhill

**Downey Fire Department**
11111 Brookshire Boulevard
Downey, California 90241
(562) 904-7345

COPY

**DATE:** **March 25, 2013**

**TO:** **Scott Keller**
**Director of Operations**
**CalConduit**
**12021 Woodruff Ave.**
**Downey, CA 90241**

**FROM:** **Lee Kirby – Hazardous Materials Specialist**
**City of Downey Fire Department**
**11111 Brookshire Avenue**
**Downey, CA 90241**

**SUBJECT:** **HAZARDOUS MATERIALS RE-INSPECTION / RETURN TO COMPLIANCE**
**CalConduit – 12021 Woodruff Ave., Downey, CA**

Pursuant to the re-inspection of your facility by the Downey Fire Department on March 25, 2013, it has been determined that the required corrective action has been satisfactorily completed with the areas inspected free of any condition that presents an immediate fire-life safety and/or environmental hazard. Further, the business was determined to be in compliance with the requirements of the Hazardous Materials Business Plan Program as outlined in Chapter 6.95 of the California Health & Safety Code.

Nothing in the above shall be construed as indicating approval of the integrity of the building, nor shall it preclude the requirements of any other agency. If there are any questions, please feel free to call me at (562) 904-7348.

**Downey Fire Department**
11111 Brookshire Boulevard
Downey, California 90241
(562) 904-7345

COPY

January 29, 2013

Scott Keller
Director of Operations
Calconduit
12021 Woodruff Ave.
Downey, CA 90241

Subject: **Hazardous Materials Inspection – CalPipe Industries, 12021 Woodruff Ave., Downey, CA**

Dear Mr. Keller:

Members of the Downey Fire Department conducted a hazardous materials inspection at the above-referenced location this day. The following fire code violations were observed and require the necessary corrective action.

1. Hazardous Materials Disclosure Update – California Health & Safety Code requires a business, which handles hazardous materials, to annually review and certify their hazardous materials inventory; and the business shall review and certify all documents within their Hazardous Material Business Plan (HMBP) [**create a CERS account at cers.calepa.ca.gov and electronically submit HMBP and chemical inventory. Provide required updated site map for change in chemical storage and handling**]
   Reference: California H&S Code, Section 25505(d)

2. Container Identification Labeling/Signs - Containers, drums, above-ground tanks or other packages of hazardous materials shall be clearly identified or labeled in accordance with nationally recognized standards as to container's contents (**provide approved hazardous materials / NFPA 704 signage to Stoddard solvent dip tank**)
   Reference: California Fire Code, Section 2703.5

3. Abatement of Electrical Hazards - Electrical wiring, devices, appliances and other equipment which are modified or damaged and constitute and electrical shock or fire hazard shall not be used (**cease hanging of clothes and/or other items on electrical breaker boxes in packing-shipping area**)
   Reference: California Fire Code, Section 605.1

4. Electrical Wiring and Equipment - Areas where flammable liquids are stored, handled or dispensed, shall be equipped in the appropriate classification of wiring and equipment, in accordance with the Electrical Code and otherwise required by Article 79 (**cease storing flammable solvents adjacent to electrical panel in machining area**)
   Reference: California Fire Code, Section 1503.2.1

5. Unauthorized Releases / Housekeeping - Flammable and combustible liquids and petroleum waste products shall not be discharged or released upon the ground. Immediate action shall be taken to control leakage and prevent accidental escape of flammable or combustible liquids (**abate oil releases to shop floor around machinery throughout facility**)
   Reference: California Fire Code, Section 2703.3; 1504.5

6. Separation from Incompatible Materials - Incompatible materials shall be separated by a distance of not less than 20 feet (**cease storing oxidizers and flammables together. Compressed Oxygen (oxidizer) was observed stored with flammable Acetylene**)
   Reference: California Fire Code, Section 2703.9.8

7. Bonding of Vessels - Vessels used for mixing or dispensing of flammable liquids shall be electrically connected by bond wires, piping or similar means where differences of potential could be created by the accumulation of static electricity charges [**where flammable liquids are being dispensed from drums (i.e. Stoddard solvent, lacquer thinner) provide approved bond-grounding of these containers**]
   Reference: California Fire Code, Section 2304.3.2

A re-inspection will be conducted on, or after **March 4, 2013** to ensure the necessary corrective action has been completed. If further assistance is needed, feel free to call (562) 904-7345.

Sincerely,

**DOWNEY FIRE DEPARTMENT**

Lee Kirby
Hazardous Materials Specialist

Encl:(3)

## Site Identification

**CAL PIPE INDUSTRIES**
12021 WOODRUFF AVE
DOWNEY, CA 90241
County
Los Angeles

CERS ID
**10303933**
EPA ID Number
CAL000348524

## Submittal Status

Submitted on 3/25/2013 by *Scott Keller* of CAL PIPE INDUSTRIES (DOWNEY, CA)
Submittal was ***Accepted***; Processed on 7/30/2013 by *LAWRENCE SCHUSTER* for Los Angeles County Fire Department
Comments by regulator: An initial review of your submission has been accepted for completeness of required forms; however, the accuracy of your submission will be verified by your inspector at a future date.

If you have any questions please contact the Data Operations Unit at (323)890-4000.

## Hazardous Materials

| | |
|---|---|
| Does your facility have on site (for any purpose) at any one time, hazardous materials at or above 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases (include liquids in ASTs and USTs); or is regulated under more restrictive inventory local reporting requirements (shown below if present); or the applicable Federal threshold quantity for an extremely hazardous substance specified in 40 CFR Part 355, Appendix A or B; or handle radiological materials in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40 or 70? | **Yes** |

## Underground Storage Tank(s) (UST)

| | |
|---|---|
| Does your facility own or operate underground storage tanks? | **No** |

## Hazardous Waste

| | |
|---|---|
| Is your facility a Hazardous Waste Generator? | **Yes** |
| Does your facility treat hazardous waste on-site? | **No** |
| Is your facility's treatment subject to financial assurance requirements (for Permit by Rule and Conditional Authorization)? | **No** |
| Does your facility consolidate hazardous waste generated at a remote site? | **No** |
| Does your facility need to report the closure/removal of a tank that was classified as hazardous waste and cleaned on-site? | **No** |
| Does your facility generate in any single calendar month 1,000 kilograms (kg) (2,200 pounds) or more of federal RCRA hazardous waste, or generate in any single calendar month, or accumulate at any time, 1 kg (2.2 pounds) of RCRA acute hazardous waste; or generate or accumulate at any time more than 100 kg (220 pounds) of spill cleanup materials contaminated with RCRA acute hazardous waste. | **No** |
| Is your facility a Household Hazardous Waste (HHW) Collection site? | **No** |

## Excluded and/or Exempted Materials

| | |
|---|---|
| Does your facility recycle more than 100 kg/month of excluded or exempted recyclable materials (per HSC 25143.2)? | **No** |
| Does your facility own or operate ASTs above these thresholds? Store greater than 1,320 gallons of petroleum products (new or used) in aboveground tanks or containers. | **No** |
| Does your facility have Regulated Substances stored onsite in quantities greater than the threshold quantities established by the California Accidental Release prevention Program (CalARP)? | **No** |

## Additional Information

No additional comments provided.

# Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **CAL PIPE INDUSTRIES**
Facility Name **CAL PIPE INDUSTRIES**
12021 WOODRUFF AVE, DOWNEY 90241

Chemical Location [redacted]

CERS ID **10303933**
Facility ID **LACoFA0043803**
Status **Submitted** on 3/25/2013 11:02 AM

| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|
| DOT: 2.1 - Flammable Gases<br>Flammable Gas | **Acetylene**<br>CAS No<br>74-86-2 | **Cu. Feet**<br>State<br>Gas<br>Type<br>Pure | **408**<br>Storage Container<br>Cylinder<br>Days on Site: 365 | **136** | 136<br>Pressue<br>> Ambient<br>Temperature<br>Ambient | Waste Code | - Fire<br>- Pressure Release<br>- Acute Health | | | |
| Other | **Argon and Carbon Dioxide in Helium**<br>CAS No | **Cu. Feet**<br>State<br>Gas<br>Type<br>Mixture | **440**<br>Storage Container<br>Cylinder<br>Days on Site: 365 | **220** | 220<br>Pressue<br>> Ambient<br>Temperature<br>Ambient | Waste Code | - Pressure Release<br>- Acute Health | Argon<br>Helium<br>Carbon Dioxide | 65 %<br>30 %<br>5 % | 7440-37-1<br>7440-59-7<br>124-38-9 |
| Other | **Argon Co2 Mix**<br>CAS No | **Cu. Feet**<br>State<br>Gas<br>Type<br>Mixture | **660**<br>Storage Container<br>Cylinder<br>Days on Site: 365 | **220** | 220<br>Pressue<br>> Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | Argon<br>Carbon Dioxide | 75 %<br>25 % | 7440-37-1<br>124-38-9 |
| DOT: 2.2 - Nonflammable Gases<br>Other | **Argon Compressed**<br>CAS No<br>7440-37-1 | **Cu. Feet**<br>State<br>Gas<br>Type<br>Pure | **300**<br>Storage Container<br>Cylinder<br>Days on Site: 365 | **300** | 200<br>Pressue<br>> Ambient<br>Temperature<br>Ambient | Waste Code | - Pressure Release | | | |
| Irritant | **Cal 32 (Alkaline soap solution)**<br>CAS No | **Gallons**<br>State<br>Liquid<br>Type<br>Mixture | **55**<br>Storage Container<br>Plastic/Non-metalic Drum<br>Days on Site: 365 | **55** | 55<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | Sodium Metasilicate<br>Sodium Dodecylbenzene Sulfonate | 35 %<br>5 % | 6834-92-0<br>1886-81-3 |
| DOT: 2.2 - Nonflammable Gases<br>Other | **Helium, Compressed**<br>CAS No<br>7440-59-7 | **Cu. Feet**<br>State<br>Gas<br>Type<br>Pure | **200**<br>Storage Container<br>Cylinder<br>Days on Site: 365 | **200** | 200<br>Pressue<br>> Ambient<br>Temperature<br>Ambient | Waste Code | - Pressure Release<br>- Acute Health | | | |
| DOT: 2.2 - Nonflammable Gases | **Nitrogen**<br>CAS No<br>7727-37-9 | **Cu. Feet**<br>State<br>Gas<br>Type<br>Pure | **1216**<br>Storage Container<br>Cylinder<br>Days on Site: 365 | **304** | 304<br>Pressue<br>> Ambient<br>Temperature<br>Ambient | Waste Code | - Pressure Release<br>- Acute Health | | | |
| DOT: 2.2 - Nonflammable Gases<br>Oxidizing, Class 2 | **Oxygen (Compressed)**<br>CAS No<br>7782-44-7 | **Cu. Feet**<br>State<br>Gas<br>Type<br>Pure | **600**<br>Storage Container<br>Cylinder<br>Days on Site: 365 | **200** | 200<br>Pressue<br>> Ambient<br>Temperature<br>Ambient | Waste Code | - Reactive<br>- Pressure Release | | | |

# Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **CAL PIPE INDUSTRIES**
Facility Name **CAL PIPE INDUSTRIES**
12021 WOODRUFF AVE, DOWNEY 90241

Chemical Location [redacted]

CERS ID **10303933**
Facility ID **LACoFA0043803**
Status **Submitted** on 3/25/2013 11:02 AM

| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DOT: 3 - Flammable and Combustible Liquids<br><br>Combustible Liquid, Class II | **Used lubricating oils**<br>CAS No | **Gallons**<br>State: Liquid<br>Type: Waste | **440**<br>Storage Container: Steel Drum<br>Days on Site: 365 | **55** | 55<br>Pressue: Ambient<br>Temperature: Ambient | 440<br>Waste Code: 221 | - Fire | Petroleum Waste | | | |

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Chemical Location [redacted]

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| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DOT: 3 - Flammable and Combustible Liquids<br>Flammable Liquid, Class I-A, Toxic, 4 | **Laquer Thinner**<br>CAS No | **Gallons**<br>State: Liquid<br>Type: Mixture | **110**<br>Storage Container: Steel Drum<br>Days on Site: 365 | **55** | 55<br>Pressue: Ambient<br>Temperature: Ambient | Waste Code | - Fire | Acetone<br>Toluene<br>N-Butyl Acetate | | | 67-64-1<br>108-88-3<br>123-86-4 |
| DOT: 3 - Flammable and Combustible Liquids<br>Combustible Liquid, Class III-B | **Lubricating Oils**<br>CAS No | **Gallons**<br>State: Liquid<br>Type: Mixture | **220**<br>Storage Container: Steel Drum, Other<br>Days on Site: 365 | **55** | 55<br>Pressue: Ambient<br>Temperature: Ambient | Waste Code | - Fire | Severely Hydrotreated Heavy Napthenic Distillates | | | 64742-52-5 |

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| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Largest Cont. | Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DOT: 3 - Flammable and Combustible Liquids<br><br>Combustible Liquid, Class II | **Stoddard Solvent**<br>CAS No<br>8052-41-3 | **Gallons**<br>State<br>Liquid<br>Type<br>Mixture | **110**<br>Storage Container<br>Steel Drum<br>Days on Site: 365 | **55** | 55<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Fire<br>- Acute Health | Stoddard Solvant | | | 8052-41-3 |

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| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DOT: 2.1 - Flammable Gases | **Liquefied Petroleum Gas (lpg)** | **Cu. Feet** | **5256** | **1800** | 1440 | | - Fire | Propane | 85 % | | 74-98-6 |
| | CAS No | State | Storage Container | | Pressue | Waste Code | - Pressure | Ethane | 7 % | | 74-84-0 |
| Flammable Gas | 74-98-6 | Gas | Cylinder | | > Ambient | | Release | Propylene | 5 % | | 115-07-01 |
| | | Type | | | Temperature | | | Butanes | 2 % | | 106-97-8 |
| | | Pure | Days on Site: 365 | | Ambient | | | Ethyl Mercaptan | 1 % | | 75-08-1 |

# California Environmental Reporting System (CERS) — Business Activities

## Site Identification

**KIRKHILL MANUFACTURE CO**
12023 WOODRUFF AVE
DOWNEY, CA 90241
County
Los Angeles

CERS ID
**10303885**
EPA ID Number
CAL002326801

## Submittal Status

Submitted on 2/26/2018 by *Michael Kilroy* of KIRKHILL MANUFACTURE CO (DOWNEY, CA)
Submittal was ***Accepted***; Processed on 5/12/2018 by *La Tanya Campbell* for Los Angeles County Fire Department
Comments by regulator: An initial review of your submission has been accepted for completeness for required forms; however, the accuracy of your submission will be verified by your inspector at a future date.

If you have any questions please contact the Data Operations Unit at 323-890-4000

## Hazardous Materials

| | |
|---|---|
| Does your facility have on site (for any purpose) at any one time, hazardous materials at or above 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases (include liquids in ASTs and USTs); or is regulated under more restrictive inventory local reporting requirements (shown below if present); or the applicable Federal threshold quantity for an extremely hazardous substance specified in 40 CFR Part 355, Appendix A or B; or handle radiological materials in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40 or 70? | **Yes** |

## Underground Storage Tank(s) (UST)

| | |
|---|---|
| Does your facility own or operate underground storage tanks? | **No** |

## Hazardous Waste

| | |
|---|---|
| Is your facility a Hazardous Waste Generator? | **Yes** |
| Does your facility treat hazardous waste on-site? | **No** |
| Is your facility's treatment subject to financial assurance requirements (for Permit by Rule and Conditional Authorization)? | **No** |
| Does your facility consolidate hazardous waste generated at a remote site? | **No** |
| Does your facility need to report the closure/removal of a tank that was classified as hazardous waste and cleaned on-site? | **No** |
| Does your facility generate in any single calendar month 1,000 kilograms (kg) (2,200 pounds) or more of federal RCRA hazardous waste, or generate in any single calendar month, or accumulate at any time, 1 kg (2.2 pounds) of RCRA acute hazardous waste; or generate or accumulate at any time more than 100 kg (220 pounds) of spill cleanup materials contaminated with RCRA acute hazardous waste. | **No** |
| Is your facility a Household Hazardous Waste (HHW) Collection site? | **No** |

## Excluded and/or Exempted Materials

| | |
|---|---|
| Does your facility recycle more than 100 kg/month of excluded or exempted recyclable materials (per HSC 25143.2)? | **No** |
| Does your facility own or operate ASTs above these thresholds? Store greater than 1,320 gallons of petroleum products (new or used) in aboveground tanks or containers. | **No** |
| Does your facility have Regulated Substances stored onsite in quantities greater than the threshold quantities established by the California Accidental Release prevention Program (CalARP)? | **No** |

## Additional Information

No additional comments provided.

# Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **KIRKHILL MANUFACTURE CO**
Facility Name **KIRKHILL MANUFACTURE CO**
12023 WOODRUFF AVE, DOWNEY 90241

Chemical Location [redacted]

CERS ID **10303885**
Facility ID **LACoFA0030310**
Status **Submitted** on 2/26/2018 7:33 AM

| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | **BUTYL**<br>CAS No<br>9010-85-9 | **Pounds**<br>State<br>Solid<br>Type<br>Pure | **9214**<br>Storage Container<br>Box | **2000** | 4849<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | | | |
| | **EPDM**<br>CAS No<br>25038-36-2 | **Pounds**<br>State<br>Solid<br>Type<br>Pure | **80000**<br>Storage Container<br>Box | **2000** | 45000<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | | | |
| | **HNBR**<br>CAS No<br>88254-10-8 | **Pounds**<br>State<br>Solid<br>Type<br>Pure | **2142**<br>Storage Container<br>Box | **1000** | 1127<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | | | |
| | **HYDRIN/ECO**<br>CAS No<br>24969-10-6 | **Pounds**<br>State<br>Solid<br>Type<br>Pure | **5717**<br>Storage Container<br>Box | **55** | 3009<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | Ethylidene Oxide | 1 % | 75-21-8 |
| | **NATURAL RUBBER/NR**<br>CAS No<br>9003-31-0 | **Pounds**<br>State<br>Solid<br>Type<br>Pure | **75000**<br>Storage Container<br>Box | **2000** | 20000<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | | | |
| | **NBR**<br>CAS No<br>9003-18-3 | **Pounds**<br>State<br>Solid<br>Type<br>Pure | **40000**<br>Storage Container<br>Box | **2000** | 15000<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | | | |
| | **Neoprene**<br>CAS No<br>126-99-8 | **Pounds**<br>State<br>Solid<br>Type<br>Mixture | **100000**<br>Storage Container<br>Box | **2000** | 50000<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | Neoprene<br>Talc<br>Water | 98 %<br>1 %<br>1 % | 126-99-8<br>14807-96-6<br>7732-18-5 |
| | **OZO**<br>CAS No | **Pounds**<br>State<br>Solid<br>Type<br>Mixture | **40000**<br>Storage Container<br>Box | **55** | 10000<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | | | |

# Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **KIRKHILL MANUFACTURE CO**
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Chemical Location [redacted]

CERS ID **10303885**
Facility ID **LACoFA0030310**
Status **Submitted** on 2/26/2018 7:33 AM

| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **SBR** | **Pounds** | **85737** | **2000** | 45125 | | - Acute Health | | | | |
| | CAS No: 9003-55-8 | State: Solid | Storage Container: Box | | Pressue: Ambient | Waste Code | | | | | |
| | | Type: Pure | | | Temperature: Ambient | | | | | | |
| | **VAMAC/AEM** | **Pounds** | **6000** | **55** | 2000 | | - Acute Health | Methyl Acrylate | 2 % | | 96-33-3 |
| | CAS No: N/A | State: Solid | Storage Container: Box | | Pressue: Ambient | Waste Code | | Methyl Alcohol | 1 % | | 67-56-1 |
| | | Type: Pure | | | Temperature: Ambient | | | | | | |
| | **XNBR** | **Pounds** | **4480** | **2000** | 2358 | | - Acute Health | 4-Vinyl Cyclohexen | 0 % | | 100-40-3 |
| | CAS No: 9010-81-5 | State: Solid | Storage Container: Box | | Pressue: Ambient | Waste Code | | | | | |
| | | Type: Pure | | | Temperature: Ambient | | | | | | |

# Hazardous Materials And Wastes Inventory Matrix Report

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Chemical Location [redacted]

CERS ID **10303885**
Facility ID **LACoFA0030310**
Status **Submitted** on 2/26/2018 7:33 AM

| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities Max. Daily | Largest Cont. | Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only) Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Carbon black** | **Pounds** | **100000** | **2000** | 40000 | | - Fire<br>- Chronic health | | | | |
| | CAS No<br>1333-86-4 | State<br>Solid | Storage Container<br>Bag | | Pressue<br>Ambient | Waste Code | | | | | |
| | | Type<br>Pure | | | Temperature<br>Ambient | | | | | | |

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Chemical Location [redacted]

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| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **LUBRICATING OILS (MACHINERY)** | **Gallons** | **75** | **50** | 20 | | - Fire | | | | |
| | CAS No: 64742-52-5 | State: Liquid | Storage Container: Steel Drum | | Pressue: Ambient | Waste Code | | | | | |
| | | Type: Mixture | | | Temperature: Ambient | | | | | | |

# Hazardous Materials And Wastes Inventory Matrix Report

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Chemical Location [redacted]

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| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Antimony trioxide**<br>CAS No<br>1309-64-4 | **Pounds**<br>State<br>Solid<br>Type<br>Pure | **3413**<br>Storage Container<br>Plastic/Non-metalic Drum | **250** | 1797<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health<br>- Chronic health | | | | |
| | **CELOGEN OT**<br>CAS No<br>80-51-3 | **Pounds**<br>State<br>Solid<br>Type<br>Pure | **4500**<br>Storage Container<br>Bag | **25** | 1000<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Fire<br>- Acute Health | | | | |
| | **Chemlube L**<br>CAS No | **Pounds**<br>State<br>Solid<br>Type<br>Mixture | **3528**<br>Storage Container<br>Bag | **55** | 1857<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Fire | | | | |
| | **DBEEA**<br>CAS No<br>141-17-3 | **Gallons**<br>State<br>Liquid<br>Type<br>Pure | **564**<br>Storage Container<br>Steel Drum | **55** | 297<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Fire | | | | |
| | **DOS**<br>CAS No<br>122-62-3 | **Gallons**<br>State<br>Liquid<br>Type<br>Pure | **880**<br>Storage Container<br>Steel Drum | **55** | 110<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Fire | | | | |
| | **HR-768**<br>CAS No | **Pounds**<br>State<br>Solid<br>Type | **3000**<br>Storage Container<br>Box | **44** | 1000<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | | | | |
| | **Kaolin**<br>CAS No<br>1332-58-7 | **Pounds**<br>State<br>Solid<br>Type<br>Pure | **47943**<br>Storage Container<br>Bag | **2000** | 25233<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | | | | | |
| | **Pine Tar**<br>CAS No | **Gallons**<br>State<br>Liquid<br>Type<br>Mixture | **7101**<br>Storage Container<br>Steel Drum | **55** | 1000<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Acute Health | Tall Oil Pitch<br>No.2 Diesel Oil<br>Crude Tall Oil<br>Rosin Oil | 65 %<br>20 %<br>6 %<br>9 % | | 8016-81-7<br>68476-34-6<br>8002-26-4<br>68425-08-1 |

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Chemical Location [redacted]

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| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Proaid PEP** | **Pounds** | **3528** | **55** | 1857 | | - Acute Health | | | | |
| | CAS No | State: Solid | Storage Container: Bag | | Pressue: Ambient | Waste Code | | | | | |
| | | Type: Mixture | | | Temperature: Ambient | | | | | | |
| | **Proaid Plus** | **Pounds** | **2521** | **55** | 1327 | | - Fire | | | | |
| | CAS No | State: Solid | Storage Container: Box | | Pressue: Ambient | Waste Code | | | | | |
| | | Type: Mixture | | | Temperature: Ambient | | | | | | |
| | **Talc** | **Pounds** | **10000** | **44** | 1162 | | - Acute Health<br>- Chronic health | | | | |
| | CAS No: 14807-96-6 | State: Solid | Storage Container: Bag | | Pressue: Ambient | Waste Code | | | | | |
| | | Type: Pure | | | Temperature: Ambient | | | | | | |
| | **TBBS** | **Pounds** | **5857** | **500** | 3083 | | - Acute Health | | | | |
| | CAS No: 95-31-8 | State: Solid | Storage Container: Bag | | Pressue: Ambient | Waste Code | | | | | |
| | | Type: Pure | | | Temperature: Ambient | | | | | | |
| | **TETD** | **Pounds** | **2615** | **44** | 1376 | | - Acute Health<br>- Chronic health | | | | |
| | CAS No: 97-77-8 | State: Solid | Storage Container: Bag | | Pressue: Ambient | Waste Code | | | | | |
| | | Type: Pure | | | Temperature: Ambient | | | | | | |
| | **TMTD** | **Pounds** | **1921** | **44** | 1011 | | - Acute Health | | | | |
| | CAS No: 137-26-8 | State: Solid | Storage Container: Bag | | Pressue: Ambient | Waste Code | | | | | |
| | | Type: Pure | | | Temperature: Ambient | | | | | | |
| | **TMTM** | **Pounds** | **2696** | **44** | 1419 | | - Fire<br>- Acute Health | | | | |
| | CAS No: 97-74-5 | State: Solid | Storage Container: Bag | | Pressue: Ambient | Waste Code | | | | | |
| | | Type: Pure | | | Temperature: Ambient | | | | | | |
| | **Wollastonite** | **Pounds** | **2811** | **44** | 1479 | | - Acute Health | | | | |
| | CAS No: 13983-17-0 | State: Solid | Storage Container: Bag | | Pressue: Ambient | Waste Code | | | | | |
| | | Type: Pure | | | Temperature: Ambient | | | | | | |

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Chemical Location [redacted]

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Status **Submitted** on 2/26/2018 7:33 AM

| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities Max. Daily | Largest Cont. | Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only) Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ZDBC** | **Pounds** | **2363** | **44** | 1244 | | - Acute Health | | | | |
| | CAS No 136-23-2 | State Solid | Storage Container Bag | | Pressue Ambient | Waste Code | | | | | |
| | | Type Pure | | | Temperature Ambient | | | | | | |
| | **ZINC STEARATE** | **Pounds** | **5000** | **55** | 2000 | | - Acute Health | | | | |
| | CAS No 67762-34-9 | State Solid | Storage Container Bag | | Pressue Ambient | Waste Code | | | | | |
| | | Type Pure | | | Temperature Ambient | | | | | | |

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Facility ID **LACoFA0030310**
Status **Submitted** on 2/26/2018 7:33 AM

| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities Max. Daily | Quantities Largest Cont. | Quantities Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only) Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **PTFE** | **Pounds** | **1000** | **40** | 200 | | - Acute Health | | | | |
| | CAS No 9002-84-0 | State Solid | Storage Container Plastic/Non-metalic Drum | | Pressue Ambient | Waste Code | | | | | |
| | | Type Pure | | | Temperature Ambient | | | | | | |

# Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **KIRKHILL MANUFACTURE CO**
Facility Name **KIRKHILL MANUFACTURE CO**
12023 WOODRUFF AVE, DOWNEY 90241

Chemical Location [redacted]

CERS ID **10303885**
Facility ID **LACoFA0030310**
Status **Submitted** on 2/26/2018 7:33 AM

| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Process Oil** | **Gallons** | **6000** | **3000** | 1500 | | - Fire | | | | |
| | CAS No<br>64741-96-4 | State<br>Liquid | Storage Container<br>Aboveground Tank | | Pressue<br>Ambient | Waste Code | | | | | |
| | | Type<br>Pure | | | Temperature<br>Ambient | | | | | | |

# Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **KIRKHILL MANUFACTURE CO**
Facility Name **KIRKHILL MANUFACTURE CO**
12023 WOODRUFF AVE, DOWNEY 90241

Chemical Location



CERS ID **10303885**
Facility ID **LACoFA0030310**
Status **Submitted** on 2/26/2018 7:33 AM

| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities Max. Daily | Largest Cont. | Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only) Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **FKM** | **Pounds** | **1403** | **55** | 738 | | - Acute Health | Polyvinylidenefluoride/hexafluoro propane | 98 % | | 9011-17-0 |
| | CAS No 9011-17-0 | State Solid | Storage Container Box | | Pressue Ambient | Waste Code | | Barium Sulfate | 2 % | | 7727-43-7 |
| | | Type Pure | | | Temperature Ambient | | | | | | |

# Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **KIRKHILL MANUFACTURE CO**
Facility Name **KIRKHILL MANUFACTURE CO**
12023 WOODRUFF AVE, DOWNEY 90241

Chemical Location [redacted]

CERS ID **10303885**
Facility ID **LACoFA0030310**
Status **Submitted** on 2/26/2018 7:33 AM

| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | **DOP/DEHP**<br>CAS No<br>117-81-7 | **Gallons**<br>State<br>Liquid<br>Type<br>Pure | **2000**<br>Storage Container<br>Tote Bin | **200** | 300<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Fire<br>- Acute Health | | | |
| | **Lubricating Oil**<br>CAS No | **Gallons**<br>State<br>Liquid<br>Type<br>Mixture | **400**<br>Storage Container<br>Steel Drum, Tote Bin | **55** | 150<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Fire | Petroleum Hydrocarbons<br><br><br>Additives | 85 %<br><br><br>15 % | 64742-54-7<br>64742-65-0<br>64742-62-7<br>Proprietary |
| | **WASTE LUBRICATING OILS (MACHINERY)**<br>CAS No<br>64742-52-5 | **Gallons**<br>State<br>Liquid<br>Type<br>Waste | **100**<br>Storage Container<br>Steel Drum, Tote Bin | **50** | 50<br>Pressue<br>Ambient<br>Temperature<br>Ambient | Waste Code | - Fire | | | |

# Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **KIRKHILL MANUFACTURE CO**
Facility Name **KIRKHILL MANUFACTURE CO**
12023 WOODRUFF AVE, DOWNEY 90241

Chemical Location [redacted]

CERS ID **10303885**
Facility ID **LACoFA0030310**
Status **Submitted** on 2/26/2018 7:33 AM

| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DOT: 2.1 - Flammable Gases<br>Unstable (Reactive), Class 2, Flammable Gas | **Acetylene**<br>CAS No<br>74-86-2 | **Cu. Feet**<br>State<br>Gas<br>Type<br>Pure | **500**<br>Storage Container<br>Cylinder | **100** | 100<br>Pressue<br>> Ambient<br>Temperature<br>Ambient | Waste Code | - Fire<br>- Reactive<br>- Pressure Release<br>- Acute Health | | | | |
| | **Argon Compressed**<br>CAS No<br>7440-37-1 | **Cu. Feet**<br>State<br>Gas<br>Type<br>Pure | **500**<br>Storage Container<br>Cylinder | **200** | 200<br>Pressue<br>> Ambient<br>Temperature<br>Ambient | Waste Code | - Pressure Release<br>- Acute Health | | | | |
| DOT: 2.2 - Nonflammable Gases<br>Oxidizing, Class 2 | **Oxygen**<br>CAS No<br>7782-44-7 | **Cu. Feet**<br>State<br>Gas<br>Type<br>Pure | **500**<br>Storage Container<br>Cylinder | **200** | 200<br>Pressue<br>> Ambient<br>Temperature<br>Ambient | Waste Code | - Fire<br>- Pressure Release | | | | |

# Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **KIRKHILL MANUFACTURE CO**
Facility Name **KIRKHILL MANUFACTURE CO**
12023 WOODRUFF AVE, DOWNEY 90241

Chemical Location [redacted]

CERS ID **10303885**
Facility ID **LACoFA0030310**
Status **Submitted** on 2/26/2018 7:33 AM

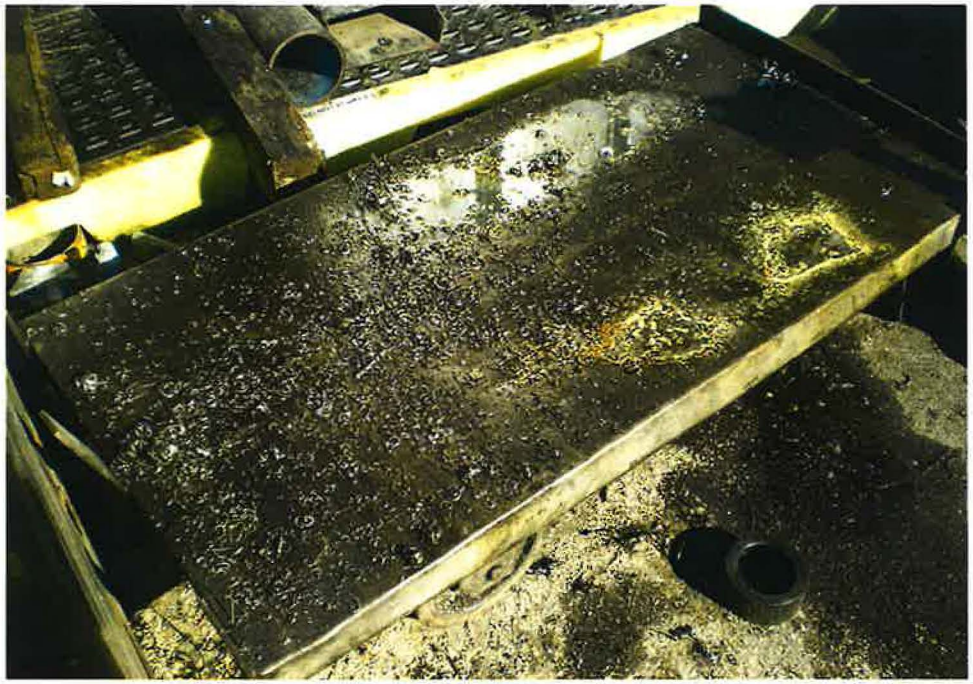
| DOT Code/Fire Haz. Class | Common Name | Unit | Quantities: Max. Daily | Quantities: Largest Cont. | Quantities: Avg. Daily | Annual Waste Amount | Federal Hazard Categories | Hazardous Components (For mixture only): Component Name | % Wt | EHS | CAS No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DOT: 2.1 - Flammable Gases<br><br>Flammable Gas | **Liquefied Petroleum Gas (lpg)**<br>CAS No<br>74-98-6 | **Gallons**<br>State<br>Gas<br>Type<br>Pure | **100**<br>Storage Container<br>Cylinder | **8** | 50<br>Pressue<br>> Ambient<br>Temperature<br>Ambient | Waste Code | - Fire<br>- Pressure Release<br>- Acute Health | | | | |



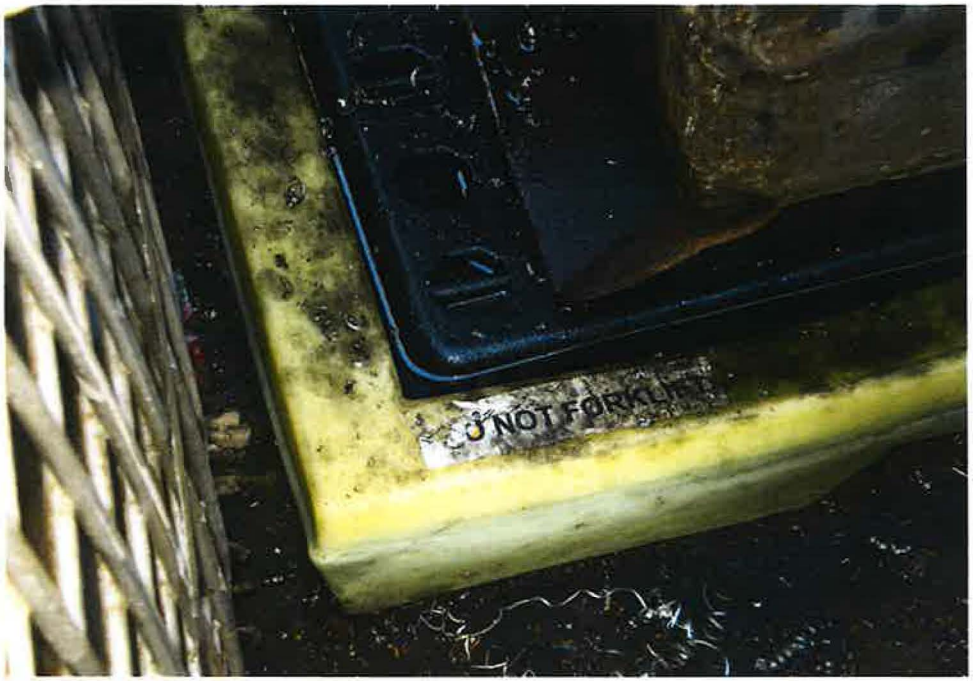











DO NOT FORKLIFT




TS3i

## Thomas, Margaret

| | |
|---|---|
| From: | Charitye Cunningham <ccunningham@downeyca.org> |
| Sent: | Thursday, September 13, 2018 5:13 PM |
| To: | Thomas, Margaret |
| Cc: | Lee Kirby |
| Subject: | 12021 & 12023 Woodruff- HAZMAT Records Request |
| Attachments: | 12023 woodruff NOV Feb 2015.pdf; 12023 Woodruff - Kirkhill Hazmat Inventory CERS 2018.pdf; 12021 Woodruff Ave - Cal Pipe HM-Fire Inspection 2013.pdf; 12021 Woodruff Ave - Cal Pipe HM Release Jan 2013.pdf; 12021 Woodruff Ave - Cal Pipe Hazmat Inventory CERS 2013.pdf |

Good afternoon Ms. Thomas,

A records search was undertaken for 12021 and 12023 Woodruff Ave. properties as to determine the site's history as it relates to the handling of hazardous materials subject to EPCRA reporting, the operation of underground storage tanks (USTs), and historical record of hazardous material releases and code violations.

Downey Fire's records indicate that 12023 Woodruff Ave., and the former 12021 Woodruff Ave., were locations handling reportable quantities of hazardous materials. These business operations established and filed the required hazardous materials business plans (HMBP) with the Fire Department in accordance with State Law. Please see attachments for further details.

Neither of the referenced locations have a history of UST operations. The only documented hazardous substances releases were for the former Cal Pipe Industries at 12021 Woodruff Ave. The release (petroleum hydrocarbon oil) was observed during a fire inspection on Jan. 29, 2013 (see attached photographs). The release and associated fire code violations were satisfactorily abated.

The most recent fire-hazmat code compliance inspection at the Kirkhill Manufacturing plant (12023 Woodruff) took place on 2/19/15. All documented violations were satisfactorily abated and facility return-to-compliance on 6/17/15.

Should you have any questions, please feel free to contact myself or Hazmat Specialist, Lee Kirby.

Sincerely,

Charitye Cunningham
Fire Prevention Technician
City of Downey
11111 Brookshire Avenue
Downey, CA 90241
Office: (562) 904-7345
Email: ccunningham@downeyca.org

SOUTH COAST AQMD

# Facility INformation Detail (FIND)



**Compliance**

| | |
|---|---|
| **Facility ID** | 3736 |
| **Company Name** | KIRKHILL INC |
| **Address** | 12021 WOODRUFF AVE |
| | DOWNEY, CA 90241 |

## Notices Of Violaton: NONE

## Notices To Comply: NONE

SOUTH COAST AQMD

# Facility INformation Detail (FIND)



## Equipment List

**Facility ID** 3736

**Company Name** KIRKHILL INC

**Address** 12021 WOODRUFF AVE

DOWNEY, CA 90241

| Appl_Nbr | Permit_Nbr | Issued_Date | Permit_Status | Eq_Type | Equip_Description | Appl_Date | Appl_Status |
|---|---|---|---|---|---|---|---|
| 276166 | | | | Basic | COMPLIANCE PLAN FOR RULE 1146 | 12/28/1992 | BANKING/ PLAN GRANTED, NON BILLABLE |
| 276168 | | | | Basic | COMPLIANCE PLAN FOR RULE 1146 | 12/28/1992 | APPLICATION CANCELLED |
| A71115 | P49356 | 8/8/1972 | INACTIVE | Basic | BOILER (<5 MMBTU/HR) COMB GAS-DISTILL | 1/1/1990 | PERMIT TO OPERATE GRANTED |
| A71116 | P49357 | 8/8/1972 | INACTIVE | Basic | BOILER (<5 MMBTU/HR) COMB GAS-DISTILL | 1/1/1990 | PERMIT TO OPERATE GRANTED |
| C04694 | M01892 | 12/4/1963 | INACTIVE | Basic | RUBBER EXTRUDER | 1/1/1990 | PERMIT TO OPERATE GRANTED |
| C04695 | M01189 | 8/25/1977 | INACTIVE | Basic | RUBBER ROLL MILL | 1/1/1990 | PERMIT TO OPERATE GRANTED |
| C04698 | M01192 | 8/25/1977 | INACTIVE | Basic | RUBBER ROLL MILL | 1/1/1990 | PERMIT TO OPERATE GRANTED |
| C04697 | M01193 | 8/25/1977 | INACTIVE | Basic | RUBBER ROLL MILL | 1/1/1990 | PERMIT TO OPERATE GRANTED |
| C04695 | M01189 | 8/25/1977 | INACTIVE | Control | BAGHOUSE | 1/1/1990 | PERMIT TO OPERATE GRANTED |
| C04698 | M01192 | 8/25/1977 | INACTIVE | Control | BAGHOUSE | 1/1/1990 | PERMIT TO OPERATE GRANTED |
| C04697 | M01193 | 8/25/1977 | INACTIVE | Control | BAGHOUSE | 1/1/1990 | PERMIT TO OPERATE GRANTED |
| C04694 | M01892 | 12/4/1963 | INACTIVE | Control | BAGHOUSE, AMBIENT TEMP (>500 SQ FT) | 1/1/1990 | PERMIT TO OPERATE GRANTED |
| 202461 | D12298 | 11/29/1989 | INACTIVE | Basic | STORAGE TANK FUEL OIL | 6/5/1989 | PERMIT TO OPERATE GRANTED |
| 202460 | D12299 | 11/29/1989 | INACTIVE | Basic | STORAGE TANK FUEL OIL | 6/5/1989 | PERMIT TO OPERATE GRANTED |
| 202459 | D12300 | 11/29/1989 | INACTIVE | Basic | STORAGE TANK FUEL OIL | 6/5/1989 | PERMIT TO OPERATE GRANTED |
| C04696 | M01190 | 8/25/1977 | INACTIVE | Basic | RUBBER ROLL MILL | | PERMIT TO OPERATE GRANTED |
| C04696 | M01190 | 8/25/1977 | INACTIVE | Control | BAGHOUSE | | PERMIT TO OPERATE GRANTED |

First Prev Page 1 of 1 (17 records) Next Last Page 1 Export To Excel

SOUTH COAST AQMD

# Facility INformation Detail (FIND)



**Compliance**

| | |
|---|---|
| **Facility ID** | 124275 |
| **Company Name** | KMC ACQUISITION CORP |
| **Address** | 12023 WOODRUFF AVE |
| | DOWNEY, CA 90241 |

## Notices Of Violation

| Notice Number | Notice Issue Date | Violation Date | Disposition Date | Disposition |
|---|---|---|---|---|
| P43869 | 5/11/2004 | 4/30/2004 | 1/14/2005 | Closed Case |
| P46067 | 7/15/2005 | 7/15/2005 | 12/23/2005 | Closed Case |
| P50355 | 10/18/2006 | 9/15/2006 | 7/18/2007 | Closed Case |

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## Notices To Comply

| Notice Number | Violation Date | Re-Inspection Date | Status |
|---|---|---|---|
| C90892 | 4/30/2004 | 7/15/2004 | In Compliance |
| D01055 | 7/15/2005 | 10/26/2005 | In Compliance |
| D29341 | 9/24/2010 | 12/28/2010 | In Compliance |

First Prev Page 1 of 1 (3 records) Next Last Page 1 Export To Excel

SOUTH COAST AQMD

# Facility INformation Detail (FIND)



**NOV/NC Details**

| Notice Number | C90868 | Violation Date | 12/10/2003 | Issue Date | 1/20/2004 | Notice Type | NC |
|---|---|---|---|---|---|---|---|

| | |
|---|---|
| Facility ID | 138954 |
| Company Name | KVP INTERNATIONAL |
| Address | 12021 WOODRUFF<br>DOWNEY, CA 90241 |
| Violation Description | SUBMIT A PERMIT APPLICATION (WITH CORRECT FEES) FOR THE 200 GAL STEAM HEATED COOKING KETTLE. PROVIDE WRITTEN DOCUMENTATION SHOWING THE MAXIMUM HEAT INPUT FOR THE MC KENZE TRAY DRYER BURNER. |
| Equipment Description | |
| Status | In Compliance |
| Re-inspection Date | 1/20/2004 |

| Rule No. | Rule Description |
|---|---|
| 203 | Permit to Operate |
| 222 | Filing Requirements for Specific Emission Sources Not Requiring a Written Permit |

SOUTH COAST AQMD

# Facility INformation Detail (FIND)



## Equipment List

**Facility ID** 124275

**Company Name** KMC ACQUISITION CORP

**Address** 12023 WOODRUFF AVE

DOWNEY, CA 90241

| Appl_Nbr | Permit_Nbr | Issued_Date | Permit_Status | Eq_Type | Equip_Description | Appl_Date | Appl_Status |
|---|---|---|---|---|---|---|---|
| 463887 | | | | Basic | RUBBER ROLL MILL | 12/14/2006 | APPLICATION REJECTED |
| 463907 | | | | Control | BAGHOUSE, AMBIENT TEMP (>100-500 SQ FT) | 12/14/2006 | APPLICATION REJECTED |
| 462946 | F86945 | 1/12/2007 | ACTIVE | Control | BAGHOUSE, AMBIENT TEMP (<=100 SQ FT) | 11/14/2006 | PERMIT TO OPERATE GRANTED |
| 449297 | F86944 | 1/12/2007 | ACTIVE | Basic | RUBBER BLENDING | 9/30/2005 | PERMIT TO OPERATE GRANTED |
| 447530 | | | | Basic | RUBBER ROLL MILL | 8/9/2005 | APPLICATION REJECTED |
| 430113 | F75699 | 5/24/2005 | INACTIVE | Basic | BOILER (<5 MMBTU/HR) NAT GAS ONLY | 6/16/2004 | PERMIT TO OPERATE GRANTED |
| 401686 | F75700 | 5/24/2005 | ACTIVE | Basic | RUBBER ROLL MILL | 5/22/2002 | PERMIT TO OPERATE GRANTED |
| 401687 | F75698 | 5/24/2005 | ACTIVE | Control | BAGHOUSE, AMBIENT TEMP (>100-500 SQ FT) | 5/22/2002 | PERMIT TO OPERATE GRANTED |
| 396749 | F52216 | 5/22/2002 | ACTIVE | Basic | RUBBER ROLL MILL | 1/22/2002 | PERMIT TO OPERATE GRANTED |
| 396751 | F52217 | 5/22/2002 | ACTIVE | Basic | RUBBER ROLL MILL | 1/22/2002 | PERMIT TO OPERATE GRANTED |
| 396748 | F52218 | 5/22/2002 | ACTIVE | Basic | RUBBER ROLL MILL | 1/22/2002 | PERMIT TO OPERATE GRANTED |
| 372580 | F37481 | 2/22/2001 | ACTIVE | Basic | BOILER (<5 MMBTU/HR) COMB GAS-DISTILL | 7/18/2000 | PERMIT TO OPERATE GRANTED |
| 372579 | F37479 | 2/22/2001 | INACTIVE | Basic | BOILER (<5 MMBTU/HR) COMB GAS-DISTILL | 7/18/2000 | PERMIT TO OPERATE GRANTED |
| 372589 | F41986 | 7/21/2001 | ACTIVE | Basic | RUBBER PRESSES/MOLDS W/ RAM DIAMENTER >26" | 7/18/2000 | PERMIT TO OPERATE GRANTED |
| 372588 | F41997 | 7/21/2001 | ACTIVE | Basic | RUBBER PRESSES/MOLDS W/ RAM DIAMENTER >26" | 7/18/2000 | PERMIT TO OPERATE GRANTED |
| 372586 | F41998 | 7/21/2001 | INACTIVE | Basic | RUBBER PRESSES/MOLDS W/ RAM DIAMENTER >26" | 7/18/2000 | PERMIT TO OPERATE GRANTED |
| 372587 | F37485 | 2/22/2001 | ACTIVE | Basic | RUBBER ROLL MILL | 7/18/2000 | PERMIT TO OPERATE GRANTED |
| 372748 | F41985 | 7/21/2001 | ACTIVE | Basic | RUBBER ROLL MILL | 7/18/2000 | PERMIT TO OPERATE GRANTED |
| 372584 | F37483 | 2/22/2001 | INACTIVE | Basic | RUBBER ROLL MILL | 7/18/2000 | PERMIT TO OPERATE GRANTED |
| 372585 | F37484 | 2/22/2001 | INACTIVE | Basic | RUBBER ROLL MILL | 7/18/2000 | PERMIT TO OPERATE |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | GRANTED |
| 372582 | F37482 | 2/22/2001 | ACTIVE | Control | BAGHOUSE, AMBIENT TEMP (>500 SQ FT) | 7/18/2000 | PERMIT TO OPERATE GRANTED |

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SOUTH COAST AQMD

# Facility INformation Detail (FIND)



## Equipment List

**Facility ID** 111439

**Company Name** KMC ACQUISTION CORPORATION

**Address** 12023 WOODRUFF AVE

DOWNEY, CA 90241

| Appl_Nbr | Permit_Nbr | Issued_Date | Permit_Status | Eq_Type | Equip_Description | Appl_Date | Appl_Status |
|---|---|---|---|---|---|---|---|
| 325235 | F5778 | 3/13/1997 | INACTIVE | Basic | BOILER (<5 MMBTU/HR) COMB GAS-DISTILL | 2/25/1997 | PERMIT TO OPERATE GRANTED |
| 325234 | F5780 | 3/13/1997 | INACTIVE | Basic | BOILER (<5 MMBTU/HR) COMB GAS-DISTILL | 2/25/1997 | PERMIT TO OPERATE GRANTED |
| 325232 | F5782 | 3/13/1997 | INACTIVE | Basic | RUBBER EXTRUDER | 2/25/1997 | PERMIT TO OPERATE GRANTED |
| 325233 | F5781 | 3/13/1997 | INACTIVE | Basic | RUBBER ROLL MILL | 2/25/1997 | PERMIT TO OPERATE GRANTED |
| 325230 | F5827 | 3/18/1997 | INACTIVE | Basic | RUBBER ROLL MILL | 2/25/1997 | PERMIT TO OPERATE GRANTED |
| 325231 | F5828 | 3/18/1997 | INACTIVE | Basic | RUBBER ROLL MILL | 2/25/1997 | PERMIT TO OPERATE GRANTED |

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# Facility INformation Detail (FIND)



**Equipment List**

| | |
|---|---|
| **Facility ID** | 138954 |
| **Company Name** | KVP INTERNATIONAL |
| **Address** | 12021 WOODRUFF AVE |
| | DOWNEY, CA 90241 |

## No Equipment Listed

SOUTH COAST AQMD

# Facility INformation Detail (FIND)

Search Again

| Facility ID | Facility Name | Facility Address | RECLAIM | Title V | Facility Status |
|---|---|---|---|---|---|
| 3736 | KIRKHILL INC | 12021 WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 124275 | KMC ACQUISITION CORP | 12023 WOODRUFF AVE , DOWNEY, CA 90241 | | | ACTIVE |
| 111439 | KMC ACQUISTION CORPORATION | 12023 WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 138954 | KVP INTERNATIONAL | 12021 WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 89433 | LYNN'S AUTO AIR INC | 13255 WOODRUFF AVE , DOWNEY, CA 90242 | | | ACTIVE |
| 149430 | M & J DESIGN GROUP | 12405 WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 120763 | MANUEL'S AUTO BODY, M. VILLASENOR, DBA | 12126 WOODRUFF AVE , DOWNEY, CA 90241 | | | ACTIVE |
| 16427 | MARK REF CO | 12305 WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 10751 | MASTERS TRUCK & AUTO PAINTING | 12323 WOODRUFF AVE , DOWNEY, CA 90242 | | | |
| 3442 | MELENDEZ BODY & PAINT WKS | 12333 WOODRUFF AVE , DOWNEY, CA 90242 | | | |
| 3661 | METALSOURCE | 11939 WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 16725 | MFR WIRE CO, DIV OF DIVERS. WIRE & STEEL | 12320 WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 170218 | NORTH STAR ELECTRONICS | 12126 WOODRUFF AVE , DOWNEY, CA 90241 | | | ACTIVE |
| 40038 | OLEA EXHIBITS | 12128 WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 16066 | P. S. MACHINE PROD. | 12256 WOODRUFF , DOWNEY, CA 90241 | | | |
| 179381 | PACIFIC ELITE COLLISION CENTER | 11899 WOODRUFF AVE , DOWNEY, CA 90241 | | | ACTIVE |
| 63467 | PACIFIC MOLDED FOAM | 12160-62 WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 153646 | PENA'S IRON WORKS AND POWDER COATING | 12162 WOODRUFF AVE , DOWNEY, CA 90241 | | | ACTIVE |
| 102668 | R J B ENTERPRISES | 12323 WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 4517 | RELIABLE PATTERN WKS | 12307 WOODRUFF , DOWNEY, CA 90241 | | | ACTIVE |
| 105905 | RELIABLE TRUCK & TRAILER PAINTING | 12323 WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 113335 | SEQUEL CONTRACTORS, INC | 12240 S WOODRUFF AVE , DOWNEY, CA | | | |

| | | | | | |
|---|---|---|---|---|---|
| | | 90241 | | | |
| 150128 | SHAWNAN | 12240 WOODRUFF AVE , DOWNEY, CA 90241 | | | ACTIVE |
| 56306 | SHAWNAN CORP, SEE ID 113335 | 12240 S WOODRUFF AVE , DOWNEY, CA 90241 | | | |
| 11110 | SIDEX FURNITURE CORP | 11929 WOODRUFF AVE , DOWNEY, CA 90241 | | | |

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

# PERMIT to OPERATE

METRO ZONE – 434 South San Pedro Street, Los Angeles, California 90013

M 01892

SECTOR CB

Operation under this permit must be conducted in compliance with all information included with the initial application and the initial permit conditions. The equipment must be properly maintained and kept in good operating condition at all times. In accordance with Rule 206, this Permit to Operate or copy must be posted on or within 8 meters of equipment.

LEGAL OWNER OR OPERATOR: **KIRKHILL INC.**

Appl. No. C-04694
PREVIOUS PERMIT NO. P-1206

EQUIPMENT LOCATED AT: 12021 **WOODRUFF AVENUE**
**DOWNEY, CALIFORNIA**

EQUIPMENT DESCRIPTION AND CONDITIONS:

**AIR POLLUTION CONTROL SYSTEM CONSISTING OF:**

1. **BAGHOUSE,NATIONAL CORNICE WORKS, WITH 160 FILTER BAGS, EACH 8" DIA. X 4'-7" L., 1,220 SQ. FT. TOTAL FILTER AREA, WITH A 1½ H.P. SHAKER.**
2. **EXHAUST SYSTEM, WITH A 10 H.P. BLOWER VENTING FOUR RUBBER MILLS.**

**-CONDITIONS-**

1. **A MECHANICAL GAUGE MUST BE INSTALLED AND MAINTAINED SO AS TO INDICATE, IN INCHES WATER COLUMN, THE STATIC PRESSURE DIFFERENTIAL ACROSS THE BAGS.**
2. **DUST COLLECTED IN THE BAGHOUSE MUST BE DISCHARGED ONLY INTO CLOSED CONTAINERS.**

FILE COPY

This initial permit must be renewed by 10/5/78 or an earlier date if equipment is moved, altered, or changes ownership. If billing for annual renewal fee (Rule 301.f) not received by expiration date, contact Zone office above.

This permit does not authorize the emission of air contaminants in excess of those allowed by Division 26 of the Health and Safety Code of the State of California or the Rules of the Air Quality Management District. This permit cannot be considered as permission to violate existing laws, ordinances, regulations or statutes of other government agencies.

**VALIDATION NUMBER 40611, DATED 4/27/76**

*VOID UNLESS VALIDATED*

AIR POLLUTION CONTROL OFFICER
**Helen Thompson**
**Permit Section**
BY

DATE 10-5-77

76P235M-2/77

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

# PERMIT TO OPERATE

9150 FLAIR DRIVE, EL MONTE, CALIFORNIA 91731

Permit No.
**D12299**
*A/N 202460*
Page 1

**This initial permit must be renewed by 12/01 ANNUALLY unless the equipment is moved, or changes ownership. If the billing for annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.**

**Legal Owner Or Operator:**

KIRKHILL INCORPORATED
12021 WOODRUFF AVENUE
DOWNEY, CA 90241
ATTN: MR. DAVE DAVIS

**ID 003736**

**Equipment located at:** SAME AS ABOVE

**Equipment Description:**

STORAGE TANK NO. 4, DIESEL FUEL OIL #2, UNDERGROUND TYPE, 7500 GALLON CAPACITY, 7'-10.0" DIA. X 20'-0.0" H.

**Conditions:**

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR COPY MUST BE POSTED ON OR WITHIN 8 METERS OF THE EQUIPMENT.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF OTHER GOVERNMENT AGENCIES.

EXECUTIVE OFFICER

By Raquel Puerta/amj
November 29, 1989

FILE COPY

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

# PERMIT TO OPERATE

9150 FLAIR DRIVE, EL MONTE, CALIFORNIA 91731

Permit No.
**D12298**
A/N 202461
Page 1

**This initial permit must be renewed by 12/01 ANNUALLY unless the equipment is moved, or changes ownership. If the billing for annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.**

**Legal Owner Or Operator:** KIRKHILL INCORPORATED
12021 WOODRUFF AVENUE
DOWNEY, CA 90241
ATTN: MR. DAVE DAVIS

**ID 003736**

**Equipment located at:** SAME AS ABOVE

**Equipment Description:**

STORAGE TANK NO. 3, DIESEL FUEL OIL #2, UNDERGROUND TYPE, 10000 GALLON CAPACITY, 8'-0.0" DIA. X 28'-0.0" H.

**Conditions:**

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

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EXECUTIVE OFFICER

By Raquel Puerta/amj
November 29, 1989

**FILE COPY**

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 East Copley Drive, Diamond Bar, CA 91765

# PERMIT TO OPERATE


Permit No.
*F37485*
A/N 372587

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.

Legal Owner
or Operator:

KMC ACQUISITION CORP.
ATTN: HENRY A. TOLEDO
12023 WOODRUFF AVENUE
DOWNEY, CA 90241

ID 124275

**Equipment Location:** SAME AS ABOVE

**Equipment Description:**

RUBBER MILL, NO. 3, BOLLING, TWO ROLL TYPE, 84", WITH A 200 H.P. DRIVE.

**Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

3. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS IT IS VENTED ONLY TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED AN OPERATING PERMIT BY THE AIR POLLUTION CONTROL OFFICER.

**FILE COPY**

CONTINUATION OF PERMIT TO OPERATE

NOTICE

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EXECUTIVE OFFICER

Dorris M Bailey

By Dorris M. Bailey/dr
2/22/01

**FILE COPY**

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 East Copley Drive, Diamond Bar, CA 91765

# PERMIT TO OPERATE


Permit No.
F75698
A/N 401687

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for the annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.

Legal Owner
or Operator:

KMC ACQUISITION CORP
12023 WOODRUFF AVE
DOWNEY, CA 90241

ID 124275

**Equipment Location:** 12023 WOODRUFF AVE, DOWNEY, CA 90241

**Equipment Description :**

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. BAGHOUSE, TORIT, MODEL TY-230-155, SERIAL NO. BB 4307, 36 FILTER BAGS WITH 144 SQUARE FEET OF FILTER AREA, PULSE JET CLEANING.

2. EXHAUST SYSTEM WITH A 5 HP BLOWER VENTING A RUBBER MILL.

**Conditions :**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

3. THIS EQUIPMENT SHALL BE EQUIPPED WITH A PRESSURE GAUGE TO INDICATE, IN INCHES WATER COLUMN, THE STATIC PRESSURE DIFFERENTIAL ACROSS THE FILTER BAGS.

4. THE PRESSURE DROP ACROSS THE FILTER BAGS SHALL NOT EXCEED 5.0 INCHES OF WATER COLUMN AT ANY TIME DURING OPERATION OF THIS EQUIPMENT.

5. DUST COLLECTED IN THE DUST COLLECTOR SHALL BE DISCHARGED ONLY INTO CLOSED CONTAINERS.

**FILE COPY**

CONTINUATION OF PERMIT TO OPERATE

**NOTICE**

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EXECUTIVE OFFICER

Dorris M Bailey

By Dorris M.Bailey/RS04
5/24/2005

**FILE COPY**

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

# PERMIT TO CONSTRUCT/OPERATE


Permit No.
F86944
A/N 449297

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for the annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.

ID 124275

Legal Owner
or Operator: KMC ACQUISITION CORP
12023 WOODRUFF AVE
DOWNEY, CA 90241

**Equipment Location:** 12023 WOODRUFF AVE, DOWNEY, CA 90241

**Equipment Description :**

MIXER NO. 12, STEWART BOLLING, SCREW TYPE, SERIAL NO. 13.378, 20'-0" L X 9'-0" W X 22'-0" H, WITH A 200 H.P. MOTOR.

**Conditions :**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

3. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS IT IS VENTED ONLY TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED A PERMIT TO OPERATE BY THE EXECUTIVE OFFICER.

4. THE TOTAL QUANTITY OF MATERIAL PROCESSED IN THIS EQUIPMENT SHALL NOT EXCEED 528,000 POUNDS IN ANY ONE MONTH.

5. THIS EQUIPMENT SHALL NOT BE USED TO PROCESS ANY VOLATILE ORGANIC COMPOUND (VOC) OR VOC CONTAINING MATERIAL.

6. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY COMPOUND IDENTIFIED AS AIR TOXIC CONTAMINANT IN RULE 1401 AS AMENDED MARCH 4, 2005.

7. THE OPERATOR SHALL MAINTAIN ADEQUATE RECORDS OF MATERIALS PROCESSED IN THIS EQUIPMENT TO DEMONSTRATE COMPLIANCE WITH CONDITION NOS. 4, 5, AND 6 ABOVE. SUCH RECORDS SHALL BE RETAINED ON THE PREMISES FOR AT LEAST TWO YEARS AND BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST.

8. MATERIAL SAFETY DATA SHEETS FOR ALL MATERIALS USED IN THIS EQUIPMENT SHALL BE KEPT CURRENT AND BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST.

**FILE COPY**

**NOTICE**

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EXECUTIVE OFFICER

Dorris M Bailey

By Dorris M.Bailey/RS04
1/12/2007

**FILE COPY**

Department of Public Works
dpw.lacounty.gov

Clean LA for Residents
Clean LA for Business
Clean LA for Government
Clean LA is for ALL
Los Angeles County

Reduce, Reuse, Recycle
Trash Collection / Illegal Dumping
Household Hazardous Waste / Electronic Waste
Used Motor Oil Recycling
Industrial Waste
Underground Storage Tanks
Solid Waste
Stormwater
Water Conservation
Youth Education

# Online File Review

Industrial Waste / Underground Storage Tanks / Stormwater

Back

You searched the following address:

Street Number: 12023 Street Name: Woodruff

**Our office does not have any records (related to industrial waste/underground storage tanks/stormwater) for the requested site address.**

Please double check the spelling of the street name or search a different address. Both street number and street name must be exact and spelled correctly as they appear for the facility on file. Do not include street direction prefix (i.e. N, S, E, W, etc...) or suffix (i.e. ST, AVE, RD, BLVD, etc...) unless they appear in the street name (i.e. AVENUE K, AVENIDA CESAR CHAVEZ, 10TH ST EAST, CROSSROADS PKWY N, etc...). Do not include any extra spaces after the street number or after the street name.

Back

Tank Protect Engineering

"ENVIRONMENTAL CONSULTING & ENGINEERING SERVICES"

July 30, 1992

File No. 92129
Project No. 220

AUG 3 5 1992
PUBLIC WORKS
WASTE MANAGEMENT DIVISION

202307

UST Local Oversight Program, Annex Building
Waste Management Division
Department of Public Works
County of Los Angeles
P.O. Box 1460
Alhambra, California 91802-1460

Attn: Mr. Pat Proano

Reference: (a) TPE Revised Workplan for Confirmation Boring dated April 21, 1992

(b) UST Local Oversight Program Review Sheet dated May 12, 1992

**Subject:** **FINAL CONFIRMATION BORINGS REPORT**
**Kirkhill, Inc.**
**12021 Woodruff Avenue**
**Downey, California 90241**
**(File No. I-12987-1F)**

Dear Mr. Proano:

Pursuant to Tank Protect Engineering's ("TPE's") revised workplan and your review sheet referenced above, TPE conducted the final confirmation borings, soil sampling and analyses between July 7 and July 24, 1992.

In accordance with the workplan, a total of 12 samples from two 30-foot soil borings were collected and analyzed for total recoverable petroleum hydrocarbons (TRPH) using EPA Method 418.1, for benzene, toluene, xylenes and ethylbenzene (BTXE) using EPA Method 8020, and for polynuclear aromatic hydrocarbons (PAHs) using EPA Method 8100. The soil samples indicated TRPH concentrations ranging from non-detectable (<10 parts per million (ppm)) to 91 ppm, and non-detectable (ND) levels of BTXE (<0.001 ppm) and PAHs (<0.005 ppm).

In addition to the soil sample analyses, a liquid sample of Edgiflex-200® (source liquid) provided by Kirkhill, Inc. was analyzed for aromatic compounds (BTXE) using EPA Method 8020 and for PAHs using EPA Method 8100. The source liquid samples indicated non-detectable levels of targeted compounds. According to the reasoning provided by the analytical laboratory (refer to Appendix A), the lowest detection limits that could be achieved without sacrificing the accuracy of the method for analyzing Edgiflex-200 was 1 ppm for BTXE and 50 ppm for PAHs. The analytical laboratory also indicated that the compound has a carbon range which will match the diesel or heavier range.

• 1071 N. Batavia
Orange, CA 92667
714/282-5635
800/464-TANK
FAX: 714/282-5644

• 1963 N. Main St.
Orange, CA 92665

• 3050 Fite Circle
Suite 108
Sacramento, CA 95827

Engr. Contr. Lic.#
489994

An inquiry to the supplier and manufacturer of Edgiflex-200 to better define the chemical composition of the compound revealed the following:

"Edgiflex-200 general use oil was a blend of two oils each carefully refined from segregated, single source, virgin crude. The Edgiflex series oils were considered specialty products by Edgington. Edgiflex-200 was not, nor did it contain, reused petroleum oils or substances thought to be 'toxic'. Its boiling range was typically 550°F to above 900°F. This boiling range effectively excludes BTXE compounds.

"The flash point of Edgiflex-200 is well over 300°F, making the product safe at ambient and most elevated temperatures."

According to the president of Kirkhill, Inc., Mr. Gary Riopelle, "Edgiflex-200 was used by Kirkhill and other rubber manufacturers in the compounding of gaskets and washers for use with potable water in industry and homes."

No aromatics (BTXE) or PAHs were detected either in the soil samples collected at the site or in the source liquid that warrants a toxicologic risk assessment. Therefore, risk assessment to determine the acute or chronic toxic affects could not be performed for the site.

The UST under question was used to store Edgiflex-200. According to the MSDS sheet of the stored product, the common name is Naphthenic-type oil, generic name is Naphthenic distillate, chemical name is Petroleum Distillate, chemical family name is Petroleum Hydrocarbon and DOT proper shipping name is Petroleum Distillate. The product ingredients are a complex mixture of naphthenic, paraffinic and aromatic petroleum hydrocarbons.

In the past correspondence regarding the project, Los Angeles County Department of Public Works, Waste Management Division, UST Local Oversight Program (the County) expressed or implied that Edgiflex-200 contained naphthalene. Due to typographical errors made by TPE in past reports, TPE referenced 'naphthalene'. However, it is clarified that based on the available information on the compound, Edgiflex-200 contained **no** naphthalene.

The maximum TRPH detected and left in-place near the underground storage tank (UST) in question to date are 852 ppm at a depth of 15 feet below ground surface. Assuming that the Edgiflex-200 contained hydrocarbons in the range of diesel or heavier, and according to the leaching potential analysis conducted for the site (please refer to TPE reports dated June 5, 1990, April 15, 1991 and October 30, 1991), a total of 1,000 ppm of diesel could be left in-place. Therefore, it is requested that the County allow Kirkhill to leave the maximum detected 852 ppm of TRPH detected in a soil sample at 15 feet below ground surface (BGS) be left-in place and the site file be closed.

Following are the details on the field procedures and findings of the site assessment.

## DRILLING AND SOIL SAMPLING

Per the revised workplan and the County approved sampling locations, on July 14, 1992, TPE supervised drilling two 30-foot depth borings near the former Edgiflex-200 (naphthenic-type oil) UST using a mobile B-53 drill rig. Please refer to Figure 1 for the sampling locations.

As described in the workplan, soil samples were properly collected at five-foot intervals starting from five feet below ground surface (BGS) until the termination depth. Based on the field indications such as visual observations and field screening instrument (Flame Ionization Detector (FID)) readings, evidence of contamination was not observed. Therefore, drilling and sampling past 30 feet BGS in each boring was discontinued. Bore logs prepared for the site based on the soil sample description are provided in Appendix B.

According to the workplan, soil samples were collected using 2.5-inch-diameter by 3-inch-long brass tubes mounted within a Californian split-spoon sampler used in advance of the augers. Prior to sampling, all brass tubes were washed in an aqueous solution of Alconox detergent, rinsed with tap water, and then triple rinsed with distilled water. After sample recovery, the lowermost brass ring from each sample interval was immediately end-wrapped with aluminum foil, polyethylene caps taped over the ends, labeled, placed into an ice chest chilled using frozen blue ice, and relinquished to Redi Express, Rancho Cucamonga, CA, a courier service, to transportation to Applied P & Ch Laboratory (APCL), Pomona, CA, a State-certified laboratory. All the samples were logged and accompanied by a chain-of-custody record form.

A portable flame-ionization detector (FID) calibrated against hexane was used on the soil samples contained within the sampler at each sampling interval within the boring to monitor the volatile organic compounds (VOCs).

The sampling equipment was decontaminated prior to and between each sampling. The drilling augers were environmentally cleaned before the drilling process.

The soil cuttings generated during drilling were placed and sealed in four 17H DOT-approved 55-gallon drums. Based on the analytical results of the soil samples, it is determined that the soil cuttings could be disposed of by handling as a non-hazardous material.

## SAMPLE ANALYSES

According to the County review sheet on the workplan and a telephone conversation with Mr. Ofari Amoah on July 15, 1992, all twelve soil samples collected from the two borings were analyzed for TRPH using EPA Method 418.1. All samples with detectable TRPH were analyzed for BTXE using EPA Method 8020. One soil sample from each boring with highest TRPH was analyzed for PAHs using EPA Method 8100. In addition, a sample of the source liquid (Edgiflex-200) supplied by Kirkhill, Inc. was analyzed for BTXE and PAHs using EPA Method 8100. A summary of the analytical results is provided in Table 1. Copies of detailed analytical result reports and chain-of-custody record are provided in Appendix C. Per Mr. Amoah's request, a copy of the SDOHS certification on the methods to be performed at APCL are also provided in Appendix C.

TABLE 1: SUMMARY OF SAMPLE (COLLECTED ON 7/14/92) ANALYSES

| SAMPLE # | TRPH (mg/kg) | BTXE ug/kg | PAHs ug/kg |
|---|---|---|---|
| FB-1/5' | 13 | ND | ND |
| FB-1/10' | ND | - | - |
| FB-1/15' | 17 | ND | - |
| FB-1/20' | ND | - | - |
| FB-1/25' | 21 | ND | - |
| FB-1/30' | 25 | ND | ND |
| FB-2/5' | ND | - | - |
| FB-2/10' | 13 | ND | - |
| FB-2/15' | ND | - | - |
| FB-2/20' | 21 | ND | - |
| FB-2/25' | 91 | ND | ND |
| FB-2/30' | ND | - | - |
| Edgiflex-200* | - | ND* | ND* |
| DETECTION LIMIT | 10 | 1 | 50 |

* = Measurements are in mg/L. ND = Not detected - = Not analyzed

As shown in the table, the soil samples indicated TRPH concentrations in the range of ND (< 10 ppm) and 91 ppm. None of the samples indicated detectable levels of either BTXE or PAHs.

## RISK ASSESSMENT

As proposed in the revised workplan, a full-scale risk assessment for the subject site could not be conducted, as there were no detectable levels of suspected toxic chemicals in the subsurface soil or the source liquid (Edgiflex-200). However, based on the previously conducted leaching potential analysis, it is TPE's opinion that the maximum concentration of 852 ppm TRPH previously discovered in the previous investigation at the site could be left in-place.

## NOTIFICATION PROCEDURES

Upon obtaining the County review sheet on the TPE revised workplan, Kirkhill, Inc. authorized TPE to proceed with the plan in first week of July to implement the plan. Per the requirement, TPE notified Mr. Dave Lobato at (818) 458-4374 on the site assessment on July 8, 1992.

## SITE HEALTH AND SAFETY PLAN

The health and safety plan prepared for the site was implemented during the site assessment. Air monitoring near the drilling operations did not warrant level "C" personnel protection. Therefore the assess-

ment was conducted under level "D" protection. A statement on the health and safety plan implementation and compliance from the site personnel is provided in Appendix D.

## CLOSURE

It is TPE's opinion that the information provided in this report and in the previous site assessment conducted at the site adequately defines the problem and there is no imminent threat to environment or human health based on the compounds discovered near the location of the site under investigation. Therefore, it is requested that the County allow the maximum detected 852 ppm of TRPH be left in-place and to close the subject site file.

## LIMITATIONS

This report should be used solely for its intended purpose and within the limitations of our scope of work. Prior to use for other than its intended purpose or beyond the limitations described herein, sufficient and thorough studies should be performed to confirm the findings presented in this report.

Changes in conditions at a property can occur with the passage of time whether they be due to acts of man or natural causes. Due to increased knowledge, concerning hazardous materials, and subsequent code alterations by legislative or regulatory agencies, standards concerning the presence of hazardous material on the site could change.

If you have any questions and/or need further information, regarding this matter, please feel free to contact the undersigned.

Respectfully submitted,

**TANK PROTECT ENGINEERING**

Prepared by:

Ravi P. Pendurthi, REA
Project Manager/Hydrogeologist

Reviewed by:

Keith E. Green, R.G. 1413
Registered California State Geologist

REGISTERED GEOLOGIST
KEITH E. GREEN
1413
STATE OF CALIFORNIA

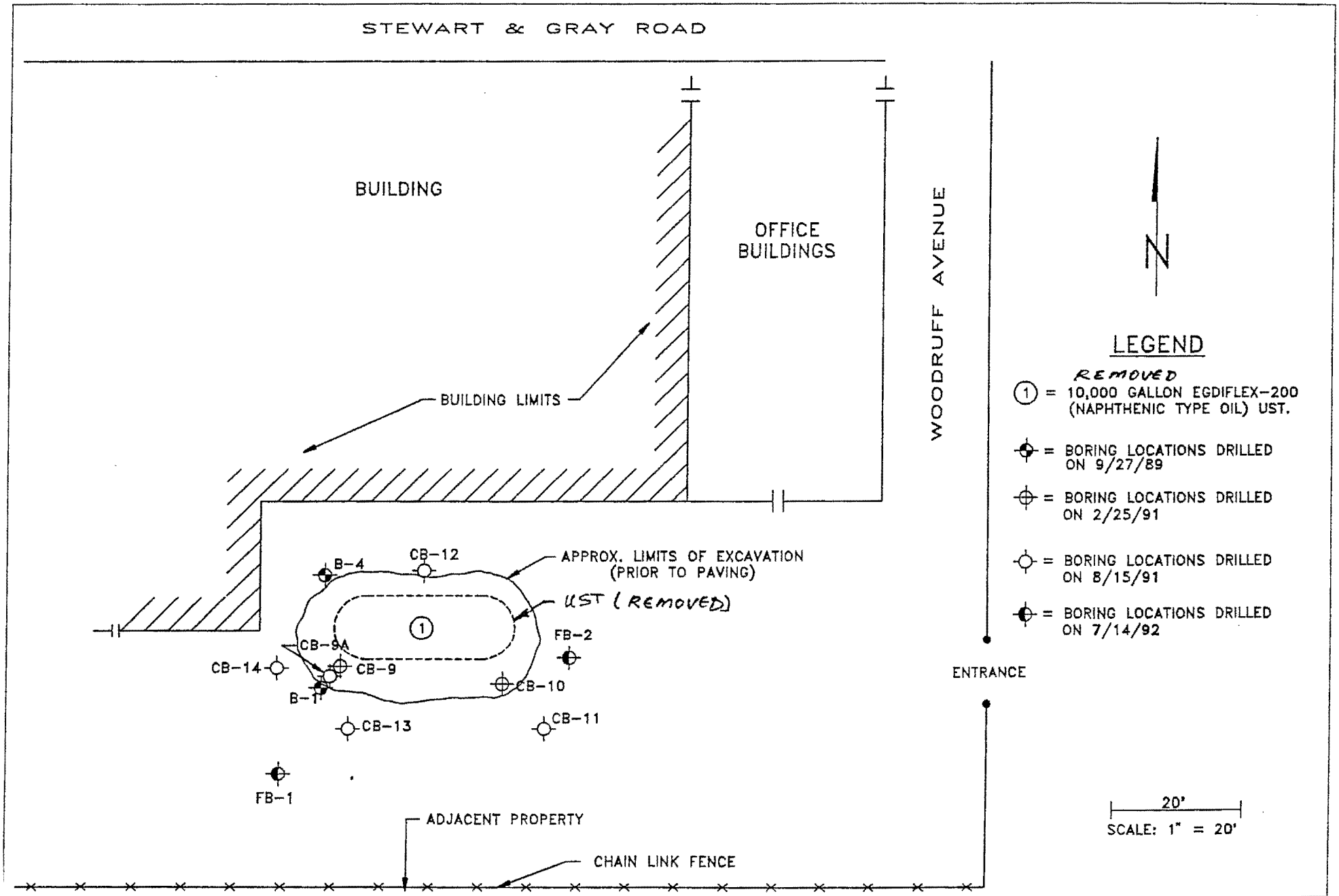
Enclosures: Figure 1
Appendices A - D

Distribution: (2) Addressee
(2) Kirkhill, Inc., Attn: Mr. Raymond Bellanger
(1) File

E:\WP51\DOCS\TPEE\090-TOE\220-FNL.RPT

# FIGURE 1

# SITE LOCATION MAP




| | | | |
|---|---|---|---|
| TPE ENVIRONMENTAL GROUP<br>1071 N. BATAVIA<br>ORANGE, CA. 92665 | ADDRESS:<br>KIRKHILL INC.<br>12021 WOODRUFF AVENUE<br>DOWNEY, CA. 90241 | SITE LOCATION MAP | DRAWN: P. LEWIS<br>APPROVED: R. PENDURTHI |
| | | DATE: 07/92<br>JOB #/FILE: 220/KRKHILL1 | SCALE: AS NOTED<br>FIGURE: 1 |

# APPENDIX A

# APPLIED P & Ch LABORATORY LETTER

RECEIVED JUL 27 1992

APCL *Applied P & Ch Laboratory*

4066 E. Mission Blvd.
Pomona, CA 91766
Tel. (714) 622-5148
Fax (714) 622-3199

24 July 1992

TPE Environmental Group
1963 N. Main St. PO Box 7066
Orange , CA 92613-7066
Attn: Ravi Pendurthi

Re: Laboratory Analyses

Dear Mr. Pendurthi:

Our analysis for your sample EDGIFLEX-200 from Kirkhill, Inc. indicates that the sample is diesel fuel or a type of lubrication oil. The sample is a mixture of organics (hydrocarbons) which mask the presence of polynuclear aromatic hydrocarbons (PAH). As a result, it cannot be concentrated to achieve a lower detection limit and, in fact, has to be diluted in order to get the response to your sample into the operating range of the GC. Consequently, we have 50ppm of MDL for your sample EDGIFLEX-200.

Sincerely,

George Zhou, Ph.D.
Service Manager
Applied P & Ch Laboratory

# APPENDIX B

# BORING LOGS

# —BORING LOG—



| PROJECT NO.: | PROJECT NAME: | SITE LOCATION |
|---|---|---|
| 220 | KIRKHILL INC. | 12021 WOODRUFF AVE. DOWNEY, CA. |

| LOGGED BY: | DRILL CO.: | DRILLER: | DRILL RIG: | BORING NO. |
|---|---|---|---|---|
| R. PENDURTHI | DRILL-LINE | JUNIOR/CHUCK | B-53 | FB-1 |

| DATE DRILLED: | BORING ELEV. | REF./DATUM | BORING DIAMETER | DRIVE WEIGHT: |
|---|---|---|---|---|
| 7/14/92 | | GROUND SURFACE | 6" | 140 LBS/6" |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES.

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION — LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | 1035 | ML | 3" ASPHALT, 3" BASE | 0 |
| 5 | ◀ | 6/10/12 | 1045 | | SILTY SAND: DARK BROWN, FINE, POORLY GRADED, COMPACT, BRITTLE SLIGHTLY MOIST. | 0 |
| 10 | ◀ | 8/14/18 | 1050 | ML | SILTY SAND: DARK BROWN, FINE, POORLY GRADED, COMPACT, BRITTLE SLIGHTLY MOIST. | 0 |
| 15 | ◀ | 5/7/15 | 1055 | ML | SILTY CLAY: BROWN, FINE, POORLY GRADED, COMPACT, SLIGHTLY PLASTIC, MOIST. | 0 |
| 20 | ◀ | 15/25/30 | 1058 | SM | FINE SAND: BROWN TO LIGHT BROWN, FINE, POORLY GRADED, LOOSE, BRITTLE, SLIGHTLY MOIST. | 0 |
| 25 | ◀ | 25/35/45 | 1102 | SM | FINE SAND: BROWN TO LIGHT BROWN, FINE, POORLY GRADED, LOOSE, BRITTLE, SLIGHTLY MOIST. | 0 |
| 30 | ◀ | 25/35 50 | 1107 | SP | SAND: SAME AS ABOVE — EXCEPT MORE COARSE GRAINS. | 0 |
| 35 | | | | | NOTES:<br>TOTAL DEPTH: 30'<br>NO VISIBLE INDICATION OF CONTAMINANTS<br>NO FIELD READINGS ON CONTAMINANTS | |
| 40 | | | | | | |
| 45 | | | | | | |
| 50 | | | | | | |

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNITURE: Raja. P. Pendurthi

\FB1LOG

# —BORING LOG—



| PROJECT NO.: | PROJECT NAME: | SITE LOCATION |
|---|---|---|
| 220 | KIRKHILL INC. | 12021 WOODRUFF AVE. DOWNEY, CA. |

| LOGGED BY: | DRILL CO.: | DRILLER: | DRILL RIG: | BORING NO. |
|---|---|---|---|---|
| R. PENDURTHI | DRILL-LINE | JUNIOR/CHUCK | B-53 | FB-2 |

| DATE DRILLED: | BORING ELEV. | REF./DATUM | BORING DIAMETER | DRIVE WEIGHT: |
|---|---|---|---|---|
| 7/14/92 | | GROUND SURFACE | 6" | 140 LBS/6" |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES.

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | 0935 | | 2.5" ASPHALT, 2" BASE | 0 |
| | | | | ML | | |
| 5 | | 8/10/18 | 0940 | | SILTY SAND: DARK BROWN, FINE, POORLY GRADED, COMPACT, BRITTLE SLIGHTLY MOIST. | 0 |
| 10 | | 7/12/20 | 0945 | ML | SILTY SAND: DARK BROWN, FINE, POORLY GRADED, COMPACT, BRITTLE SLIGHTLY MOIST. | 0 |
| 15 | | 5/10/20 | 0952 | ML | SILTY CLAY: BROWN, FINE, POORLY GRADED, COMPACT, SLIGHTLY PLASTIC, MOIST. | 0 |
| 20 | | 20/30 /40 | 1000 | SM | FINE SAND: BROWN TO LIGHT BROWN, FINE, POORLY GRADED, LOOSE, BRITTLE, SLIGHTLY MOIST. | 0 |
| 25 | | 20/30 /40 | 1007 | SM | FINE SAND: BROWN TO LIGHT BROWN, FINE, POORLY GRADED, LOOSE, BRITTLE, SLIGHTLY MOIST. | 0 |
| 30 | | 25/45 /50 | 1015 | SP | SAND: SAME AS ABOVE – EXCEPT MORE COARSE GRAINS. | 0 |
| 35 | | | | | NOTES:<br>TOTAL DEPTH: 30'<br>NO VISIBLE INDICATION OF CONTAMINANTS<br>NO FIELD READINGS ON CONTAMINANTS | |
| 40 | | | | | | |
| 45 | | | | | | |
| 50 | | | | | | |

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNITURE: Rad. P. Pendurthi

\FBLOG2

# APPENDIX C

# ANALYTICAL RESULTS & CHAIN-OF-CUSTODY

Applied P & Ch Laboratory
4066 E. Mission Blvd., Pomona CA 91766
Tel: (714) 622-5148 Fax: (714) 622-3199

RECEIVED JUL 2 2 1992

# APCL Analytical Report

Submitted to:
TPE Environmental Group
Attention: Ravi
1963 N. Main St. PO Box 7066
Orange, CA 92613
Tel: (714)282-5635 Fax: (714)282-5644

Service ID #: 801-922464
Collected by: Ravi P.
Collected on: 07/14/92
Sample description:
Soil Samples (FB-1, FB-2) from Kirichill, Inc.
(Job# 220, PO# 09567)

Received : 07/14/92
Tested : 07/17-20/92
Reported : 07/20/92

## Analysis of Soil



| Component Analyzed | Method | Unit | MDL | Concentration FB-1/10' 92-2464-2 | FB-1/20' 92-2464-4 | FB-2/ 5' 92-2464-7 | FB-2/15' 92-2464-9 | FB-2/30' 92-2464-12 | FB-1/ 5' 92-2464-1 |
|---|---|---|---|---|---|---|---|---|---|
| **TRPH** | 418.1 | mg/kg | 10 | N.D. | N.D. | N.D. | N.D. | N.D. | 13 |
| **Benz. Tolu. Xylen. Ethylbenz. (BTXE)** | | | | | | | | | |
| Benzene | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |
| Toluene | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |
| Ethylbenzene | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |
| m-Xylene | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |
| o-Xylene/p-Xylene | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |
| **BTXE, Total** | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |

| Component Analyzed | Method | Unit | MDL | FB-1/15' 92-2464-3 | FB-1/25' 92-2464-5 | FB-2/10' 92-2464-8 | FB-2/20' 92-2464-10 | FB-1/30' 92-2464-6 | FB-2/25' 92-2464-11 |
|---|---|---|---|---|---|---|---|---|---|
| **TRPH** | 418.1 | mg/kg | 10 | 17 | 21 | 13 | 21 | 25 | 91 |
| **Benz. Tolu. Xylen. Ethylbenz. (BTXE)** | | | | | | | | | |
| Benzene | 8020 | µg/kg | 1 | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Toluene | 8020 | µg/kg | 1 | N.D. | N.D. | N.D | N.D. | N.D. | N.D. |
| Ethylbenzene | 8020 | µg/kg | 1 | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| m-Xylene | 8020 | µg/kg | 1 | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| o-Xylene/p-Xylene | 8020 | µg/kg | 1 | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| **BTXE, Total** | 8020 | µg/kg | 1 | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| **Polynuclear Aromatic Hydrocarbons** | | | | | | | | | |
| Acenaphthene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Acenaphthylene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Anthracene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Benzo(a)anthracene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Benzyl(a)pyrene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Benzo(b)fluoranthene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Benzo(k)fluoranthene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Benzo(ghi)perylene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |

Applied P & Ch Laboratory
4066 E. Mission Blvd., Pomona CA 91766
Tel: (714) 622-5148 Fax: (714) 622-3199

# APCL Analytical Report

## Analysis of Soil



| Component Analyzed | Method | Unit | MDL | Concentration FB-1/15' 92-2464-3 | FB-1/25' 92-2464-5 | FB-2/10' 92-2464-8 | FB-2/20' 92-2464-10 | FB-1/30' 92-2464-6 | FB-2/25' 92-2464-11 |
|---|---|---|---|---|---|---|---|---|---|
| Chrysene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Dibenzo(a,h)anthracene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Fluoranthene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Fluorene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Indeno(1,2,3-cd)pyrene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Naphthalene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Phenanthrene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Pyrene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |

MDL : Method Detection Limit
— : The analysis has not been required for that sample.
N.D. : Not Detected in this analysis, or less than the method detection limit.

Respectfully submitted,

Jack Zhang

Jack Y. Zhang, Ph. D.,
Director
Applied P & Ch Laboratory

# APCL

## Applied P & Ch Laboratory

4066 E. Mission Blvd., Pomona CA 91766
Tel: (714) 622-5148 Fax: (714) 622-3199

# Chain of Custody

Please Print in pen

Page _____ of _____

| | | | |
|---|---|---|---|
| Client: TPE Environmental Inc. | Contact: Ravi | Tel: (714) 282-5635 | Fax: (714) 282-5644 |
| Address: 1963 E. Main St., PO Box 7066 | City: Orange | State: CA | Zip code: 92613-7066 |
| Project Title/Code KIRKHILL, INC. | Job# 220 | PO# 09567 | Sampler RAVI PENDURTHI |
| Project Address 12021 WOODRUFF AVENUE, DOWNEY, CA 90241 | | | |
| Due date ☒ regular ☐ rush days | Client signature Ravi P. Pendurthi | Date 7/14/92 | |

| Field NO. | Sample Desc. | Date Collected | Time | Soil/Water | Analysis items | Remark |
|---|---|---|---|---|---|---|
| FB-1/5' | FROM BORING FB-1 | 7/14/92 | 10:45 | SOIL, CAL. SPLIT SPOON SAMPLING | 418.1 (TRPH) | ANALYZE HIGHEST TPH SAMPLES |
| FB-1/10' | ↓ | ↓ | 10:50 | ↓ | ↓ | FOR 8100 PNA AND 8020 (BTXE) |
| FB-1/15' | | | 10:55 | | | — ONE FROM EACH BOREHOLE. |
| FB-1/20' | | | 11:02 | | | IF TRPH IS NON DETECT, |
| FB-1/25' | | | 11:07 | | | PLEASE ANALYZE THE SAMPLE |
| FB-1/30' | ↓ | | 11:12 | | | AT 30' DEPTH FROM EACH |
| FB-2/5' | FROM BORING FB-2 | | 9:30 | | | BORING (TOTAL TWO). |
| FB-2/10' | ↓ | | 9:35 | | | DETECTION LIMITS LER LA |
| FB-2/15' | | | 9:40 | | | COUNTY (TRPH 10 MG/KG) |
| FB-2/20' | | | 9:45 | | | |
| FB-2/25' | | | 9:50 | | | |
| FB-2/30' | ↓ | ↓ | 10:00 | ↓ | ↓ | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Sample Conditions: Seal ☒ Intact ☒ Broken ☐ None; Temperature ☒ Cold ☐ Room; Other

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by | Ravi P. Pendurthi | Date/Time 7/14/92 3:20 pm | Received by | Ravi Courtney | Date/Time 7/14/92 3:20 p.m |
| Relinquished by | Ravi Courtney | Date/Time 7/14/92 4:05 | Received by | Colleen Neal | Date/Time 7/14/92 4:05p |
| Relinquished by | | Date/Time | Received by | | Date/Time |
| Relinquished by | | Date/Time | Received by | | Date/Time |

APCL USE ONLY Service # № 24054 Note:

Note: Samples are discarded 30 days after received unless prearrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

RECEIVED JUL 2 2 1992

Applied P & Ch Laboratory
4066 E. Mission Blvd., Pomona CA 91766
Tel: (714) 622-5148 Fax: (714) 622-3199

# APCL Analytical Report

Submitted to:
TPE Environmental Group
Attention: Ravi
1963 N. Main St. PO Box 7066
Orange, CA 92613
Tel: (714)282-5635 Fax: (714)282-5644

Service ID #: 801-922467 Received : 07/14/92
Collected by: R. P. Tested : 07/18-19/92
Collected on: 07/14/92 Reported : 07/19/92
Sample description:
EDGIFLEX - 200 (Source Liquid) from Kirkhill Inc.

## Analysis of Liquid

801-922467 Page 1 of 1

| Component Analyzed | Method | Unit | MDL | Concentration EDGIFLEX-200 92-2467-1 |
|---|---|---|---|---|
| **Polynuclear aromatics** | | | | |
| Acenaphthene | 8100 | mg/L | 50 | N.D. |
| Acenaphthylene | 8100 | mg/L | 50 | N.D. |
| Anthracene | 8100 | mg/L | 50 | N.D. |
| Benzo(a)anthracene | 8100 | mg/L | 50 | N.D. |
| Benzyl(a)pyrene | 8100 | mg/L | 50 | N.D. |
| Benzo(b)fluoranthene | 8100 | mg/L | 50 | N.D. |
| Benzo(k)fluoranthene | 8100 | mg/L | 50 | N.D. |
| Benzo(ghi)perylene | 8100 | mg/L | 50 | N.D. |
| Chrysene | 8100 | mg/L | 50 | N.D. |
| Dibenzo(a,h)anthracene | 8100 | mg/L | 50 | N.D. |
| Fluoranthene | 8100 | mg/L | 50 | N.D. |
| Fluorene | 8100 | mg/L | 50 | N.D. |
| Indeno(1,2,3-cd)pyrene | 8100 | mg/L | 50 | N.D. |
| Naphthalene | 8100 | mg/L | 50 | N.D. |
| Phenanthrene | 8100 | mg/L | 50 | N.D. |
| Pyrene | 8100 | mg/L | 50 | N.D. |
| **Benz. Tolu. Xylen. Ethylbenz. (BTXE)** | | | | |
| Benzene | 8020 | mg/L | 1 | N.D. |
| Toluene | 8020 | mg/L | 1 | N.D. |
| Ethylbenzene | 8020 | mg/L | 1 | N.D. |
| m-Xylene | 8020 | mg/L | 1 | N.D. |
| o-Xylene/p-Xylene | 8020 | mg/L | 1 | N.D. |
| **BTXE, Total** | 8020 | mg/L | 1 | N.D. |

MDL : Method Detection Limit
N.D. : Not Detected in this analysis, or less than the method detection limit.

Respectfully submitted,

Jack Y. Zhang, Ph. D.,
Director
Applied P & Ch Laboratory

# APCL

## Applied P & Ch Laboratory

4066 E. Mission Blvd., Pomona CA 91766
Tel: (714) 622-5148 Fax: (714) 622-3199

# Chain of Custody

Please Print in pen
Page 1 of 1

| | | | | |
|---|---|---|---|---|
| Client: TPE Environmental Inc. | | Contact: Ravi | Tel: (714) 282-5635 | Fax: (714) 282-5644 |
| Address: 1963 E. Main St., PO Box 7066 | | City: Orange | State: CA | Zip code: 92613-7066 |
| Project Title/Code | KIRKHILL, INC. | Job# 220 | PO# 09567 | Sampler RAVI PENDURTHI |
| Project Address | 12021 WOODRUFF AVENUE, DOWNEY, CA 90241 | | | |
| Due date ☒ regular ☐ rush days | | Client signature | Ravi P. Pendurthi | Date 7/14/92 |

| Field NO. | Sample Desc. | Date Collected | Time Collected | Soil/Water | Analysis items | Remark |
|---|---|---|---|---|---|---|
| EDGIFLEX-200 | SOURCE LIQUID | 7/14/92 | 11:00am | LIQUID | 8100 PNA AND 8020 BTXE | |
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Sample Conditions: Seal ☒ Intact ☒ Broken ☐ None; Temperature ☒ Cold ☐ Room; Other

| | | | |
|---|---|---|---|
| Relinquished by | Ravi P. Pendurthi Date/Time 7/14/92 3:20pm | Received by | Date/Time 7/14 3:20pm |
| Relinquished by | Date/Time | Received by | Date/Time |
| Relinquished by | Date/Time | Received by | Date/Time |
| Relinquished by | Date/Time | Received by | Date/Time |
| APCL USE ONLY Service # | 9207 | Note: | #2467 |

Note: Samples are discarded 30 days after received unless prearrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

# APPENDIX D

# SITE HEALTH & SAFETY COMPLIANCE STATEMENT

## HEALTH AND SAFETY COMPLIANCE STATEMENT

The undersigned certify that they have received, read and understood the procedues and requirements contained in the Health and Site Safety Plan prepared for this project.

Further, the undersigned have received proper training under the Occupational Safety and Health Act (29 CFR, Part 1910.120) prior to conducting any activities at the site.

| NAME/TITLE | SIGNATURE | DATE |
|---|---|---|
| Chuck Parra (Driller) | | 7-14-92 |
| Luapo F. Sefo. Jr (Helper) | Luapo F. Sefo. Jr. | 071492 |
| Adam Pudlicki | | 7-14-92 |
| RAVI PENDURTHI/SSOG Pm | Ravi P. Pendurthi | 7/14/92 |
| | | |
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# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


May 12, 1992

IN REPLY PLEASE REFER TO FILE. I-12987

Mr. Ray Ballenger
Kirkhill, Inc.
P. O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballenger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**CLOSURE PERMIT NO. 5999B**
**LOCATION: 12021 WOODRUFF AVENUE, DOWNEY**

The proposal to drill additional borings has been reviewed and approved. Borings must be drilled to 30 feet at the locations shown in the attached plot plan. If contamination is encountered at 30 feet borings must be drilled to five and 15 feet below the last detected contamination. Analyze all soil samples collected at every five feet using a State certified laboratory. Using the highest levels of total recoverable petroleum hydrocarbons by EPA 418.1 Method, analyze for naphthalene using EPA methods 8100 and 8020. As discussed at the meeting of April 6, 1992 based on the highest levels of contamination prepare a health-based risk assessment report demonstrating that the contaminants left in place will not cause a threat to human health and/or groundwater.

Use all necessary precautions and comply with all NIOSH requirements of Health and Safety for the protection of all personnel during the drilling operations.

Submit a Site Assessment Report and Risk Assessment Report on/before July 30, 1992.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted in duplicate to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Ofori Amoah at (818) 458-3573.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By _____
Ofori Amoah
UST Local Oversight Program
Waste Management Division

Reviewed _____
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

OKA:rm
WP/12987

cc: California Regional Water Quality Control Board
Tank Protect Engineering

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


March 9, 1992

IN REPLY PLEASE REFER TO FILE I-12987

Mr. Ray Ballenger
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballenger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**SITE ASSESSMENT PROPOSAL**
**PREPARED BY: TANK PROTECT ENGINEERING**
**REPORT DATE: FEBRUARY 5, 1992**
**CLOSURE PERMIT NOS. 5999B AND 6000B**
**LOCATION: 12021 WOODRUFF AVENUE, DOWNEY**

The proposal to drill one boring has not been approved for the following reasons:

> The boring will not define the lateral extent of the contamination. A boring is required to the north, south, and east of the previous borings designated as CB-10 and CB-11. A boring also needs to be drilled adjacent to the previously drilled boring CB-9 to investigate the soil at 35 feet if it is believed that no contamination exists at this depth.

Submit the revised Site Assessment Proposal to this office by May 14, 1992.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted in duplicate to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Scott Small at (818) 458-3996.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By Scott Small
Scott Small
UST Local Oversight Program
Waste Management Division

OKA

Reviewed P. A. Proano
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

SS:ts/200441/February 10, 1992
WP/12987-1

cc: California Regional Water Quality Control Board
Mr. Tony Lizzi, Tank Protect Engineering

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


August 6, 1992

IN REPLY PLEASE REFER TO FILE: I-12987

FINAL
UST
CLOSURE

Mr. Gary A. Riopelle
President and C. E. O.
Kirkhill, Inc.
P. O. Box 7012
Downey, CA 90241-0030

Dear Mr. Riopelle:

**HAZARDOUS MATERIALS UNDERGROUND STORAGE**
**SITE ASSESSMENT/REMEDIAL ACTION PLAN CLOSURE CERTIFICATION**
**FACILITY LOCATION: 12021 WOODRUFF AVENUE, DOWNEY**
**CLOSURE PERMIT NUMBER: 5999B**

This office has reviewed the final report submitted on August 5, 1992. Based on the information submitted, this letter confirms the completion of site investigation and remedial action at the above site. With the provision that the information provided to this agency was accurate and representative of existing conditions, it is our position that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present or future operations at this site. Nor does it relieve you of the responsibility to clean up existing, additional or previously unidentified conditions at the site which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Additionally, be advised that changes in the present or proposed use of the site may require further site characterization and mitigation activity. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings or site usage.

Any questions regarding this matter should be directed to Ofori Amoah at (818) 458-3573.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

P. A. Proano

Pat A. Proano
Supervising Civil Engineer II
Waste Management Division

OKA:rm
WP/12987-1

cc: California Regional Water Quality Control Board
Tank Protect Engineering

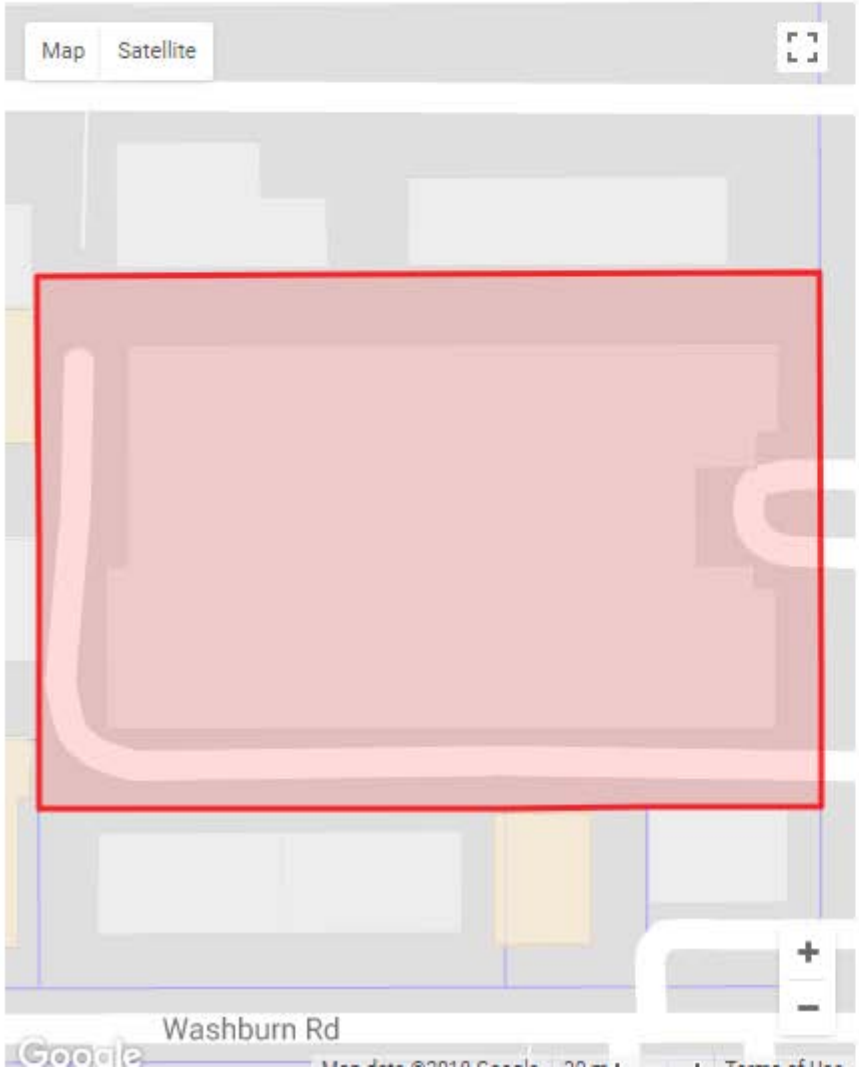
Department of Public Works
dpw.lacounty.gov

BSD Home BPV Application

Download Permit Data

12021 Woodruff Ave , Downey | Search | Enter address, intersection(street @ street), parcel number/apn/ain

Parcel Info | Permits | Documents | Report a Violation




Parcel Info | Engineering Info | Civic Info

| | |
|---|---|
| **AIN** | 6284025018 |
| **Site Address** | 12021 WOODRUFF AVE , DOWNEY CA 90241 |
| **Last Sale Date** | 12/20/2013 |
| **Year Built** | 1951 |
| **Land Value** | $7,104,178 |
| **Improvement Value** | $1,186,597 |
| **Square Feet** | 74662 |
| **Jurisdiction** | DOWNEY |
| **BSD Rehab** | |
| **Road Maintenance District** | N/A |

DATE RECEIVED
(date stamp)

# City of Downey

## Request For Public Records

Upon receipt of a request for copies of City records, the City shall determine within ten (10) days if the records are public and available within the City's records system and will notify the requestor of such determination. (California Public Records Act [G.C. Section 6250-6261]).

Date Requested: July 2, 2018 Number of Copies Requested: _____

**Please list each document, file or record separately.**
**Please describe the specific records as completely as possible**

**I wish to:** ☒ **Review**
☒ **Obtain copies of the following public records:**

12021 Woodruff Avenue (Kirkhill)

All building permit records

Fire department: chemical/haz mat info, HMBP, UST/AST info, Spill/Release info, Enforcement History

Purpose: Environmental Assessment

*I/We, the undersigned, request documents as indicated and agree to pay the City of Downey for copies at the rate of .60¢ for the first page, .10¢ for each additional page. (.10¢ per page for documents requested pursuant to the Political Reform Act, including campaign statements and contribution and expenditure reports) at the time of receipt by me or my representative.*

Misty Ponce / Partner Engineering and Science, Inc.
Name/Organization

2154 Torrance Blvd., Suite 200, Torrance CA 90501
Mailing Address

818-337-1203 mponce@partneresi.com
Contact Phone Number E-mail Address Signature

Date Records Picked Up: _____ Signature of Requestor: _____

## FOR INTERNAL USE ONLY

| Reviewed by City Clerk/Representative | Department Notification | Response Provided | Notification (Date): |
|---|---|---|---|
| Approved ☐ Denied ☐<br>If denied, reason: | Department(s):<br>Date:<br>Staff Initials: | Date:<br>Staff Initials:<br>By: (check one) | 1st Attempt:<br>2nd Attempt:<br>3rd Attempt: |
| Date Required<br>10 Day: _____<br>14 Day Extension: _____ | Fee: _____<br>Approximate Staff Time: _____ | Picked Up: ☐<br>Mailed: ☐<br>Faxed: ☐<br>E-mailed: ☐<br>Verbal: ☐ | Staff Initials: |

*City Clerk Office Hours: Monday – Friday 7:30 a.m. to 5:30 p.m.*
*11111 Brookshire Ave.,Downey,CA 90241 Ph: (562) 904-7280 FAX: (562) 923-6388*

6284 | 25

SCALE 1" = 100'

1996

3266 — 3274 — 3274 — 3266

24

N. Line of S. ½ of that part N. of a line parrallel with & dist. N. at R/A 175 ft. from E. & W. & of Sec. 10. T. 3S., R. 12 W. and S. of S.P.R.R. R/W

18.75

310.72

762.55

162.85

S. Line of O.R. 46339-308

636.27

36

50

100

AVE.

21
0.64± Ac

25
29,188 sq ft
3

179.18

179.31

162.83

4.20± Ac.
0.21± "(St)
3.99 ± Ac.

800

POR. S.E. 1/4, N.E. 1/4, SEC. 10

414.71

132.53

22
0.49± sq ft

24
26,209 sq ft
2

132.53

160

161.86

50.50 55.34 57

23

32,879 sq ft

1

201

18
6.92± Ac.
0.61± "(St)
6.31 ± Ac.

POR. S.E. 1/4, N.E. 1/4, SEC. 10

396.15

E. l'n. Sec. 10

27

636.27

380

115

141.27

50

20
1.02± Ac.

272

203

9
1.53 ± Ac.
0.26 ± "(St)
1.27 ± Ac.

12

14
20,340± sq ft

175

128

100

WOODRUFF

3266

3274

W. Line of SE 1/4 of NE. 1/4 of Sec. 10, T. 3S., R. 12 W.

175

310.72 East - West ℄ of Sec. 10, T. 3S., R. 12W.

#4431 1-13-58

162.55

162.79

380

115

124.27

191.27

30 30 60

30

60 30 55 25

55 25

WASHBURN

RD.

East-West ℄ of Sec 11, T. 3S., R. 12W.

DUNROBIN AVE.

EASTBROOK AVE.

CORNUTA AVE.

BK. 6283

3274

3266

CODE
3266
3274

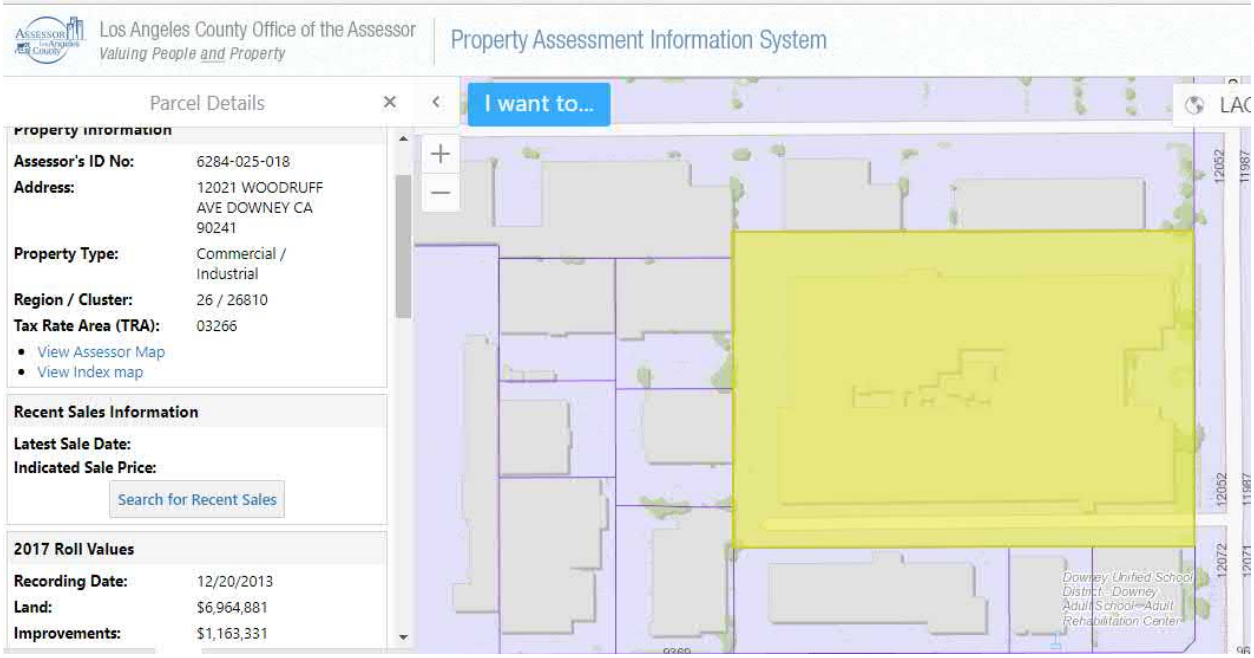
10-7-57
3-24-58
4-1-58
4-7-58
1-28-60
12-22-60
4-2-62
5-28-64
6-23-64
2-1-65
660728
6908/9604
7108/64/12
730409404
830418361
871102-88
95111507004001-27

# RANCHO SANTA GERTRUDES
SECTIONS, TOWNSHIP AND RANGE
AS PER MISC. RECORDS BK. 32 P. 18
M.R. 32-18

# PARCEL MAP
P.M. 269-27-28

FOR PREV. ASSM'T. SEE:
6284 - 25

ASSESSOR'S MAP
COUNTY OF LOS ANGELES, CALIF.




**Property Boundary Description**

RANCHO SANTA GERTRUDES SECTIONS,
TOWNSHIP AND RANGE LOT (EX OF ST) COM
N 175 FT FROM SE COR OF NE 1/4 OF
SEC 10 T 3S R 12W TH N 432.15 FT TH
... SEE MAPBOOK FOR MISSING PORTION ...
1/4 OF NE 1/4 OF SEC 10 T 3S R 12W

RANCHO SANTA GERTRUDES SECTIONS,
TOWNSHIP AND RANGE LOT (EX OF ST) COM
N 175 FT FROM SE COR OF NE 1/4 OF
SEC 10 T 3S R 12W TH N 432.15 FT TH
... SEE MAPBOOK FOR MISSING PORTION ...
1/4 OF NE 1/4 OF SEC 10 T 3S R 12W

**Building Description**

**Building Improvement 1**

| | |
|---|---|
| **Square Footage:** | 74,662 |
| **Year Build / Effective Year Built:** | 1951 / 1965 |
| **Bedrooms / Bathrooms** | 0 / 0 |
| **Units** | 0 |

**Building Improvement 2**

| | |
|---|---|
| **Square Footage:** | 4,209 |
| **Year Build / Effective Year Built:** | 1959 / 1959 |
| **Bedrooms / Bathrooms** | 0 / 0 |
| **Units** | 0 |

**Building Improvement 3**

| | |
|---|---|
| **Square Footage:** | 85,000 |
| **Year Build / Effective Year Built:** | 1951 / 1962 |
| **Bedrooms / Bathrooms** | 0 / 0 |
| **Units** | 0 |

**Building Improvement 4**

| | |
|---|---|
| **Square Footage:** | 17,880 |
| **Year Build / Effective Year Built:** | 1971 / 1971 |
| **Bedrooms / Bathrooms** | 0 / 0 |
| **Units** | 0 |

**Building Improvement 5**

| | |
|---|---|
| **Square Footage:** | 11,700 |
| **Year Build / Effective Year Built:** | 1971 / 1971 |
| **Bedrooms / Bathrooms** | 0 / 0 |
| **Units** | 0 |

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

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 |
|---|---|---|---|
| CAL000176097 | 1 | 626-961-9326 | 010639824 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address

Kirkhill Manufacturing
12023 Woodruff Ave.
Downey, CA 90241

Generator's Phone: 562 803 1117

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name — U.S. EPA ID Number

Express Oil Co — CAL000264806

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

DeMenno Kerdoon
2000 N. Alameda St.
Compton, CA 90222

CAT080013352

Facility's Phone: 310-537-7100

| 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 Liquid (Waste Oil) | 1 | TT | 590 | G | 221 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information

ERG# 128

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 — Signature — Month Day Year: 09 04 18

**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: Rudy A Flores — Signature — Month Day Year: 09 04 18

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

423594-1 COPY MK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 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 |
|---|---|---|---|
| CAL000178097 | 1 | 626-961-9326 | 010639627 FLE |

**GENERATOR**

5. Generator's Name and Mailing Address

Kirkhill Manufacturing
12023 Woodruff Ave.
Downey, CA 90241

Generator's Phone: 562-803-1117

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name — U.S. EPA ID Number

Express Oil Co. — CAL000264806

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

DeMenno Kerdoon
2000 N. Alameda St.
Compton, CA 90222

CAT080013352

Facility's Phone: 310-537-7100

| 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 Liquid (Waste Oil) | 1 | TT | 1900 | G | 221 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

THIS WASTE STREAM HAS BEEN QUALIFIED FOR RECYCLING/TREATMENT AT THE DeMENNO/KERDOON DBA WORLD OIL RECYCLING FACILITY IN COMPTON, CALIFORNIA. THIS FACILITY HAS THE NECESSARY PERMITS TO RECEIVE YOUR WASTE STREAM AS QUALIFED. OUR EPA NUMBER IS CAT080013352

14. Special Handling Instructions and Additional Information

ERG# 128

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: Oswaldo Ortiz — Signature — Month 07 Day 30 Year 18

**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: Rudy Alcala — Signature — Month 07 Day 30 Year 18

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. |
|---|---|---|---|
| H039 | | | |

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: Daniel Pool — Signature — Month 08 Day 02 Year 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: CAL000178097
2. Page 1 of: 1
3. Emergency Response Phone: 626-961-9326
4. Manifest Tracking Number: 010639646 FLE

**GENERATOR**

5. Generator's Name and Mailing Address:
Kirkhill Manufacturing
12023 Woodruff Ave.
Downey, CA 90241
Generator's Phone: 562-803-1117

Generator's Site Address (if different than mailing address):

6. Transporter 1 Company Name: Express Oil Co.
U.S. EPA ID Number: CAL000264809

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
US Ecology Vernon Inc.
5375 S. Boyle Ave.
Los Angeles, CA 90058
Facility's Phone: 323-277-1500
U.S. EPA ID Number: CAD097030993

| 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 (Oily Debris) | 26 | DM | 11700 | P | 352 | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
Profile# AP167842
327080

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: Austin Lopez | Signature: Austin Lopez | Month: 08 | Day: 03 | Year: 18

**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: Antonio Delgado | Signature | Month: 08 | Day: 03 | Year: 18
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. H141 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: Mads Hansen | Signature: Mads Hansen | Month: 08 | Day: 05 | Year: 18

## Thomas, Margaret

From: Mike Kilroy <mkilroy@kirkhillrubber.com>
Sent: Sunday, September 16, 2018 3:34 PM
To: Thomas, Margaret
Subject: Re: Additional Historical UST Records

Hello Margaret

Unfortunately I have NO records other then what we supplied all ready.

My information is all 2nd or 3rd hand from that period.

My understanding was that everything was closed and signed off on.

Regards

Mike

Sent from my iPhone

On Sep 16, 2018, at 1:31 PM, Thomas, Margaret <mathomas@partneresi.com> wrote:

> Hello Mike,
>
> I am reviewing the closure information for the historical USTs and notice on the No Further Action (NFA) letter dated August 6, 1992, that it references only one of the two closure permit numbers (5999B for the three removed USTs). Attached is the NFA letter and one other letter showing both permit numbers for quick reference. Do you know if the County issued just one NFA letter to cover all four USTs ? Also, would you have a copy of the very last final report that is referenced in the NFA letter that was submitted August 5, 1992 ? Thank you for any additional information you can provide.
>
> Respectfully,
>
> Margaret R. Thomas
> Project Assessor
>
> PARTNER ENGINEERING AND SCIENCE, INC. – CORPORATE OFFICE
> 2154 Torrance Boulevard, Suite 200, Torrance, CA 90501
> T: Main 800-419-4923 | T: Direct 310-220-6191 | F: 310-615-4544
>
> <NFA Letter for USTs August 6, 1992.pdf>
>
> <Letter for USTs March 1992 showing two closure permit numbers.pdf>

## Thomas, Margaret

From: Mike Kilroy <mkilroy@kirkhillrubber.com>
Sent: Monday, September 17, 2018 1:21 PM
To: Thomas, Margaret
Subject: RE: Additional Historical UST Records

Hello Margaret

3000 gallons
2000 gallons (empty)
3000 gallons
4000 gallons

Regards

Mike Kilroy
Operations, Sales, and Marketing Manager
KIRKHILL
Complete Rubber Solutions
Office: 562.803.1117
Fax: 562.803.3117
Cell: 562.397.1732
Email: MKilroy@KirkhillRubber.com
www.KirkhillRubber.com

ISO 9001:2015 with Design Registered Company

***** MY EMAIL ADDRESS HAS CHANGED - PLEASE UPDATE YOUR CONTACT INFORMATION *****

***** NEW EMAIL - MKILROY@KIRKHILLRUBBER.COM *****

---

**From:** Thomas, Margaret [mailto:mathomas@partneresi.com]
**Sent:** Monday, September 17, 2018 1:22 PM
**To:** Mike Kilroy
**Subject:** RE: Additional Historical UST Records

Hello Mike,

I have another question about the volume in gallons of the interior aboveground storage tanks (ASTs) in the manufacturing area including:

1) 77606 Raffene Oil (gray colored);
2) white AST next to the first one – I though it may be empty;
3) 77614 Sunpar 2280 oil; and

4) Hynap N100 Oil near #3 along south side of the building.

Thank you for your time in obtaining this information. If you don't have the exact size in gallons, would you be able to give me an approximate capacity of each one.

Thank you again.

Respectfully,

Margaret R. Thomas
Project Assessor

PARTNER ENGINEERING AND SCIENCE, INC. – CORPORATE OFFICE
2154 Torrance Boulevard, Suite 200, Torrance, CA 90501
T: Main 800-419-4923 | T: Direct 310-220-6191 | F: 310-615-4544

---

From: Mike Kilroy [mailto:mkilroy@kirkhillrubber.com]
Sent: Monday, September 17, 2018 10:55 AM
To: Thomas, Margaret <mathomas@partneresi.com>
Subject: RE: Additional Historical UST Records

Hello Margaret

Attached are the recent manifests, including one for oily debris/solids (sludge/grease) – This is what was in the 8 drums – we usually accumulate 25-30 before disposing.

Regards

Mike Kilroy
Operations, Sales, and Marketing Manager

KIRKHILL
Complete Rubber Solutions

Office: 562.803.1117
Fax: 562.803.3117
Cell: 562.397.1732
Email: MKilroy@KirkhillRubber.com
www.KirkhillRubber.com

ISO 9001:2015 with Design Registered Company

***** MY EMAIL ADDRESS HAS CHANGED - PLEASE UPDATE YOUR CONTACT INFORMATION *****

***** NEW EMAIL - MKILROY@KIRKHILLRUBBER.COM *****

**From:** Thomas, Margaret [mailto:mathomas@partneresi.com]
**Sent:** Monday, September 17, 2018 10:50 AM
**To:** Mike Kilroy
**Subject:** RE: Additional Historical UST Records

Hello Mike,

Question, would you be able to email me the most recent hazardous waste manifest(s) to show what types and amounts of hazardous waste were transported off site most recently. Also, my photos show about (8) 55-gallon drums on the exterior west side of the building labeled hazardous waste that says non RCRA hazardous waste solid. What is that material, as my notes did not include a description – thank you.

Thank you for your time and information.

Respectfully,

Margaret R. Thomas
Project Assessor

PARTNER ENGINEERING AND SCIENCE, INC. – CORPORATE OFFICE
2154 Torrance Boulevard, Suite 200, Torrance, CA 90501
T: Main 800-419-4923 | T: Direct 310-220-6191 | F: 310-615-4544

From: Mike Kilroy [mailto:mkilroy@kirkhillrubber.com]
Sent: Sunday, September 16, 2018 3:34 PM
To: Thomas, Margaret <mathomas@partneresi.com>
Subject: Re: Additional Historical UST Records

Hello Margaret

Unfortunately I have NO records other then what we supplied all ready.

My information is all 2nd or 3rd hand from that period.

My understanding was that everything was closed and signed off on.

Regards

Mike

Sent from my iPhone

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>
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for quick reference. Do you know if the County issued just one NFA letter to cover all four USTs ? Also, would you have a copy of the very last final report that is referenced in the NFA letter that was submitted August 5, 1992 ? Thank you for any additional information you can provide.

Respectfully,

Margaret R. Thomas
Project Assessor

PARTNER ENGINEERING AND SCIENCE, INC. – CORPORATE OFFICE
2154 Torrance Boulevard, Suite 200, Torrance, CA 90501
T: Main 800-419-4923 | T: Direct 310-220-6191 | F: 310-615-4544

<NFA Letter for USTs August 6, 1992.pdf>

<Letter for USTs March 1992 showing two closure permit numbers.pdf>

# PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

| | |
|---|---|
| SUBJECT PROPERTY: | INDUSTRIAL BUILDINGS<br>12021-12023 WOODRUFF AVENUE<br>DOWNEY, CALIFORNIA 90241 |
| REPORT DATE: | AUGUST 10, 2005 |
| CLIENT: | MR. TOM OLSEN<br>OLSEN FAMILY TRUST<br>1242 NORTH KENNYMEAD STREET<br>ORANGE, CALIFORNIA 92869 |
| PREPARED FOR: | MR. TOM OLSEN<br>OLSEN FAMILY TRUST |

WRITTEN AND REVIEWED BY:

JOHN E. ORSWELL
REGISTERED ENVIRONMENTAL ASSESSOR

REGISTERED ENVIRONMENTAL ASSESSOR
JOHN E. ORSWELL
No. 1263
Expires: 6/30/06
STATE OF CALIFORNIA

P05260

This report was prepared in conformance to meet or exceed the scope and limitations as set forth by the American Society for Testing & Materials (ASTM) Standard Practice E 1527-00. It is for the express use of the client, and its contents are considered to be privileged and confidential. Acceptance of this report constitutes an agreement by the client to assume full liability for information contained herein. This report is for the sole use and interpretation of the client, and it is not to be reproduced or distributed to outside parties. The information in this report is furnished in good faith and was obtained from sources and databases considered to be reliable; however, the accuracy of the information cannot be guaranteed. Our liability is limited to the fee charged.

Prepared by
ORSWELL & KASMAN, INC.
316 West Foothill Boulevard ■ Monrovia, CA 91016
(626) 932-1800 ■ FAX (626) 932-1807
www.orswell-kasman.com

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- 2.6 User Reliance

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**ORSWELL & KASMAN, INC.**
**PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT**

INDUSTRIAL BUILDINGS
12021-12023 WOODRUFF AVENUE
DOWNEY, CALIFORNIA 90241

## 1.0 SUMMARY

Based on a review of regulatory records, historical site information, and a visual inspection of the subject property and surrounding area, this assessment has revealed no *recognized environmental conditions* or *historical recognized environmental conditions* in connection with the Property, except as follows:

1) According to the records of the State of California Regional Water Quality Control Board (RWQCB), in March 1990, the subject property reported an unauthorized release of diesel fuel from a leaking underground storage tank. The tank and the impacted soil was removed from the site, and the file was closed in August 1992;

2) An inspection of the subject property determined there were visible stains of oil on the paved surface and on the exterior wall near the aboveground process oil storage tank on the south side of the building. In addition, water-soluble oil was observed on the paved surface near the cooling system in the open area near the center of the building; and

3) In addition, three offsite locations have been identified as potential risks or threats to the subject property. According to the data, the sites are not located in the near vicinity, and there is no indication that contaminants from these sites have migrated onto the subject property.

Based on the results of this assessment, it is recommended samples be obtained in the area of the process oil storage tank and in the area of the water-soluble oil cooling system, to determine if the soil has been impacted from the spilled materials. In addition, the company needs to institute better housekeeping procedures to prevent spilled materials in the outdoor storage areas from being washed into the local stormwater runoff system.

## 2.0 INTRODUCTION

### 2.1 Purpose

The purpose of this Phase I Environmental Site Assessment is to determine if any *recognized environmental conditions* or *historical recognized environmental conditions* exist on or near the subject property. As defined by the ASTM Standard, a *recognized environmental condition* is the presence or likely presence of any hazardous substances or petroleum products on a property

under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The ASTM Standard defines a *historical recognized environmental condition* as a condition which in the past would have been considered a *recognized environmental condition*, but which may or may not be considered a *recognized environmental condition* currently. If a past release of any hazardous substance or petroleum products has occurred in connection with the property and has been remediated, with such remediation accepted by the responsible regulatory agency, this condition shall be considered a *historical recognized environmental condition.*

## 2.2 Detailed Scope of Services

This report is based on a preliminary study into the past and current uses of the subject property and the surrounding area. The report includes a visual inspection of the property and adjacent sites, and a review of regulatory agency records, aerial photographs, and other historic record sources. Also included in this report are maps, diagrams, and photographs pertaining to this site.

## 2.3 Significant Assumptions

The information in this report is furnished in good faith and was obtained from sources and databases considered to be reliable; however, nothing in this report should be construed as a promise or guarantee that the subject property is free of environmental hazards. In many instances, this report relies on regulatory database information provided by federal, state and local governmental agencies. Although the database information used in this report consists of the most recently released records, it may not reflect the actual current status of the case.

## 2.4 Limitations and Exceptions

This report was prepared in conformance to meet or exceed the scope and practice as set forth by the American Society for Testing & Materials (ASTM) Standard Practice E 1527-00, "Standard Practice of Environmental Site Assessments: Phase I Environmental Site Assessment Process." No tests were conducted, and no samples of air, water, soil or building materials were taken.

2.5 Special Terms and Conditions

No special terms or conditions have been incorporated into the preparation of this report. There were also no limiting physical conditions such as rain or lack of electrical power, that had a limiting effect on the site inspection.

2.6 User Reliance

This report is prepared for the express use of the client, and its contents are considered to be privileged and confidential. Acceptance of this report constitutes an agreement by the client to assume full liability for information contained herein. This report is for the sole use and interpretation of the client, and it is not be reproduced or distributed to outside parties.

## 3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The subject property, 12021-12023 Woodruff Avenue, Downey, California, is located on the west side of Woodruff Avenue, north of Washburn Road. The property is described as Los Angeles County Tax Assessor's Parcel Number (APN) 6284-025-018.

3.2 Site and Vicinity General Characteristics

The site consists of a large, single-story industrial building, with paved parking and storage areas, located in a light industrial area of Downey, California (see site plan). The site and surrounding area are fairly level, and the subject property is connected to the municipal water and sewage systems.

3.3 Current Use of Property

The subject property is currently occupied by Kong Pet Toys, a distributor of chewable pet toys, and the Kirkhill Manufacturing Company, a manufacturer of rubber products.

3.4 Descriptions of Structures, Roads, Other Improvements On Site

In the center of the subject property is a large industrial building, which is divided into offices, a manufacturing area, warehouses and storage areas. On the north, west, and south sides of the site are paved parking and storage areas.

3.5 Current Uses of the Adjoining Properties

North of the subject property is a multi-tenant industrial building. To the east is Woodruff Avenue, and further east is a multi-tenant industrial building. South of the subject property are several smaller industrial buildings. To the west are several smaller industrial buildings.

## 4.0 USER PROVIDED INFORMATION

4.1 Title Records

No recorded land title records were provided by the client for review.

4.2 Environmental Liens or Activity and Use Limitations

The client has not provided any information concerning environmental liens or activity and use limitations.

4.3 Specialized Knowledge

No specialized knowledge of *recognized environmental conditions* or *historical recognized environmental conditions* in connection with the subject property has been provided by the client.

4.4 Valuation Reduction for Environmental Issues

No information has been provided which indicates the subject property is being sold or purchased at a significantly reduced price due to outstanding environmental issues.

4.5 Owner, Property Manager, and Occupant Information

Information provided by the owner, property manager, and/or occupants of the site are included in this report under Section 7.0, Interviews.

4.6 Reasons for Performing Phase I Environmental Site Assessment

The reasons for performing this Phase I Environmental Site Assessment is to satisfy commercial real estate lending requirements, or provide due diligence information concerning the historical uses and current condition of the site.

4.7 Other User Provided Information

No other information concerning the subject property has been provided by the client.

## 5.0 RECORDS REVIEW

5.1 Standard Environmental Records Sources

### FEDERAL AGENCY RECORDS

**United States Environmental Protection Agency (USEPA)**
**National Priorities List**

The National Priorities List (NPL) identifies abandoned or uncontrolled hazardous waste sites which have been identified as possibly representing a long-term threat to the public health or environment. These sites have been identified as being highly contaminated with hazardous substances and represent the USEPA's target enforcement and cleanup efforts. Studies of individual sites are conducted by the USEPA to determine level of contamination, and the sites are then compared and ranked to other sites on the NPL.

*A review of the USEPA National Priorities List dated May 2005 indicates there are no proposed or final sites within one mile of the subject property.*

**United States Environmental Protection Agency (USEPA)**
**Federal Superfund Liens List**

The USEPA maintains a list of Superfund Lien sites that have been issued on properties throughout the United States. These sites have been remediated through the expenditures of Superfund monies; the purpose of the lien is to prevent the property owner from gaining a financial benefit from the federal government's cleanup and restoration activities.

*A review of the July 1993 Federal Superfund List revealed there are no Superfund Liens on or adjacent to the site.*

**United States Environmental Protection Agency (USEPA)**
**Comprehensive Environmental Response, Compensation**
**and Liability Information System (CERCLIS)**

The USEPA has developed a database known as CERCLIS which contains information on potential hazardous waste sites located throughout the United States. There are over 33,000 sites

on the CERCLIS inventory. All sites are subjected to a preliminary assessment and thereafter are either placed on the National Priority List (NPL) or are placed in a category for those sites requiring no further Federal Superfund action.

*A review of the May 2005 CERCLIS report indicates there is one CERCLIS site within a ½ mile radius of the subject property:*

Boeing North American, Inc. (#1 on map)
12214 Lakewood Boulevard
Downey, CA 90242

According to the records, this site was discovered in November 1998, and no further remedial action has been reported for this site.

*There are no listed "No Further Remedial Action Planned" (NFRAP) sites on or adjacent to the subject property.*

**United States Environmental Protection Agency (USEPA)**
**Resource Conservation and Recovery Act (RCRA)**
**Treatment, Storage or Disposal Facilities (TSDF)**

The USEPA maintains a list of facilities which have been authorized to receive hazardous waste. These facilities have permits to treat, store, or dispose of the waste, as determined by the RCRA regulations. In addition, the USEPA publishes a list of those facilities who are subject to a corrective action, based on the facilities waste handling and storage procedures. The facilities which are subject to a corrective action are identified as CORRACTS sites.

*A review of the November 2004 RCRA TSDF list determined there are no CORRACTS facilities within a one mile radius of the subject property. In addition, there are no non-CORRACTS TSD facilities listed within a one mile radius.*

**United States Environmental Protection Agency (USEPA)**
**Resource Conservation and Recovery Act (RCRA)**
**Hazardous Waste Generators**

The USEPA maintains a list of facilities which are identified as generators of large and small quantities of hazardous waste. These facilities have permits to generate, store and dispose of the waste, as determined by the RCRA regulations.

*A review of the November 2004 RCRA Hazardous Waste Generators list determined the subject*

*property (Kirkhill Inc., 12021 Woodruff Avenue) is identified as small quantity hazardous waste generator. According to the records, there are small quantity hazardous waste generators identified on the adjacent properties to the east (Fuji Photo Film USA Inc., 12010 Woodruff Avenue, Suite A) and to the west (Classic Graphix, 9459 Washburn Road and Stud Welding Products Inc., 9455 Washburn Road).*

**United States Environmental Protection Agency (USEPA)**
**Office of Emergency and Remedial Response**
**Emergency Response Notification System (ERNS)**

The USEPA maintains a list of locations which have reported a release of oil or hazardous substances to the federal government. Most of the data in this system is based on information that was received during the initial notification.

*A review of the ERNS list for 1999 determined there are no reported incidents on the subject property.*

**United States Department of Transportation**
**United States Coast Guard**
**National Response Center (NRC)**

The NRC is the national point of contact for reporting all oil, chemical, radiological, biological and etiological discharges into the environment anywhere in the United States and its territories. In addition to gathering and distributing spill data for Federal On-Scene Coordinators and serving as the communications and operations center for the National Response Team, the NRC maintains agreements with a variety of federal entities to make additional notifications regarding incidents meeting established trigger criteria.

*A review of the NRC list for 2004 determined there are no reported incidents on the subject property.*

## STATE AGENCY RECORDS

**State of California**
**Environmental Protection Agency (CAL-EPA)**
**Department of Toxic Substances Control (DTSC)**

CAL-EPA is responsible for the regulation and enforcement of environmental health laws within the state of California, as set forth by the California Health and Safety Code. CAL-EPA is also designated by the USEPA to assist in enforcing federal environmental laws. CAL-EPA regulates

companies involved in the generation, transportation, storage and disposal of hazardous substances. CAL-EPA records include the "CalSites" database, which is a listing of 7,800 known active, inactive and abandoned hazardous waste sites. These sites have previously been reported in the Abandoned Site Program Information System (ASPIS), Bond Expenditure Plan (BEP), and Cortese databases. CAL-EPA records also include an October 1990 listing of registered underground tanks and the California Integrated Waste Management Board's "Active" and "Closed and Inactive" landfills database.

*A review of the June 2005 CAL-EPA records determined there is one listed "CalSite" facility within one mile of the subject property:*

NASA Industrial Plant - Kaiser (#1 on map)
12214 Lakewood Boulevard
Downey, CA 90241

The business has completed a Voluntary Cleanup Program with DTSC.

*There are historical records of a registered underground storage tank on the subject property (Kirkhill Inc., 12021 Woodruff Avenue) and on the adjacent property to the east (Darnell Corp., 12000 Woodruff Avenue). There are also historical and current records of a registered underground storage tank on the adjacent property to the north (Inco Express Inc., 11941 Woodruff Avenue). In addition, there is one landfill site listed within a ½ mile radius of the subject property:*

Downey Dump (#2 on map)
9612 Ardine Street
Downey, CA 90241

This site is identified as a closed, solid waste disposal site.

**State of California**
**Water Resources Control Board**
**Regional Water Quality Control Board (RWQCB)**

The RWQCB is responsible for monitoring the quality and flow of the groundwater, and compiles lists of known leaking underground storage tanks. In addition, the RWQCB addresses other potential threats to the groundwater from surface spills and leaks. The RWQCB monitors the contamination problem, the investigation and any remedial action.

*A review of the May 2005 leaking underground storage tank records of the RWQCB determined*

*the subject property is not currently listed as the source of a known leaking storage tank. In March 1990, the subject property reported an unauthorized release of diesel fuel from a leaking underground storage tank. The tank and the impacted soil was removed from the site, and the file was closed in August 1992. According to the records, there is one known leaking underground tank site within a ½ mile radius of the subject property:*

Calsan, Inc. (#3 on map)
9821 Downey & Norwalk Road
Downey, CA 90241

This site was first reported in September 2000. According to the records, a leak is suspected at the site, and the responsible party is conducting an inspection of the tanks and plumbing system to verify the existence of a leak.

*The subject property or adjacent sites were not identified on the RWQCB Spills, Leaks, Investigations and Cleanups (SLIC) list.*

5.2 Additional Environmental Sources

**State of California**
**Department of Conservation**
**Division of Mines and Geology (CDMG)**

The CDMG conducts studies, publishes maps, and provides information concerning the geological formations throughout the state of California. CDMG research information is combined with information from the United States Geological Survey and the ensuing geologic maps of the state are prepared. These geologic maps also illustrate the approximate locations of known earthquake faults.

*A review of the area map published by CDMG indicates the geologic area surrounding the subject property consists of Recent alluvium, which includes alluvial fan, flood-plain, and streambed deposits. The client may wish to refer to the enclosed geologic map.*

**State of California**
**Department of Conservation**
**Division of Oil and Gas (CDOG)**

The CDOG regulates the drilling, operation and abandonment of gas and oil wells throughout the state of California. If an active, idle or abandoned well is located on or adjacent to a proposed construction site, CDOG requires a site plan review prior to issuing a building permit.

Abandoned oil wells must meet standards established in 1984.

*A review of the area map published by CDOG indicates there are no producing, idle or abandoned oil wells on or adjacent to the subject property. The client may wish to review the enclosed map.*

**South Coast Air Quality**
**Management District (AQMD)**

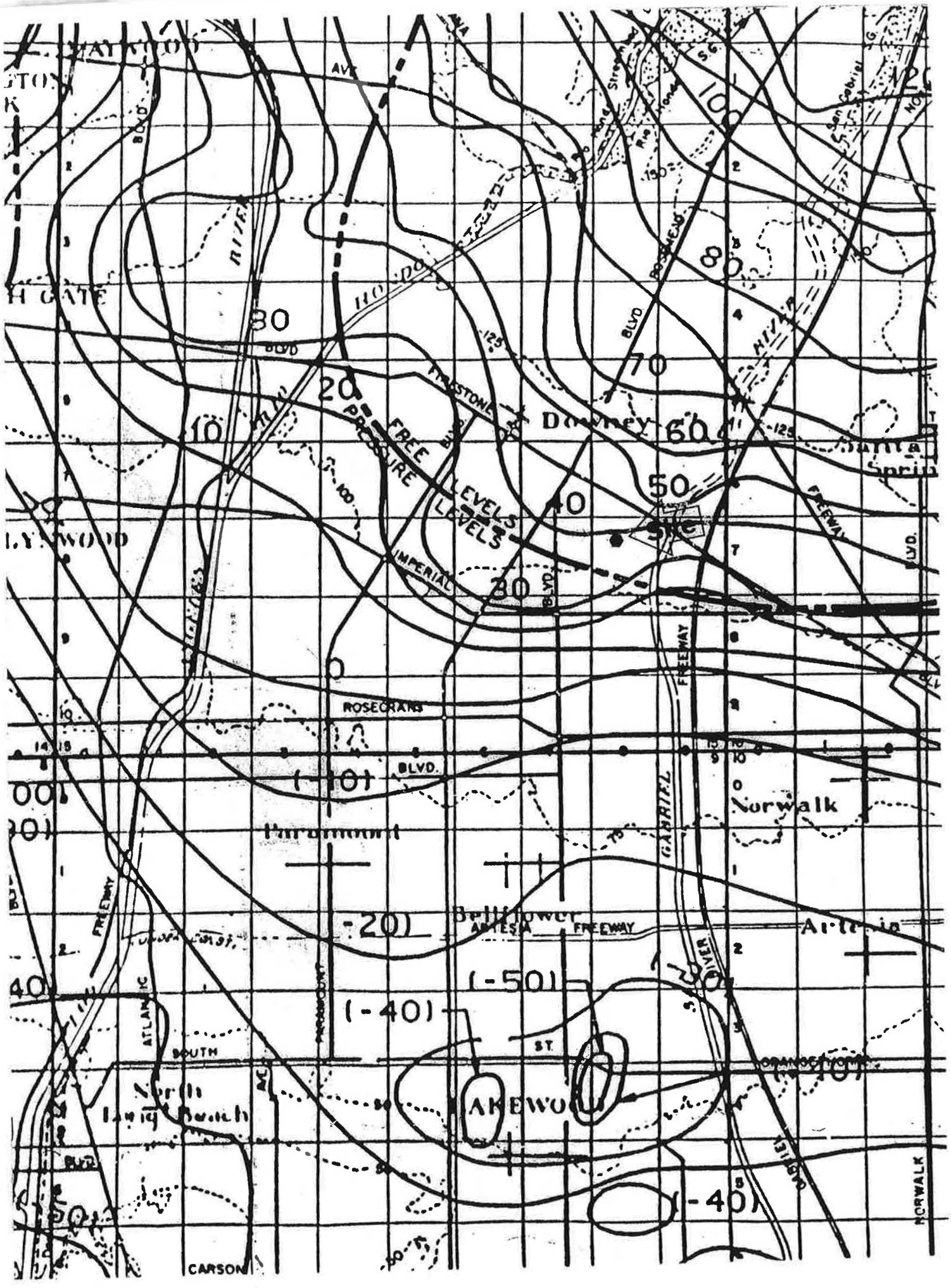
The AQMD is responsible for the development and enforcement of regulations concerning air emissions and airborne hazards from stationary sources in the South Coast Air Basin. AQMD maintains a "Hot Spot" list of facilities whose air emissions pose as a risk to the surrounding community.

*A review of the AQMD records determined there are no "Hot Spot" facilities on or adjacent to the subject property.*

**Los Angeles County**
**Fire Department (LACOFD)**
**Health Hazardous Materials Division**

LACOFD maintains inspection and inventory records of companies involved in the storage and use of hazardous materials, petrochemicals, or hazardous waste. LACOFD attempts to maintain a current record of the types of hazardous substances that are utilized or stored at a particular site, and conducts periodic inspections for safety and compliance. In addition, LACOFD maintains records concerning hazardous material sites in Los Angeles County, which are reported to LACOFD by various regulatory agencies. Upon receiving the report, LACOFD monitors the cleanup process on the contaminated site.

*According to the LACOFD files, the subject property (Kirkhill Inc., 12021 Woodruff Avenue) is identified as a hazardous material handler. There are records of a hazardous waste generator and hazardous waste handler on the adjacent property to the north (Storopack Inc., 12007 South Woodruff Avenue). The records also identified a registered underground storage tank and hazardous material handler on the adjacent property to the north (Inco Express, Inc., 11941 Woodruff Avenue). A review of the Active Mitigation Complaint Control Logs determined there are no listed sites on or adjacent to the subject property.*


FREE
PRESSURE
LEVELS
IMPERIAL
BLVD.
ROSECRANS
(-10)
(-20)
(-40)
(-50)
Norwalk
Bellflower
FREEWAY
ATLANTIC
PARAMOUNT
SOUTH
CARSON
Lakewood
Downey
NORWALK

Matt
(310) 2075425

**Los Angeles County**
**Department of Public Works**
**Waste Management Division (DPW/WMD)**

DPW/WMD maintains maps showing the locations of active, inactive or future solid waste landfill sites in Los Angeles County.

*A review of DPW's major waste systems map determined there are no active, inactive or future landfill sites within a ½ mile radius of the subject property.*

**Los Angeles County**
**Department of Public Works**
**Hydraulic/Water Conservation Division (DPW/HWC)**

DPW/HWC maintains contour maps and data of the groundwater levels in the Los Angeles County area. The map shows the depth to the aquifer, as well as the approximate flow direction.

*A review of this data revealed the site is located at an elevation of approximately 100 feet above sea level. According to well data, the groundwater level in the area is approximately 40 feet above sea level, or about 60 feet below the ground surface. The groundwater contour lines in the area of the subject property indicate the groundwater flows in a southerly direction. The client may wish to review the enclosed map.*

**Los Angeles County**
**Department of Public Works**
**Underground Tank Division (DPW/UGT)**

DPW/UGT maintains records and permits on businesses which store hazardous materials in underground tanks, and issues permits to remove abandoned underground tanks.

*A review of the DPW/UGT records determined an underground tank was removed from the subject property (Kirkhill Rubber Inc., 12021 South Woodruff Avenue) and on the adjacent property to the north (Inco Express Inc., 11941 South Woodruff Avenue).*

5.3 Physical Setting Sources

A United States Geological Survey (USGS) 7.5 Minute Topographical map of the subject property and surrounding area is included in the appendices of the report. The map shows the locations of the identified offsite environmental risks or threats described in the report.

5.4 Historical Use Information on the Property

**City of Downey**
**Division of Building and Safety**

A review of the building records for the subject property revealed the following:

| Date | Activity | Owner |
|---|---|---|
| | 12021 Woodruff Avenue | |
| 2/55 | Building addition | Kirkhill, Inc. |
| 2/56 | Building addition | Kirkhill, Inc. |
| 7/56 | Building addition | Kirkhill, Inc. |
| 5/59 | Add warehouse | Kirkhill, Inc. |
| 9/59 | Add fire sprinklers | Kirkhill, Inc. |
| 1/60 | Repair fire damage | Kirkhill, Inc. |
| 3/66 | Repave parking lot | Kirkhill, Inc. |
| 6/66 | Add offices and factory | Kirkhill, Inc. |
| 6/66 | Add fire sprinklers | Kirkhill, Inc. |
| 1/68 | Add manufacturing area | Kirkhill, Inc. |
| 9/68 | Alter offices | Kirkhill, Inc. |
| 2/69 | Add fire sprinklers | Kirkhill, Inc. |
| 12/69 | Install office air conditioning | Kirkhill, Inc. |
| 12/69 | Add warehouse | Kirkhill, Inc. |
| 7/81 | Add partitions | Kirkhill, Inc. |
| 9/81 | Add fire sprinklers | Kirkhill, Inc. |
| 7/88 | Add offices and bathroom | Kirkhill, Inc. |
| 1/90 | Reroof building | Kirkhill, Inc. |
| 10/90 | Reroof building | Kirkhill, Inc. |
| 10/92 | Add handicapped ramp | Kirkhill Corp. |
| 1/99 | Add demising walls | IDC Corp |
| | 12023 Woodruff Avenue | |
| 5/99 | Add partitions | Kirkhill Manufacturing |
| 6/99 | Install new loading dock | IDC/Meyers |
| 10/04 | Install new foundation for equipment | Ed Reker |
| 3/05 | Raise existing roof | KMC |

No other building or demolition permits were on file for the subject property.

**Historical Aerial Photographs**

A review of historical aerial photographs of the subject property determined the following information:

| Date of Photo | Description |
|---|---|
| May 1938 | The subject property is vacant, agricultural land, with no visible buildings or structures on the site. |
| October 1953 | A large industrial building is now on the subject property. The west side of the site is vacant land. |
| February 1963 | The subject property appears to be about the same as the 1953 photograph. |
| October 1972 | A large industrial building is on the subject property. A paved storage yard is on the west side of the site. |
| March 1980 | The existing industrial building and storage areas are now on the subject property. |
| August 1989 | The subject property appears to be about the same as the 1980 photograph. |
| May 1994 | The existing industrial building and storage areas are on the subject property. |
| June 2002 | The subject property appears to be about the same as the 1994 photograph. |

**Historic Sanborn Fire Insurance Maps**

Sanborn Fire Insurance Maps provide information on commercial and industrial properties, based on risk data gathered for the fire insurance companies. The maps show the number of buildings located on the property, and the type of construction. The maps also describe the various businesses located nearby, and show the locations of tanks, boilers, and other potential hazards.

*A review of the Sanborn Fire Insurance Map collections from 1867-1970, did not locate any maps for the subject property.*

A review of building permit records and historical aerial photographs determined an industrial building was originally constructed on the site over 50 years ago, and expanded into its existing size in the 1960s. The subject property was part of a large agricultural field in the 1930s.

5.5 Historical Use Information on the Adjoining Properties

**Historical Aerial Photographs**

A review of historical aerial photographs of the adjoining properties determined the following information:

| Date of Photo | Description |
|---|---|
| May 1938 | The area surrounding the subject property is vacant agricultural land, with no visible buildings or structures. To the east is Woodruff Avenue. |
| October 1953 | North and west of the subject property is vacant agricultural land. To the east is Woodruff Avenue, and further east is a parking lot. To the south are two industrial buildings and vacant land. |
| February 1963 | North of the subject property is vacant agricultural land. To the east is Woodruff Avenue, and further east is a parking lot. South of the subject property are three industrial buildings and vacant land. To the west are three industrial buildings. |
| October 1972 | North of the subject property is vacant agricultural land. To the east is Woodruff Avenue, and further east is a parking lot. South of the subject property are four industrial buildings. To the west are three industrial buildings. |
| March 1980 | North of the subject property is an industrial building and vacant land. To the east is Woodruff Avenue, and further east is vacant land. South of the subject property are four industrial buildings. To the west are three industrial buildings. |
| August 1989 | North of the subject property are two industrial buildings. To the east is Woodruff Avenue, and further east is an industrial building. South of the subject property are four industrial buildings. To the west are three industrial buildings. |
| May 1994 | The area surrounding the subject property appears to be about the same as the 1989 photograph. |

| Date of Photo | Description |
|---|---|
| June 2002 | North of the subject property are two industrial buildings. To the east is Woodruff Avenue, and further east is an industrial building. South of the subject property are four industrial buildings. To the west are three industrial buildings. |

**Historic Sanborn Fire Insurance Maps**

Sanborn Fire Insurance Maps provide information on commercial and industrial properties, based on risk data gathered for the fire insurance companies. The maps show the number of buildings located on the property, and the type of construction. The maps also describe the various businesses located nearby, and show the locations of tanks, boilers, and other potential hazards.

*A review of the Sanborn Fire Insurance Map collections from 1867-1970, did not locate any maps for the area surrounding the subject property.*

A review of historical aerial photographs and Sanborn fire insurance maps determined the industrial buildings to the north were constructed about 20-25 years ago. The industrial building east of Woodruff Avenue was constructed about 20-25 years ago. The industrial buildings to the south were constructed 30-50 years ago. The industrial buildings west of the subject property were constructed 40-45 years ago. The area surrounding the subject property was vacant agricultural land in the 1930s.

## 6.0 SITE RECONNAISSANCE

### 6.1 Methodology and Limiting Conditions

The site reconnaissance consisted of a walk through the entire property, and visually observing the structures, storage areas, and parking lots. No inspection was conducted under floors, above ceilings, or behind walls.

### 6.2 General Site Setting

The site consists of a large, single-story industrial building, with paved parking and storage areas, located in a light industrial area of Downey, California (see site plan). The site and surrounding area are fairly level, and the subject property is connected to the municipal water and sewage systems.

6.3 Subject Property Observations

On August 1, 2005, an inspection of the site and surrounding area was conducted by Registered Environmental Assessor Jack Orswell. The single-story, concrete block industrial building (see photo #1) is divided into two areas, and described as follows:

12021 Woodruff Avenue

The north side of the industrial building is occupied by Kong Pet Toys, a distributor of chewable pet toys. Inside, on the east side of the building, are the business and sales offices. The office ceilings are covered with suspended-grid acoustical tile or sprayed with a white acoustical materials, which is painted and in good condition. The office floors are carpeted or covered with vinyl or terrazzo tile. An additional office area, which is currently vacant and empty, is located on the east side of the building. This area was previously occupied by a temporary employment services agency. The heating, ventilation and cooling (HVAC) system appears to be mounted on the roof of the building.

On the west side of the building is the packaging and warehouse area (see photos #2 and #3). The warehouse has an open wood beam ceiling, and an exposed concrete floor. The company packages and distributes chewable pet toys, and no manufacturing activities take place on the site. No large quantities of hazardous materials were observed being stored or used inside the building, and no hazardous wastes are generated from the business operations.

12023 Woodruff Avenue

The south side of the industrial building is occupied by the Kirkhill Manufacturing Company, a manufacturer of rubber products and gaskets. Inside, in the southeast corner, are the business and sales offices (see photo #4). The office ceilings are covered with suspended-grid acoustical tile, and the floors are covered with vinyl tile. The heating, ventilation and cooling (HVAC) system appears to be mounted on the roof of the building.

Along the southern side of the building is the manufacturing area and a warehouse for materials and finished goods (see photos #5 and #6). The company uses process oil and mixes the material with rubber, various additives and color pigments to blend the product material. The material is then placed into a pressurized mold, and the final product is formed. Liquid nitrogen stored in portable tanks (see photo #7) and cooling water is used to cool the equipment. Water-soluble oil is used to pressurize the molding process.

The process oil is stored in a large aboveground storage tank (see photo #8), which is located on the south side of the building. There were visible stains of oil on the paved surface (see photo

#9) and on the exterior wall (see photo #10) near the aboveground process oil storage tank on the south side of the building. On the west side of the warehouse is a shipping and receiving area (see photo #11) and a materials storage area (see photo #12). In the center of the building is an open yard (see photo #13), with an electrical transformer, a water evaporation and cooling system (see photo #14), and water-soluble oil cooling system (see photo #15). Water-soluble oil was observed on the paved surface (see photo #16) near the cooling system in the open area near the center of the building. Waste oil and lubricants are stored in 55-gallon drums with secondary spill containment under a covered area in the center yard.

Outside, on the north side of the building, is a paved parking lot and driveway (see photo #17). There is also a paved parking lot and storage yard on the south side of the site (see photo #18). The west side of the subject property is used to store materials, off-spec products, trash, wooden pallets, and old equipment (see photos #19 and #20). Large amounts of spilled powdered materials were observed on the west and south sides of the storage areas, and the company did not appear to have any containment in place to prevent these materials from being washed into the local stormwater runoff system. Commercial trash bins are located throughout the site, and no signs of improper solid waste disposal were observed in or near the trash bins. The company stores and uses large quantities of hazardous materials such as process oil, rubber additives, and solvents, and generates waste oil, lubricants, and solvents. All of the waste products appeared to be properly stored and managed. No evidence of waste water clarifiers, sumps, pits, septic tanks, or underground storage tanks was observed on the site. The electrical power in the area is supplied by overhead utility lines located along the west site of the property, and there were no nearby transformers with signs indicating the presence of polychlorinated biphenyls (PCBs).

6.4 Adjoining Property Observations

Northern Border

North of the subject property is a multi-tenant industrial building (see photo #21). There were no visible signs of spills or contamination on the adjacent property.

Eastern Border

East of the subject property is Woodruff Avenue, and further east is a multi-tenant industrial building (see photo #22). There were no visible signs of spills or contamination on the adjacent property.

Southern Border

South of the subject property are several smaller industrial buildings (see photo #23). There were

no visible signs of spills or contamination on the adjacent properties.

Western Border

West of the subject property are several smaller industrial buildings (see photo #24). There were no visible signs of spills or contamination on the adjacent properties.

## 7.0 INTERVIEWS

### 7.1 Interview with Owner

No interview with the property owner was conducted.

### 7.2 Interview with Site Manager

Mike Kilroy, the marketing and sales manager of the Kirkhill Manufacturing Company, stated the company has operated on the site for over 50 years, and they manufacture various rubber products and gaskets. He stated they sublease the northern portion of the building to Kong Pet Toys, and his company manufactures about 50% of the products for Kong Pet Toys. Mr. Kilroy advised they store and use large quantities of hazardous materials, including process oil, rubber additives, solvents, and lubricants. He stated the manufacturing process generates waste lubricants and solvents, which are stored in a secure area in the center of the building.

Mr. Kilroy stated an underground storage tank was removed from the site over ten years ago, and there are currently no underground storage tanks, waste water clarifiers, or septic tanks on the property. He advised the company is coming out of bankruptcy, and they are in the process of moving and replacing equipment, and changing the warehouse and materials storage areas. Mr. Kilroy stated he is not aware of any chemical spills or contamination problems with the site.

### 7.3 Interviews with Occupants

No interviews with the other occupants were conducted.

### 7.4 Interviews with Local Government Officials

No interviews with local government officials were conducted.

### 7.5 Interview with Others

No interviews with other people were conducted concerning the subject property.

## 8.0 FINDINGS

### 8.1 Recognized Environmental Conditions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E 1527-00 on the industrial buildings located at 12021-12023 Woodruff Avenue, Downey, California, the Property. Any exceptions to, or deletions from the Standard Practice are described in Section 2.4 of this report. This assessment has revealed no evidence of *recognized environmental conditions* in connection with the Property, except as follows:

1) An inspection of the subject property determined there were visible stains of oil on the paved surface and on the exterior wall near the aboveground process oil storage tank on the south side of the building. In addition, water-soluble oil was observed on the paved surface near the cooling system in the open area near the center of the building; and

2) In addition, three offsite locations have been identified as potential risks or threats to the subject property. According to the data, the sites are not located in the near vicinity, and there is no indication that contaminants from these sites have migrated onto the subject property.

### 8.2 Historical Recognized Environmental Conditions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E 1527-00 on the industrial buildings located at 12021-12023 Woodruff Avenue, Downey, California, the Property. Any exceptions to, or deletions from the Standard Practice are described in Section 2.4 of this report. This assessment has revealed no evidence of *historical recognized environmental conditions* in connection with the Property, except as follows:

According to the records of the State of California Regional Water Quality Control Board (RWQCB), in March 1990, the subject property reported an unauthorized release of diesel fuel from a leaking underground storage tank. The tank and the impacted soil was removed from the site, and the file was closed in August 1992.

## 9.0 OPINION

Based on a review of regulatory and historical records, an interview with the property manager, and a visual inspection of the site and surrounding area, this assessment has found evidence of *recognized environmental conditions* which may have impacted the subject property.

## 10.0 CONCLUSIONS

Based on the results of this assessment, it is recommended samples be obtained in the area of the process oil storage tank and in the area of the water-soluble oil cooling system, to determine if the soil has been impacted from the spilled materials. In addition, the company needs to institute better housekeeping procedures to prevent spilled materials in the outdoor storage areas from being washed into the local stormwater runoff system.

## 11.0 DEVIATIONS

This report was prepared in conformance to meet or exceed the scope and practice as set forth by the American Society for Testing & Materials (ASTM) Standard Practice E 1527-00, "Standard Practice of Environmental Site Assessments: Phase I Environmental Site Assessment Process." No significant deviations or deletions were made from this practice.

## 12.0 ADDITIONAL SERVICES

No additional services including a broader scope of services, liability/risk evaluations, or remedial activities are included in this report.

## 13.0 REFERENCES

All government records and maps were obtained directly from the regulatory agencies identified in this report. The fire insurance map information was obtained from Digital Sanborn Maps, 1867-1970, Ann Arbor, Michigan. The aerial photographs were obtained from Rupp Aerial Photography, Corona, California; the United States Geological Survey, Menlo Park, California; or the United States Department of Agriculture, Salt Lake City, Utah.

## 14.0 APPENDICES

### 14.1 Qualifications of the Environmental Professionals

Attached to this report are the résumés of Jack Orswell and Marty Kasman, who conducted the site inspection, the records review, and prepared the report.

### 14.2 Site and Vicinity Map

A United States Geological Survey (USGS) 7.5 Minute Topographical map of the subject property and surrounding area is included in the appendices of the report. The map shows the locations of the identified offsite environmental risks or threats described in the report.

14.3 Site Plan

A site plan of the subject property is included in the appendices of the report. The site plan shows the general location of the structures on the property, and other items of interest which were identified in the description of the site.

14.4 Site and Vicinity Photographs

Photographs of the subject property and surrounding neighborhood are attached to this report. These photographs were taken at the time of the site inspection.

14.5 Historical Research Documentation

Building permit records were obtained directly from the regulatory agency identified in this report. The aerial photographs summarized in this report were obtained from Rupp Aerial Photography, Corona, California; the United States Geological Survey, Menlo Park, California; or the United States Department of Agriculture, Salt Lake City, Utah. The Sanborn Fire Insurance Map information was obtained from Digital Sanborn Maps, 1867-1970, Ann Arbor, Michigan.

14.6 Regulatory Records Documentation

All government records were obtained directly from the regulatory agencies identified in this report.

14.7 Interview and Research Documentation

All of the field notes and supporting information obtained from interviews and research concerning the subject property are maintained in the report file at the offices of Orswell & Kasman, Inc.

14.8 Special Contractual Conditions between User and Environmental Professional

No special contractual conditions or agreements exist between the client and any of the employees of Orswell & Kasman, Inc., and Orswell & Kasman, Inc. does not have any financial interest in the subject property.

# APPENDIX

# JACK ORSWELL

Jack Orswell, a principal of the company, is a Registered Environmental Assessor (#1263) and a licensed Private Investigator (#PI 14366) with the State of California. He is also a USEPA/AHERA accredited Asbestos Management Planner and California Certified Asbestos Consultant (#92-0869). He received his Bachelor of Science degree in Business Administration from the University of Southern California, and spent 15 years as a Special Agent with the Federal Bureau of Investigation in the Denver, San Francisco and Los Angeles offices. Mr. Orswell received specialized training from the United States Environmental Protection Agency (EPA), and he was one of the first FBI Agents to work with the EPA in investigating federal environmental crimes.

While with the FBI, Mr. Orswell worked with the EPA's National Enforcement Investigations Center (NEIC) in Denver, Colorado, and helped establish evidence control procedures for their laboratory personnel. As coordinator of environmental investigations for the FBI's Los Angeles office, Mr. Orswell gained extensive training and experience working with the California Department of Health Services and the Los Angeles County Sheriff's Department.

For the past 15 years, Mr. Orswell has been in private industry, conducting environmental assessments for several financial institutions, real estate companies and law firms. Mr. Orswell has conducted environmental investigations throughout the United States, locating and interviewing witnesses to determine how hazardous materials were handled in various manufacturing operations, and documenting the long term effects of improper disposal.

Mr. Orswell's extensive background in criminal environmental enforcement and civil litigation support make him uniquely qualified as an environmental assessor and investigator. He is a member of the California Hazardous Materials Investigators Association, the Society of Former Special Agents of the Federal Bureau of Investigation, the National Association of Environmental Professionals, the National Association of Government Guarantee Lenders, and the American Society for Testing of Materials (ASTM).

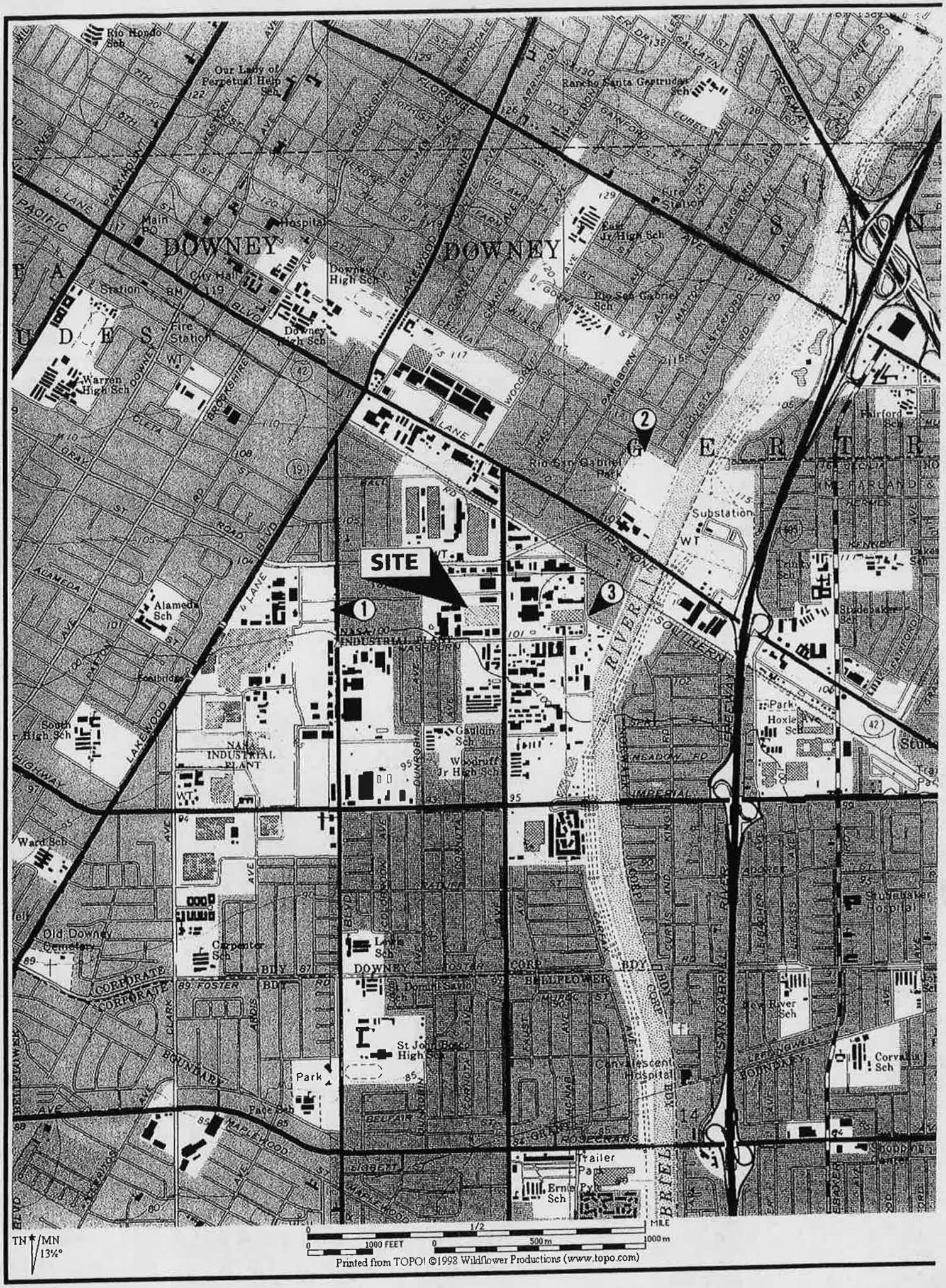
# MARTY KASMAN

Marty Kasman, a principal of the company, is a Registered Environmental Health Specialist (#4927) and a Registered Environmental Assessor (#4022) with the State of California. He is also a USEPA/AHERA accredited Asbestos Management Planner and California Certified Asbestos Consultant (#99-2553). He received his Bachelor of Science and Master of Science degrees in Environmental and Occupational Health Science from California State University at Northridge. He also has a Certificate in Hazardous Materials Management from the University of California at Los Angeles (UCLA). In addition, Mr. Kasman also received specialized hazardous materials training at the Federal Law Enforcement Training Center in Georgia.

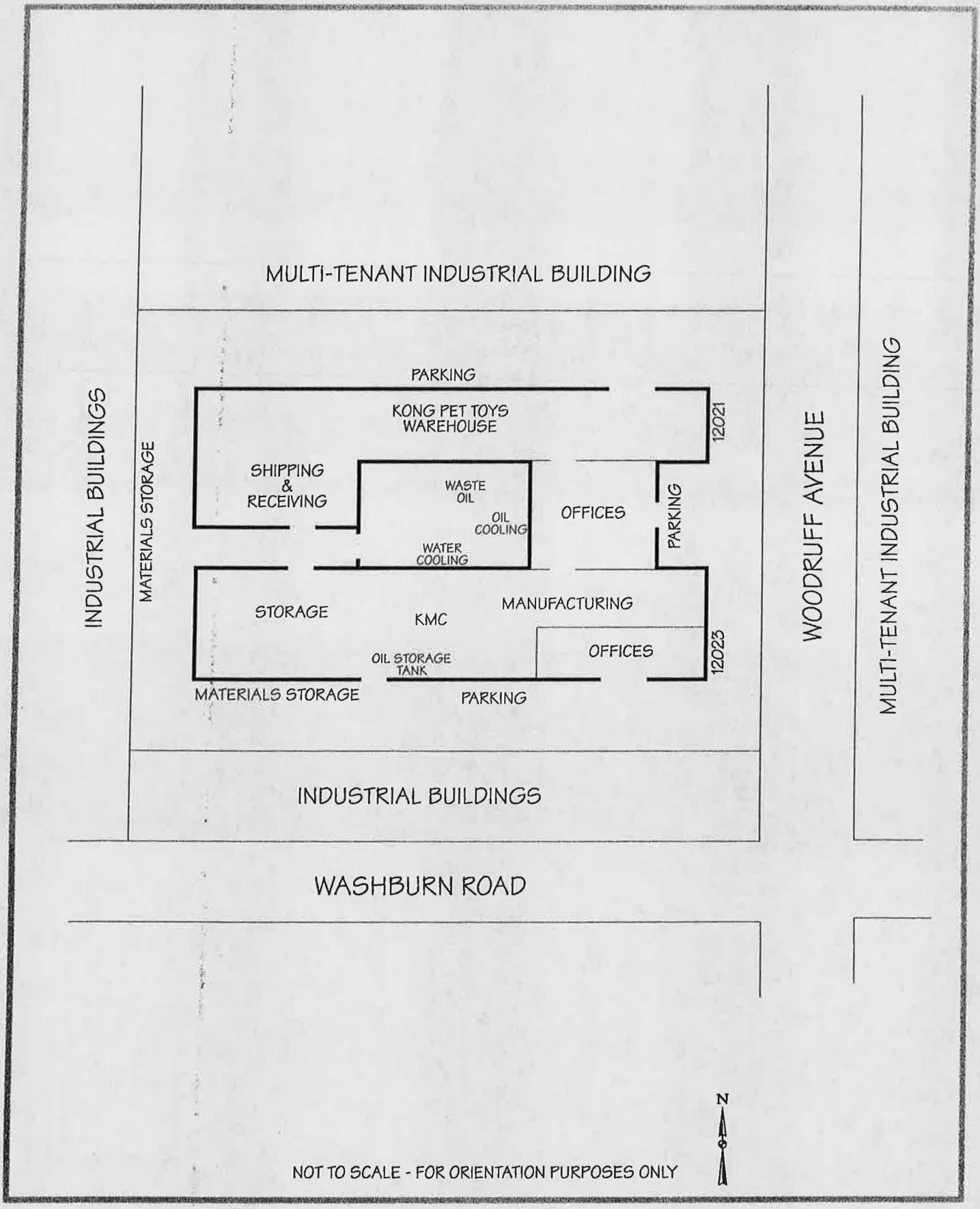
Mr. Kasman served 14 years with the Los Angeles County Fire Department, as a Supervising Hazardous Material Specialist and Deputy Health Officer. His responsibilities included field and laboratory work in hazardous materials management, conducting inspections of industrial plant operations, and monitoring cleanup activities. In addition, Mr. Kasman has investigated hundreds of abandoned waste sites and other cases involving the illegal dumping of hazardous materials throughout Los Angeles County.

Mr. Kasman currently serves as an environmental consultant to industry management in the proper handling of hazardous materials and waste. He has taught courses in hazardous materials regulatory compliance and waste management at UCLA, California State University at Northridge, and the California Specialized Training Institute at San Luis Obispo. Mr. Kasman is also serving on the State of California Local Unified Program Implementation Committee (LUPIC) to develop a standardized hazardous materials contingency plan.

Mr. Kasman's extensive education, training, and experience in hazardous materials management make him fully qualified to conduct environmental assessments and investigations. He is the former president and director of the California Hazardous Materials Investigators Association. He is also a former director of the Local Environmental Enforcement Officers Association, and the Los Angeles County Association of Environmental Health Specialists. He is a member of California and National Environmental Health Associations, and the National Association of Government Guarantee Lenders.



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MULTI-TENANT INDUSTRIAL BUILDING
INDUSTRIAL BUILDINGS
MATERIALS STORAGE
PARKING
KONG PET TOYS WAREHOUSE
12021
SHIPPING & RECEIVING
WASTE OIL
OIL COOLING
WATER COOLING
OFFICES
PARKING
STORAGE
KMC
MANUFACTURING
OIL STORAGE TANK
OFFICES
12023
MATERIALS STORAGE
PARKING
WOODRUFF AVENUE
MULTI-TENANT INDUSTRIAL BUILDING
INDUSTRIAL BUILDINGS
WASHBURN ROAD
N
NOT TO SCALE - FOR ORIENTATION PURPOSES ONLY

Phase I Environmental Site Assessment
12021-12023 Woodruff Avenue
August 10, 2005

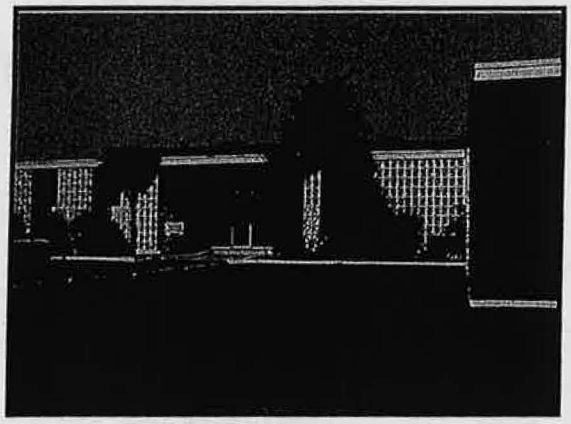


Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6

Phase I Environmental Site Assessment
12021-12023 Woodruff Avenue
August 10, 2005



Photo 7




Photo 8



Photo 9



Photo 10

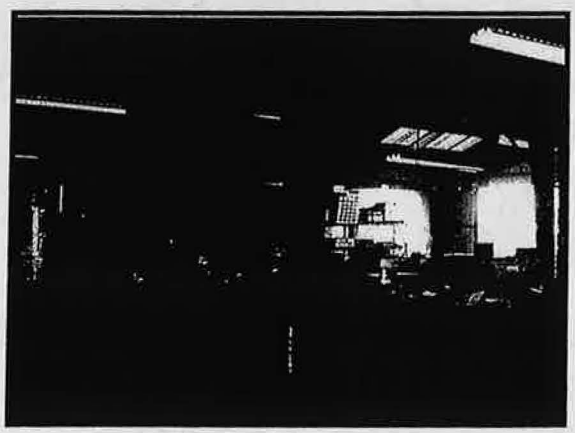


Photo 11



Photo 12

Phase I Environmental Site Assessment
12021-12023 Woodruff Avenue
August 10, 2005

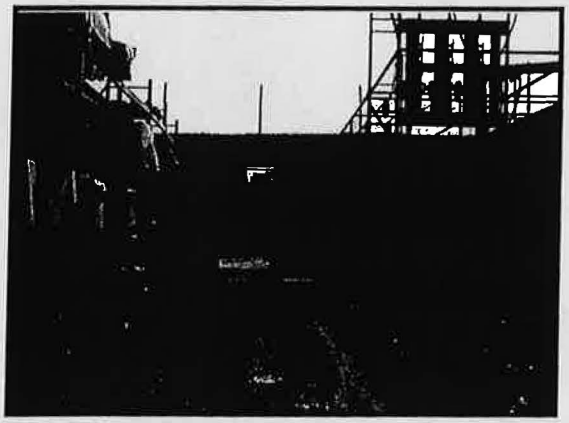


Photo 13



Photo 14

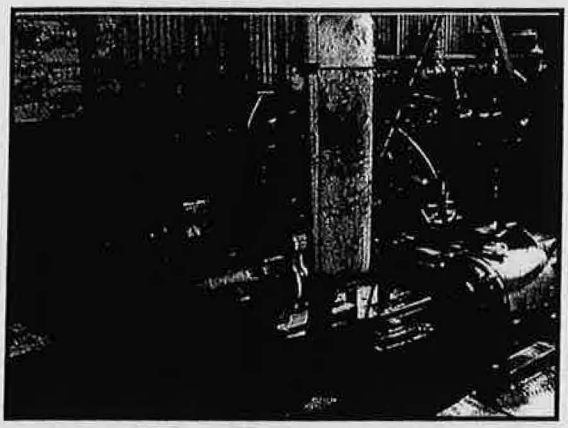


Photo 15



Photo 16



Photo 17



Photo 18

Phase I Environmental Site Assessment
12021-12023 Woodruff Avenue
August 10, 2005

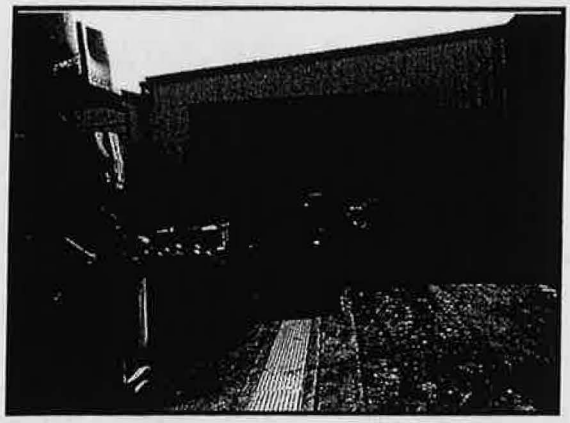


Photo 19



Photo 20



Photo 21



Photo 22



Photo 23

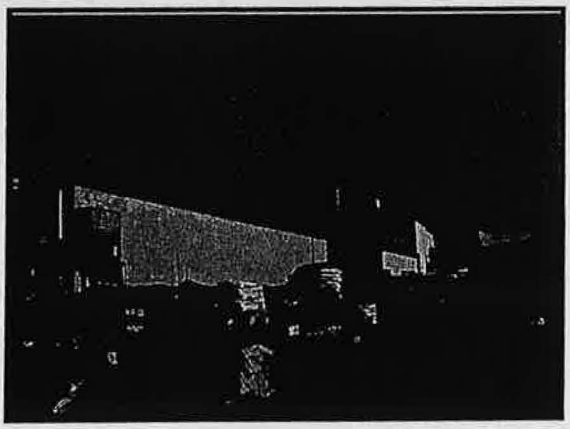
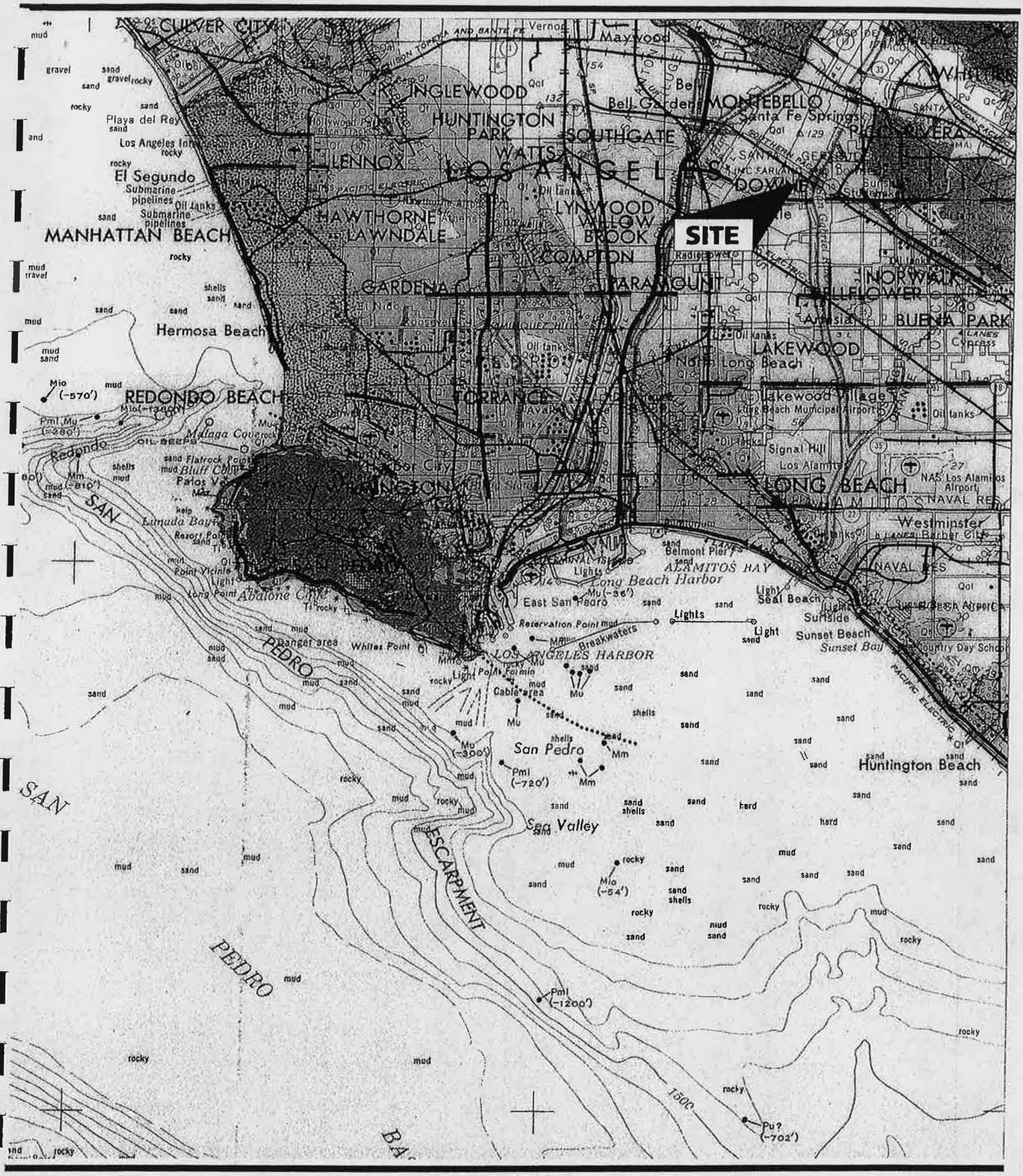


Photo24




CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS

# GEOLOGIC MAP OF CALIFORNIA

# EXPLANATION

## SEDIMENTARY AND METASEDIMENTARY ROCKS

CENOZOIC

QUATERNARY

Recent

- Qs — Dune sand
- Qal — Alluvium
- Qsc — Stream channel deposits (GREAT VALLEY)
- Qf — Fan deposits (GREAT VALLEY)
- Qb — Basin deposits (GREAT VALLEY)
- Qsl — Salt deposits
- Ql — Quaternary lake deposits

Pleistocene

- Qg — Glacial deposits
- Qf — Quaternary nonmarine terrace deposits
- Qm — Pleistocene marine and marine terrace deposits
- Qc — Pleistocene nonmarine
- QP — Plio-Pleistocene nonmarine

TERTIARY

Pliocene

- Pc — Undivided Pliocene nonmarine
- Pun — Upper Pliocene nonmarine
- Pu — Upper Pliocene marine
- Pml — Middle and/or lower Pliocene nonmarine
- Pml — Middle and/or lower Pliocene marine

Miocene

- Mc — Undivided Miocene nonmarine
- Mu — Upper Miocene nonmarine
- Mu — Upper Miocene marine
- Mm — Middle Miocene nonmarine
- Mm — Middle Miocene marine
- Ml — Lower Miocene marine

Oligocene

- Oc — Oligocene nonmarine
- O — Oligocene marine

Eocene

- Ec — Eocene nonmarine
- E — Eocene marine

Paleocene

- Pc — Paleocene nonmarine
- P — Paleocene marine

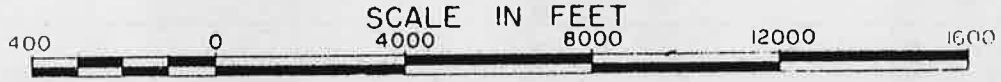
## IGNEOUS AND META-IGNEOUS ROCKS

- Qrv — Recent volcanic: $Q_{rv}^{r}$ —rhyolite; $Q_{rv}^{a}$ —andesite; $Q_{rv}^{b}$ —basalt; $Q_{rv}^{p}$ —pyroclastic rocks
- Qpv — Pleistocene volcanic: $Q_{pv}^{r}$ —rhyolite; $Q_{pv}^{a}$—andesite; $Q_{pv}^{b}$ —basalt; $Q_{pv}^{p}$ —pyroclastic rocks
- Quaternary and/or Pliocene cinder cones
- Pv — Pliocene volcanic: $P_{v}^{r}$ —rhyolite; $P_{v}^{a}$—andesite; $P_{v}^{b}$ —basalt; $P_{v}^{p}$ —pyroclastic rocks
- Mv — Miocene volcanic: $M_{v}^{r}$ —rhyolite; $M_{v}^{a}$ —andesite; $M_{v}^{b}$ —basalt; $M_{v}^{p}$ —pyroclastic rocks
- Φv — Oligocene volcanic: $\Phi_{v}^{r}$—rhyolite; $\Phi_{v}^{a}$ —andesite; $\Phi_{v}^{b}$—basalt; $\Phi_{v}^{p}$—pyroclastic rocks
- Ev — Eocene volcanic: $E_{v}^{r}$ —rhyolite; $E_{v}^{a}$—andesite; $E_{v}^{b}$ —basalt; $E_{v}^{p}$—pyroclastic rocks

# REGIONAL
# WILDCAT MAP

SHOWING WELLS NOT ON
DIVISION OF OIL & GAS FIELD MAPS
STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
## DIVISION OF OIL & GAS

SCALE IN FEET




JULY 7, 1990

### LEGEND

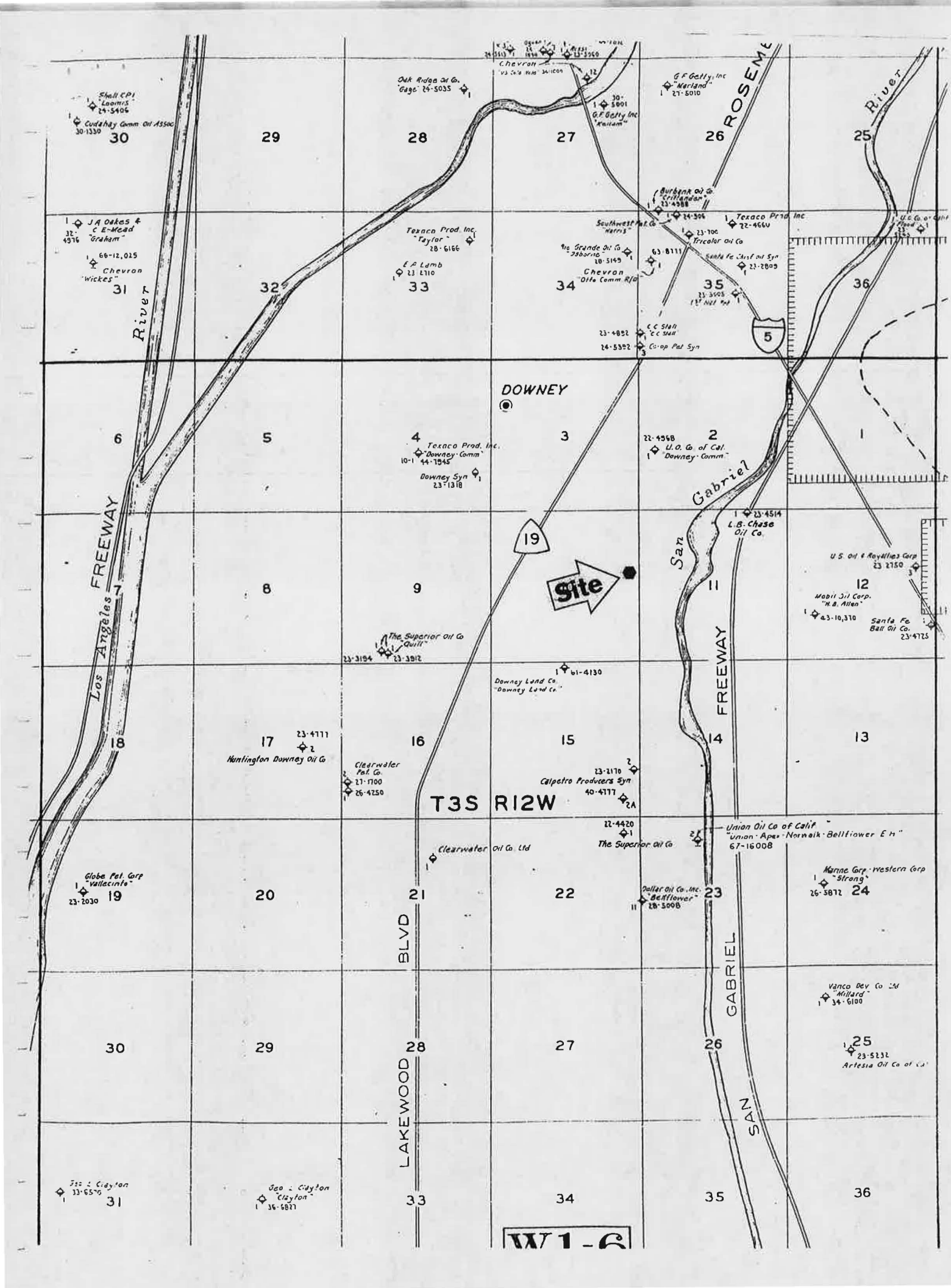
- DRILLING
- DRILLING - IDLE
- 67-6789 PLUGGED AND ABANDONED - DRY HOLE (Showing year drilled and total depth)
- PRODUCING - OIL
- IDLE - OIL
- PLUGGED AND ABANDONED - OIL
- PRODUCING - GAS
- IDLE - GAS
- PLUGGED AND ABANDONED - GAS
- WATER SOURCE
- GAS INJECTION
- WATER FLOOD
- WATER DISPOSAL
- STEAM FLOOD
- BOUNDARY OF FIELD MAP COVERAGE
- FIELD BOUNDARY
- BURIED IDLE
- OBSERVATION

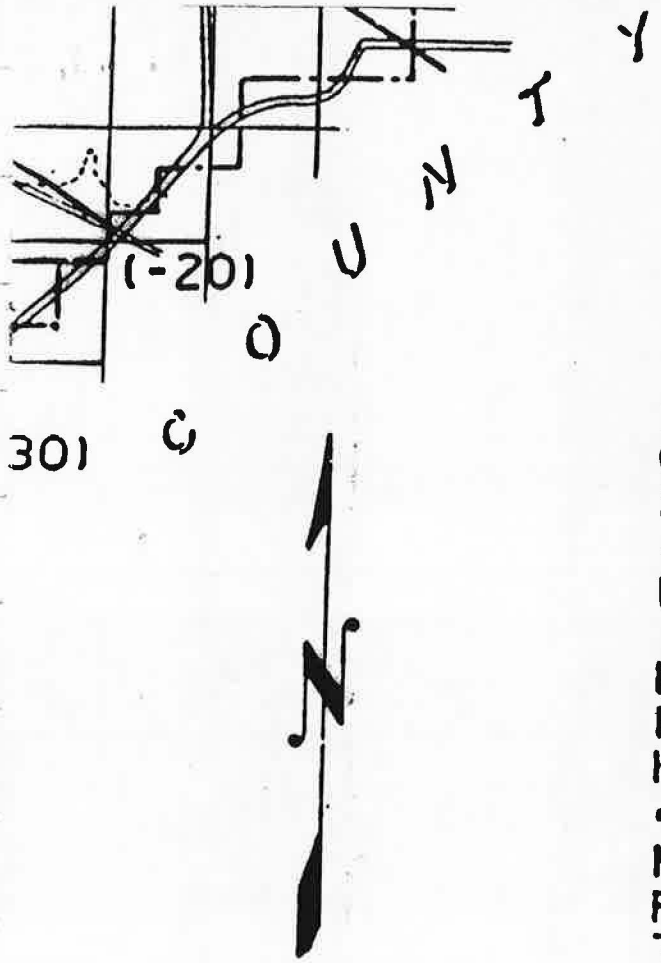
DIVISION OF OIL & GAS
1416 9th STREET
SACRAMENTO, CALIF 95814

NOTE: WELLS WITH DIRECTIONAL SURVEYS
DIVISION OF OIL AND GAS ARE INDIC
LINE UNDER THE WELL SYMBOL.




# W1-6 LOS ANGELES & ORANGE COUNTIES SOUTHERN LOS ANGELES


Site
DOWNEY
T3S R12W
Los Angeles River
San Gabriel River
ROSEMEAD
Los Angeles FREEWAY
San Gabriel FREEWAY
LAKEWOOD BLVD
SAN GABRIEL
19
5
Chevron
Oak Ridge Oil Co. "Gage" 24-5035
G.F. Getty, Inc. "Mariand" 27-5010
G.F. Getty Inc "Kellam"
Burbank Oil Co. "Crittenden" 23-4988
Texaco Prod. Inc 22-4660
Southwest Pet. Co "Harris"
Tricolor Oil Co
Rio Grande Oil Co "Osborne"
Chevron "Otto Comm R/D"
Santa Fe Chief Oil Syn 23-2805
C.C. Stahl "C.C. Stahl"
Co-op Pet Syn
Texaco Prod. Inc. "Taylor"
E.P. Lamb
Texaco Prod. Inc. "Downey Comm"
Downey Syn
U.O. Co of Cal. "Downey Comm"
L.B. Chase Oil Co.
U.S. Oil & Royalties Corp
Mobil Oil Corp. "H.B. Allen"
Santa Fe Ball Oil Co.
The Superior Oil Co "Quill"
Downey Land Co. "Downey Land Co."
Huntington Downey Oil Co
Clearwater Pet. Co.
Calpetro Producers Syn
Clearwater Oil Co. Ltd
The Superior Oil Co
Union Oil Co of Calif "Union-Apex-Norwalk-Bellflower E.H."
Globe Pet. Corp "Vallecinto"
Dollar Oil Co. Inc. "Bellflower"
Marine Corp-Western Corp "Strong"
Vanco Dev Co "Millard"
Artesia Oil Co of Ca
Geo. L. Clayton "Clayton"
W1-6







SCALE IN MILES

## EXPLANATION

——— LINES OF EQUAL PRESSURE ELEVATIONS - PRINCIPAL AQUIFER (INTERPOLATED BETWEEN WELLS)

— — — SAME AS ABOVE, LOCATION APPROXIMATE.

— — RESTRICTIONS OR BARRIERS TO GROUNDWATER MOVEMENT, (GEOLOGIC AND/OR HYDROLOGIC)

—·—·— LINE APPROXIMATELY MARKING TRANSITION FROM FREE GROUNDWATER LEVELS TO PRESSURE LEVELS. (CENTRAL COASTAL PLAIN 1933, D.W.R. BULL. NO. 45.)

PROJECT

| SIONS | COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS |
|---|---|
| DESCRIPTION | |

# COASTAL PLAIN
## DEEP AQUIFER
## GROUNDWATER CONTOUR MAP
## FOR
## FALL 1994

| WN BY | PROJECT ENGINEER | RECOMMENDED BY | DATE | SCALE |
|---|---|---|---|---|

# ORSWELL & KASMAN, INC.

## ENVIRONMENTAL RECORDS RESEARCH REPORT

*Property Information:*

**Industrial Buildings**
**12021-12023 Woodruff Avenue**
**Downey, CA 90241**

*OKI Report #:*

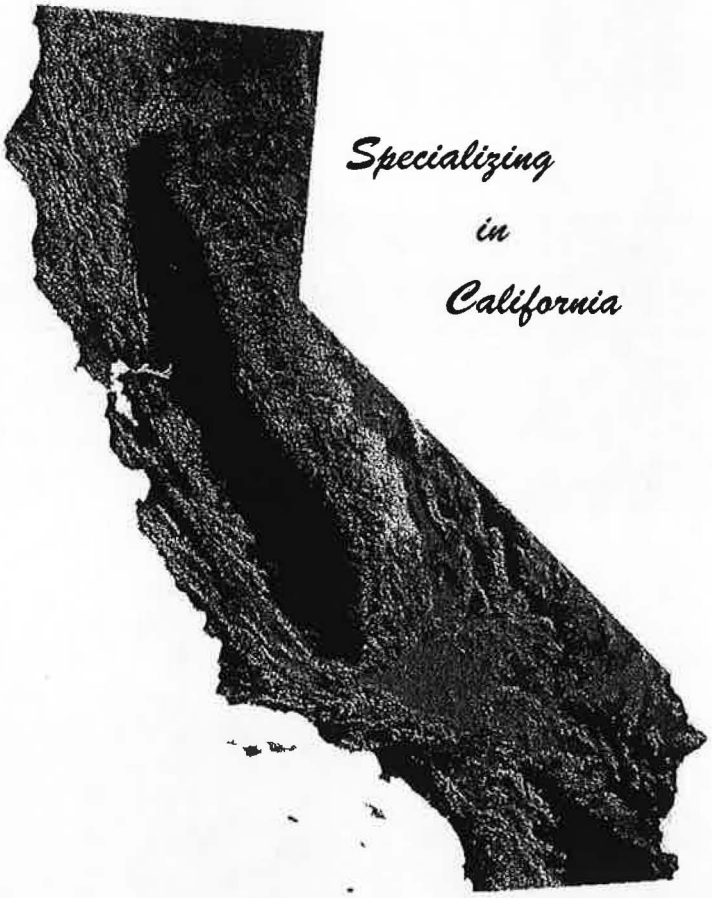
**P05260**

*Report Date:*

**August 10, 2005**

*Prepared For:*

**Tom Olsen**
**Olsen Family Trust**




*Prepared by:*

**Orswell & Kasman, Inc.**
**316 West Foothill Boulevard**
**Monrovia, CA 91016**
**(626) 932 - 1800 * FAX (626) 932 - 1807**
*www.orswell-kasman.com*

*The information provided herein is based upon research of public records listed on the "Reference to the Regulatory Agency Database" page of this report and not on a physical inspection of the property. By requesting this report, the client accepts the terms and conditions described on the "Response Noitification Sheet" of this report. The client may want to obtain detailed subject property information from a qualified consultant or specialist to determine if any potential hazards exist on the property.*

# RESPONSE NOTIFICATION SHEET

*This report is in conformance with the ASTM standard for a Phase I Environmental Site Assessment governernment records check*

| | No Sites Within Specified Radius | Property & Adjacent | ¼ Mile Radius | ½ Mile Radius | 1 Mile Radius |
|---|---|---|---|---|---|
| National Priority List (NPL) | ✓ | | | | |
| RCRA CORRACTS Facilities* | ✓ | | | | |
| CERCLIS | | | | ✓ | |
| CALSITES** | | | | ✓ | |
| Leaking Underground Storage Tanks (LUSTIS)* | | | | ✓ | |
| Active / Inactive Landfills | | | | ✓ | |
| Treatment, Storage & Disposal (TSD) | ✓ | | | | |
| Emergency Response Notification System (ERNS) | ✓ | | | | |
| Generators (HWG) | | ✓ | | | |
| Registered Underground Tanks | | ✓ | | | |
| Superfund Leins | ✓ | | | | |
| CERCLIS NFRAP | ✓ | | | | |

Sites reported as "Case Closed"* or "NFA - No Further Action"** may not be listed in this report

*OKI Report #:* **P05260**
*Completion Date:* **8/10/05**

*Property Information:*
**Industrial Buildings**
**12021-12023 Woodruff Avenue**
**Downey, CA 90241**

**John E. Orswell**
**Registered Environmental Assessor**

REGISTERED ENVIRONMENTAL ASSESSOR
JOHN E. ORSWELL
No. 1263
Expires: 6/30/06
STATE OF CALIFORNIA

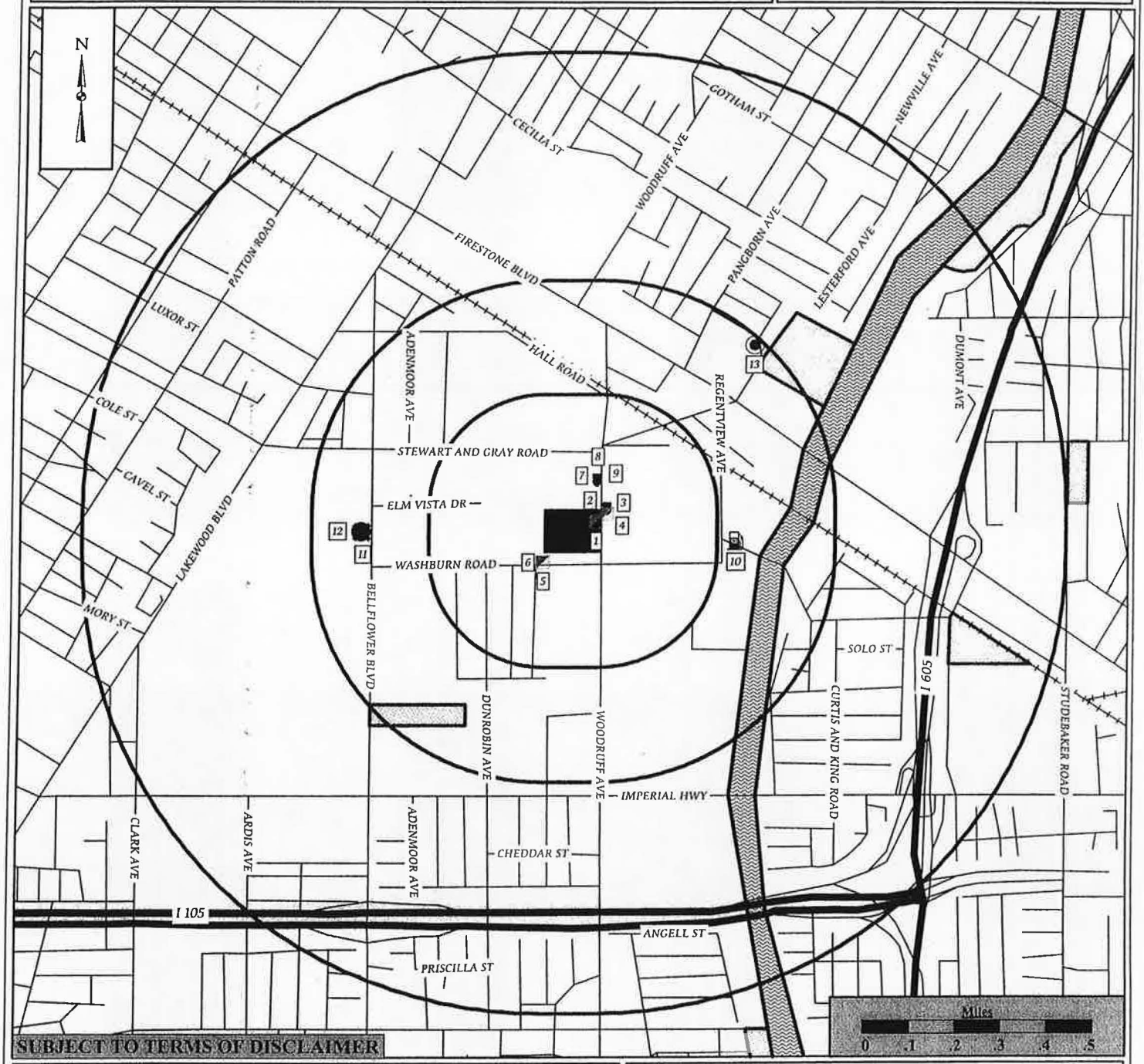
*The information contained in this report is obtained from federal, state and other public sources. Orswell & Kasman, Inc. (OKI) does not make any guarantees, warranties or representations, whether expressed or implied, regarding the accuracy of such information, and shall not be held responsible in the event that any such inaccuracies are present. All liability for damages of any nature arising from any inaccuracy in the facts stated herein must be assumed by the client. Orswell & Kasman, Inc. (OKI) also advises the client that this report and information contained herein is intended solely for the use of the client or assignee with whom Orswell & Kasman, Inc. (OKI) has a contractual relationship. Orswell & Kasman, Inc. (OKI) makes no other warranty, express or implied, as to the conclusions and professional advice included in this report, and is not responsible for the independent conclusions, opinions or recommendations made by any other party or entity based whole or in part on the information provided in this records review.*

**Orswell & Kasman, Inc.**
**316 West Foothill Boulevard**
**Monrovia, CA 91016**
**(626) 932 - 1800 * Fax (626) 932 - 1807**
*www.orswell-kasman.com*

# Orswell & Kasman, Inc.

**Environmental**
**Assessments & Consulting**

Subject Property Location:
12021-12023 Woodruff Avenue
Downey, CA 90241




SUBJECT TO TERMS OF DISCLAIMER

## MAP LEGEND

- One Mile Radius
- Half Mile Radius
- Quarter Mile Radius
- Property Area
- Airports
- Parks & Golf Courses
- Waterways
- Railroads
- Roads
- Highways

## HAZARDOUS SITE SYMBOLS

- National Priority List
- RCRA Corracts
- CERCLIS
- CalSites
- Leaking Underground Storage Tanks
- Active / Inactive Landfills
- Treatment, Storage, & Disposal Facilities
- Emergency Response Notification System
- Generators
- Registered Underground Tanks
- Superfund Liens
- CERCLIS No Further Remedial Action Planned

For more information please contact us at (626) 844-4150 or www.orswell-kasman.com

# Site Summary List

Please note that certain sites may appear on multiple databases
For more information on these sites, please see the accompanying pages

**Subject Property Information:**
**Industrial Buildings**
**12021-12023 Woodruff Avenue**
**Downey, CA 90241**

| | | |
|---|---|---|
| ***Site # 1***<br>*0.0561 miles from the subject property* | Case # 19012766<br>Site **KIRKHILL INC**<br>**12021 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | Source Database<br>**UTANK** |
| ***Site # 2***<br>*0.0562 miles from the subject property* | Case # CAD008255648<br>Site **KIRKHILL INC**<br>**12021 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | Source Database<br>**GEN** |
| ***Site # 3***<br>*0.0837 miles from the subject property* | Case # CAR000129742<br>Site **FUJI PHOTO FILM U S A INC**<br>**12010 WOODRUFF AVE STE A**<br>**DOWNEY, CA 90241** | Source Database<br>**GEN** |
| ***Site # 4***<br>*0.0897 miles from the subject property* | Case # 19016288<br>Site **DARNELL CORP**<br>**12000 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | Source Database<br>**UTANK** |
| ***Site # 5***<br>*0.0916 miles from the subject property* | Case # CAR000012781<br>Site **CLASSIC GRAPHIX**<br>**9459 WASHBURN RD**<br>**DOWNEY, CA 90242** | Source Database<br>**GEN** |
| ***Site # 6***<br>*0.094 miles from the subject property* | Case # CAD983585290<br>Site **STUD WELDING PRODUCTS INC**<br>**9455 WASHBURN RD**<br>**DOWNEY, CA 90242** | Source Database<br>**GEN** |
| ***Site # 7***<br>*0.1223 miles from the subject property* | Case # 12833<br>Site **INCO EXPRESS INC**<br>**11941 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | Source Database<br>**UTANK** |
| ***Site # 8***<br>*0.1223 miles from the subject property* | Case # 19017888<br>Site **INCO EXPRESS INC**<br>**11941 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | Source Database<br>**UTANK** |
| ***Site # 9***<br>*0.1223 miles from the subject property* | Case # 012833<br>Site **INCO EXPRESS INC**<br>**11941 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | Source Database<br>**UTANK** |
| ***Site # 10***<br>*0.3489 miles from the subject property* | Case # R-09296<br>Site **CALSAN, INC.**<br>**9821 DOWNEY & NORWALK RD**<br>**DOWNEY, CA 90241** | Source Database<br>**LUSTIS** |
| ***Site # 11***<br>*0.4547 miles from the subject property* | Case # CA7800019419<br>Site **BOEING NORTH AMERICAN, INC.**<br>**12214 LAKEWOOD BOULEVARD**<br>**DOWNEY, CA 90242** | Source Database<br>**CERCLIS** |
| ***Site # 12***<br>*0.4564 miles from the subject property* | Case # 19370366<br>Site **NASA INDUSTRIAL PLANT- KAISER**<br>**12214 LAKEWOOD BLVD.**<br>**DOWNEY, CA 90241** | Source Database<br>**CALST** |

# Site Summary List

Please note that certain sites may appear on multiple databases
For more information on these sites, please see the accompanying pages

**Subject Property Information:**
**Industrial Buildings**
**12021-12023 Woodruff Avenue**
**Downey, CA 90241**

***Site # 13***

*0.5597 miles from the subject property*

Case # 19-AA-5382

Site **Downey Dump**
**9612 Ardine Street**
**Downey, CA 90241**

Source Database
**SWIS**

# Underground Storage Tanks

Case Number: **19012766**

Site: **KIRKHILL INC**
**12021 WOODRUFF AVE**
**DOWNEY CA 90241**

Status: **Historical**

*Site # 1* *0.0561 miles from the Subject Property*

---

Case Number: **19016288**

Site: **DARNELL CORP**
**12000 WOODRUFF AVE**
**DOWNEY CA 90241**

Status: **Historical**

*Site # 4* *0.0897 miles from the Subject Property*

---

Case Number: **12833**

Site: **INCO EXPRESS INC**
**11941 WOODRUFF AVE**
**DOWNEY CA 90241**

Status: **Historical**

*Site # 7* *0.1223 miles from the Subject Property*

---

Case Number: **19017888**

Site: **INCO EXPRESS INC**
**11941 WOODRUFF AVE**
**DOWNEY CA 90241**

Status: **Historical**

*Site # 8* *0.1223 miles from the Subject Property*

---

Case Number: **012833**

Site: **INCO EXPRESS INC**
**11941 WOODRUFF AVE**
**DOWNEY CA 90241**

Status: **Current**

*Site # 9* *0.1223 miles from the Subject Property*

# GENERATORS

Case Number: **CAD008255648**

Site: **KIRKHILL INC**
**12021 WOODRUFF AVE**
**DOWNEY CA 90241**

Generator Type SQG
**Small Quantity Hazardous Waste Generator**

*Site # 2* *0.0562 miles from the Subject Property*

**Handler IS NOT a Transporter**

---

Case Number: **CAR000129742**

Site: **FUJI PHOTO FILM U S A INC**
**12010 WOODRUFF AVE STE A**
**DOWNEY CA 90241**

Generator Type SQG
**Small Quantity Hazardous Waste Generator**

*Site # 3* *0.0837 miles from the Subject Property*

**Handler IS NOT a Transporter**

---

Case Number: **CAR000012781**

Site: **CLASSIC GRAPHIX**
**9459 WASHBURN RD**
**DOWNEY CA 90242**

Generator Type SQG
**Small Quantity Hazardous Waste Generator**

*Site # 5* *0.0916 miles from the Subject Property*

**Handler IS NOT a Transporter**

---

Case Number: **CAD983585290**

Site: **STUD WELDING PRODUCTS INC**
**9455 WASHBURN RD**
**DOWNEY CA 90242**

Generator Type SQG
**Small Quantity Hazardous Waste Generator**

*Site # 6* *0.094 miles from the Subject Property*

**Handler IS NOT a Transporter**

# CERCLIS

*CERCLIS -*

Case Number: **CA7800019419**

Site: **BOEING NORTH AMERICAN, INC.**
**12214 LAKEWOOD BOULEVARD**
**DOWNEY CA 90242**

NPL Status: Not on the NPL

Federal Facility Yes

*Site # 11 0.4547 miles from the Subject Propert*

| Event: DS001 | Status: | Start Date |
|---|---|---|
| DISCOVERY | Funding: EPA Fund Financed | Completion Date 11/23/1998 |

# REFERENCE GUIDE TO THE REGULATORY AGENCY DATABASES

| SOURCE | DESCRIPTION |
|---|---|
| **NPL:**<br>*1 mile search radius*<br>*Date: May 2005* | The Natonal Priority List (NPL) identifies abandoned or uncontrolled hazardous waste sites, which have been identified as possibly representing a long-term threat to the public health or environment. These sites have been identified as being highly contaminated with hazardous substances and represent the USEPA's target enforcement and cleanup efforts. Studies of individual sites are conducted by the USEPA to determine the level of contamination, and the sites are then compared and ranked to other sites on the NPL. |
| **CORRACTS:**<br>*1 mile search radius*<br>*Date: November2004* | The USEPA maintains a list of facilities which have been authorized to receive hazardous waste. These facilities have permits to treat, store or dispose of the waste as determined by the RCRA regulations. In addition, the USEPA publishes a list of those facilities who are subject to a corrective action based on the facilities waste handling and storage procedures. The facilities, which are subject to a corrective action, are identified as CORRACTS sites. |
| **CERCLIS:**<br>*½ mile search radius*<br>*Date: May 2005* | The USEPA has developed a database known as the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), which contains information on potential hazardous waste sites located throughout the United States. There are over 33,000 sites on the CERCLIS inventory. All sites are subjected to a preliminary assessment and thereafter are either placed on the National Priority List (NPL) or are placed in a category for those sites requiring no further Federal Superfund action. |
| **CALST:**<br>*½ mile search radius*<br>*Date: June 2005* | The State of California Environmental Protection Agency maintains the "CalSite" database, which is a listing of 7,800 known active, inactive and abandoned hazardous sites. These sites have previously been reported in the Abandoned Site Program Information System (ASPIS), Bond Ependiture Plan (BEP) and Cortese database. |
| **LUSTIS:**<br>*½ mile search radius*<br>*Date: May 2005* | The State of California Water Resources Control Board is responsible for monitoring the quality of flow of the groundwater and compiles lists of known leaking undergound storage tanks. The list is maintained as the Leaking Underground Storage Tank Information System (LUSTIS). The local Regional Water Quality Control Board (RWQCB) monitors the contamination problem, the investigation and any remedial activities. |
| **SWIS:**<br>*½ mile search radius*<br>*Date: December 2003* | The State of California Integrated Waste Management Board maintains a list of active and inactive landfill sites within California and provides information concerning the ownership and types of wastes brought to the landfills. |
| **TSD:**<br>*½ mile search radius*<br>*Date: November 2004* | Treatment, Storage or Disposal Facilities (TSDF) is a federal listing of facilities, which have been authorized to receive hazardous waste. These facilities have permits to treat, store or dispose of waste as determined by the RCRA regulations. |
| **ERNS:**<br>*Property & adjacent*<br>*Date: January 2004* | The Emergency Response Notification System (ERNS) is a list of locations which have reported a release of oil or hazardous substances to the USEPA Office of Emergency and Remedial Response. Most of the data in this system is based on information that was received during the initial notification. |
| **HWG:**<br>*Property & adjacent*<br>*Date: November 2004* | The United States Environmental Protection Agency maintains a list of known hazardous waste generators in the nation. A company on the list generates reportable quantities of hazardous waste, and the disposal and transportation of the waste is monitored through the use of a hazardous waste manifest. |
| **UTANK:**<br>*Property & adjacent*<br>*Date: May 2005* | The location and identy of registered underground tanks is maintained by the State of California Water Resources Control Board in the Hazardous Substance Storage Container Database. The list was compiled in 1991 and there are currently no plans to update the database at the present time. |
| **SFL:**<br>*Property & adjacent*<br>*Date: July 1993* | The USEPA maintains a list of Superfund Leins that have been issued on properties throughout the United States. These sites have been remediated through the expenditures of Superfund monies. The purpose of the lein is to prevent the property owner from gaining a financial benefit from the federal government's cleanup and restoration activities. |

# S&S COMMERCIAL ENVIRONMENTAL SERVICES, INC.

## PHASE II ENVIRONMENTAL ASSESSMENT
## 'REPORT OF FINDINGS'

AT:

**Industrial Property**
12021-12023 Woodruff
Downey, CA 90241

PREPARED FOR:

**Mr. Joe Cecala, Executive V.P.**
**& Chief Credit Officer**
Foothill Independent Bank
510 S. Grand Avenue
Suite 203
Glendora, CA 91741

PROJECT CONDUCTED AND REPORT PREPARED BY:

REGISTERED GEOLOGIST
WILLIAM C. LACHMAR
No. 6168
STATE OF CALIFORNIA

William C. Lachmar, R.G. # 6168

**November 9, 2005**

12960 Central Ave. • Suite E • Chino, CA 91710 • PH. 949-650-4994 • FX. 949-650-4275

# EXECUTIVE SUMMARY

S&S Commercial Environmental Services (S&S), Inc. was contracted by Foothill Independent Bank to conduct a Phase II Soil Investigation to better qualify the findings from two previous Phase II Investigations. The previous investigations found arsenic at concentrations above California State Hazardous levels, however the impacted soil was extremely limited in total extent (i.e., between 3-6 $yds^3$ impacted).

The additional Phase II Investigation conducted by S&S found nothing to indicate any greater arsenic contamination to exist, than what had previously been identified in the two prior Phase II Soil Investigations.

However, within the immediate area of the oil/water separator, elevated concentrations of oil impacted soil as high as 54,100 parts per million were identified, with quantifiable oil impacted soil concentrations found to 20-feet below grade. The impacted soil first appeared directly beneath the bottom (i.e., 5-feet down) of the oil/water separator discharge conveyance system, which appears to be more-or-less an open, concrete, gravity flow culvert type system.

Ultimately S&S identified a 25-foot "Clean Earth" interval between the last identified impacted soil depth interval of 20-feet and 45-feet beneath ground surface (bgs). Having met the 25-foot clean earth interval and knowing the contaminant in question is one of the lowest rated regulated compounds by the State, S&S believes no significant threat to the immediate environment, or human health risk upon physical contact exists as a result of the TPH impacted soil found during this project.

Based on S&S findings, it is our opinion that nothing further needs to be conducted with reference to the immediate area around the oil/water separator, however if future plans require disturbance of the soil in this area, then the soil must be properly handled and taken to a Cal-EPA certified recycler.

Based on boring locations and sample results, it is the opinion of S&S that if the entire site were leveled, a conservative cost estimate (in 2005 dollars) of $90,000 would be necessary to properly remediate the impacted soil, so that a "no further action" letter could be issued by the Los Angeles County, Department of Public Works – Environmental Programs Division.

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## APPENDICES


**Appendix I** Soil Chemical Analyses Results with QA/QC Statement
**Appendix II** Soil Boring Logs

Phase 1

## 1.0 INTRODUCTION

S&S was contracted by Foothill Independent Bank to confirm the recommendations of GeoScience Analytical's September 14, 2005 Phase II Environmental Investigation at a commercial property located at 12021-12023 Woodruff Ave., Downey, CA (Site). The additional Phase II Investigation was conducted in response to an initial Phase II Investigation conducted by Converse Consultants in August 2005 and an additional Phase II Investigation conducted by GeoScience Analytical, Inc. on September 6, 2005. The initial Phase II Investigation was conducted throughout the entire site beneath areas of concern. The additional Phase II Investigation conducted by GeoScience Analytical was conducted specifically near the oil-water separator, where Converse Consultants found an Arsenic concentration above Cal-Hazardous levels. The additional Phase II Investigation by GeoScience Analytical concluded the Arsenic contamination to be no more than 3-6 $yds^3$ and of no immediate concern.

## 2.0 SOIL INVESTIGATIVE METHODS

### 2.1 Boring Location Determination

The boring locations were determined based on the two prior Phase II Investigations conducted by Converse Consultants and GeoScience Analytical. Ultimately a total of 14 soil borings were drilled during this project with a maximum total penetrated depth of 45-feet being investigated in boring SS5-Alt

### 2.2 Geo Probe 2400 Direct-Push Rig Soil Investigation

On September 28, 2005, S&S advanced eight (8) exploratory borings to a total depth of 5-feet below ground surface (bgs). The borings were drilled using a Geo Probe, model 2420 confined space, hydraulic punch drill rig. On October 5, 2005 S&S conducted an additional soil characterization which comprised of drilling four additional borings near the previous four borings drilled by S&S by the oil/water separator, but drilling to greater depths. Finally an additional field investigation was conducted by S&S on October 10, 2005, which consisted of drilling boring SS5-Alt to a total depth of 30-feet to 45-feet below grade.

Undisturbed soil samples were collected at ½, 1, 2 and 5-feet bgs in each boring from the September 28th investigation, at 5-foot intervals beginning at 10-feet below grade to total boring depth (varying between 15 to 30-feet below grade) in the October 5th investigation and at 35, 40 and 45-feet below grade in boring SS5-Alt in the October 10th investigation. All samples collected during this project were collected by driving a 2-inch diameter by 2-foot long spoon sampler containing four 1½" diameter by six-inch long brass sample sleeves in advance of the bore-hole, using the hydraulic drill hammer. The "lead" sample

sleeve from each sampling interval was secured with Parafilm™ lined plastic end caps. Soil from the second sleeve was evacuated into one Encore™ 25-gram Teflon sampler. The evacuation was conducted by manually driving the Encore sampler into the brass sample sleeve using the Encore twist-loc sample handle. All soil samples were collected and logged per EPA method 5035 guidelines, by William C. Lachmar, R.G. # 6168.

The lead brass sample sleeve and 25-gram Encore sample was then clearly marked as to boring number and sample depth interval, then placed in a zip-loc bag that was also clearly labeled. The bagged sample was then placed in a chilled ice chest for temporary storage pending transport to the laboratory.

The remaining soil from the second brass sample sleeve was placed in zip-loc bags, marked as to boring location and sample depth and placed on S&S's vehicle to heat in the sun. After approximately 10-minutes to warm and equilibrate, the probe from a Micro Rae model PGM-7600, Photo Ionization Detector (PID) was placed approximately ½ the headspace width inside the zip-loc bag. The soil was then "turned" by hand and readings from the OVA posted on boring logs, along with the soil description. All soil borings were logged using the Unified Soil Classification System (USCS) and included a description of the soil matrix, with reference to classification, color, grain-size, sorting, plasticity/hardness, transition zones, moisture, field reading and any odors or signs of staining (discoloration).

## 2.3 Soil Sampling Methods

The collected soil samples were submitted to Southland Technical Services (STS), Inc., located in Montebello, CA. Based on field observations selected samples were submitted for testing of total petroleum hydrocarbons (TPH), by EPA method 8015m Arsenic by EPA method 7060A and total chromium by EPA method 7190 (for outside chiller). In addition the most elevated TPH sample (SS5-5') was further tested for Volatile Organic Compounds (VOC's) by EPA method 8260B and Semi-Volatile Organic Compounds by EPA method 8270C. A summary of the soil chemical analyses results is provided in Table 1 below. The certified laboratory chemical analyses results, with QA/QC data is provided in Appendix I.

**TABLE 1:**
**SUMMARY OF SOIL ANALYTICAL RESULTS**
**In Parts Per Million (mg/kg)**
**Sampling Date: September 28, 2005**

| Sample ID | TPH C8-C12 | TPH C13-C23 | TPH C24-C40 | VOC's | Semi-VOC's | As | Cr |
|---|---|---|---|---|---|---|---|
| SS1-½ | --- | --- | --- | --- | --- | 19.2 | 13.2 |
| SS1-1 | --- | --- | --- | --- | --- | 5.4 | 11.6 |
| SS1-2 | --- | --- | --- | --- | --- | 3.5 | 13.4 |
| SS2-½ | --- | --- | --- | --- | --- | 7.7 | 11.0 |
| SS2-1 | --- | --- | --- | --- | --- | 4.2 | 17.8 |
| SS2-2 | --- | --- | --- | --- | --- | 5.7 | 9.9 |
| SS3-½ | --- | --- | --- | --- | --- | 10.9 | 15.6 |
| SS3-1 | --- | --- | --- | --- | --- | 5.7 | 11.4 |
| SS3-2 | --- | --- | --- | --- | --- | 7.0 | 16.8 |
| SS4-½ | --- | --- | --- | --- | --- | 32.7 | --- |
| SS4-1 | --- | --- | --- | --- | --- | 5.7 | --- |
| SS4-2 | --- | --- | --- | --- | --- | 22.2 | --- |
| SS5-½ | --- | --- | --- | --- | --- | 71.3 | --- |
| SS5-1 | --- | --- | --- | --- | --- | 70.0 | --- |
| SS5-2 | --- | --- | --- | --- | | 31.4 | --- |
| SS5-5 | ND | 54,100 | 26,100 | ND | ND-NS | --- | --- |
| SS6-½ | --- | --- | --- | --- | --- | 10.4 | --- |
| SS6-1 | --- | --- | --- | --- | --- | 4.2 | --- |
| SS6-2 | --- | --- | --- | --- | --- | 5.4 | --- |
| SS7-½ | --- | --- | --- | --- | --- | 7.4 | --- |
| SS7-1 | --- | --- | --- | --- | --- | 6.2 | --- |
| SS7-2 | --- | --- | --- | --- | --- | 4.7 | --- |
| SS8-½ | --- | --- | --- | --- | --- | 5.6 | --- |
| SS8-1 | --- | --- | --- | --- | --- | 6.1 | --- |
| SS8-2 | --- | --- | --- | --- | --- | 4.4 | --- |
| Detect Limits | 5.0 | 5.0 | 50.0 | 0.005 | 0.33 | 2.5 | 2.5 |

**TABLE 2:**
**SUMMARY OF SOIL ANALYTICAL RESULTS**
**In Parts Per Million (mg/kg)**
**Sampling Dates: October 5 & 10, 2005**

| Sample ID | TPH C8-C12 | TPH C13-C23 | TPH (C24-C40) |
|---|---|---|---|
| SS5-5' * | ND | 54,100 | 26,100 |
| SS5-Alt-10' | ND | 6,820 | 2,750 |
| SS5-Alt-15' | ND | 185 | 65 |
| SS5-Alt-20' | 5.6 | 21,300 | 8,540 |
| SS5-Alt-25' | ND | ND | ND |
| SS5-Alt-30' | ND | ND | ND |
| SS5-Alt-35' | ND | ND | ND |
| SS5-Alt-40' | ND | ND | ND |
| SS5-Alt-45' | ND | ND | ND |
| SS10-5' | ND | ND | ND |
| SS10-10' | ND | ND | ND |
| SS10-20' | ND | ND | ND |
| SS11-5' | ND | 38,300 | 8,320 |
| SS12-5' | ND | 21,200 | 11,100 |
| SS12-10' | ND | 1,470 | 1,410 |
| SS12-15' | ND | 73 | ND |
| SS12-20' | ND | ND | ND |
| SS13-10' | 80 | 29,200 | 15,100 |
| SS13-15' | ND | 309 | 195 |
| SS14-10' | ND | ND | ND |
| Detect Limits | 5.0 | 5.0 | 50.0 |

* Sample taken 9-28-05

### 2.4 Soil Sample Results

Results of the laboratory soil analyses testing found nothing in the soil to warrant further investigation. No organic compounds specified for analyses through EPA method 418.1, 8260B, 8270C, or 335.2 testing were found to exist, while the metals results found nothing above what can be considered normal soil background levels.

## 3.0 GEOLOGY / HYDROGEOLOGY

### 3.1 Regional

The site lies within the Montebello Forebay Area of the Central Basin of the Los Angeles Coastal Plain. The Central Basin is one of four identified groundwater basins within the Los Angeles Coastal Plain and its southeast boundary coincides with the Los Angeles-Orange County line. The Coastal Plain consists mainly of unconsolidated sediments or alluvium, which is underlain and bounded on the north and east, by essentially bedrock. The recent alluvium contains parts of the Gaspur and Gage aquifers.

The Central Basin is overlain by the Montebello and Downey Plains. The freshwater bearing sediments vary in age from recent, to early Pleistocene and extend to a maximum depth of approximately 900-feet below average mean sea level (AMSL). The aquifers to note within the Montebello Forebay area consist of the Lynwood and Silverado aquifers. The Lynwood and Silverado aquifers lie entirely within the San Pedro Formation[1].

### 3.2 Local

Referencing the 1989 Seismicity Map of the Los Angeles Region, published by the State of California, Division of Mines and Geology, the general site area lies to the interpreted most westerly extension of the Whittier Fault.

Referencing Cross Section B-B' from Bulletin 104, posts the Gaspur Aquifer at approximately 70-feet beneath the site. The more significant Lynwood and Silverado aquifers are shown to be approximately 290 and 410-feet beneath the site, with an estimated thickness of 80-feet and 220-feet respectively.

[1] State of California, Department of Water Resources, Bulletin 104

### 3.3 Site Specific

Shallow soil types encountered while drilling consisted mainly of a moist silt and silty-sand and fine-medium sand (please reference the soil boring logs in Appendix II). A nearby Los Angeles County water monitor well #1587Y, is located approximately 100 yards south of the site, at the intersection of Woodruff Avenue and Washburn Road. Depth to water as last recorded on March 31, 2005 was 74.3-feet bgs, with a measured surface elevation of 107.0-feet AMSL.

## 4.0 CONCLUSIONS

Based on all environmental information collected to date, S&S Commercial Environmental Services concludes the following:

- Nothing was found in this additional soil characterization that would alter the general conclusions presented in GeoScience Analytical, Inc.'s September 14, 2005 report, with reference to Arsenic contamination. GeoScience concluded a total of 3-6 cubic yards of soil exists on-site with Arsenic concentrations slightly above Cal-Hazardous levels. The impacted soil depth does not appear to continue beyond 3-feet below grade.

- Elevated oil concentrations as high as 54,100 parts per million (ppm) and quantifiable oil impacted soil concentrations to 20-feet below grade were found to exist during this project. The impacted soil first appeared directly beneath the bottom (i.e., 5-feet down) of the oil/water separator discharge conveyance system, which appears to be more-or-less an open, concrete, gravity flow culvert type system.

- S&S did identify a 25-foot "Clean Earth" interval between the last identified oil impacted soil depth interval of 20-feet and 45-feet beneath ground surface (bgs).

- The general site area is located approximately 70-feet above the first recognized commercially producible aquifer (Gage Aquifer).

- The general soil types found during this investigation was generally a moist silt and silty-fine sand to 20-feet, followed by a fine-medium sand to 45-feet below grade.

- Depth to groundwater is estimated at approximately 70-feet beneath this site.

## 5.0 RECOMMENDATIONS

Based on the soil chemical analyses results, recognized 25-foot "Clean Earth" interval for the oil impacted soil, the fact the Cal-Hazardous Arsenic soil is beneath a capped area and all Arsenic concentrations were found below the Cal-Hazardous Total Threshold Limit Concentration (TTLC) and only failed when tested for soluble Arsenic, no remediation is recommended at this time. Furthermore, it is the opinion of S&S Commercial Environmental Services, Inc. that no significant threat to the immediate environment, or human health risk upon physical contact exists as a result of the oil impacted soil found to exist during this project.

## 6.0 REPORT LIMITATIONS

The conclusions and recommendations presented above are based upon the agreed scope of work as approved by the client. S&S makes no guarantees as to the accuracy or completeness of information obtained from others. It is possible that additional soil and/or water data exists beyond what was presented or cited in this report.

The services performed by S&S have been conducted in a manner consistent with the level of care ordinarily exercised by members of our profession currently practicing under similar conditions.

This report is not a legal opinion, but may under certain circumstances be prepared at the direction of counsel, may be in anticipation of litigation, and may be classified as an attorney client communication, or as an attorney-work product.

The findings in this report are based on field observations, and on the analytical data provided by an independent laboratory. Interpretations of the subsurface conditions at the site were made from a limited number of data points provided by the four investigative borings. Subsurface conditions may vary from these data points.

Furthermore, results of this investigation represent conditions at the time and specific locations where samples were collected and does not fully characterize the site for products not specified for analyses, or for other areas/structures not investigated.

All laboratory work cited in this report was prepared under the direction of Southland Technical Services, Inc., who is solely responsible for the contents and conclusions of the chemical analyses data.

If there are any questions regarding soil sample collection or soil analysis, please contact Mr. William C. Lachmar, Project Manager: at (714) 508-9794.

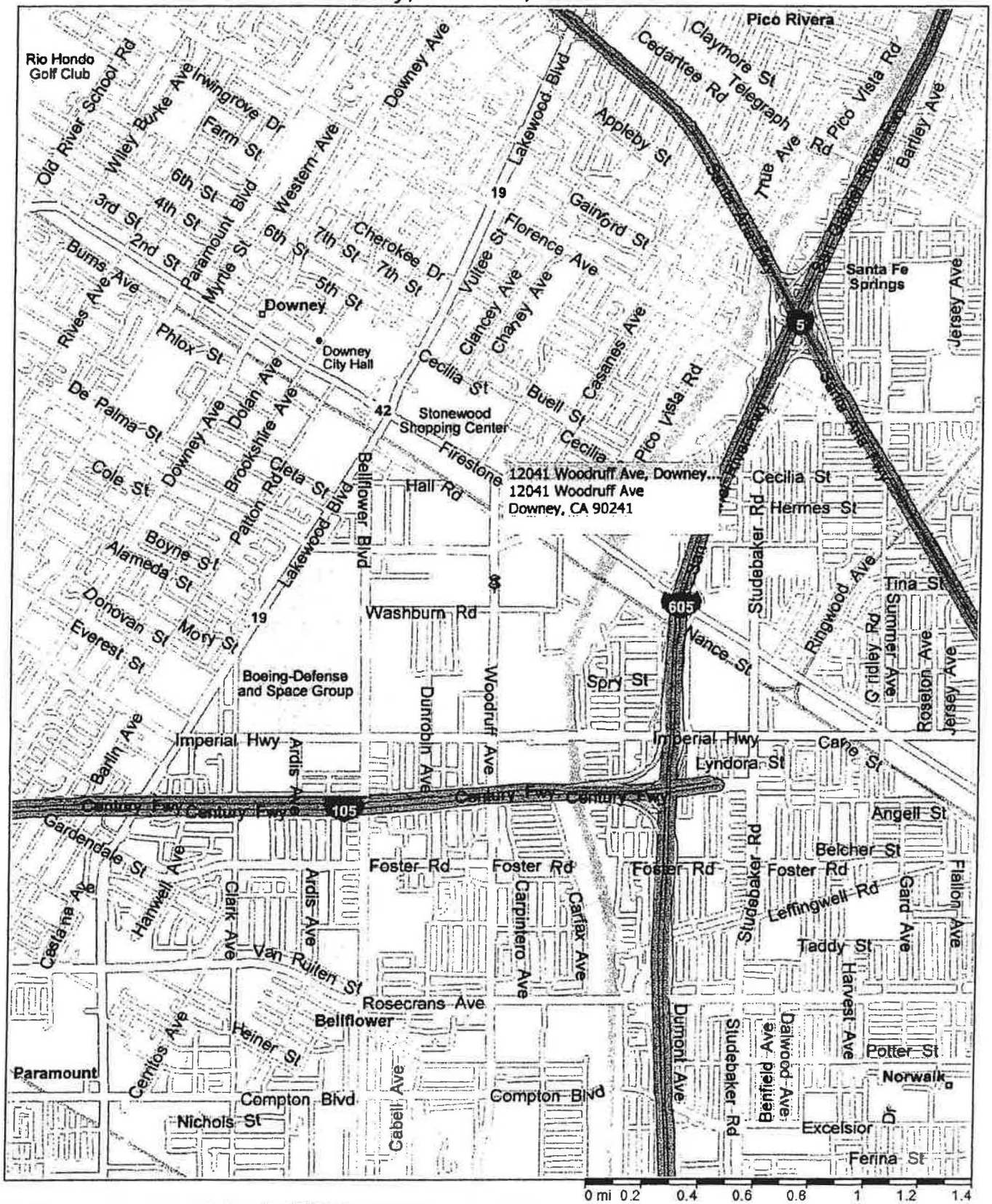
Respectfully,

*S&S Commercial Environmental Services, Inc.*

# FIGURES


| | |
|---|---|
| Figure 1: | Site Location Map |
| Figure 2: | Site Map Showing Boring Locations |
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| Figure 4: | Oil/Water Separator Boring Map with posted Oil Concentrations |
| Figure 5: | Photographic Plate of Field Operations |
| **Plate 1**: | Bulletin 104 Cross-Section B-B' with Posted Site Location |

## Downey, California, United States




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© Copyright 2001 by Geographic Data Technology, Inc. All rights reserved. © 2001 Navigation Technologies. All rights reserved. This data includes information taken with permission from Canadian authorities © Her Majesty the Queen in Right of Canada.

NORTH

**SITE LOCATION MAP**

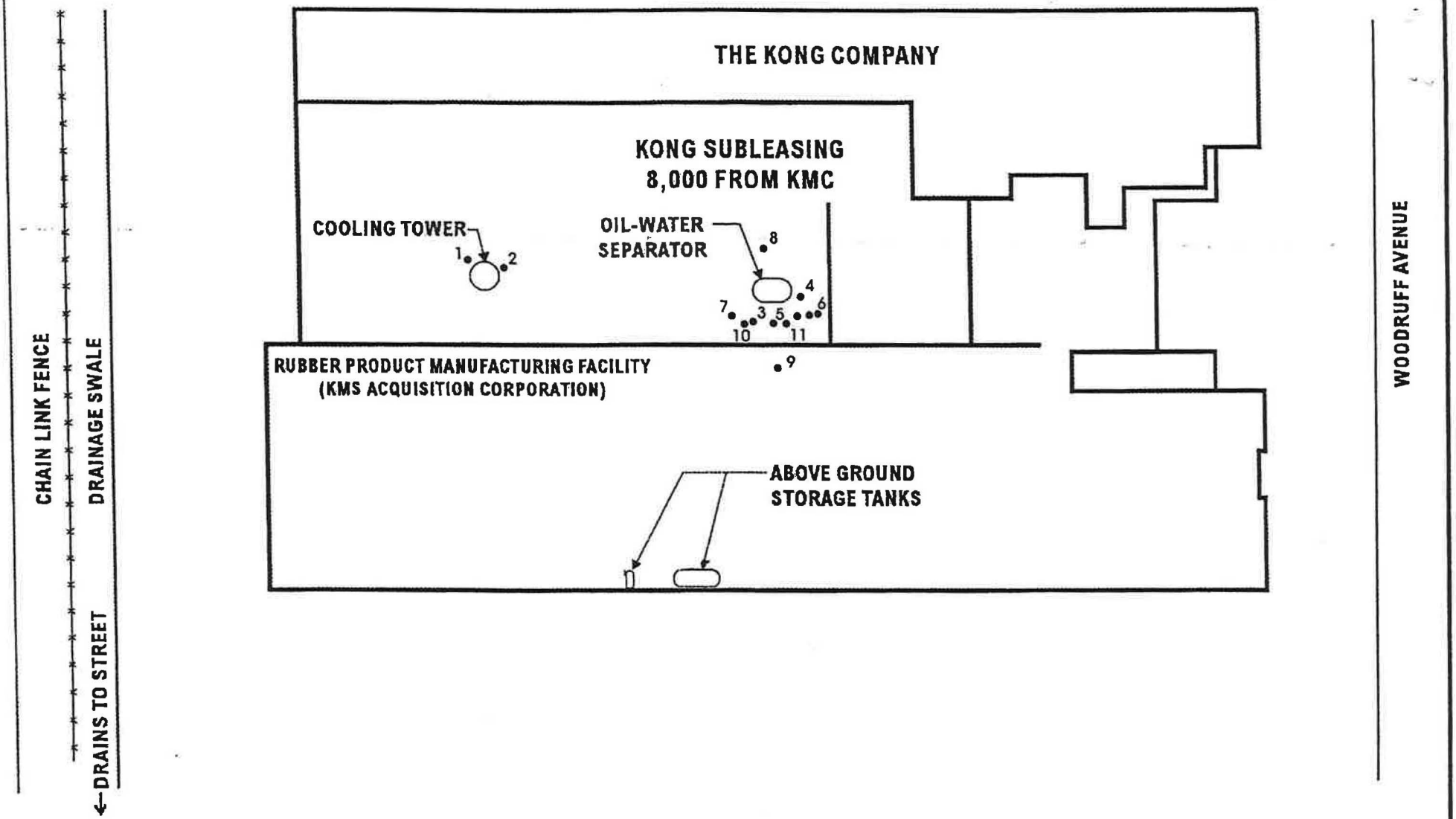
**SITE: SMK Rubber**

12021 Woodruff Ave.
Downey, CA 90241

S&S COMMERCIAL Environmental Services

| PROJECT # 5928 | DRAFTED BY: | WCL |
|---|---|---|
| | DATE: | 10/05 |

FIG 1




***LEGEND:***

- • — **Boring Drilled by S&S 9-28-05, 10-05 & 10-10-05**

**SITE SKETCH MAP**

SHOWING GENERAL SITE OUTLINE & BORING LOCS.

**SITE: KMS Rubber**

12021 Woodruff Avenue

Downey, CA

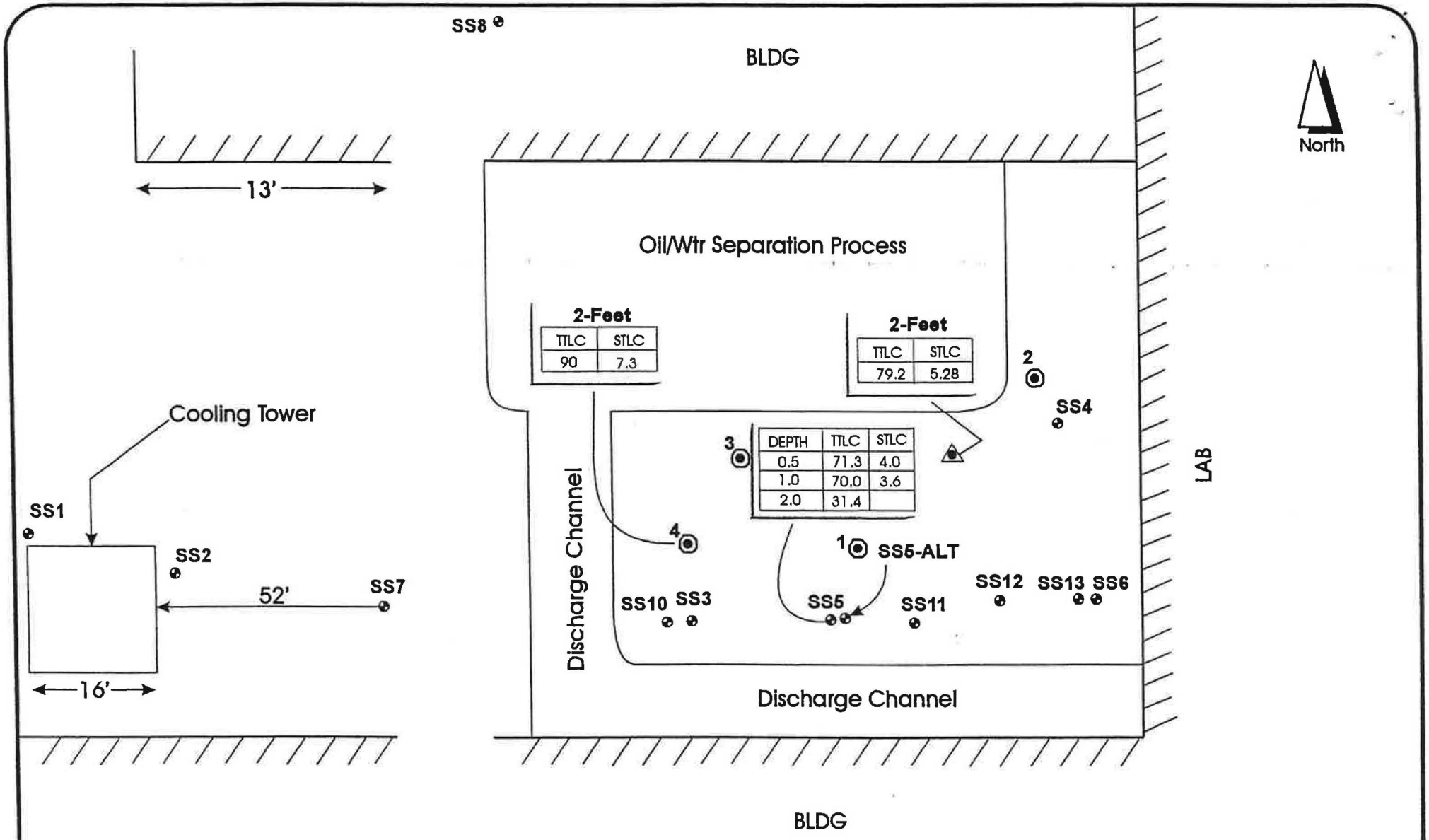
S&S COMMERCIAL Environmental Services

PROJECT # 5928

DRAFTED BY:

DATE: 10/05

FIG 2




***LEGEND:***

- ◉ — Borings Drilled By GeoScience Analytical 9-6-05
- ◬ — Boring Drilled by Converse Consultants 8-05
- ⊕ — Boring Drilled by S&S 9-28-05, 10-05 & 10-10-05

**SITE SKETCH MAP**

SHOWING BORING LOCATIONS / ARSENIC CONC.

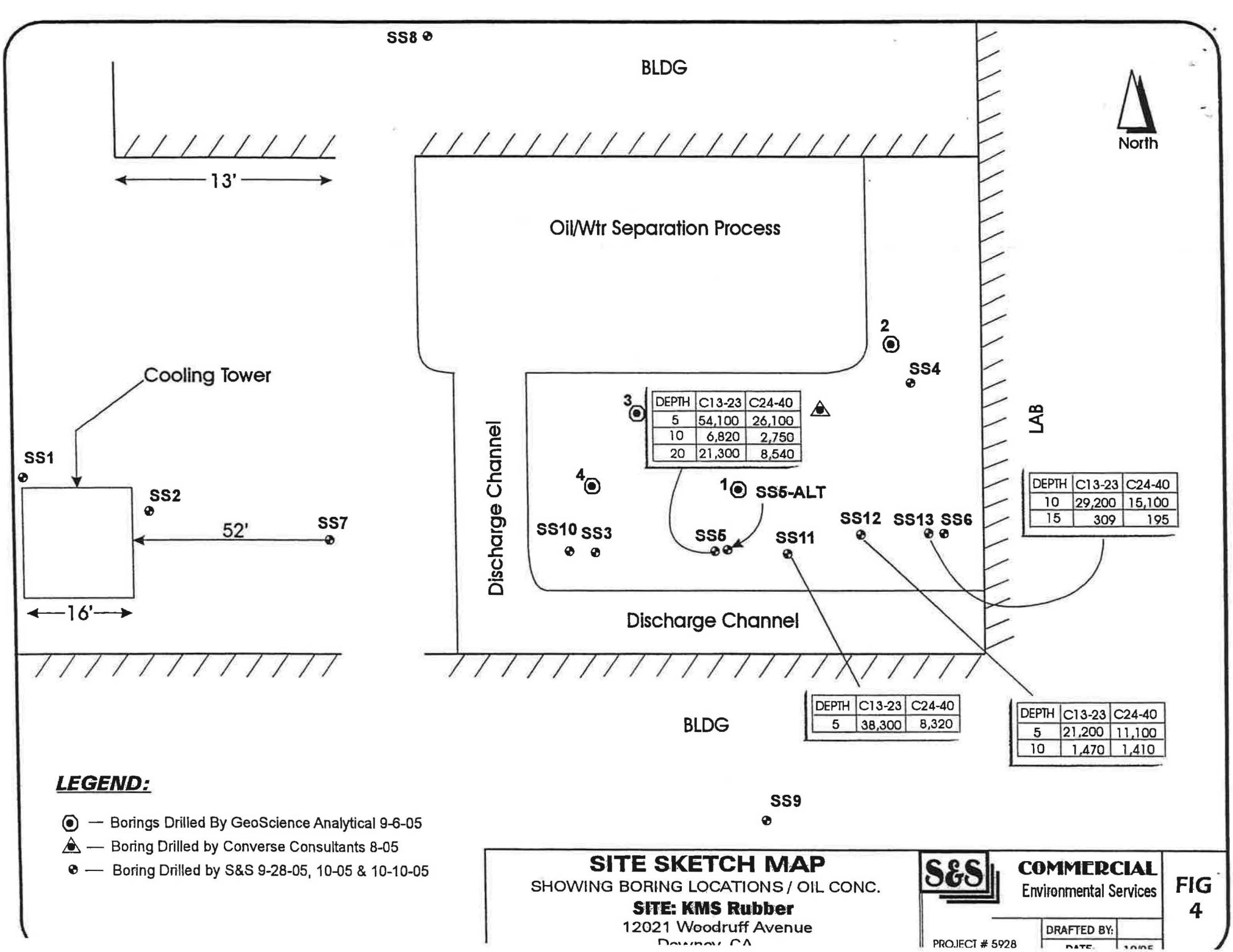
**SITE: KMS Rubber**

12021 Woodruff Avenue

S&S COMMERCIAL Environmental Services

PROJECT # 5928 | DRAFTED BY:

FIG 3




***LEGEND:***

- ◉ — Borings Drilled By GeoScience Analytical 9-6-05
- ◬ — Boring Drilled by Converse Consultants 8-05
- ⊕ — Boring Drilled by S&S 9-28-05, 10-05 & 10-10-05

# SITE SKETCH MAP

SHOWING BORING LOCATIONS / OIL CONC.

**SITE: KMS Rubber**

12021 Woodruff Avenue

Downey, CA

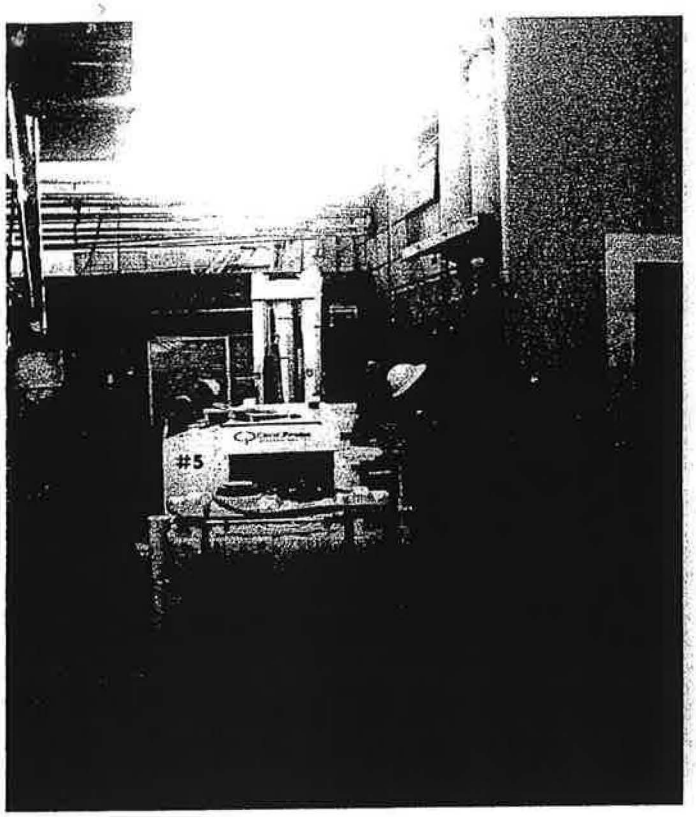
S&S COMMERCIAL Environmental Services

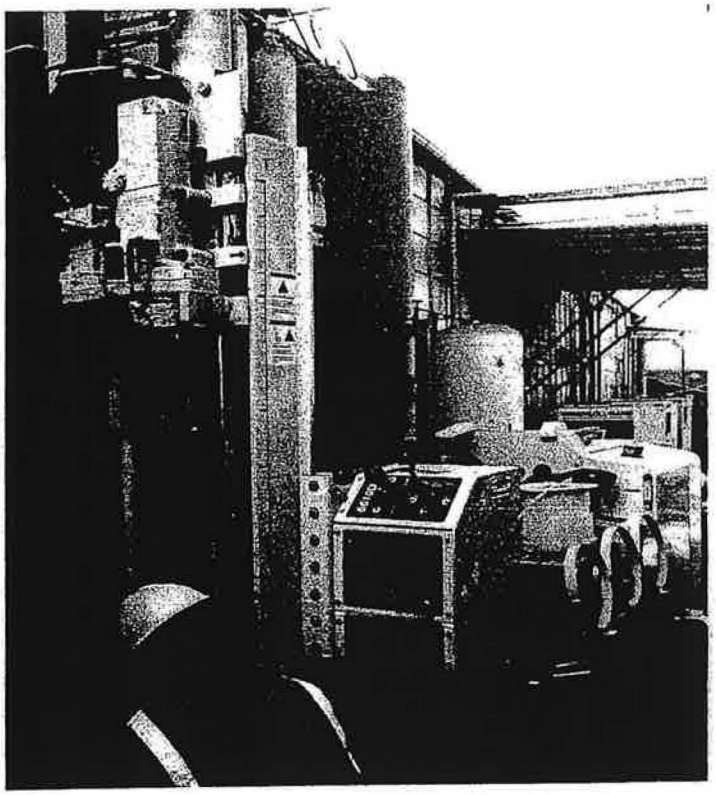
PROJECT # 5928

DRAFTED BY:

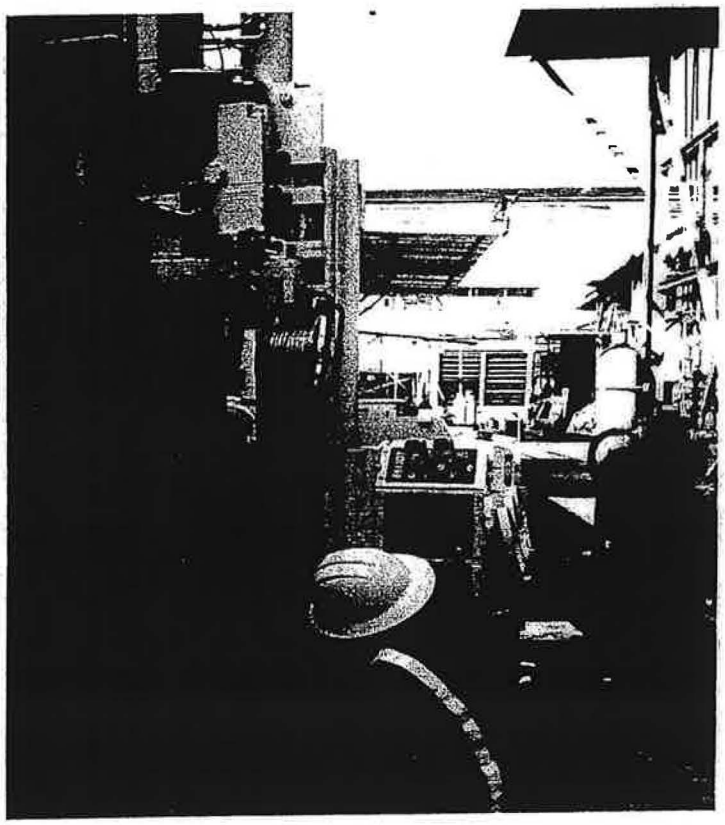
DATE: 10/05

FIG 4



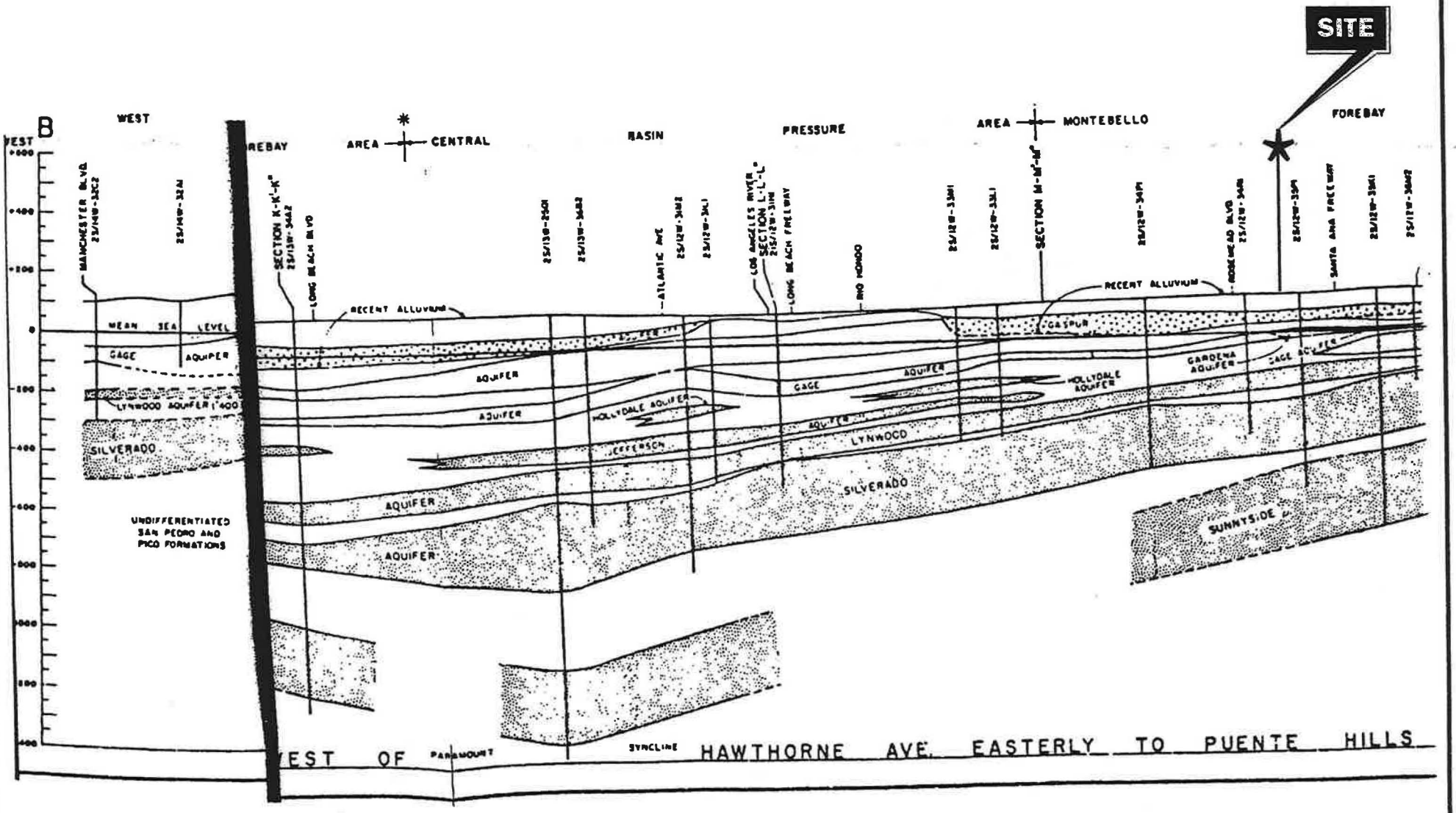




*PHOTOGRAPHIC PLATE*

Showing Field Operations

**FIG:**




N

**BULLETIN 104 B-B' CROSS-SECTION**

**SITE: SMK Rubber**

12021 Woodruff Ave.

S&S COMMERCIAL Environmental Services

DRAFTED BY: WCL

PLATE 1

# APPENDIX I

Cal-EPA Certified Laboratory Chemical Analyses Results

**Southland Technical Services, Inc.**
Environmental Laboratories

09-30-20

Mr. Bill Lachmar
S & S Commercial Environmental Services
13520 Amber Road
Chino, CA 91710

Project: 5928
Project Site: KMS-12021-23 Woodruff Ave., Downey, CA
Date Sampled: 09-28-2005
Lab Job No.: Z509167

Dear Mr. Lachmar:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 09-28-20 and analyzed by the following EPA methods:

EPA 8015M (Total Petroleum Hydrocarbons)
EPA 8260B (VOCs & Oxygenates)
EPA 7060A (Arsenic, TTLC )
EPA 7190 (Chromium, TTLC)
EPA 8270C (SVOCs by GC/MS)

All analyses have met the QA/QC criteria of this laboratory.

The sample arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by CA DHS (Certificate Number 1986). Thank you for giving us t opportunity to serve you. Please feel free to call me at (323) 888-0728 if oB1-5ur laboratory can be of further servi to you.

Sincerely,

Roger Wang, Ph.D.
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.

**Southland Technical Services, Inc.**
Environmental Laboratories

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 09-28-2005 |
| Matrix: | Soil | Date Received: | 09-28-2005 |
| Batch No.: | EI28-DS1 | Date Analyzed: | 09-28-2005 |
| | | Date Reported: | 09-30-2005 |

**EPA 8015M (Total Petroleum Hydrocarbons)**
**Reporting Unit: mg/kg (ppm)**

| Sample ID | Lab ID | C8-C12 | C13-C23 (Diesel Range) | C24-C40 (Oil Range) |
|---|---|---|---|---|
| Reporting Limit | | 5 | 5 | 50 |
| Method Blank | | ND | ND | ND |
| SS5-5 | Z509167-16 | ND | 54,100 | 26,100 |
| | | | | |

ND: Not Detected (at the specified limit).

Client: S & S Commercial Environmental Services
Project: 5928

Lab Job No.: Z509167
Matrix: Soil

Date Reported: 09-30-2005
Date Sampled: 09-28-2005

**EPA 8260B (VOCs by GC/MS, Page 1 of 2)** Reporting Unit: µg/kg(ppb)

| DATE ANALYZED | | 09-28 | 09-28-05 | | | | |
|---|---|---|---|---|---|---|---|
| DILUTION FACTOR | | 1 | 1 | | | | |
| LAB SAMPLE I.D. | | | Z509167-16 | | | | |
| CLIENT SAMPLE I.D. | | | SS5-5 | | | | |
| COMPOUND | MDL | MB | | | | | |
| Dichlorodifluoromethane | 5 | ND | ND | | | | |
| Chloromethane | 5 | ND | ND | | | | |
| Vinyl Chloride | 5 | ND | ND | | | | |
| Bromomethane | 5 | ND | ND | | | | |
| Chloroethane | 5 | ND | ND | | | | |
| Trichlorofluoromethane | 5 | ND | ND | | | | |
| 1,1-Dichloroethene | 5 | ND | ND | | | | |
| Iodomethane | 5 | ND | ND | | | | |
| Methylene Chloride | 5 | ND | ND | | | | |
| trans-1,2-Dichloroethene | 5 | ND | ND | | | | |
| 1,1-Dichloroethane | 5 | ND | ND | | | | |
| 2,2-Dichloropropane | 5 | ND | ND | | | | |
| cis-1,2-Dichloroethene | 5 | ND | ND | | | | |
| Bromochloromethane | 5 | ND | ND | | | | |
| Chloroform | 5 | ND | ND | | | | |
| 1,2-Dichloroethane | 5 | ND | ND | | | | |
| 1,1,1-Trichloroethane | 5 | ND | ND | | | | |
| Carbon tetrachloride | 5 | ND | ND | | | | |
| 1,1-Dichloropropene | 5 | ND | ND | | | | |
| Benzene | 2 | ND | ND | | | | |
| Trichloroethene | 5 | ND | ND | | | | |
| 1,2-Dichloropropane | 5 | ND | ND | | | | |
| Bromodichloromethane | 5 | ND | ND | | | | |
| Dibromomethane | 5 | ND | ND | | | | |
| Trans-1,3-Dichloropropene | 5 | ND | ND | | | | |
| cis-1,3-Dichloropropene | 5 | ND | ND | | | | |
| 1,1,2-Trichloroethane | 5 | ND | ND | | | | |
| 1,3-Dichloropropane | 5 | ND | ND | | | | |
| Dibromochloromethane | 5 | ND | ND | | | | |
| 2-Chloroethylvinyl ether | 5 | ND | ND | | | | |
| Bromoform | 5 | ND | ND | | | | |
| Isopropylbenzene | 5 | ND | ND | | | | |
| Bromobenzene | 5 | ND | ND | | | | |

Client: S & S Commercial Environmental Services
Project: 5928

Lab Job No.: Z509167
Matrix: Soil

Date Reported: 09-30-2005
Date Sampled: 09-28-2005

**EPA 8260B (VOCs by GC/MS, Page 2 of 2)** Reporting Unit: ppb

| COMPOUND | MDL | MB | SS5-5 | | | | |
|---|---|---|---|---|---|---|---|
| Toluene | 2 | ND | ND | | | | |
| Tetrachloroethene | 5 | ND | ND | | | | |
| 1,2-Dibromoethane(EDB) | 5 | ND | ND | | | | |
| Chlorobenzene | 5 | ND | ND | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | ND | ND | | | | |
| Ethylbenzene | 2 | ND | ND | | | | |
| Total Xylenes | 4 | ND | ND | | | | |
| Styrene | 5 | ND | ND | | | | |
| 1,1,2,2-Tetrachloroethane | 5 | ND | ND | | | | |
| 1,2,3-Trichloropropane | 5 | ND | ND | | | | |
| n-Propylbenzene | 5 | ND | ND | | | | |
| 2-Chlorotoluene | 5 | ND | ND | | | | |
| 4-Chlorotoluene | 5 | ND | ND | | | | |
| 1,3,5-Trimethylbenzene | 5 | ND | ND | | | | |
| tert-Butylbenzene | 5 | ND | ND | | | | |
| 1,2,4-Trimethylbenzene | 5 | ND | ND | | | | |
| Sec-Butylbenzene | 5 | ND | ND | | | | |
| 1,3-Dichlorobenzene | 5 | ND | ND | | | | |
| p-Isopropyltoluene | 5 | ND | ND | | | | |
| 1,4-Dichlorobenzene | 5 | ND | ND | | | | |
| 1,2-Dichlorobenzene | 5 | ND | ND | | | | |
| n-Butylbenzene | 5 | ND | ND | | | | |
| 1,2,4-Trichlorobenzene | 5 | ND | ND | | | | |
| 1,2-Dibromo-3-Chloropropane | 5 | ND | ND | | | | |
| Hexachlorobutadiene | 5 | ND | ND | | | | |
| Naphthalene | 5 | ND | ND | | | | |
| 1,2,3-Trichlorobenzene | 5 | ND | ND | | | | |
| Acetone | 50 | ND | ND | | | | |
| 2-Butanone (MEK) | 50 | ND | ND | | | | |
| Carbon disulfide | 50 | ND | ND | | | | |
| 4-Methyl-2-pentanone (MIBK) | 50 | ND | ND | | | | |
| 2-Hexanone | 50 | ND | ND | | | | |
| Vinyl Acetate | 50 | ND | ND | | | | |
| MTBE | 5 | ND | ND | | | | |
| ETBE | 5 | ND | ND | | | | |
| DIPE | 5 | ND | ND | | | | |
| TAME | 5 | ND | ND | | | | |
| TBA | 20 | ND | ND | | | | |

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below DF × MDL).

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 09-28-2005 |
| Matrix: | Soil | Date Received: | 09-28-2005 |
| Digestion Method: | EPA 3050B | Date Digested: | 09-28-2005 |
| Batch No.: | 0929-M1 | Date Analyzed: | 09-29-2005 |
| | | Date Reported: | 09-30-2005 |

**EPA 7060A (Arsenic, TTLC)**
**Reporting Unit: mg/kg(ppm)**

| Sample ID | Lab ID | Arsenic | Reporting Limit |
|---|---|---|---|
| Method Blank | | ND | 2.5 |
| SS1-1/2 | Z509167-1 | 19.2 | 2.5 |
| SS1-1 | Z509167-2 | 5.4 | 2.5 |
| SS1-2 | Z509167-3 | 3.5 | 2.5 |
| SS2-1/2 | Z509167-4 | 7.7 | 2.5 |
| SS2-1 | Z509167-5 | 4.2 | 2.5 |
| SS2-2 | Z509167-6 | 5.7 | 2.5 |
| SS3-1/2 | Z509167-7 | 10.9 | 2.5 |
| SS3-1 | Z509167-8 | 5.7 | 2.5 |
| SS3-2 | Z509167-9 | 7.0 | 2.5 |
| SS4-1/2 | Z509167-10 | 32.7 | 2.5 |
| SS4-1 | Z509167-11 | 5.7 | 2.5 |
| SS4-2 | Z509167-12 | 22.2 | 2.5 |
| SS5-1/2 | Z509167-13 | 71.3 | 2.5 |
| SS5-1 | Z509167-14 | 70.0 | 2.5 |
| SS5-2 | Z509167-15 | 31.4 | 2.5 |
| SS6-1/2 | Z509167-17 | 10.4 | 2.5 |
| SS6-1 | Z509167-18 | 4.2 | 2.5 |
| SS6-2 | Z509167-19 | 5.4 | 2.5 |
| SS7-1/2 | Z509167-20 | 7.4 | 2.5 |
| | | | |

ND: Not Detected (at the specified limit).

**Southland Technical Services, Inc.**
Environmental Laboratories

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 09-28-2005 |
| Matrix: | Soil | Date Received: | 09-28-2005 |
| Digestion Method: | EPA 3050B | Date Digested: | 09-28-2005 |
| Batch No.: | 0929-M2 | Date Analyzed: | 09-29-2005 |
| | | Date Reported: | 09-30-2005 |

**EPA 7060A (Arsenic, TTLC)**
**Reporting Unit: mg/Kg(ppm)**

| Sample ID | Lab ID | Arsenic | Reporting Limit |
|---|---|---|---|
| Method Blank | | ND | 2.5 |
| SS7-1 | Z509167-21 | 6.2 | 2.5 |
| SS7-2 | Z509167-22 | 4.7 | 2.5 |
| SS8-1/2 | Z509167-23 | 5.6 | 2.5 |
| SS8-1 | Z509167-24 | 6.1 | 2.5 |
| SS8-2 | Z509167-25 | 4.4 | 2.5 |
| | | | |

ND: Not Detected (at the specified limit).

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 09-28-2005 |
| Matrix: | Soil | Date Received: | 09-28-2005 |
| Digestion Method: | EPA 3050B | Date Digested: | 09-28-2005 |
| Batch No.: | 0929-M1 | Date Analyzed: | 09-29-2005 |
| | | Date Reported: | 09-30-2005 |

**EPA 7190 (Total Chromium, TTLC)**
**Reporting Unit: mg/kg (ppm)**

| Sample ID | Lab ID | Total Chromium | Reporting Limit |
|---|---|---|---|
| Method Blank | | ND | ND |
| SS1-1/2 | Z509167-1 | 13.2 | 2.5 |
| SS1-1 | Z509167-2 | 11.6 | 2.5 |
| SS1-2 | Z509167-3 | 13.4 | 2.5 |
| SS2-1/2 | Z509167-4 | 11.0 | 2.5 |
| SS2-1 | Z509167-5 | 17.8 | 2.5 |
| SS2-2 | Z509167-6 | 9.9 | 2.5 |
| SS3-1/2 | Z509167-7 | 15.6 | 2.5 |
| SS3-1 | Z509167-8 | 11.4 | 2.5 |
| SS3-2 | Z509167-9 | 16.8 | 2.5 |
| | | | |

ND: Not Detected (at the specified limit).

**Southland Technical Services, Inc.**
Environmental Laboratories

Client: S & S Commercial Environmental Services
Project: 5928

Lab Job No.: Z509167
Matrix: Soil

Date Reported: 09-30-2005
Date Sampled: 09-28-2005

**EPA 8270C (Semi-VOCs by GC/MS, Page 1 of 2)**
Reporting Unit: mg/kg (ppm)

| DATE ANALYZED | | 09-30-05 | 09-30-05 | | | | |
|---|---|---|---|---|---|---|---|
| DATE EXTRACTED | | 09-29-05 | 09-29-05 | | | | |
| DILUTION FACTOR | | 1 | 100 | | | | |
| LAB SAMPLE I.D. | | | Z509167-16 | | | | |
| CLIENT SAMPLE I.D. | | | SS5-5 | | | | |
| COMPOUND | MDL | MB | | | | | |
| Phenol | 0.33 | ND | ND | | | | |
| Bis(2-chloroethyl) ether | 0.33 | ND | ND | | | | |
| 2-Chlorophenol | 0.33 | ND | ND | | | | |
| 1,3-Dichlorobenzene | 0.33 | ND | ND | | | | |
| 1,4-Dichlorobenzene | 0.33 | ND | ND | | | | |
| Benzyl alcohol | 0.66 | ND | ND | | | | |
| 1,2-Dichlorobenzene | 0.33 | ND | ND | | | | |
| 2-Methylphenol (o-cresol) | 0.33 | ND | ND | | | | |
| Bis(2-chloroisopropyl)ether | 0.33 | ND | ND | | | | |
| N-Nitrosodi-n-propylamine | 0.33 | ND | ND | | | | |
| 4-Methylphenol (p-cresol) | 0.33 | ND | ND | | | | |
| Hexachloroethane | 0.33 | ND | ND | | | | |
| Nitrobenzene | 0.33 | ND | ND | | | | |
| Isophorone | 0.33 | ND | ND | | | | |
| 2-Nitrophenol | 0.33 | ND | ND | | | | |
| 2,4-Dimethylphenol | 0.33 | ND | ND | | | | |
| Bis(2-chloroethoxy)methane | 0.33 | ND | ND | | | | |
| 2,4-Dichlorophenol | 0.33 | ND | ND | | | | |
| Benzoic acid | 1.65 | ND | ND | | | | |
| 1,2,4-Trichlorobenzene | 0.33 | ND | ND | | | | |
| Naphthalene | 0.33 | ND | ND | | | | |
| 4-Chloroaniline | 0.66 | ND | ND | | | | |
| Hexachlorobutadiene | 0.33 | ND | ND | | | | |
| 4-Chloro-3-methylphenol | 0.66 | ND | ND | | | | |
| 2-Methylnaphthalene | 0.33 | ND | ND | | | | |
| Hexachlorocyclopentadiene | 0.66 | ND | ND | | | | |
| 2,4,6-Trichlorophenol | 0.33 | ND | ND | | | | |
| 2,4,5-Trichlorophenol | 0.5 | ND | ND | | | | |
| 2-Chloronaphthalene | 0.33 | ND | ND | | | | |
| 2-Nitroaniline | 1.65 | ND | ND | | | | |
| Dimethylphthalate | 0.33 | ND | ND | | | | |
| Acenaphthylene | 0.33 | ND | ND | | | | |
| 2,6-Dinitrotoluene | 0.33 | ND | ND | | | | |

Client: S & S Commercial Environmental Services
Project: 5928

Lab Job No.: Z509167
Matrix: Soil

Date Reported: 09-30-2005
Date Sampled: 09-28-2005

**EPA 8270C (Semi-VOCs by GC/MS, Page 2 of 2)** Reporting Unit: mg/kg(ppm)

| COMPOUND | MDL | MB | SS5-5 | | | | |
|---|---|---|---|---|---|---|---|
| 3-Nitroaniline | 1.65 | ND | ND | | | | |
| Acenaphthene | 0.33 | ND | ND | | | | |
| 2,4-Dinitrophenol | 1.65 | ND | ND | | | | |
| Dibenzofuran | 0.33 | ND | ND | | | | |
| 4-Nitrophenol | 1.65 | ND | ND | | | | |
| 2,4-Dinitrotoluene | 0.33 | ND | ND | | | | |
| Fluorene | 0.33 | ND | ND | | | | |
| Diethylphthalate | 0.33 | ND | ND | | | | |
| 4-Chlorophenyl phenyl ether | 0.33 | ND | ND | | | | |
| 4-Nitroaniline | 1.65 | ND | ND | | | | |
| 1,2-Diphenylhydrazine | 0.33 | ND | ND | | | | |
| 4,6-Dinitro-2-methylphenol | 1.65 | ND | ND | | | | |
| N-Nitrosodiphenylamine | 0.33 | ND | ND | | | | |
| 4-Bromophenyl-phenyl ether | 0.33 | ND | ND | | | | |
| Hexachlorobenzene | 0.33 | ND | ND | | | | |
| Pentachlorophenol | 1.65 | ND | ND | | | | |
| Phenanthrene | 0.33 | ND | ND | | | | |
| Anthracene | 0.33 | ND | ND | | | | |
| Di-n-butylphthalate | 0.33 | ND | ND | | | | |
| Fluoranthene | 0.33 | ND | ND | | | | |
| Pyrene | 0.33 | ND | ND | | | | |
| Butyl benzylphthalate | 0.33 | ND | ND | | | | |
| Benzo(a)anthracene | 0.33 | ND | ND | | | | |
| 3,3'-Dichlorobenzidine | 0.66 | ND | ND | | | | |
| Chrysene | 0.33 | ND | ND | | | | |
| Bis(2-Ethylhexyl)phthalate | 0.33 | ND | 50.5 | | | | |
| Di-n-octylphthalate | 0.33 | ND | ND | | | | |
| Benzo(b)fluoranthene | 0.33 | ND | ND | | | | |
| Benzo(k)fluoranthene | 0.33 | ND | ND | | | | |
| Benzo(a)pyrene | 0.33 | ND | ND | | | | |
| Indeno(1,2,3-cd)pyrene | 0.33 | ND | ND | | | | |
| Dibenz(a,h)anthracene | 0.33 | ND | ND | | | | |
| Benzo(g,h,i)perylene | 0.33 | ND | ND | | | | |

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below MDL).

**Southland Technical Services, Inc.**
Environmental Laboratories

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 09-28-2005 |
| Matrix: | Soil | Date Received: | 09-28-2005 |
| Digestion Method: | EPA 3050B | Date Digested: | 09-28-2005 |
| Batch No.: | 1006-M1 | Date Analyzed: | 10-06-2005 |
| | | Date Reported: | 10-07-2005 |

**EPA 7060A (Arsenic, STLC)**
**Reporting Unit: mg/Kg(ppm)**

| Sample ID | Lab ID | Arsenic, STLC | Reporting Limit |
|---|---|---|---|
| Method Blank | | ND | 2.5 |
| SS5-1/2 | Z509167-13 | 4.0 | 2.5 |
| SS5-1 | Z509167-14 | 3.6 | 2.5 |
| | | | |

ND: Not Detected (at the specified limit).

Checked & approved by:

Roger Wang, Ph.D.
Laboratory Director

09-30-200

# EPA 8015M (TPH)
# Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | S509164-1 |
| Batch No.: | EI28-DS1 | Date Analyzed: | 09-28-2005 |

## I. MS/MSD Report
**Unit: ppm**

| Analyte | Sample Conc. | Spike Conc. | MS | MSD | MS %Rec. | MSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|---|---|---|
| TPH-d | ND | 200 | 165 | 165 | 82.5 | 82.5 | 0.0 | 30 | 70-130 |

## II. LCS Result
**Unit: ppm**

| Analyte | LCS Report Value | True Value | Rec.% | %Rec Accept. Limit |
|---|---|---|---|---|
| TPH-d | 199 | 200 | 99.5 | 80-120 |

ND: Not Detected (at the specified limit).

**Southland Technical Services, Inc.**
Environmental Laboratories

09-30-2005

# EPA 8260B
## Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | SS0928-1 |
| Batch No: | 0928-VOAS | Date Analyzed: | 09-28-2005 |

### I. MS/MSD Report
Unit: ppb

| Analyte | Sample Conc. | Spike Conc. | MS | MSD | MS %Rec. | MSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | ND | 20 | 17.1 | 14.2 | 85.5 | 71.0 | 18.5 | 30 | 70-130 |
| Benzene | ND | 20 | 23.8 | 23.2 | 119.0 | 116.0 | 2.6 | 30 | 70-130 |
| Trichloro-ethene | ND | 20 | 19.2 | 19.4 | 96.0 | 97.0 | 1.0 | 30 | 70-130 |
| Toluene | ND | 20 | 25.2 | 23.2 | 126.0 | 116.0 | 8.3 | 30 | 70-130 |
| Chlorobenzene | ND | 20 | 22.6 | 20.4 | 113.0 | 102.0 | 10.2 | 30 | 70-130 |

### II. LCS Result
Unit: ppb

| Analyte | LCS Value | True Value | Rec.% | Accept. Limit |
|---|---|---|---|---|
| 1,1-Dichloroethene | 41.4 | 50.0 | 82.8 | 80-120 |
| Benzene | 59.8 | 50.0 | 119.6 | 80-120 |
| Trichloro-ethene | 51.6 | 50.0 | 103.2 | 80-120 |
| Toluene | 59.1 | 50.0 | 118.2 | 80-120 |
| Chlorobenzene | 51.1 | 50.0 | 102.2 | 80-120 |

ND: Not Detected.

09-30-20(

## EPA 8270C
## Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | SS50930-1 |
| Batch No: | 0930-BNA | Date Analyzed: | 09-30-05 |

**MS/MSD Report**
**Unit: ppm**

| Compound | MB | Spike Conc. | MS | MSD | MS %Rec. | MSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|---|---|---|
| Phenol | ND | 10 | 11.3 | 12.3 | 113.0 | 123.0 | 8.5 | 40 | 12-130 |
| 2-Chlorophenol | ND | 10 | 8.59 | 9.78 | 85.9 | 97.8 | 13.0 | 40 | 24-134 |
| 1,4-Dichloro-benzene | ND | 5.0 | 3.78 | 4.14 | 75.6 | 82.8 | 9.1 | 40 | 36-124 |
| n-Nitroso-di-n-propylamine | ND | 5.0 | 5.48 | 6.12 | 109.6 | 122.4 | 11.0 | 40 | 41-230 |
| 1,2,4-Trichlorobenzene | ND | 5.0 | 2.89 | 3.07 | 57.8 | 61.4 | 6.0 | 40 | 44-142 |
| 4-Chloro-3-methylphenol | ND | 10 | 8.09 | 9.29 | 80.9 | 92.9 | 13.8 | 40 | 22-147 |
| Acenaphthene | ND | 5.0 | 3.82 | 4.51 | 76.4 | 90.2 | 16.6 | 40 | 47-145 |
| 4-Nitrophenol | ND | 10 | 12.0 | 11.4 | 120.0 | 114.0 | 5.1 | 58 | 12-132 |
| 2,4-Dinitro-toluene | ND | 5.0 | 3.14 | 3.95 | 62.8 | 79.0 | 22.8 | 40 | 39-139 |
| Pentachloro-phenol | ND | 10 | 4.96 | 6.38 | 49.6 | 63.8 | 25.0 | 51 | 14-176 |
| Pyrene | ND | 5.0 | 5.04 | 5.57 | 100.8 | 111.4 | 10.0 | 30 | 26-130 |

ND: Not Detected

09-30-20(

## EPA 7060A (As) & 7190 (Cr)
## Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | LCS |
| Batch No: | 0929-M1 | Date Analyzed: | 09-29-2005 |

### LCS/LCSD Report

| Analyte | MB Conc. | LCS %Rec. | LCSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|
| Arsenic (As) | ND | 121.0 | 119.0 | 1.7 | 30 | 70-130 |
| Chromium (Cr) | ND | 102.0 | 98.0 | 4.0 | 30 | 70-130 |
| | | | | | | |

ND: Not Detected

09-30-200

## EPA 7060A (As)
### Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | LCS |
| Batch No: | 0929-M2 | Date Analyzed: | 09-29-2005 |

**LCS/LCSD Report**

| Analyte | MB Conc. | LCS %Rec. | LCSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|
| Arsenic (As) | ND | 113.9 | 113.5 | 0.4 | 30 | 70-130 |
| | | | | | | |

ND: Not Detected

**Southland Technical Services, Inc.**
Environmental Laboratories

10-07-200

**EPA 7060A (Arsenic,STLC)**
**Batch QA/QC Report**

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | LCS |
| Batch No: | 1006-M1 | Date Analyzed: | 10-06-2005 |

**LCS/LCSD Report**

| Analyte | MB Conc. | LCS %Rec. | LCSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|
| Arsenic (As) | ND | 95 | 89 | 6 | 30 | 70-130 |
| | | | | | | |

ND: Not Detected

**SOUTHLAND TECHNICAL SERVICES, INC.**



**CHAIN OF CUSTODY RECORD**

Lab Job Number Z509167

Client: S&S Commercial Environmental Services

Address: 12960 Central Ave., #E, Chino, CA

Report Attention: Bill Lachmar | Phone: 714-508-9994 | Fax: 714-508-9971 | Sampled by: W.C.L.

Project Name/No: 5928 | Project Site: KMS - 12021-23 Woodruff Ave., Downey

T.A.T. Requested: ☐ Rush 8 12 24 hours ☒ 2-3 days ☐ Normal

Sample Condition: ☒ Chilled ☒ Intact ☐ Sample seals

| Client Sample ID | Lab Sample ID | Sample Collect Date | Sample Collect Time | Matrix Type | Sample Preserve | No.,type* & size of container | 602/8021 (BTEX,MTBE) | 8015M (Gasoline) | 8015M (Diesel) | 8260B (VOCs) | 8260B (Oxygenates, BTEX) | 8260B (MTBE Confirm.) | Arsenic | Chromium | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS1-1/2 | Z509167-1 | 9-28-05 | | Soil | | Bass | | | | | | | X | X | | | | | |
| SS1-1 | -2 | | | | | | | | | | | | X | X | | | | | |
| SS1-2 | -3 | | | | | | | | | | | | X | X | | | | | |
| SS1-5 | | | | | | | | | | | | | | | | | | | |
| SS2-1/2 | -4 | | | | | | | | | | | | X | X | | | | | |
| SS2-1 | -5 | | | | | | | | | | | | X | X | | | | | |
| SS2-2 | -6 | | | | | | | | | | | | X | X | | | | | |
| SS2-5 | | | | | | | | | | | | | | | | | | | |
| SS3-1/2 | -7 | | | | | | | | | | | | X | X | | | | | |
| SS3-1 | -8 | | | | | | | | | | | | X | X | | | | | |
| SS3-2 | -9 | | | | | | | | | | | | X | X | | | | | |
| SS3-5 | | ↓ | | | | ↓ | | | | | | | | | | | | | |

| Relinquished by | Company | Date | Time | Received by | Company |
|---|---|---|---|---|---|
| | S&S Commercial | 9-28-05 | 12:00 | | STS |
| Relinquished by | Company | Date | Time | Received by | Company |

Container types: M=Metal Tube, A=Air Bag, P=Plastic bottle, G=Glass bottle, V=VOA vial



Note: Samples are discarded 30 days after results are reported unless other arrangements are

**SOUTHLAND TECHNICAL SERVICES, INC.**

**CHAIN OF CUSTODY RECORD**



Lab Job Number Z509167

Client: S:S Commercial Environmental Services

Address: 12960 Central Ave. #E, Chino, CA, 91733

Report Attention: B. Ill Lachmar | Phone: 714-508-9771 | Fax: 714-508-9791 | Sampled by: B. Ill Lachmar

Project Name/No.: 5928 | Project Site: KMS 12021-23 Woodruff Ave., Downey

T.A.T. Requested: ☐ Rush 8 12 24 hours ☒ 2-3 days ☐ Normal

Sample Condition: ☒ Chilled ☒ Intact ☐ Sample seals

| Client Sample ID | Lab Sample ID | Sample Collect Date | Sample Collect Time | Matrix Type | Sample Preserve | No.,type* & size of container | 602/8021 (BTEX,MTBE) | 8015M (Gasoline) | 8015M (Diesel) | 8260B (VOCs) | 8260B (Oxygenates, BTEX) | 8260B (MTBE Confirm.) | 8015 C8-C40 | 8270C | Arsenic | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS4-1/2 | Z509167-10 | 9-28-05 | | Soil | | Bass | | | | | | | | | X | | | | |
| SS4-1 | -11 | | | | | | | | | | | | | | X | | | | |
| SS4-2 | -12 | | | | | | | | | | | | | | X | | | | |
| SS4-5 | | | | | | | | | | | | | | | | | | | |
| SS5-1/2 | -13 | | | | | | | | | | | | | | X | | | | |
| SS5-1 | -14 | | | | | | | | | | | | | | X | | | | |
| SS5-2 | -15 | | | | | | | | | | | | | | X | | | | |
| SS5-5 | -16 | | | | Chill | | | | | X | | | X | X | | | | | |
| SS6-1/2 | -17 | | | | | | | | | | | | | | X | | | | |
| SS6-1 | -18 | | | | | | | | | | | | | | X | | | | |
| SS6-2 | -19 | | | | | | | | | | | | | | X | | | | |
| SS6-5 | | | | | | | | | | | | | | | | | | | |
| SS7-1/2 | -20 | | | | | | | | | | | | | | X | | | | |
| SS7-1 | -21 | | | | | | | | | | | | | | X | | | | |
| SS7-2 | -22 | | | | | | | | | | | | | | X | | | | |
| SS7-5 | | | | | | | | | | | | | | | | | | | |

| Relinquished by | Company | Date | Time | Received by | Company |
|---|---|---|---|---|---|
| | S:S Commercial | 9-28-05 | 1200 | | SAS |
| Relinquished by | Company | Date | Time | Received by | Company |
| | | | | | |

Container types: M=Metal Tube, A=Air Bag, P=Plastic bottle, G=Glass bottle, V=VOA vial

Southland Tech. Services, Inc.

Note: Samples are discarded 30 days after results are reported unless other arrangements are

**SOUTHLAND TECHNICAL SERVICES, INC.**

**CHAIN OF CUSTODY RECORD**



Lab Job Number Z509167

Client: S;S Commercial Environmental Services

Address: 12960 Central Ave., #E, Chino, CA

Report Attention: Bill Lachmar | Phone: 714-508-9784 | Fax: 714-508-9791 | Sampled by: W.C.L.

Project Name/No.: 5928 | Project Site: KMS - 12021-23 Woodruff Ave., Downey

| Client Sample ID | Lab Sample ID | Sample Collect Date | Sample Collect Time | Matrix Type | Sample Preserve | No.,type* & size of container | 602/8021 (BTEX,MTBE) | 8015M (Gasoline) | 8015M (Diesel) | 8260B (VOCs) | 8260B (Oxygenates, BTEX) | 8260B (MTBE Confirm.) | 8015-C8-C40 | 8270C | Arsenic | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS8-1/2 | Z509167-23 | 9-28-05 | | Soil | ~~HNO3~~ | Brass | | | | | | | | | X | | | | |
| SS8-1 | -24 | " | | " | " | " | | | | | | | | | X | | | | |
| SS8-2 | -25 | " | | " | " | " | | | | | | | | | X | | | | |
| SS8-5 | | ↓ | | ↓ | ↓ | ↓ | | | | | | | | | | | | | |

T.A.T. Requested: ☐ Rush 8 12 24 hours ☒ 2-3 days ☐ Normal

Sample Condition: ☒ Chilled ☒ Intact ☐ Sample seals

| Relinquished by | Company | Date | Time | Received by | Company |
|---|---|---|---|---|---|
| [signature] | S;S Commercial | 9-28-05 | 12:00 | [signature] | STL |
| Relinquished by | Company | Date | Time | Received by | Company |

Container types: M=Metal Tube, A=Air Bag, P=Plastic bottle, G=Glass bottle, V=VOA vial

Southland Tech. Services, Inc.
7801 Telegraph Road, Suite L & K Tel: (323) 888-0728

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

**Southland Technical Services, Inc.**
Environmental Laboratories

10-10-200

Mr. Bill Lachmar
S & S Commercial Environmental Services
13520 Amber Road
Chino, CA 91710

Project: 5928
Project Site: KMS-12021-23 Woodruff Ave., Downey, CA
Date Sampled: 10-05-2005
Lab Job No.: Z510018

Dear Mr. Lachmar:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 10-05-200 and analyzed by the following EPA methods:

EPA 8015M (Total Petroleum Hydrocarbons)

All analyses have met the QA/QC criteria of this laboratory.

The sample arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by CA DHS (Certificate Number 1986). Thank you for giving us th opportunity to serve you. Please feel free to call me at (323) 888-0728 if oB1-5ur laboratory can be of further servic to you.

Sincerely,

Roger Wang, Ph.D.
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.

**Southland Technical Services, Inc.**
Environmental Laboratories

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z510018 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 10-05-2005 |
| Matrix: | Soil | Date Received: | 10-05-2005 |
| Batch No.: | EJ05-DS1 | Date Analyzed: | 10-05-2005 |
| | | Date Reported: | 10-06-2005 |

**EPA 8015M (Total Petroleum Hydrocarbons)**
**Reporting Unit: mg/kg (ppm)**

| Sample ID | Lab ID | C8-C12 | C13-C23 (Diesel Range) | C24-C40 (Oil Range) |
|---|---|---|---|---|
| Reporting Limit | | 5 | 5 | 50 |
| Method Blank | | ND | ND | ND |
| SS-5-Alt-10' | Z510018-1 | ND | 6,820 | 2,750 |
| SS-5-Alt-15' | Z510018-2 | ND | 185 | 65 |
| SS-5-Alt-20' | Z510018-3 | 5.6 | 21,300 | 8,540 |
| SS-5-Alt-25' | Z510018-4 | ND | ND | ND |
| SS-5-Alt-30' | Z510018-5 | ND | ND | ND |
| SS-10-5' | Z510018-6 | ND | ND | ND |
| SS-10-10' | Z510018-7 | ND | ND | ND |
| SS-10-20' | Z510018-13 | ND | ND | ND |
| SS-11-5' | Z510018-8 | ND | 38,300 | 8,320 |
| SS-12-5' | Z510018-9 | ND | 21,200 | 11,100 |
| SS-12-10' | Z510018-10 | ND | 1,470 | 1,410 |
| SS-12-15' | Z510018-11 | ND | 73 | ND |
| SS-12-20' | Z510018-14 | ND | ND | ND |
| SS-13-10' | Z510018-12 | 80 | 29,200 | 15,100 |
| SS-13-15' | Z510018-15 | ND | 309 | 195 |
| SS-14-10' | Z510018-16 | ND | ND | ND |
| | | | | |

ND: Not Detected (at the specified limit).

10-10-200

# EPA 8015M (TPH)
# Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z510018 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | SS51005-1 |
| Batch No.: | EJ05-DS1 | Date Analyzed: | 10-05-2005 |

## I. MS/MSD Report
**Unit: ppm**

| Analyte | Sample Conc. | Spike Conc. | MS | MSD | MS %Rec. | MSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|---|---|---|
| TPH-d | ND | 200 | 214 | 213 | 107.0 | 106.5 | 0.5 | 30 | 70-130 |

## II. LCS Result
**Unit: ppm**

| Analyte | LCS Report Value | True Value | Rec.% | %Rec Accept. Limit |
|---|---|---|---|---|
| TPH-d | 508 | 500 | 101.6 | 80-120 |

ND: Not Detected (at the specified limit).

**SOUTHLAND TECHNICAL SERVICES, INC.**

**CHAIN OF CUSTODY RECORD**



Lab Job Number 510018

Client: S&S Commercial Environmental Services

Address 12960 Central Ave #E, Chino, CA 91733

Report Attention: Bill Lachmar | Phone: 714-508-9794 | Fax: 714/508-9791 | Sampled by: Hamid Khorzani

Project Name/No.: 5928 | Project Site: KMS 12021-23 Woodruff Av., Downey

T/A.T. Requested: ☑ Rush 8 12 24 hours ☐ 2-3 days ☐ Normal

Sample Condition: ☑ Chilled ☑ Intact ☐ Sample seals

| Client Sample ID | Lab Sample ID | Sample Collect Date | Sample Collect Time | Matrix Type | Sample Preserve | No.,type* & size of container | 602/8021 (BTEX,MTBE) | 8015M (Gasoline) | 8015M (Diesel) | 8260B (VOCs) | 8260B (Oxygenates, BTEX) | 8260B (MTBE Confirm.) | 8015-C8-C40 | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS5 Alt -5' | | 10/5/05 | 8:00 | Soil | | Tube | | | | | | | | Hold |
| SS5 Alt -10' | 510018-1 | " | " | " | | " | | | | | | | ✓ | 510018 |
| SS5 Alt -15' | " 2 | " | " | " | | " | | | | | | | ✓ | |
| SS5 Alt -20' | " 3 | " | " | " | | " | | | | | | | ✓ | |
| SS5 Alt -25' | " 4 | " | " | " | | " | | | | | | | ✓ | |
| SS5 Alt -30' | " 5 | " | " | " | | " | | | | | | | ✓ | |
| SS10 -5' | " 6 | " | " | " | | " | | | | | | | ✓ | |
| SS10 -10' | " 7 | " | " | " | | " | | | | | | | ✓ | |
| SS10 -15' | | | | | | | | | | | | | | Hold |
| SS10 -20' | -13 | " | " | " | | " | | | | | | | ✓ | ~~Hold~~ |
| SS10 -25' | | | | | | | | | | | | | | Hold |
| SS10 -30' | | | | | | | | | | | | | | Hold |
| SS11 -5' | " 8 | " | " | " | | " | | | | | | | ✓ | |
| SS12 -5' | " 9 | " | " | " | | " | | | | | | | ✓ | |
| SS12 -10' | " 10 | " | " | " | | " | | | | | | | ✓ | |
| SS12 -15' | " 11 | " | " | " | | " | | | | | | | ✓ | |

| Relinquished by | Company | Date | Time | Received by | Company | |
|---|---|---|---|---|---|---|
| [signature] | S&S | 10/5/05 | 1:10 | [signature] | SB | 10-5-05 1:10 pm |
| Relinquished by | Company | Date | Time | Received by | Company | |

Container types: M=Metal Tube, A=Air Bag, P=Plastic bottle, G=Glass bottle, V=VOA vial



Note: Samples are discarded 30 days after results are reported unless other arrangements are

# SOUTHLAND TECHNICAL SERVICES, INC.

## CHAIN OF CUSTODY RECORD



Lab Job Number Z510018

Client: S&S Commerical Environmental Services

Address: 12960 Central Ave #E Chino, CA 91733

| Report Attention | Phone | Fax | Sampled by |
|---|---|---|---|
| Bill Lehmar | 714/508-9794 | 714/504-9791 | Hamid Khorzani |

Project Name/No.: 5928

Project Site: KMS 12021-23 Woodruff Ave. Downey

**Analyses Requested**

T.A.T. Requested: ☑ Rush 8 12 24 hours ☐ 2-3 days ☐ Normal

Sample Condition: ☑ Chilled ☑ Intact ☐ Sample seals

| Client Sample ID | Lab Sample ID | Sample Collect Date | Sample Collect Time | Matrix Type | Sample Preserve | No.,type* & size of container | 602/8021 (BTEX,MTBE) | 8015M (Gasoline) | 8015M (Diesel) | 8260B (VOCs) | 8260B (Oxygenates, BTEX) | 8260B (MTBE Confirm.) | 8015 - C8-C40 | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS12-20' | -14 | 10/5/05 | | Soil | | | | | | | | | ✓ | ~~Hold~~ |
| SS13-10' | Z510018-12 | ↓ | | | | | | | | | | | ✓ | |
| SS13-15' | -15 | | | | | | | | | | | | ✓ | ~~Hold~~ |
| SS14-10' | -16 | | | | | | | | | | | | ✓ | ~~Hold~~ |
| SS14-15' | | ↓ | 12:30 | | | Tube | | | | | | | | Hold |

| Relinquished by | Company | Date | Time | Received by | Company | Container types: | |
|---|---|---|---|---|---|---|---|
| [signature] | S&S | 10/5/05 | 1:10 | Jessica Z. Zong | SDS | 10-05-05 1:10pm | A=Air Bag P=Plastic bottle |
| Relinquished by | Company | Date | Time | Received by | Company | G=Glass bottle | V=VOA vial |

Southland Tech. Services, Inc.

Note: Samples are discarded 30 days after results are reported unless other arrangements are

**Southland Technical Services, Inc.**
Environmental Laboratories

10/10/200:

Mr. Bill Lachmar
S & S Commercial Environmental Services
13520 Amber Road
Chino, CA 91710

Project: 5928
Project Site: KMS-12021-23 Woodruff Ave., Downey, CA
Date Sampled: 10-10-2005
Lab Job No.: Z510042

Dear Mr. Lachmar:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 10-10-200 and analyzed by the following EPA methods:

EPA 8015M (Total Petroleum Hydrocarbons)

All analyses have met the QA/QC criteria of this laboratory.

The sample arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by CA DHS (Certificate Number 1986). Thank you for giving us th opportunity to serve you. Please feel free to call me at (323) 888-0728 if oB1-5ur laboratory can be of further servic to you.

Sincerely,

Roger Wang, Ph.D.
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z510042 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 10-10-2005 |
| Matrix: | Soil | Date Received: | 10-10-2005 |
| Batch No.: | EJ10-DS1 | Date Analyzed: | 10-10-2005 |
| | | Date Reported: | 10/10/2005 |

**EPA 8015M (Total Petroleum Hydrocarbons)**
**Reporting Unit: mg/kg (ppm)**

| Sample ID | Lab ID | C8-C12 | C13-C23 (Diesel Range) | C24-C40 (Oil Range) |
|---|---|---|---|---|
| Reporting Limit | | 5 | 5 | 50 |
| Method Blank | | ND | ND | ND |
| SS-5-Alt-35' | Z510042-1 | ND | ND | ND |
| SS-5-Alt-40' | Z510042-2 | ND | ND | ND |
| SS-5-Alt-45' | Z510042-3 | ND | ND | ND |
| | | | | |

ND: Not Detected (at the specified limit).

10/10/200

# EPA 8015M (TPH)
# Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z510042 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | Z510042-1 |
| Batch No.: | EJ10-DS1 | Date Analyzed: | 10-10-2005 |

## I. MS/MSD Report
**Unit: ppm**

| Analyte | Sample Conc. | Spike Conc. | MS | MSD | MS %Rec. | MSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|---|---|---|
| TPH-d | ND | 200 | 210 | 208 | 105.0 | 104.0 | 1.0 | 30 | 70-130 |

## II. LCS Result
**Unit: ppm**

| Analyte | LCS Report Value | True Value | Rec.% | %Rec Accept. Limit |
|---|---|---|---|---|
| TPH-d | 209 | 200 | 104.5 | 80-120 |

ND: Not Detected (at the specified limit).

**SOUTHLAND TECHNICAL SERVICES, INC.**



**CHAIN OF CUSTODY RECORD**

Lab Job Number 2510042

Client: S:S Commercial Environmental Services

Address: 1260 Central Ave. #E, Chino, CA

Report Attention: Bill Lockwood | Phone: 714-508-7787 | Fax: 714-508-9791 | Sampled by: W.C.L.

Project Name/No.: 5928 | Project Site: Kirkhill Man. 12021 Woodruff, Downey

| Client Sample ID | Lab Sample ID | Sample Collect Date | Sample Collect Time | Matrix Type | Sample Preserve | No.,type* & size of container | 602/8021 (BTEX,MTBE) | 8015M (Gasoline) | 8015M (Diesel) | 8260B (VOCs) | 8260B (Oxygenates, BTEX) | 8260B (MTBE Confirm.) | 8260B-C40 | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SSSALT-35 | 2510042-1 | 10/05 | | Soil | Chill | T5be | | | | | | | X | | | | | | |
| SSSALT-40 | -2 | ↓ | | ↓ | ↓ | ↓ | | | | | | | X | | | | | | |
| SSSALT-45 | -3 | ↓ | | ↓ | ↓ | ↓ | | | | | | | X | | | | | | |

T.A.T. Requested: ☒ Rush 8 12 24 hours ☐ 2-3 days ☐ Normal

Sample Condition: ☒ Chilled ☒ Intact ☐ Sample seals

| Relinquished by | Company | Date | Time | Received by | Company |
|---|---|---|---|---|---|
| | S:S Commercial | 10-10-05 | 12:00 | | STS |
| Relinquished by | Company | Date | Time | Received by | Company |
| | | | | | |

Container types: A=Air Bag G=Glass bottle M=Metal Tube P=Plastic bottle V=VOA vial



Note: Samples are discarded 30 days after results are reported unless other arrangements are

# APPENDIX II

Soil Boring Logs

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS1

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 9/28/05

Reviewed By: W. Lachmar, R.G.

**WATER / WELL DATA**

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

Static Depth of Water in Well: NA

Total Depth of Boring: 5'

**LITHOLOGIC DESCRIPTION**

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

| BORING DETAIL | Blow Count | OVA (ppmv) | Graphic Log |
|---|---|---|---|

Boring Backfilled with Bentonite

0 5 10 15 20 25 30 35 40

| And (40-50%) | With (25-40%) | Some (10-25%) | Trace (0-10%) |
|---|---|---|---|

Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS2

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 9/28/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

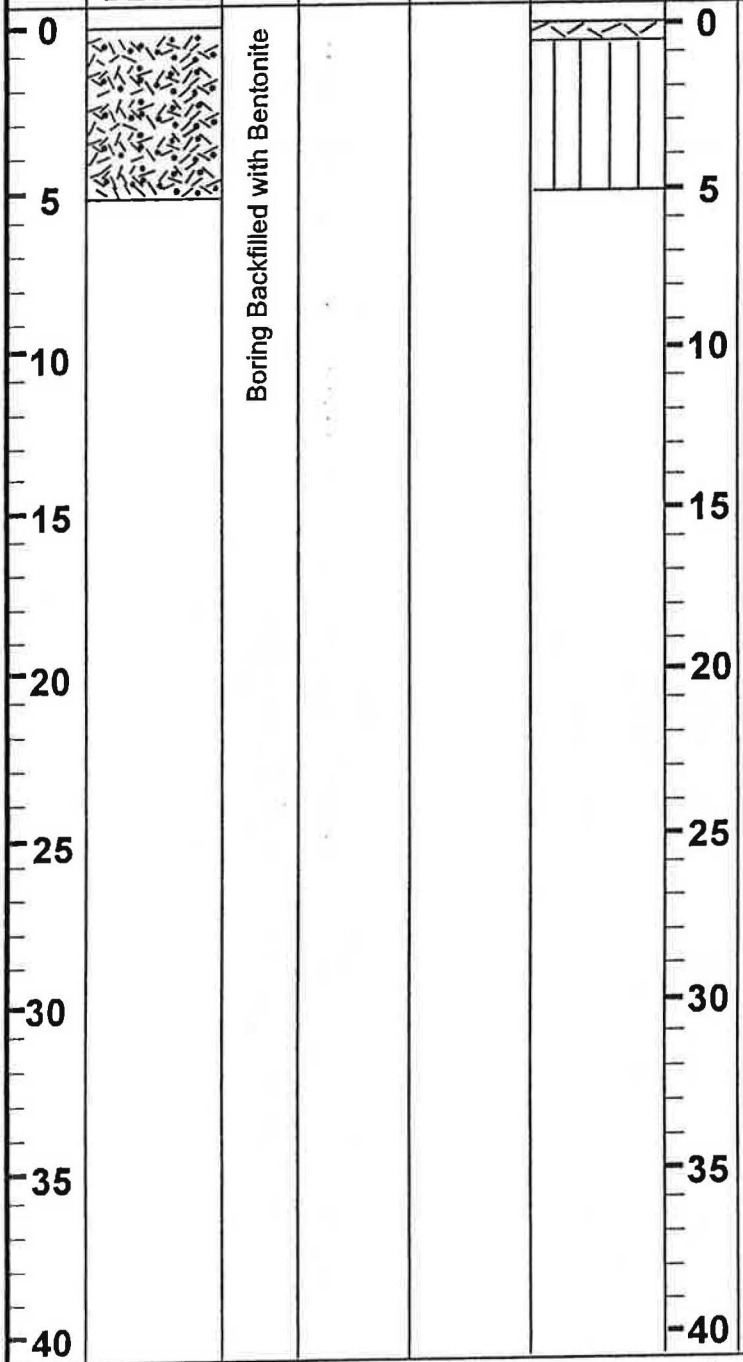
Static Depth of Water in Well: NA

Total Depth of Boring: 5'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

| And (40-50%) | With (25-40%) | Some (10-25%) | Trace (0-10%) |
|---|---|---|---|




Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS3

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 9/28/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

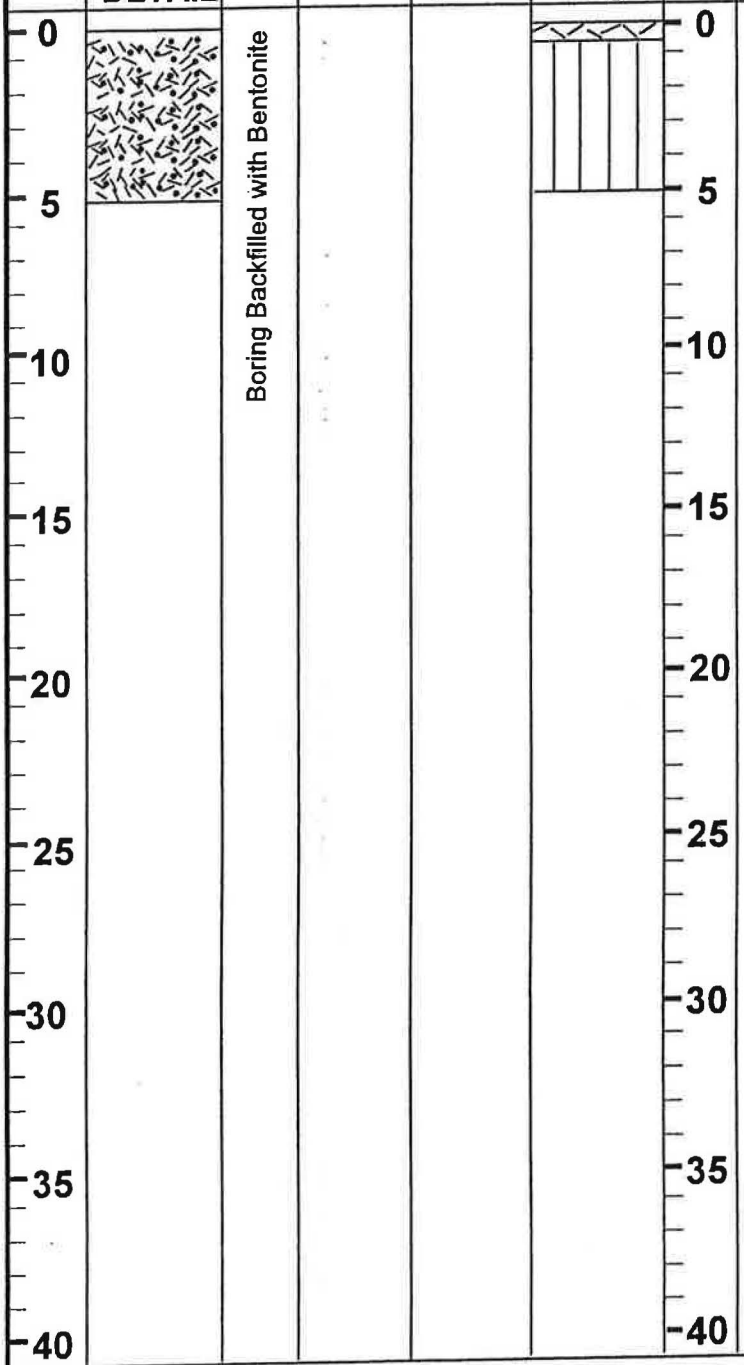
Static Depth of Water in Well: NA

Total Depth of Boring: 5'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)




Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS4

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 9/28/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

Static Depth of Water in Well: NA

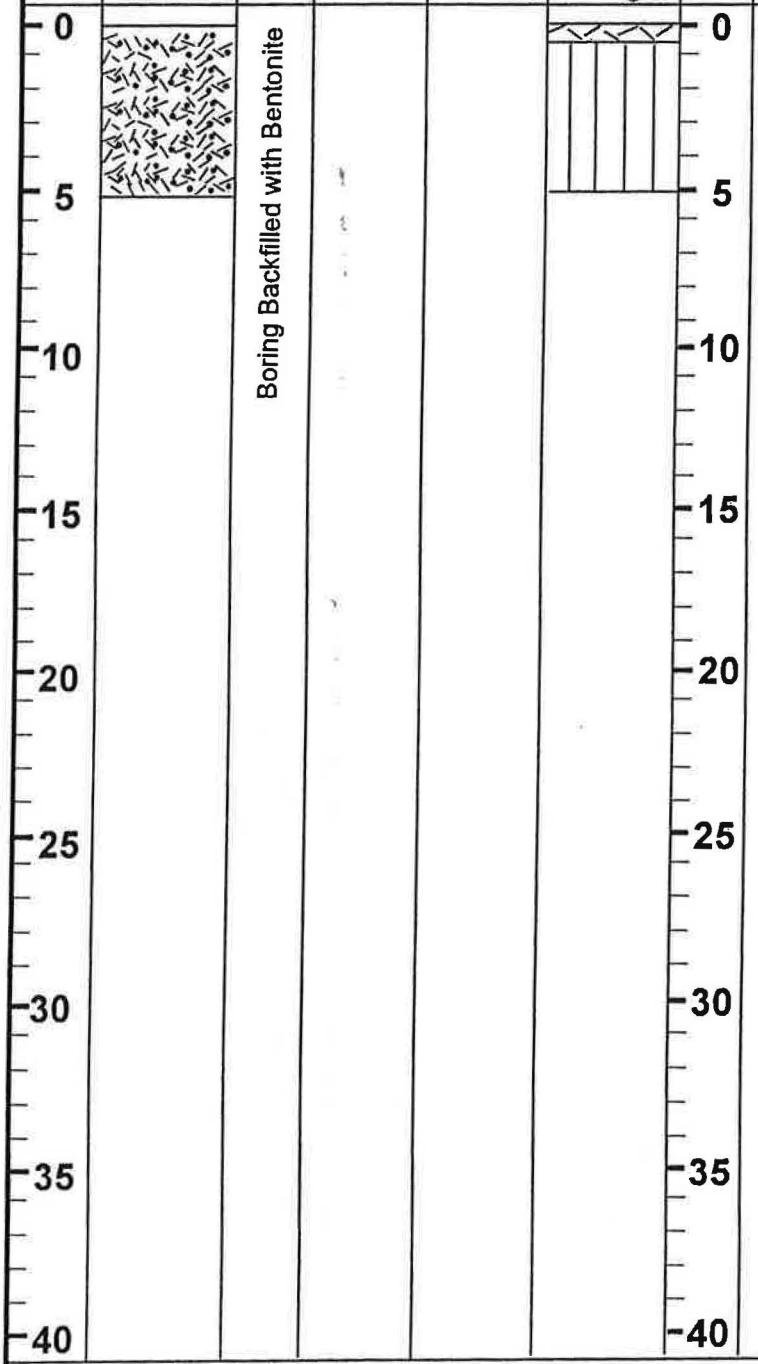
Total Depth of Boring: 5'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

| BORING DETAIL | Blow Count | OVA (ppmv) | Graphic Log |
|---|---|---|---|

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)




Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS5 & 5 Alt

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 09/28/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

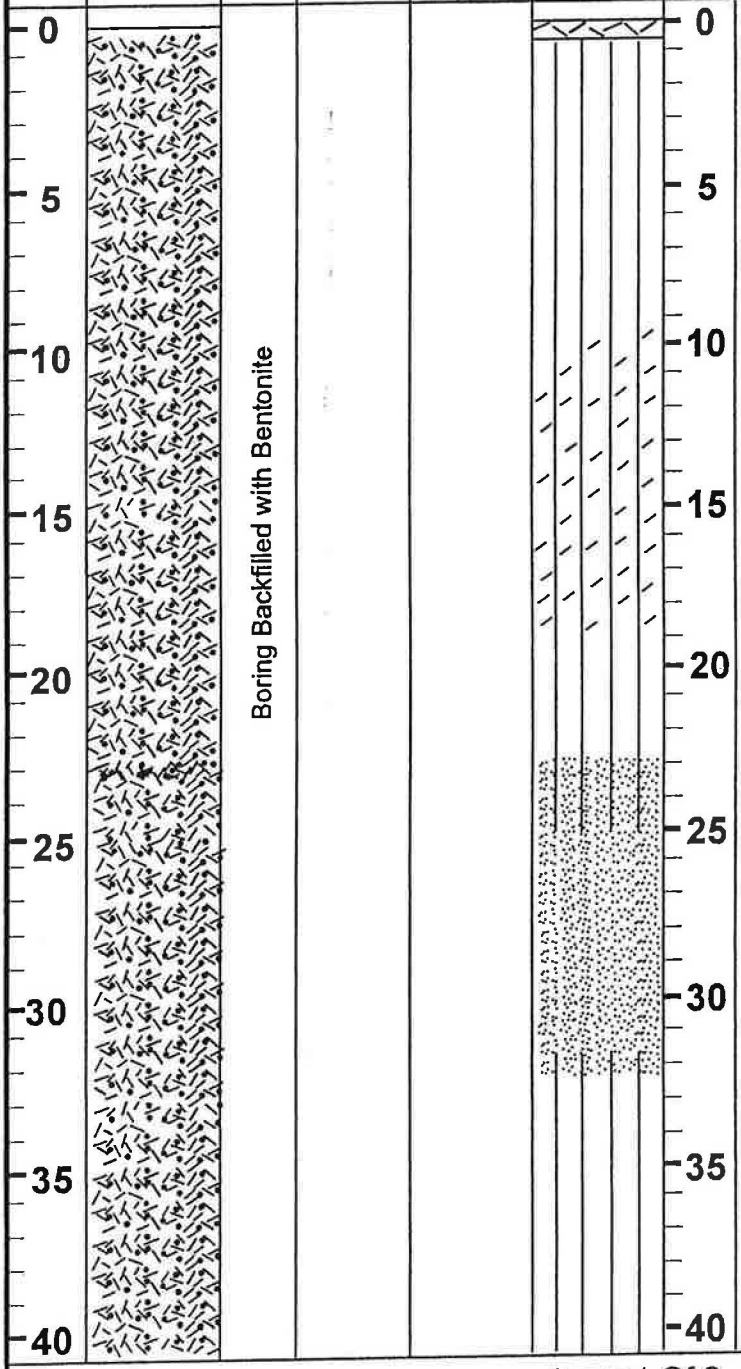
Static Depth of Water in Well: NA

Total Depth of Boring: 45'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)




Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Oil impacted Silt, (ML), very moist, cohesive, black discoloration, oil odor

Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, plastic, some rock fragments, no discoloration, slight oil odor

Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, plastic, some rock fragments, no discoloration, no odor

Light Brown Silt (ML), moist, relatively friable, contact to fine-medium sand, no discoloration, no odor

Gray fine sand (SP), slight moisture, oose, friable, well sorted, no discoloration, no odor

Light Gray F-M Sand (SP), slgiht moisture, loose, friable, well sorted, no discoloration, no odor

Light Brown Silt (ML), slgiht moisture, firm, relatively cohesive, no odor, no discoloration

Light Brown Silt (ML), slgiht moisture, firm, relatively cohesive, no odor, no discoloration



S&S Form 20-A

| INVESTIGATIVE SOIL COMPOSITE BORING LOG DETAIL | BORING NO. SS5-Alt |
|---|---|
| Project Name: KMS Rubber | Project Location: 12021 Woodruff Ave., Downey |
| Logged By: W.C.L. | Dated Drilled: 10/05/05 |
| | Reviewed By: W. Lachmar, R.G. |

| GRAPHIC LOG | Boring Detail | OVA (ppm) | Drill Depth (In Feet) | LITHOLOGIC DESCRIPTION<br>Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation<br>And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%) |
|---|---|---|---|---|
| | | | 45<br>50<br>55<br>60<br>65<br>70<br>75<br>80<br>85 | Brown Very Fine Sand (SP), moist, well sorted, firm, no odor, no discoloration |



S&S FORM 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS6

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 9/28/05

Reviewed By: W. Lachmar, R.G.

**WATER / WELL DATA**

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

Static Depth of Water in Well: NA

Total Depth of Boring: 5'

**LITHOLOGIC DESCRIPTION**

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)

| BORING DETAIL | | Blow Count | OVA (ppmv) | Graphic Log |
|---|---|---|---|---|
| | Boring Backfilled with Bentonite | | | |

0

5

10

15

20

25

30

35

40

Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS7

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 9/28/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

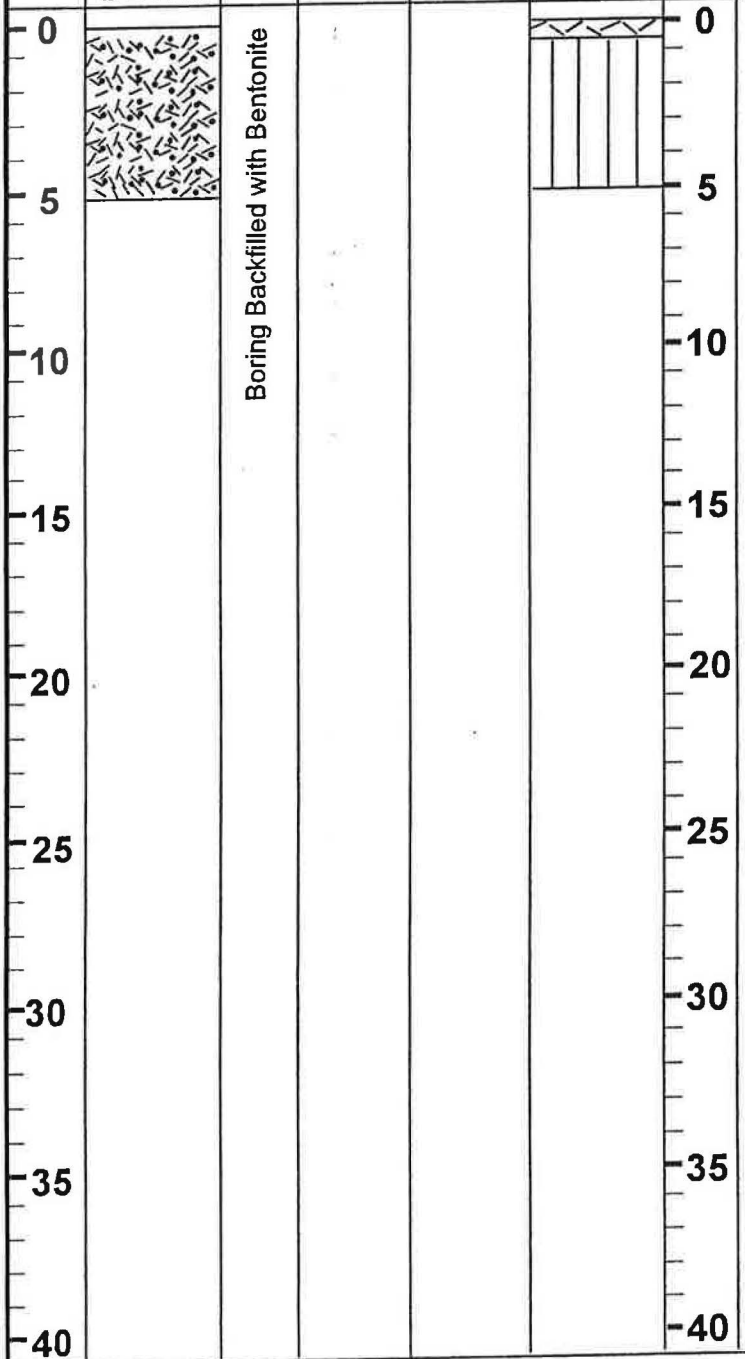
Static Depth of Water in Well: NA

Total Depth of Boring: 5'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)




Approximately 3-inches of concrete

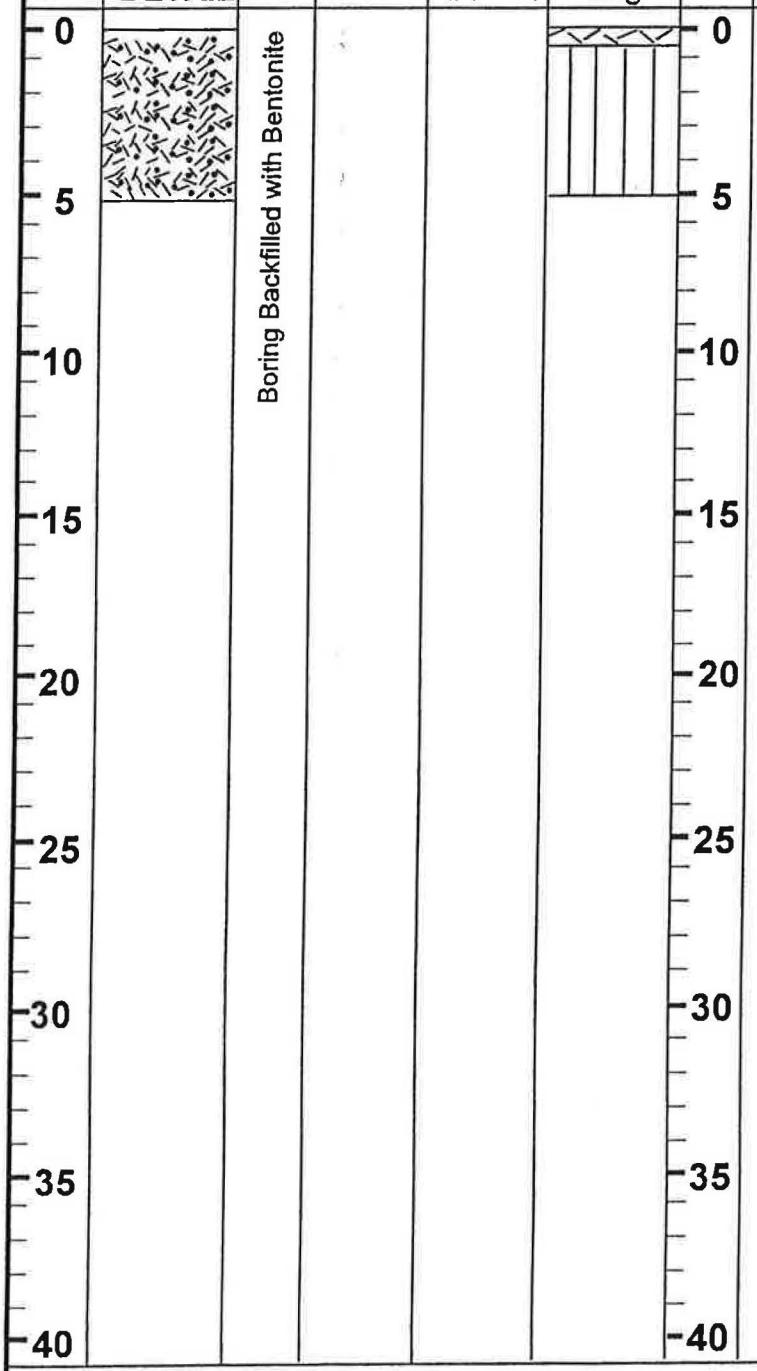
Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

| INVESTIGATIVE SOIL BORING LOG DETAIL | | BORING NO. SS8 |
|---|---|---|
| Project Name: KMS Rubber | | Project Location: 12021 Woodruff Ave., Downey |
| Logged By: W.C.L. | Dated Drilled: 9/28/05 | Reviewed By: W. Lachmar, R.G. |
| **WATER / WELL DATA**<br>Depth of First Saturated Zone: NA | | Total Depth of Well Completed: NA<br>Well Screen Type & Diameter: NA |
| Static Depth of Water in Well: NA<br>Total Depth of Boring: 5' | | **LITHOLOGIC DESCRIPTION**<br>Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation |




And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)

Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS9

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 9/28/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

Static Depth of Water in Well: NA

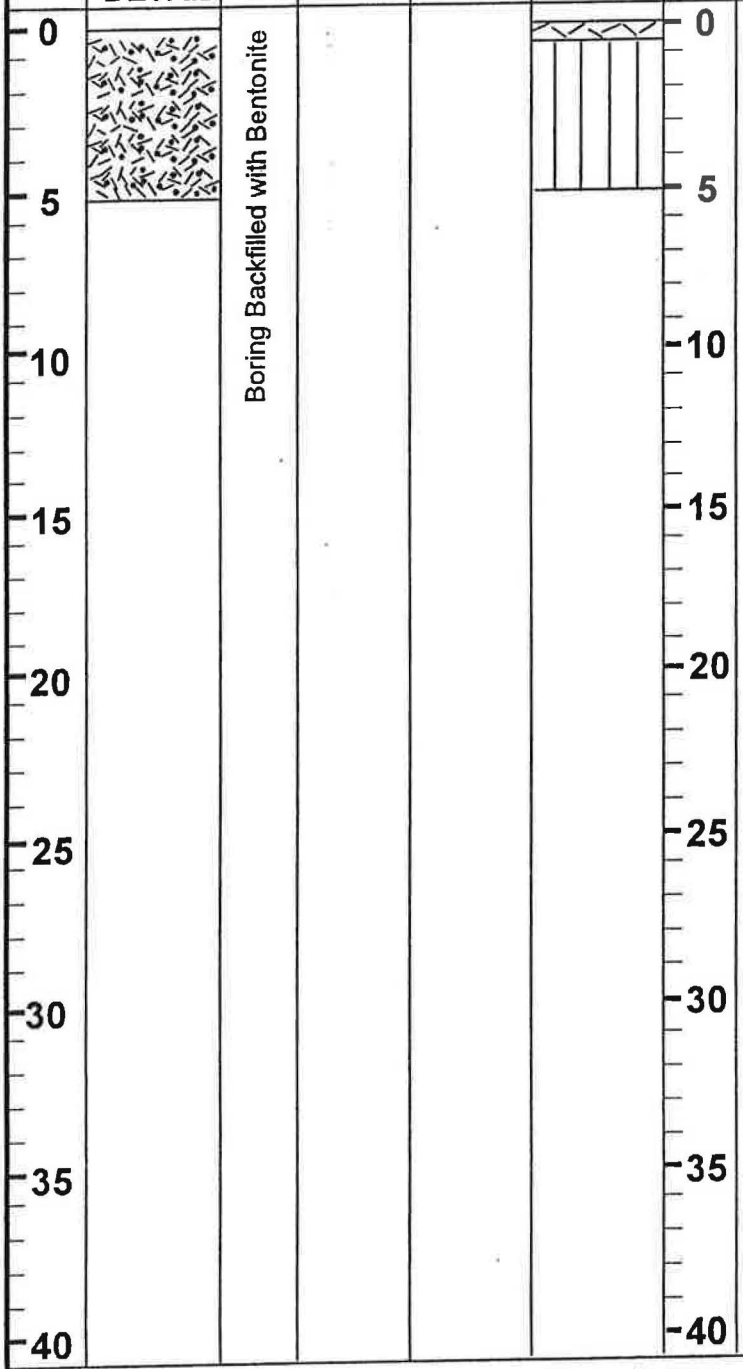
Total Depth of Boring: 5'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)

| BORING DETAIL | Blow Count | OVA (ppmv) | Graphic Log |
|---|---|---|---|




Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS510

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 10/05/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

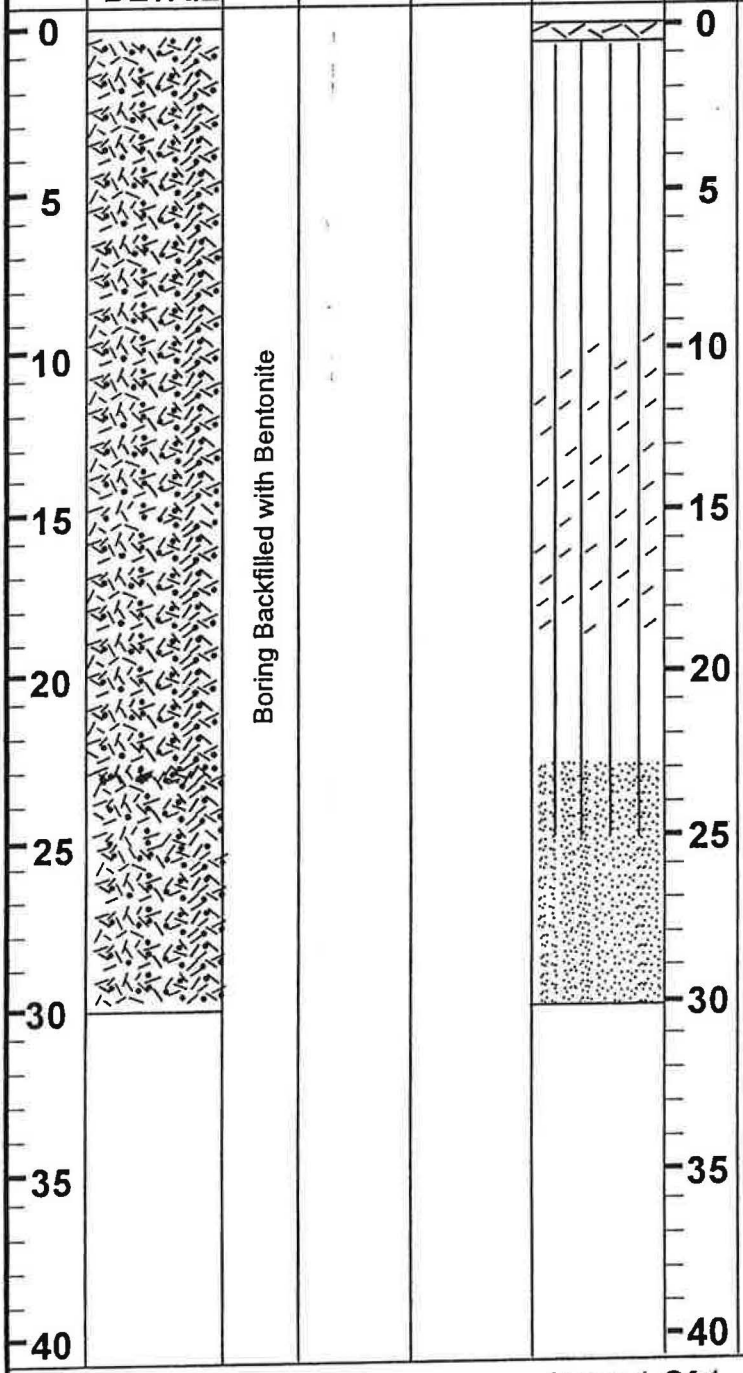
Static Depth of Water in Well: NA

Total Depth of Boring: 30'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)




Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, no odor, ho discoloration

Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, plastic,, no discoloration, faint oil odor

Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, pmedium plasticity, no discoloration, no odor

Light Brown Silt (ML), moist, relatively friable, contact to fine-medium sand, no discoloration, no odor

Gray fine sand (SP), slight moisture, oose, friable, well sorted, no discoloration, no odor

Light Gray F-M Sand (SP), slgiht moisture, loose, friable, well sorted, no discoloration, no odor



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS11

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 10/05/05

Reviewed By: W. Lachmar, R.G.

**WATER / WELL DATA**

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

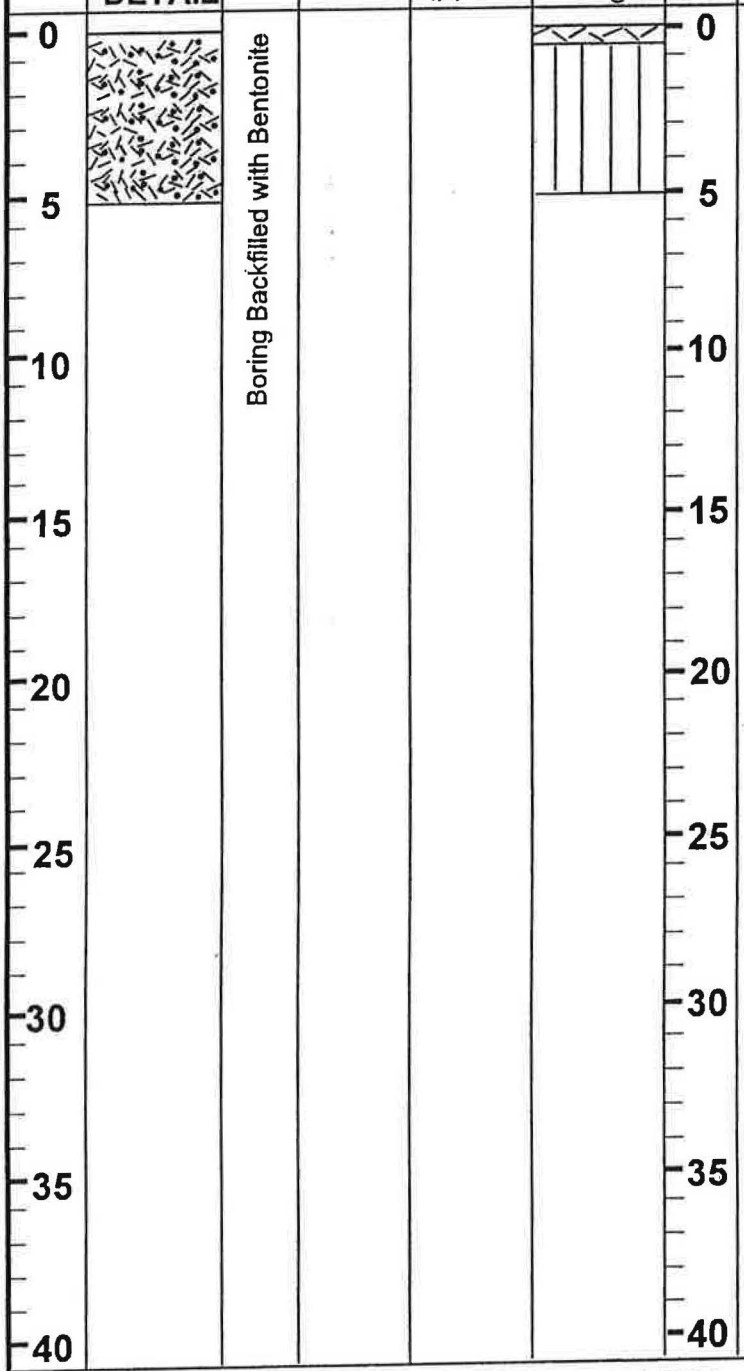
Static Depth of Water in Well: NA

Total Depth of Boring: 5'

**LITHOLOGIC DESCRIPTION**

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)




Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS12

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 10/05/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

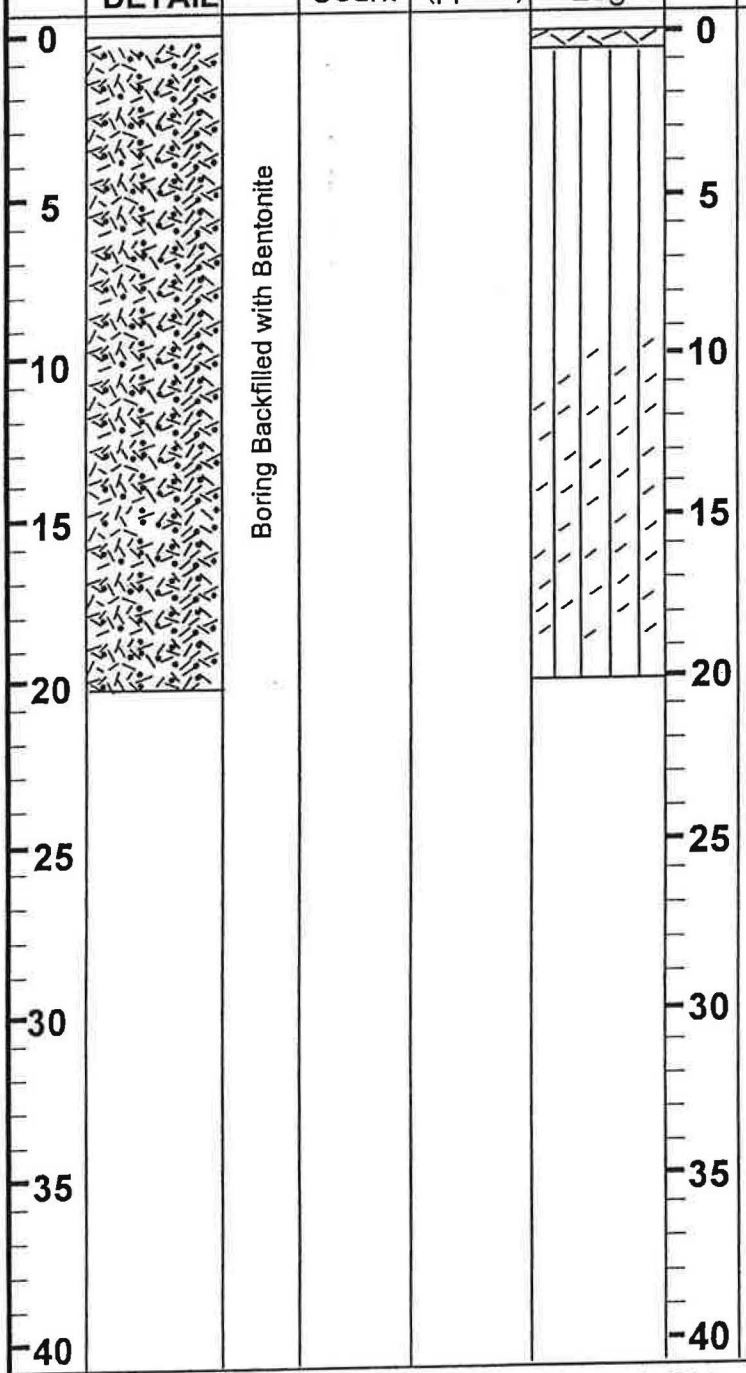
Static Depth of Water in Well: NA

Total Depth of Boring: 20'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)




Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration

Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, plastic,, no discoloration, faint oil odor

Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, medium plasticity, no discoloration, no odor

Light Brown Silt (ML), moist, relatively friable, contact to fine-medium sand, no discoloration, no odor



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS13

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 10/05/05

Reviewed By: W. Lachmar, R.G.

**WATER / WELL DATA**

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

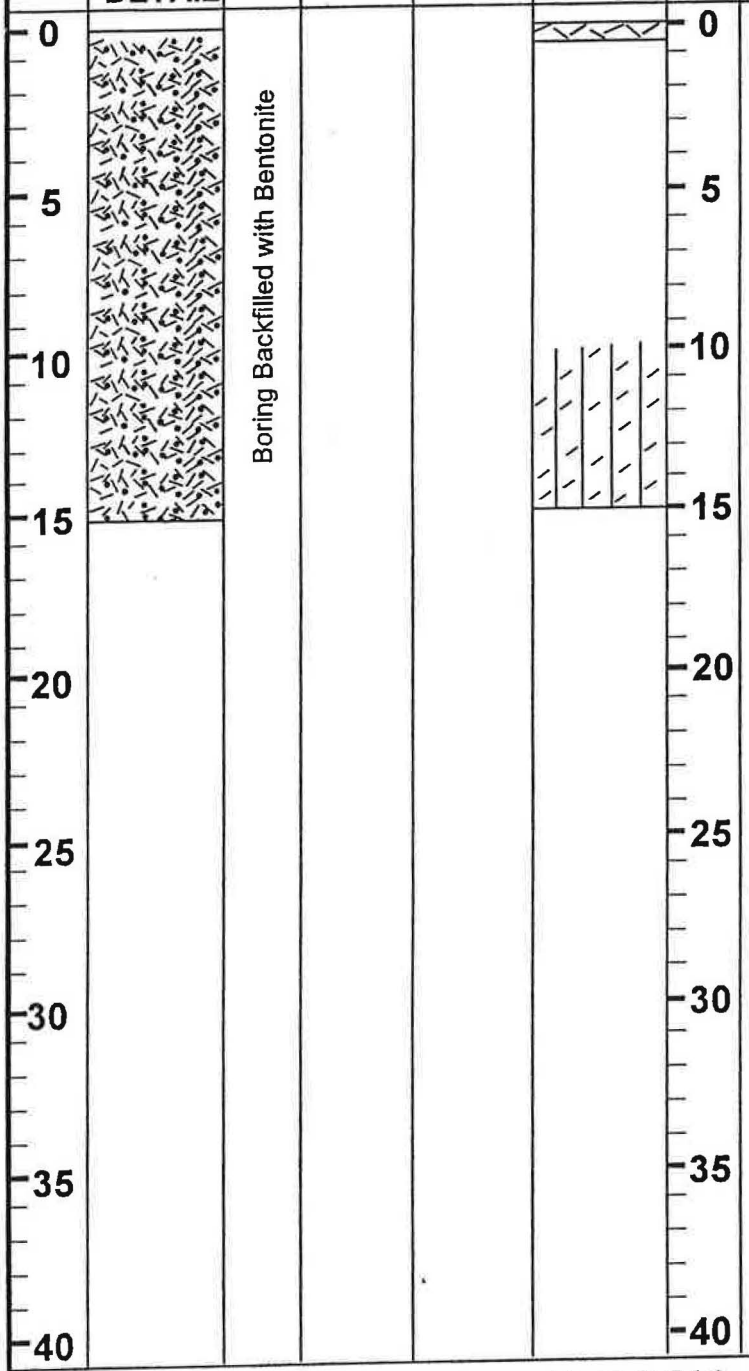
Static Depth of Water in Well: NA

Total Depth of Boring: 15'

**LITHOLOGIC DESCRIPTION**

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)




Approximately 3-inches of concrete

Olive-Brown Clayey-Silt (CL-ML), slight moisture, moderate plasticity,, no discoloration, no odor

Brown Silty-Clay to Clay (ML-CL), moist, cohesive, medium plasticity, no discoloration, no odor



S&S Form 20-A

# Painter Avenue LLC

1400 E. Olympic Blvd #200
Los Angeles, CA 90021

## FACSIMILE COVER PAGE

| | |
|---|---|
| To: Mike Kilroy | From: Paul Minoo |
| Fax #: 15628033117 | Fax #: 213-624-4050 |
| Company: KMC Acquisition Corp | Tel #: 213-624-4040 |
| Subject: Supplemental Phase II | |
| Sent: 7/14/2006 at 11:03:20 AM | |

**MESSAGE:**

Total number of pages including this cover : 14

WinFax PRO Cover Page

GeoScience Analytical, Inc. "established March 1981"

608 HAILEY COURT SIMI VALLEY, CA 93065 (805) 526-6532 FAX 526-3570 EMAIL GEOSCI10@AOL.COM

14 September 2005

Mr. Paul Minoo (323) 583-3898
6270 S. Boyle Avenue
Vernon, CA 90058

**RE: Supplemental Phase II Environmental Audit at 12021-12023 Woodruff Avenue, Downey, CA 90241**

Dear Mr. Minoo:

We have reviewed the following documents that have been prepared as part of the environmental review of the above referenced property:

- Phase I Environmental Site Assessment Report prepared August 10, 2005: Industrial Buildings 12021-12023 Woodruff Avenue, Downey, CA 90241 prepared by Orswell & Kasman, Inc.
- Letter Report for Limited Soil Sampling prepared August 31, 2005: 12021-12023 Woodruff Avenue, Downey, CA prepared by Converse Consultants

The Phase I report identified the follow areas of environmental concern:

- A release of diesel fuel from a leaking underground storage tank in 1990. The tank and the impacted soil were removed from the site.
- Visible stains of oil on the paved surface and on the exterior wall near the aboveground process oil storage tank on the south side of the building. Water-soluble oil was observed on the paved surface near the cooling system in the open area near the center of the building.

The Phase II report provided the following analytical data:

- Soils in the vicinity of the above ground storage tanks were void of contaminants above regulatory levels.

- Soils in the vicinity of the oil-water separator in a cooling water processing area contained elevated concentrations of arsenic in one soil sample at a depth 2.0' with deeper soils void of these elevated levels.
- Soils in the vicinity of the rubber presses were void of contaminants above regulatory levels.
- Soils in the vicinity of the west property line adjacent to a drainage swale were void of contaminants above regulatory levels.

The Phase II report identified total arsenic at a concentration of 79.2 mg/kg at a depth of 2.0 ft. (bg) with soil boring GW-4. This concentration was significantly below the regulatory level threshold of 500.0 mg/kg. Soluble (STLC) arsenic was identified at a concentration of 5.28 mg/L. This concentration was slightly above the regulatory level threshold of 5.0 mg/L; however the Total Characteristic Leaching Potential (TCLP) at this location was 0.65 mg/L significantly below the regulatory limit of 5.0 mg/L. At deeper depths at this location, arsenic was significantly below regulatory levels at both 4.0 ft. and 8.0 ft.

In order to further define the arsenic anomaly at the location of GW-4, GSA advanced four (4) soil borings to depths of 6.0 ft. in soils surrounding this location as shown in Figure 1, attached. Soils from depths of 2.0 ft. and 6.0 ft. (bg) were analyzed for total arsenic (TTLC). Arsenic concentrations ranged from <0.5 – 90.0 mg/kg. Maximum arsenic concentrations were identified at GSA-3 and GSA-4 at the 2.0 ft. depth interval at both locations with TTLC arsenic concentrations of 33.0 and 90.0 mg/kg, respectively. All TTLC arsenic concentrations were significantly below regulatory thresholds in all cases.

Additional characterization of soil at GSA-4 at a depth of 2.0 ft. was advanced with the analysis of soluble arsenic (STLC). Analytical results identified soluble arsenic at a concentration of 7.3 mg/L. This concentration is slightly above the regulatory levels threshold of 5.0 mg/L and in close agreement with the concentration observed at GW-4 reported previously.

Arsenic concentration isopleths have been contoured in Figure 2. Based on the available analytical data, maximum volume of soil potentially containing arsenic in excess of STLC concentrations for disposal purposes is estimated to be 3 – 6 cu.yds.

In summary, the subject site contains total arsenic within allowable limits. Within a small area of the site and in the immediate vicinity of the oil-water separator, soluble arsenic is present at a concentration slightly above threshold limits. Based on the low concentration of arsenic present under a capped surface, no remediation is recommended.

Please call us at your opportunity in the event we can provide you with any additional review.

Sincerely yours,

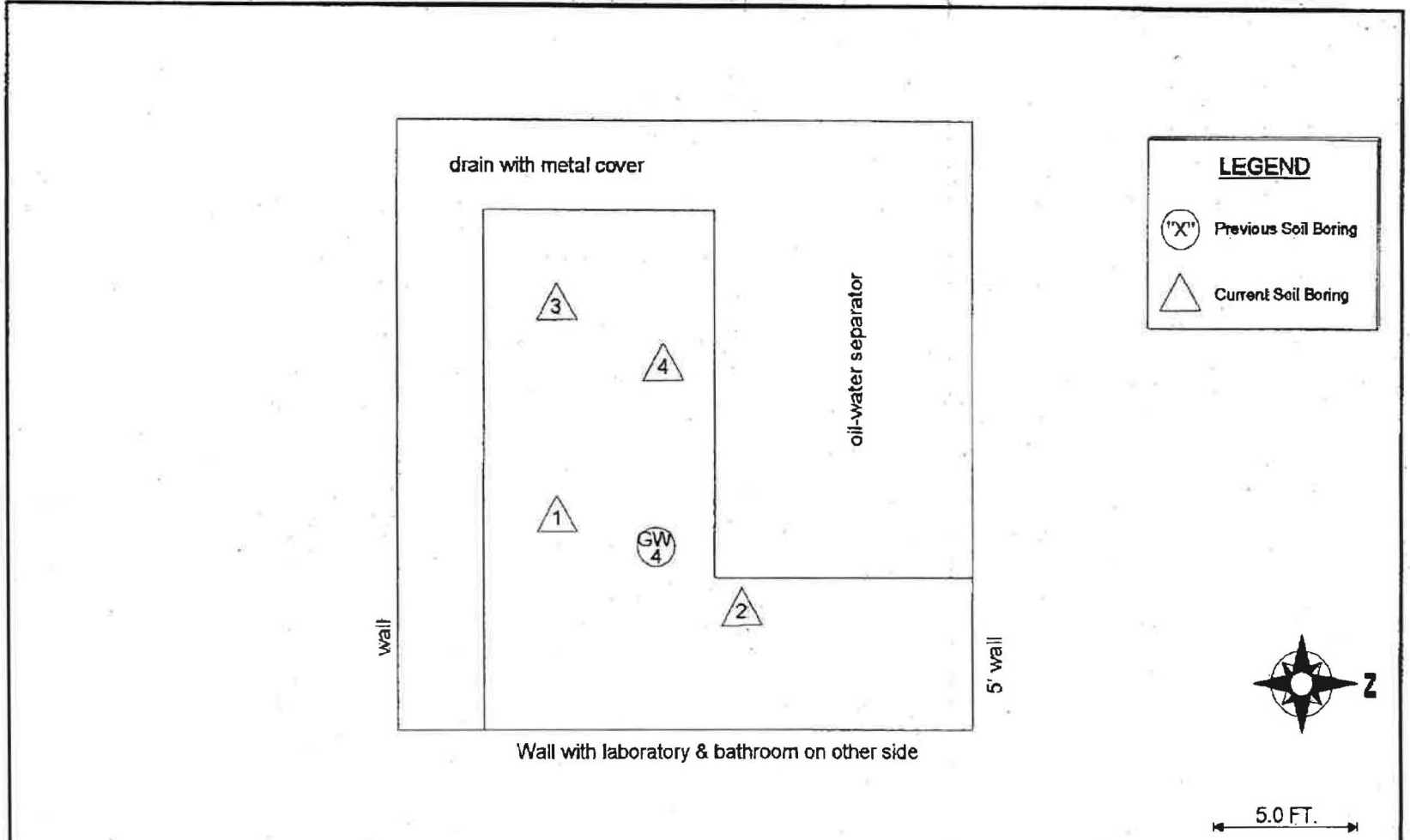
Louis J. Pandolfi
President

Rollie D. Berry
Reg. Engineer (Civil)
CA No. 17223

REGISTERED PROFESSIONAL ENGINEER
ROLLIE D. BERRY
No. 17223
EXP. 6/30/07
CIVIL
STATE OF CALIFORNIA

ReMINO012224

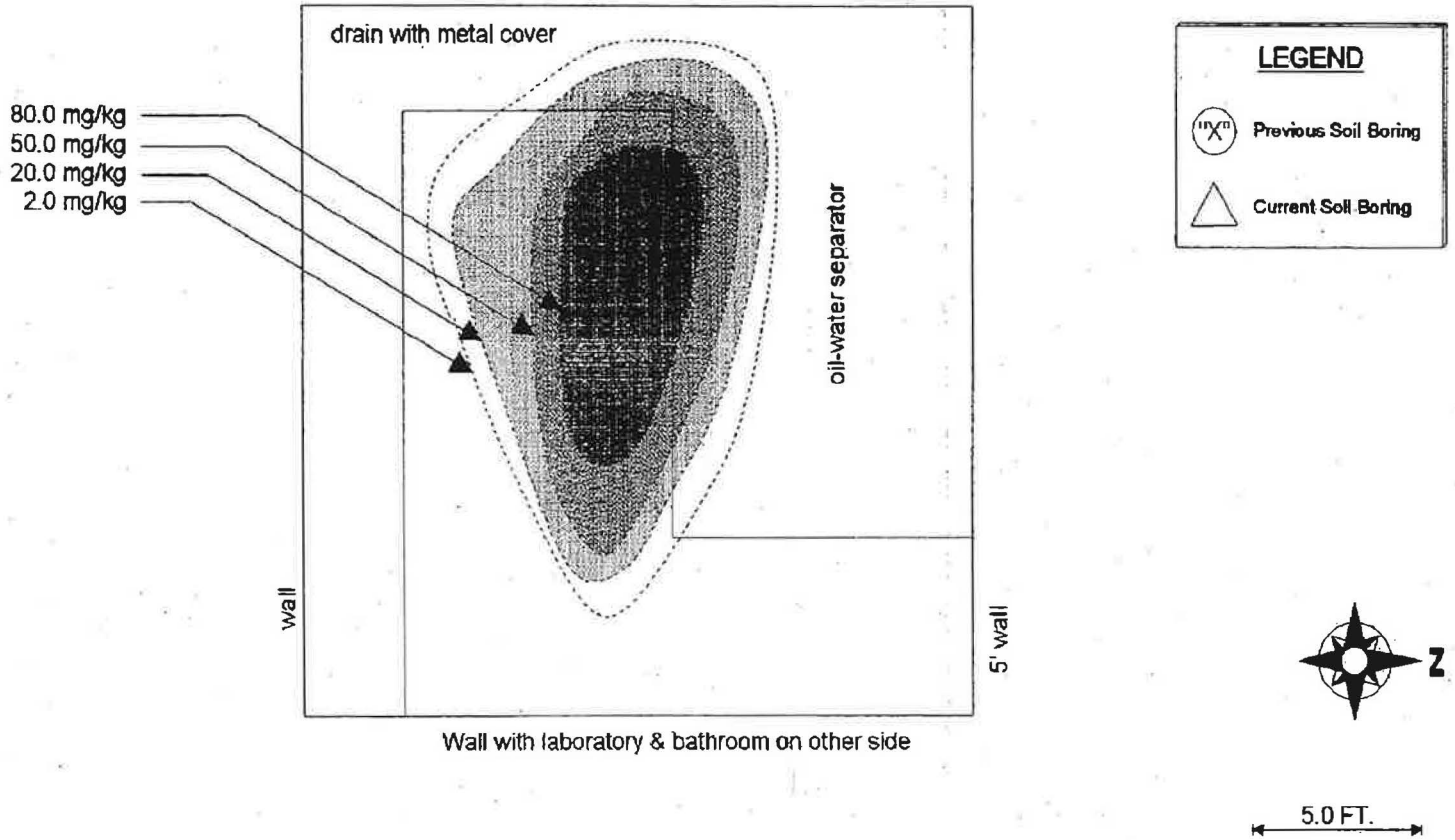
# FIGURE 1




| | | |
|---|---|---|
| **GEOSCIENCE ANALYTICAL, INC.**<br>608 Hailey Court<br>Simi Valley, CA 93065<br>TEL. (805) 526-6532 FAX: 526-3570 | SHEET TITLE: SITE PLAN | JOB NO. 3221 |
| | PROJECT: 12021 - 12023 WOODRUFF AVENUE<br>DOWNEY, CA | DWN. BY: LJP |
| | | CHKD BY: FER |
| | | DATE: 09/13/05 |
| | | DWG. NO: minoo09135 |

Jul 14 2006 11:03AM HP LASERJET 3330

# FIGURE 2




| | | | |
|---|---|---|---|
| **GEOSCIENCE ANALYTICAL, INC.**<br>606 Hailey Court<br>Simi Valley, CA 93065<br>TEL. (805) 526-6532 FAX: 526-3570 | SHEET TITLE: ARSENIC (TTLC) CONCENTRATION ISOPLETHS | JOB NO. | 3221 |
| | PROJECT: | DWN. BY: | LJP |
| | 12021 - 12023 WOODRUFF AVENUE<br>DOWNEY, CA | CHKD BY: | FER |
| | | DATE: | 09/13/05 |
| | | DWG. NO: | minoo09135 |

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# TABLE 1: ARSENIC IN SOIL

| Soil Boring No./Depth & Arsenic Concentration | | | |
|---|---|---|---|
| Soil Boring No. | Depth of Sampling (ft.) | Arsenic TTLC (mg/kg) | Arsenic STLC (mg/kg) |
| | | | |
| GSA-1 | 2.0 | 0.64 | n/a |
| GSA-1 | 6.0 | <0.5 | n/a |
| GSA-2 | 2.0 | 2.4 | n/a |
| GSA-2 | 6.0 | 1.2 | n/a |
| GSA-3 | 2.0 | 33 | n/a |
| GSA-3 | 6.0 | 0.7 | n/a |
| GSA-4 | 2.0 | 90 | 7.3 |
| GSA-4 | 6.0 | <0.5 | n/a |
| GW-4 | 2.0 | 79.2 | 5.28 |
| | 4.0 | 1.34 | 0.13 |
| GW-4 | 8.0 | 7.69 | 0.31 |

APPENDIX I

# ANALYTICAL DATA

## LABORATORY ANALYSIS RESULTS



**Client:** Geoscience Analytical, Inc.
**Project No.:** NA
**Project Name:** Kirkhill Plastics
**Sample Matrix:** Soil
**Method:** EPA 6010B (Total Arsenic)

**AA Project No.:** A22912
**Date Received:** 09/06/05
**Date Reported:** 09/07/05
**Units:** mg/Kg

| AA I.D. No. | Client I.D. No. | Date Sampled | Date Analyzed | DF | Results | MRL |
|---|---|---|---|---|---|---|
| 192465 | B1-2' | 09/06/05 | 09/07/05 | 1.0 | **0.64** | 0.5 |
| 192466 | B1-6' | 09/06/05 | 09/07/05 | 1.0 | <0.5 | 0.5 |
| 192467 | B2-2' | 09/06/05 | 09/07/05 | 1.0 | **2.4** | 0.5 |
| 192468 | B2-6' | 09/06/05 | 09/07/05 | 1.0 | **1.2** | 0.5 |
| 192469 | B3-2' | 09/06/05 | 09/07/05 | 1.0 | **33** | 0.5 |
| 192470 | B3-6' | 09/06/05 | 09/07/05 | 1.0 | **0.70** | 0.5 |
| 192471 | B4-2' | 09/06/05 | 09/07/05 | 1.0 | **90** | 0.5 |
| 192472 | B4-6' | 09/06/05 | 09/07/05 | 1.0 | <0.5 | 0.5 |

MRL: Method Reporting Limit J: Estimated Value DF: Dilution Factor

**Allen Aminian**
**Project Manager**

American Analytics • 9765 Eton Avenue, Chatsworth, California 91311
Tel: (818) 998 - 5547 • • Fax: (818) 998 - 7258

## LABORATORY ANALYSIS RESULTS



**Client:** Geoscience Analytical, Inc.
**Project No.:** NA
**Project Name:** Kirkhill Plastics
**Sample Matrix:** Soil
**Method:** STLC Arsenic

**AA Project No.:** A22912
**Date Received:** 09/06/05
**Date Reported:** 09/09/05
**Units:** mg/L

| AA I.D. No. | Client I.D. No. | Date Extracted | Date Sampled | Date Analyzed | DF | Results | MRL |
|---|---|---|---|---|---|---|---|
| 192471 | B4-2' | 09/07/05 | 09/06/05 | 09/09/05 | 1.0 | 7.3 | 0.005 |

MRL: Method Reporting Limit J: Estimated Value DF: Dilution Factor

Allen Aminian
Project Manager

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# LABORATORY QA/QC REPORT



**Client:** Geoscience Analytical, Inc.
**Project Name:** Kirkhill Plastics
**Method:** EPA 6010B (Total Arsenic)
**Sample ID:** Reagent Blank

**Project No.:** NA
**AA Project No.:** A22912
**Date Analyzed:** 09/07/05
**Date Reported:** 09/07/05

| Compounds | Results mg/Kg | MRL |
|---|---|---|
| Arsenic | <0.5 | 0.5 |

MRL: Method Reporting Limit

Allen Aminlan
Project Manager

## LABORATORY QA/QC REPORT



**Client:** Geoscience Analytical, Inc.
**Project Name:** Kirkhill Plastics
**Method:** EPA 6010B (Total Arsenic)
**Sample ID:** Laboratory Control Standard
**Concentration:** 50 mg/Kg

**Project No.:** NA
**AA Project No.** A22912
**Date Analyzed:** 09/07/05
**Date Reported:** 09/07/05

| Compounds | Recovered Amount (mg/Kg) | Recovery (%) | Acceptable Range (%) |
|---|---|---|---|
| Arsenic | 52 | 104 | 75 - 125 |

**Allen Aminian**
**Project Manager**

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## LABORATORY QA/QC REPORT



**Client:** Geoscience Analytical, Inc.
**Project Name:** Kirkhill Plastics
**Method:** EPA 6010B (Total Arsenic)
**Sample ID:** Matrix Spike
**Concentration:** 50 mg/Kg

**AA ID No:** 192465
**Project No.:** NA
**AA Project No.** A22912
**Date Analyzed:** 09/07/05
**Date Reported:** 09/07/05

| Compounds | Result (mg/Kg) | Spike Recovery (%) | Dup. Result (mg/Kg) | Spike/Dup. Recovery (%) | RPD (%) | Accept. Rec. Range (%) |
|---|---|---|---|---|---|---|
| Arsenic | 50.56 | 101 | 50.68 | 101 | 0 | 50 - 150 |

Allen Aminian
Project Manager

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# AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 FAX: 818-998-7258

№ 308335
DATE: 9/6/05
PAGE 1 OF 1

| | | | |
|---|---|---|---|
| AA Client: GeoScience Analytical, Inc | Phone: 805 526 6532 | Sampler's Name (Print): Fleet Rust | |
| Project Manager: F. Rust | P.O. No. | Sampler's Signature: Fleet Rust | |
| Project Name: Arsenic | Client's Project No. | Project Manager's Signature: Fleet Rust | |
| Job Name and Address: Kirkhill Plastics Downey | | | |

ANALYSES REQUIRED (Test Name): Arsenic

Client's Comment Special Test Requirements / Comments (i.e., - Turnaround Time, Detection Limits, Data Package...): 2 HR RUSH

| Client's I.D. | AA I.D.# | Date | Time | Sample Type | Number of Containers |
|---|---|---|---|---|---|
| B1-2' | 192465 | 9/6 | | Soil | 1 |
| B1-6' | 192466 | | | | |
| B2-2' | 192467 | | | | |
| B2-6' | 192468 | | | | |
| B3-2' | 192469 | | | | |
| B3-6' | 192470 | | | | |
| B4-2' | 192471 | | | | |
| B4-6' | 192472 | | | | |

05 SEP 6 PM 4:27

LAB COMMENTS

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| Fleet Rust | 9/6/05 | 4:30 PM | |
| Relinquished by: | Date | Time | Received by: |
| Relinquished by: | Date | Time | Received by: |
| Relinquished by: | Date | Time | Received by: |

Approved as Work Order by: Print Name: Allen Amiyan Signature: Date/Time: 9/6/05
AA Project No. A29912 4:32 PM

DISTRIBUTION: Page 1, White - Laboratory Page 2, Yellow - Laboratory Page 3, Pink - Account Executive Page 4, Gold - Client

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**PIC ENVIRONMENTAL SERVICES**
A DIVISION OF PETROLEUM INDUSTRY CONSULTANTS, INC.
**2619 Sierra Way, La Verne, CA 91750**
**Phone: (909) 593-2427 Fax (909) 593-2105**
**Email: picenv@verizon.net**

# PHASE I AND PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

## PREPARED FOR

**ED REKER**
**KMC / KIRKHILL, INC.**
**12023 WOODRUFF AVENUE**
**DOWNEY, CA 90241**

## CONCERNING COMMERCIAL PROPERTY AT

**12021 AND 12023 WOODRUFF AVENUE**
**DOWNEY, CA 90241**

**AUGUST 30, 2013**

PIC ENVIRONMENTAL SERVICES
2619 SIERRA WAY
LA VERNE, CA 91750

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**DISPLAYS**


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Figure 2: Site Map – Current
Figure 2A: Site Map – Detail (Courtyard)
Figure 2B: Site Plan – 1990
Figure 2C: Site Plan – 1991
Figure 2D: Site Plan Detail (UST #1) -- 1992
Figure 2E: Site Plan Detail (Courtyard) - 2005
Figure 3: Regional Groundwater Contour Map
Figure 4: Oil and Gas Map
Figure 5: Asbestos Reference Display
Figure 6: Waste Disposal Map
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Appendix A: Title Information
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Appendix D: Boring Logs
Appendix E: Laboratory Results
Appendix F: Historic Topographic Maps
Appendix G: Historic Aerial Photographs
Appendix H: City Directory Report
Appendix I: EDR Report
Appendix J: Tetra Tech "Environmental Audit Report" dated February, 1990
Appendix K: Orswell and Kasman "Phase I Site Assessment Report" dated August 10, 2005
Appendix L: GeoScience Analytical "Supplemental Phase II Report" dated September 14, 2005
Appendix M: S&S Environmental "Phase II Report" dated November 9, 2005
Appendix N: Tank Protect Engineering " UST Reports" (15) dated November 1989 through 1992

# PIC ENVIRONMENTAL SERVICES

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August 30, 2013

## INTRODUCTION

PIC Environmental Services (PIC) was contracted by KMC and/or Kirkhill, Inc. to conduct a Phase I Environmental Site Assessment (PESA) and Phase II Soil Investigation at commercial (industrial) property located in Downey, California (see Figure 1). The purpose of this investigation was to determine if environmental impairments existed at the site. This document represents the PESA report prepared in accordance with customary industry practices and current ASTM (2005) Standards. This document also intends to satisfy the "All Appropriate Inquiries" guidelines established by the Federal Environmental Protection Agency (EPA).

The following sources were used to prepare this report:

1. Site inspection
2. California Regional Water Quality Control Board (RWQCB) records
3. California Department of Health Services (DHS), Site Mitigation Division records
4. United States Environmental Protection Agency (EPA) and Geological Society (USGS) records
5. California Department of Natural Resources (CDNR), Division of Oil and Gas (DOG) records
6. Los Angeles County Waste Discharge Systems records of active and inactive landfills
7. EDR collection of historic aerial photographs
8. Los Angeles County Title Records
9. Historic Telephone Directories
10. City of Downey Permit Records
11. Los Angeles County Industrial Waste and UST Permit Records
12. Laboratory Results from a Phase II Investigation
13. Review of previous environmental assessment reports

## SCOPE OF INVESTIGATION

The scope of this investigation included: site inspection, survey of adjacent properties, review of the above listed government records, review of historical aerial photographs, geologic and hydrogeologic information search, and a Phase II Soil Investigation.

## SITE INSPECTION

On June 17, 2013, July 8, 2013, August 6, 2013 and August 13, 2013, PIC Professional Geologist, J. Tim Hersch and PIC Project Manager, Ethan Hersch, conducted site inspections at the subject property and adjacent/nearby properties. PIC was assisted by Mike Kilroy.

## SITE DESCRIPTION

The subject property is a rectangular shaped parcel including a total of about 6.3 acres west of Woodruff Avenue in Downey, CA 90241. Los Angeles County title records indicate the Assessor Parcel Number (APN) is 6284-025-018 (see Appendix A). The property is further identified as a portion of Section 10, T3S, R12W, SBB+M. Property boundaries are indicated by a public street to the east and adjoining commercial (industrial) developments to the north, west, and south. Features observed onsite by PIC are illustrated on Figures 2 and 7 and site photos in Appendix B. Historic site addresses appear limited to 12021 and 12023 Woodruff Avenue Downey, CA 90241.

The property has been improved with several contiguous commercial (industrial) buildings located in the central portion of the property. The site was occupied by Kirkhill, Inc. and Cal Pipe at the time of PIC's inspection. The property has been continuously occupied by Kirkhill, Inc and/or Kirkhill Rubber Manufacturing since at least 1971. Exterior areas are paved with asphalt and concrete.

County permit records confirm that four former underground storage tanks (USTs) were located onsite (see Figures 2 through 2D). County permit records and historic environmental assessment reports confirm that three of the historic USTs had been located in the southern exterior portion of the property (see Figures 2, 2B, and 2C). A fourth UST was located in the central portion of the site adjacent to the waste water treatment oil/water separator. Regulatory closure has been awarded to all former onsite USTs (see Appendix C).

Based on former historic leakage and use of underground fuel/oil storage tanks and concerns summarized in prior site assessment reports, PIC concluded that petroleum hydrocarbons (gasoline, diesel, hydraulic/lubricating oils, and/or waste oil), metals, and degreasing solvents could be present under the site. In consideration of the site's history and uses, PIC recommended performance of a Phase II Soil Investigation within areas of concern.

KMC and/or Kirkhill, Inc. conducts metal fabrication and rubber manufacturing operations onsite. The facility includes boilers, a waste water treatment unit/oil-water separator, a network of concrete-lined trenches and drains to circulate and recover water and oil based fluids, manufacturing equipment, and various petroleum and carbon based hazardous materials. Additional information concerning onsite manufacturing operations is included in the attached Environmental Audit Report in Appendix J.

As will be discussed later in this report, PIC's Phase II soil testing results confirmed a lack of significant petroleum or hazardous materials contaminants. As a result, there is no likelihood of significant, historic, residual, subsurface contamination onsite.

Historic aerial photographs in Appendix G and city permit records indicate most existing buildings were constructed prior to 1980. As a result, asbestos containing construction materials (ACM) may be present in the buildings. Figure 5 includes a reference diagram of ACM in older commercial buildings.

## SITE HISTORY

Based on PIC's site inspection and review of regulatory records, historic telephone directories, historic topographic maps, and historic aerial photos, it appears the subject property remained undeveloped and unoccupied prior to 1951 when one or more of the existing buildings were constructed in support of rubber manufacturing and metal fabrication activities. Historic telephone directory listings in Appendix H indicate the property has been occupied continuously by KMC/Kirkhill, Inc. from at least 1971 until the present. Additional occupants include a trucking company and office tenants.

County permit records were reviewed by PIC and contained documents which have been copied and attached in Appendices C and N. County records confirm the property contained four USTs historically. Three USTs were removed in 1989 from the southern portion of the site by Tank Protect Engineering (TPE). Figures 2B, 2C and 2D illustrate the removed USTs as Tanks 1, 2, and 3. A fourth tank (#4) was closed in-place by slurry filling due to access limitations (see Figures 2A, 2B, and 2C). County permit records are reproduced in Appendix C and historic TPE UST closure and investigation reports (15) are attached in Appendix N. Soil testing conducted under the former USTs discovered petroleum soil contamination under tanks 1 and 2. From 1989 through 1992, TPE conducted soil excavation as deep as 23 feet, conducted offsite soil disposal of contaminated soil, conducted onsite treatment of contaminated soil, and drilled/sampled a total of seventeen (17) soil borings. TPE submitted a total of 15 reports to the Los Angeles County Department of Public Works (LACDPW) from 1989 through 1992 documenting all UST closure and investigation activities summarized above. In correspondence dated August 6, 1992, regulatory closure was awarded to the subject property by LACDPW relevant to all four USTs.

In August 2005, Orswell and Kasman conducted a Phase I Environmental Site Assessment at the subject property (see copy of report in Appendix K). Based on petroleum surface staining observed near the cooling tower and oil-water separator "courtyard" area and an exterior, above-ground, oil storage tank in the southern portion of the property, the report recommended precautionary Phase II soil testing.

In September, 2005, GeoScience Analytical, Inc. (GSA), drilled and sampled four borings (B1-B4) in the "courtyard" area in close proximity to the oil-water separator (copy of report attached in Appendix L). The GSA report referenced results from a previous Phase II Soil Testing Report dated August 31, 2005 by Converse Consultants (Converse). PIC was unable to access the August 31, 2005 Converse Phase II Report. The GSA report confirmed that Converse had measured a lack of petroleum contamination in soil adjacent to the above-ground oil storage tank, but had measured an elevated total arsenic concentration of 79.2 ppm in shallow soil (two feet depth). The soluble fraction of arsenic in the same sample was measured at 5.28 ppm (slightly above the 5.0 ppm state guideline). The purpose of the GSA Supplemental Phase II Investigation was to determine the extent of arsenic impacted soil. Results from the four GSA borings confirmed the presence of elevated arsenic concentrations at a depth of two feet below surface in two of the four borings. All four borings confirmed a lack of elevated arsenic concentrations below two feet. The GSA report recommended no remedial action due to the limited lateral and vertical extent of arsenic impact and the fact that maximum arsenic concentrations measured only slightly above regulatory thresholds. In late September 2005, S & S Environmental Services (S&S) conducted additional, deeper, Phase II soil testing in the "courtyard" area on behalf of Foothill Independent Bank, to verify the previous findings of Converse and GSA. A copy of the S&S report is attached in Appendix M. In addition, locations of all Converse, GSA, and S&S borings are illustrated on Figure 2E. S&S drilled and sampled a total of 14 borings in close proximity to the cooling tower and oil-water separator. The maximum depth of soil testing by S&S was 45 feet below surface. Elevated arsenic concentrations in shallow soil were confirmed in one

boring (SS5), but measured at background concentrations in seven nearby S&S borings (SS1-SS8). S&S also measured elevated levels of nonvolatile, petroleum hydrocarbons in four borings (SS5/SS5ALT, SS11, SS12, and SS13) at depths ranging from 5 to 20 feet below surface. The S&S report contains analytical confirmation that no hazardous petroleum constituents (e.g. benzene) were present at detectable concentrations. In addition, the S&S report includes testing results below 20 feet to confirm that groundwater was not impacted by the presence of petroleum hydrocarbons in soil above a depth of 20 feet. Based on its findings, S&S recommended no further investigation and no remedial actions.

PIC's analysis of historic soil testing results conducted onsite between 1989 and 2005 prompt the following:

1. Soil contamination discovered in 1989 during UST closure operations was adequately investigated and remediated. Accordingly, regulatory closure was awarded in 1992. PIC's recommendation to conduct follow-up Phase II soil testing within the former UST area was made to confirm a lack of certain, volatile organic compounds (VOCs), including fuel oxygenates, which were not a part of analytical testing protocols until after 1992.

2. Soil testing results already completed in 2005, concerning elevated arsenic concentrations in shallow soil above a depth of two feet, are adequate to confirm the lateral and vertical extent of the arsenic impact. Accordingly, PIC recommended no additional Phase II testing concerning arsenic. Further, PIC concludes the shallow occurrence of arsenic in the courtyard area is probably an artifact of arsenic already present in imported fill material. That is, PIC concludes elevated arsenic concentrations were not the result of an onsite release of contaminant. Regardless, PIC concurs with the conclusions of previous investigations that the shallow occurrence of arsenic does not warrant further investigation nor remedial action.

3. Elevated concentrations of nonvolatile petroleum hydrocarbons measured by S&S in close proximity to the oil-water separator appears sporadic and limited. Of the initial eight S&S borings (SS1-SS8) only one (SS5) exhibited field evidence (odor and discoloration) of petroleum contamination. As a result, only the five feet deep sample from SS5 was analyzed for petroleum contaminants. In the subsequent seven S&S borings (SS5-ALT-SS14), elevated petroleum concentrations were measured only in 4 borings a few feet east of SS5 (SS5-ALT, SS11, SS12, and SS13). Accordingly, PIC recommended additional Phase II testing in proximity to the oil-water separator and S&S boring locations SS5/SS5-ALT to verify the limited lateral and vertical extent of elevated petroleum concentrations and to verify there is no continuing release of petroleum contaminants since 2005. As discussed later in this report, no elevated petroleum concentrations were measured in any of PIC's Phase II borings, thereby confirming the extremely limited lateral and vertical extent of nonvolatile, petroleum hydrocarbons measured by S&S in 2005.

In consideration of the foregoing, PIC concluded that petroleum hydrocarbons (gasoline, diesel, and/or oil) and volatile organic compounds (including fuel oxygenates) could have been stored, used, and/or released onsite by historic tenants.

Accordingly, PIC recommended performance of a subsurface Phase II Soil Investigation at seven locations. Figure 2 illustrates PIC's seven boring locations.

## SURVEY OF ADJACENT PROPERTIES

Figures 2 and 7 illustrate uses on adjacent properties. The subject property is bound by commercial (industrial) in all directions.

None of the adjacent properties exhibited obvious evidence of petroleum or hazardous materials contamination. In addition, the EDR Report in Appendix I does not contain documentation of environmental impairments on adjoining parcels. Further, the EDR Report documents successful regulatory closure at all Leaking Underground Storage Tank (LUST) sites located within one fourth mile of the subject property

Surface runoff at all surrounding properties appeared to be southerly towards the nearby San Gabriel River.

No evidence of historic or improper waste disposal was observed by PIC in any storm drain at the site or surrounding areas.

## HISTORICAL AERIAL PHOTOGRAPH REVIEW

Historical aerial photographs provided by EDR were reviewed by PIC (see copies in Appendix G). Available photographs were dated 1928, 1938, 1947, 1956, 1960, 1968, 1976, 1989, 1994, 2005, 2009, 2010, 2011, and 2012.

The 1928, 1938, and 1947 photos indicate the property was undeveloped and unoccupied. Agricultural cultivation is evident onsite in all three photos. Woodruff Avenue and Washburn Road are visible in all photos. By 1956, several buildings are evident onsite, in support of industrial use. By 1960, additional buildings and surface pavement are observed onsite. Similar features are observed on the 1968 photo. By 1976, additional warehouse buildings in the western portion of the site had been constructed. Subsequent photos exhibit similar features as observed in 1976.

Figure 7 provides a current aerial photo (2011) of the property.

The aerial photo study indicates no obvious or potential environmental impairments on the subject property.

PIC observed no historic evidence of oil wells, landfills or rock quarries on the subject property.

## PHASE II SOIL INVESTIGATION

Phase II site investigation operations were conducted on August 13, 2013.

PIC Project Manager, Ethan Hersch, supervised all field operations and conducted utility clearance operations.

On August 13, 2013, a total of seven (7) soil borings (PIC-1 – PIC-7) were drilled and sampled using direct push drilling equipment. Boring locations are illustrated on Figures 2 and 2A. Boring locations were selected on the basis of proximity to historic potential sources of petroleum or hazardous materials contamination (i.e. former UST #1 and existing oil-water separator). StrongArm Environmental was contracted to provide coring services. Soil samples were recovered at five feet intervals in each boring,

which were cored to depths ranging from five to fifty feet below surface. A total of 25 soil samples were recovered and selectively analyzed for petroleum, metal, and volatile contaminants at Cal Tech Environmental Laboratories. Laboratory results are attached in Appendix E.

The drill auger and core barrels were decontaminated with a liquinox detergent solution, then rinsed with water between boring locations to minimize potential cross contamination. Mr. Hersch conducted vapor monitoring of recovered soil samples during coring operations using an OVM Photoionization Detector (PID). None of the soil samples measured any detectable volatile contaminants using the PID nor was significant field evidence (odor or discoloration) of petroleum or hazardous materials contamination detected. Lithologic data were documented on boring logs attached in Appendix D.

All seven soil borings were backfilled with bentonite seal material and surface pavement.

Groundwater was apparently encountered in two of the borings (PIC-1 and PIC-2) at a depth of about 45 feet below surface.

## LABORATORY RESULTS

A total of twenty five (25) soil samples were recovered during coring operations on August 13, 2013. All 25 soil samples were transported to Cal Tech Environmental Laboratories (Paramount).

Twenty one (21) soil samples recovered from PIC-1 – PIC-7 were quantitatively analyzed for total petroleum hydrocarbons (gasoline, diesel, and oil) by EPA Method 8015. In addition, ten (10) soil samples were analyzed for total volatiles (fuel oxygenates and solvents) by EPA Method 8260B, and six (6) soil samples were analyzed for total metals by EPA Method 6010.

Table I below summarizes laboratory results, which are attached as Appendix E:

**TABLE I**
**LABORATORY RESULTS**

| Boring ID | Sample Depth (feet) | Soil Total Volatiles EPA Method 8260B (ppm) | Soil Total Petroleum EPA 8015 (ppm) | Total Metals EPA 6010 (ppm) |
|---|---|---|---|---|
| PIC-1 | 10 | All = ND | All = ND | All = ND or Background |
| PIC-1 | 20 | All = ND | All = ND | - |
| PIC-1 | 25 | - | All = ND | - |
| PIC-1 | 30 | - | All = ND | - |
| PIC-1 | 35 | - | All = ND | - |
| PIC-1 | 40 | - | All = ND | - |
| PIC-1 | 45 | - | All = ND | - |
| PIC-1 | 50 | - | All = ND | - |
| PIC-2 | 10 | All = ND | All = ND | All = ND or Background |

**TABLE I**
**LABORATORY RESULTS**

| Boring ID | Sample Depth (feet) | Soil Total Volatiles EPA Method 8260B (ppm) | Soil Total Petroleum EPA 8015 (ppm) | Total Metals EPA 6010 (ppm) |
|---|---|---|---|---|
| PIC-2 | 20 | All = ND | All = ND | - |
| PIC-2 | 30 | - | All = ND | - |
| PIC-2 | 40 | - | All = ND | - |
| PIC-2 | 45 | - | All = ND | - |
| PIC-2 | 50 | - | All = ND | - |
| PIC-3 | 5 | All = ND | All = ND | All = ND or Background |
| PIC-4 | 5 | All = ND | All = ND | All = ND or Background |
| PIC-5 | 5 | All = ND | All = ND | All = ND or Background |
| PIC-6 | 5 | All = ND | All = ND | All = ND or Background |
| PIC-7 | 10 | - | All = ND | - |
| PIC-7 | 20 | All = ND | All = ND | - |
| PIC-7 | 30 | All = ND | All = ND | - |
| Regulatory Action Level | Variable | Gas=500 Diesel=1,000 Oil=10,000 | Variable | Variable |

Note: All results reported as mg/kg = parts per million
ND = None Detected
= Not Analyzed

The laboratory results measured no detectable, subsurface soil contamination by petroleum hydrocarbons or volatile organic compounds in any sample. All metals concentrations were measured at nondetectable to background concentrations. All measured concentrations are well below regulatory action levels.

## GOVERNMENT RECORDS REVIEW

The following federal, state, and local public records and associated lists were searched to determine the potential for or existence of onsite and/or offsite unauthorized releases of hazardous materials (i.e., contamination) related to onsite and/or offsite aboveground or underground storage tanks, or any other potential sources:

**FEDERAL SOURCES**

| | |
|---|---|
| NPL | National Priority List |
| PROPOSED NPL | Proposed National Priority List |
| DELISTED NPL | National Priority List Deletions |
| NPL LIENS | Federal Superfund Liens |
| CERCLIS | Comprehensive Environmental Response, Compensation, and Liability Information System |
| CERCLIS – NFRAP | CERCLIS No Further Remedial Action Planned |
| CORRACTS | Corrective Action Report |

**FEDERAL SOURCES**

| | |
|---|---|
| RCRA | Resource Conservation and Recovery Act Information |
| ERNS | Emergency Response Notification System |
| HMIRS | Hazardous Materials Information Reporting System |
| US ENG CONTROLS | Engineering Controls Sites List |
| US INST CONTROL | Sites with Institutional Controls |
| DOD | Department of Defense Sites |
| FUDS | Formerly Used Defense Sites |
| US BROWNFIELDS | A Listing of Brownfield Sites |
| CONSENT | Superfund (CERCLA) Consent Decrees |
| ROD | Records of Decision |
| UMTRA | Uranium Mill Tailings Sites |
| ODI | Open Dump Inventory |
| TRIS | Toxic Chemical Release Inventory System |
| TSCA | Toxic Substances Control Act |
| FTTS | FIFRA/TSCA Tracking System – FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) |
| SSTS | Section 7 Tracking Systems |
| LIENS 2 | CERCLA LIEN Information |
| RADINFO | Radiation Information Database |
| ICIS | Integrated Compliance Information System |
| LUCIS | Land Use Control Information System |
| DOT OPS | Incident and Accident Data |
| HISTORIC FTTS | FIFRA/TSCA Tracking System Administrative Case Listing |
| US CDL | Clandestine Drug Labs |
| PADS | PCB Activity Database System |
| MLTS | Material Licensing Tracking System |
| MINES | Mines Master Index File |
| FINDS | Facility Index System/Facility Registry System |
| RAATS | RCRA Administrative Action Tracking System |
| NPDES | National Pollutant Discharge Elimination System |

**STATE OF CALIFORNIA AND LOS ANGELES COUNTY SOURCES**

| | |
|---|---|
| AWP | Annual Work Plan Sites |
| CALSITES | Calsites Database |
| CA BOND EXP. PLAN | Bond Expenditure Plan |
| NFA | No Further Action Determination |
| NFE | Properties Needing Further Evaluation |
| REF | Unconfirmed Properties Referred to Another Agency |
| SCH | School Property Evaluation Program |
| TOXIC PITS | Toxic Pits Cleanup Act Sites |
| SWF/LF (SWIS) | Solid Waste Information System |
| CA WDS | Waste Discharge System |
| WMUDS/SWAT | Waste Management Unit Database |
| CORTESE | "Cortese" Hazardous Waste & Substances Sites List |
| SWRCY | Recycler Database |

**STATE OF CALIFORNIA AND LOS ANGELES COUNTY SOURCES**

| | |
|---|---|
| LUST | Leaking Underground Storage Tank Report |
| CA FID UST | Facility Inventory Database |
| SLIC | Statewide SLIC Cases |
| UST | Active UST Facilities |
| HIST UST | Hazardous Substance Storage Container Database |
| LIENS | Environmental Liens Listing |
| AST | Aboveground Petroleum Storage Tank Facilities |
| SWEEPS UST | SWEEPS UST Listing |
| CHMIRS | California Hazardous Material Incident Report System |
| NOTIFY 65 | Proposition 65 Records |
| DEED | Deed Restriction Listing |
| VCP | Voluntary Cleanup Program Properties |
| DRYCLEANERS | Cleaner Facilities |
| LA CO HMS | HMS Street Number List |
| WIP | Well Investigation Program Case List |
| CDL | Clandestine Drug Labs |
| RESPONSE | State Response List |
| HAZNET | Facility and Manifest Data |
| EMI | Emissions Inventory Data |
| ENVIROSTOR | DTSC Database |
| HAULERS | Registered Waste Tire Haulers Listing |

**TRIBAL RECORDS**

| | |
|---|---|
| INDIAN RESERV | Indian Reservations |
| INDIAN LUST | Leaking Underground Storage Tanks on Indian Land |
| INDIAN UST | Underground Storage Tanks on Indian Land |

**EDR PROPRIETARY RECORDS**

| | |
|---|---|
| MANUFACTURED GAS PLANTS | EDR Proprietary Manufactured Gas Plants |
| EDR HISTORICAL AUTO STATIONS | Historic Gas Stations |
| EDR HISTORICAL CLEANERS | EDR Proprietary Historic Drycleaners |

All of the above records were examined for up to a one mile radius by EDR (see Appendix I). The subject property does appear on several of the regulatory lists. More specifically, the site appears on the following:

1. LUST – Leaking Underground Storage Tanks List: This list includes sites which have sustained historc soil and/or groundwater contamination due to leakage from underground storage tanks (USTs). The property appears on the LUST list due to diesel and oil soil contamination discovered in 1989 during UST removal operations (see Site History Section). Excavation, soil remediation, and site assessment requirements were completed in 1992 to the satisfaction of the Los Angeles County Dept. of Public Works (LACDPW). Regulatory closure was awarded in correspondence dated August 6, 1992 (See Appendix C).

2. CORTESE/HISTORIC CORTESE: These state lists are no longer updated. The CORTESE lists originally included sites known to have sustained contamination by leaking underground storage tanks, landfill use, or other industrial causes. All CORTESE sites have been reassigned to other

state lists such as the LUST, SLIC, or Landfill lists. The subject property appears on the HISTORIC CORTESE list due to soil contamination from leaking USTs discovered in 1989 already discussed above.

3. UST/SWEEPS UST/HIST UST: Underground Storage Tank Lists: These state lists identify sites which currently or historically have used, operated, and/or permitted underground storage tanks (USTs). The subject property appears on the state HIST UST list. The Site History Section and Appendix C contain documentation of regulatory closure for all historic onsite USTs. Appearance on the state UST Permit lists does not indicate the presence of a subsurface contamination problem.

4. RCRA: Resource Conservation and Recovery Act – This federal list includes sites that have obtained permits to legally use, store, and/or dispose of hazardous waste (e.g. waste oil). The property appears on the federal RCRA list. Appearance on the federal RCRA list does not indicate the presence of a subsurface contamination problem.

5. FINDS: Facility Index Registry System – This federal list includes sites which appear on one or more other federal lists. The property appears on the FINDS list in response to inclusion on the RCRA permit list. Appearance on the federal FINDS list does not indicate the presence of a subsurface contamination problem.

6. WDS: Waste Discharge System – This state lists includes sites permitted to conduct recycling operations for solid wastes and discharge waste according to permit requirements. The property appears on the state WDS list. Appearance on the WDS list does not indicate the presence of a subsurface contamination problem.

7. NPDES: National Pollutant Discharge Elimination System – This state list includes sites which have obtained federal EPA permits to discharge treated waste water into the municipal storm water system. The property appears on the NPDES list to facilitate disposal of waste process water generated during recycling operations. Appearance on the state NPDES list does not indicate the presence of a subsurface contamination problem.

8. HAZNET: Facility and Manifest Data – This state list, like the federal RCRA list, includes sites which have historically obtained permits to legally dispose of hazardous wastes (e.g. waste oil). Appearance on the HAZNET list does not indicate the presence of a subsurface contamination problem.

9. LA COUNTY HMS: Los Angeles County Hazardous Materials Sites – This county list includes sites which have been inspected or obtained industrial waste discharge/underground storage tank operating permits from the Los Angeles County Department of Public Works. PIC reviewed all available records at the county offices (See Appendix C). As discussed previously, all historic USTs have been removed under permit requirements of the LACDPW and received regulatory closure with "No Further Action" status (see Appendix C).

The EDR record search also revealed the following concerning properties located within a one mile radius of the subject site:

| GOVERNMENT RECORDS Federal | SEARCH RADIUS (miles) | NUMBER OF SITES |
|---|---|---|
| NPL | 1 | 0 |
| PROPOSED NPL | 1 | 0 |
| DELISTED NPL | 1 | 0 |
| NPL RECOVERY | SITE ONLY | 0 |
| CERCLIS | 0.5 | 0 |
| CERCLIS NFRAP | 0.5 | 0 |
| CORRACTS | 1 | 0 |
| RCRA – TSD | 0.5 | 0 |
| RCRA – Lg Gen | 0.25 | 1 |
| RCRA – Sm Gen | 0.25 | 15 |
| ERNS | SITE ONLY | 0 |
| HMIRS | SITE ONLY | 0 |
| US ENG CONTROLS | 0.5 | 0 |
| US INST CONTROLS | 0.5 | 0 |
| DOD | 1 | 0 |
| FUDS | 1 | 1 |
| US BROWNFIELDS | 0.5 | 0 |
| CONSENT | 1 | 0 |
| ROD | 1 | 0 |
| UMTRA | 0.5 | 0 |
| ODI | 0.5 | 0 |
| TRIS | SITE ONLY | 0 |
| TSCA | SITE ONLY | 0 |
| FTTS | SITE ONLY | 0 |
| SSTS | SITE ONLY | 0 |
| LIENS 2 | SITE ONLY | 0 |
| ICIS | SITE ONLY | 0 |
| LUCIS | 0.5 | 0 |
| PADS | SITE ONLY | 0 |
| MLTS | SITE ONLY | 0 |
| MINES | 0.25 | 0 |
| FINDS | SITE ONLY | 1 |
| RAATS | SITE ONLY | 0 |
| NPDES | SITE ONLY | 1 |

| GOVERNMENT RECORDS State and Local | SEARCH RADIUS (miles) | NUMBER OF SITES |
|---|---|---|
| AWP | 1 | 0 |
| CAL-SITES | 1 | 0 |
| BOND EXP | 1 | 0 |
| NFA | 0.25 | 0 |
| NFE | 0.25 | 0 |

| GOVERNMENT RECORDS State and Local | SEARCH RADIUS (miles) | NUMBER OF SITES |
|---|---|---|
| REF | 0.25 | 0 |
| SCH | 0.25 | 0 |
| TOXIC PITS | 1 | 0 |
| LANDFILLS | 0.5 | 2 |
| WDS | SITE ONLY | 1 |
| SWAT | 0.5 | 2 |
| CORTESE | 0.5 | 13 |
| SWRCY | 0.5 | 0 |
| LUST | 0.5 | 17 |
| UST | 0.25 | 5 |
| SLIC | 0.5 | 4 |
| UST | 0.25 | 6 |
| HIST UST | 0.25 | 12 |
| AST | 0.25 | 1 |
| LIENS | SITE ONLY | 0 |
| SWEEPS UST | 0.25 | 19 |
| CHMIRS | SITE ONLY | 0 |
| NOTIFY 65 | 1 | 1 |
| DEED | 0.5 | 0 |
| VCP | 0.5 | 0 |
| DRYCLEANERS | 0.25 | 0 |
| LA CO. HMS | SITE ONLY | 1 |
| WIP | 0.25 | 0 |
| CDL | SITE ONLY | 0 |
| RESPONSE | 1 | 0 |
| HAZNET | SITE ONLY | 4 |
| EMI/AIRS | SITE ONLY | 0 |
| ENVIROSTOR | 1 | 8 |
| HAULERS | SITE ONLY | 0 |

| GOVERNMENT RECORDS Tribal | SEARCH RADIUS (miles) | NUMBER OF SITES |
|---|---|---|
| INDIAN RESERV | 1 | 0 |
| INDIAN LUST | 0.5 | 0 |
| INDIAN UST | 0.25 | 0 |

| GOVERNMENT RECORDS EDR | SEARCH RADIUS (miles) | NUMBER OF SITES |
|---|---|---|
| MAN. GAS PLANTS | 1 | 0 |
| HIST AUTO STATIONS | 0.25 | 18 |
| HIST CLEANERS | 0.25 | 0 |

**Historic Oil and Gas Drilling Activity**

According to California Division of Oil and Gas Records, no historic exploratory oil drilling activity has occurred within one-half mile of the subject site. It is unlikely that any historic oil and gas drilling has impacted the site. Historic oil well drilling activity is illustrated on Figure 4.

**Solid Waste Disposal Sites**

The Los Angeles County Solid Waste Management Department provides a public index of Solid Waste and Liquid Industrial Waste Disposal Sites (see Figure 6). The EDR Report in Appendix I also includes a review of listings concerning landfills. Figure 6 and the EDR report both indicate that no landfills have been located on or near the subject property. In addition, results of PIC's Phase II Soil Investigation found no evidence of buried refuse of landfill debris.

It appears the subject property has not been impacted historically by landfill activity.

## GEOLOGY AND HYDROGEOLOGY

The subject site is located within the San Gabriel River flood plain. Underlying soil consists of Pleistocene alluvial sediments. The elevation of the property is about 105 feet above sea level; the surrounding topography slopes to the south (see Figure 1: USGS Topographic Map and Appendix F). PIC's recent Phase II Investigation determined that to an approximate depth of 50 feet below surface, soil consists of brown, fine grained sand and silt overlying grey, clayey silt (see Boring Logs in Appendix D). The lithology is consistent with alluvial deposition within the San Gabriel River Flood Plain.

The Los Angeles County Flood Control District publishes regional groundwater information (groundwater contour map) which includes coverage of this area (see Figure 3). The most likely direction of groundwater flow is southwesterly. According to Figure 3, depth to the first groundwater aquifer is about 60 feet below surface (sea level elevation of 45 feet).

## CONCLUSIONS AND RECOMMENDATIONS

Based upon the results of this Phase I and Phase II Environmental Investigation and the research of available records, PIC has found no evidence to conclude that significant environmental impairments exist at the subject property. PIC concludes:

1. One documented, historic occurrence of petroleum hydrocarbon contamination (environmental impairment) was discovered at the subject property. In 1989, diesel and oil soil contamination was discovered during UST removal operations. After successful completion of site assessment and soil remediation requirements, Los Angeles County awarded regulatory closure in correspondence dated

August 6, 1992 (See Appendix C).

2. Potential historic onsite sources of petroleum or hazardous materials contamination were adequately investigated by Phase II Testing operations. More specifically, several subsurface investigations were conducted onsite from 1989 through 2013 by Tank Protect Engineering, Converse Consultants, GeoScience Analytical, S & S Environmental Services, and PIC Environmental Services. Within the "courtyard" area, adjacent to the oil-water separator, some near surface soil above a depth of five feet was found to contain slightly elevated concentrations of arsenic, probably as an artifact of imported fill material. In addition, S & S Environmental measured elevated concentrations of nonvolatile, petroleum hydrocarbons as deep as 20 feet southeast of the oil-water separator. PIC's recent confirmation testing near and within the same location measured no detectable petroleum contaminants below a depth of five feet. PIC concurs with previous investigations that the occurrences of elevated arsenic and nonvolatile petroleum are very limited and do not warrant remedial action or further investigation.

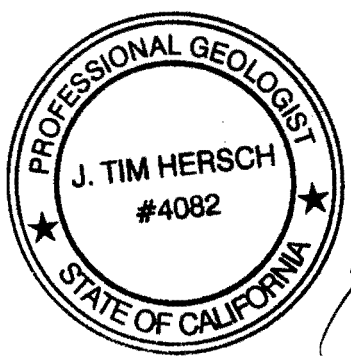
3. PIC concludes the site lacks significant environmental impairments (Recognized Environmental Conditions).

4. PIC recommends no further investigation.

This report is proprietary and confidential, to be delivered to, and intended for the exclusive use of, the above named client, or the client's assignees only. PIC Environmental Services assumes no responsibility nor liability for the reliance herein or use hereof by anyone other then the above named client or the client's assignees. In addition, the results of the government record search were prepared and conducted by EDR, who are responsible for the accuracy and completeness of the information provided. Finally, the laboratory results were prepared, conducted, and provided by Cal Tech Environmental Laboratories, under the direct supervision of Greg Tejirian, who is responsible for the accuracy and completeness of the results provided.

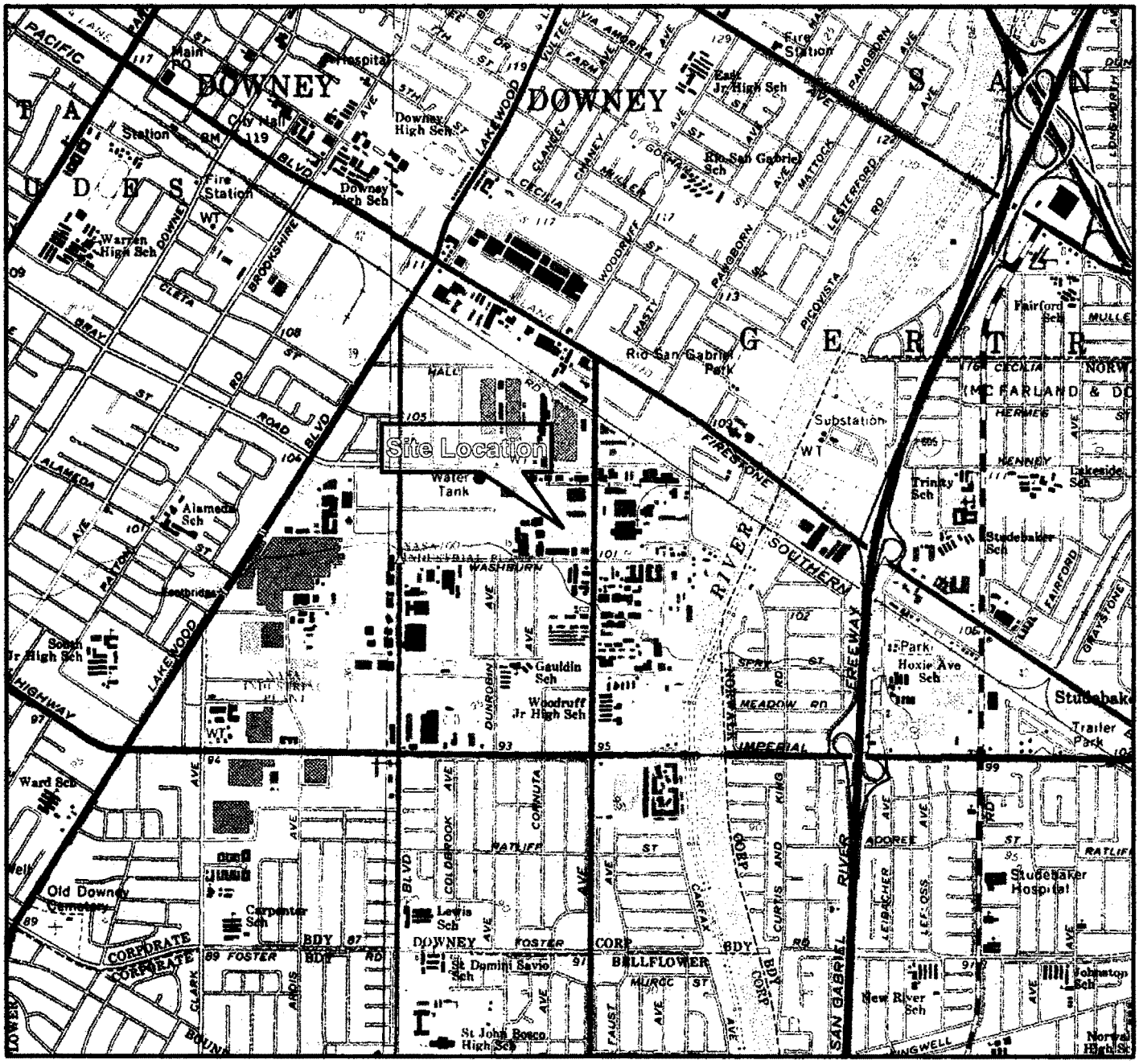
Should you have any questions or comments regarding the procedures outlined in this report, please do not hesitate to call us at 909/593-2427.

Respectfully submitted,



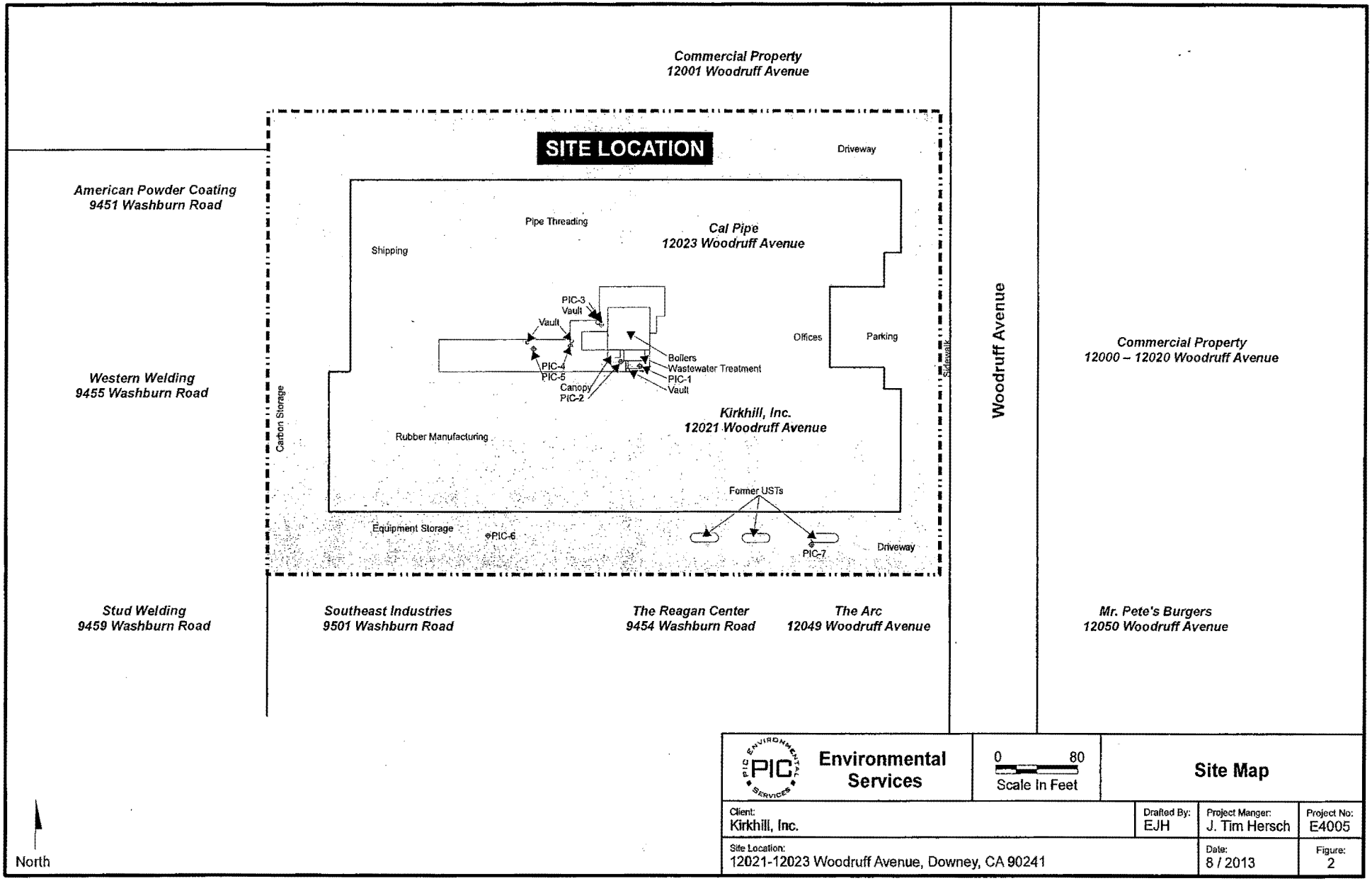

Ethan J. Hersch
Project Manager

J. Tim Hersch
California Professional Geologist #4082
President




| | | |
|---|---|---|
| PIC Environmental Services | 0 2000 Scale In Feet | **Site Location Map Topographic Map** |

| | | | |
|---|---|---|---|
| Client: Kirkhill, Inc. | Drafted By: EJH | Project Manger: J. Tim Hersch | Project No: E4005 |
| Site Location: 12021-12023 Woodruff Avenue, Downey, CA 90241 | | Date: 8 / 2013 | Figure: 1 |

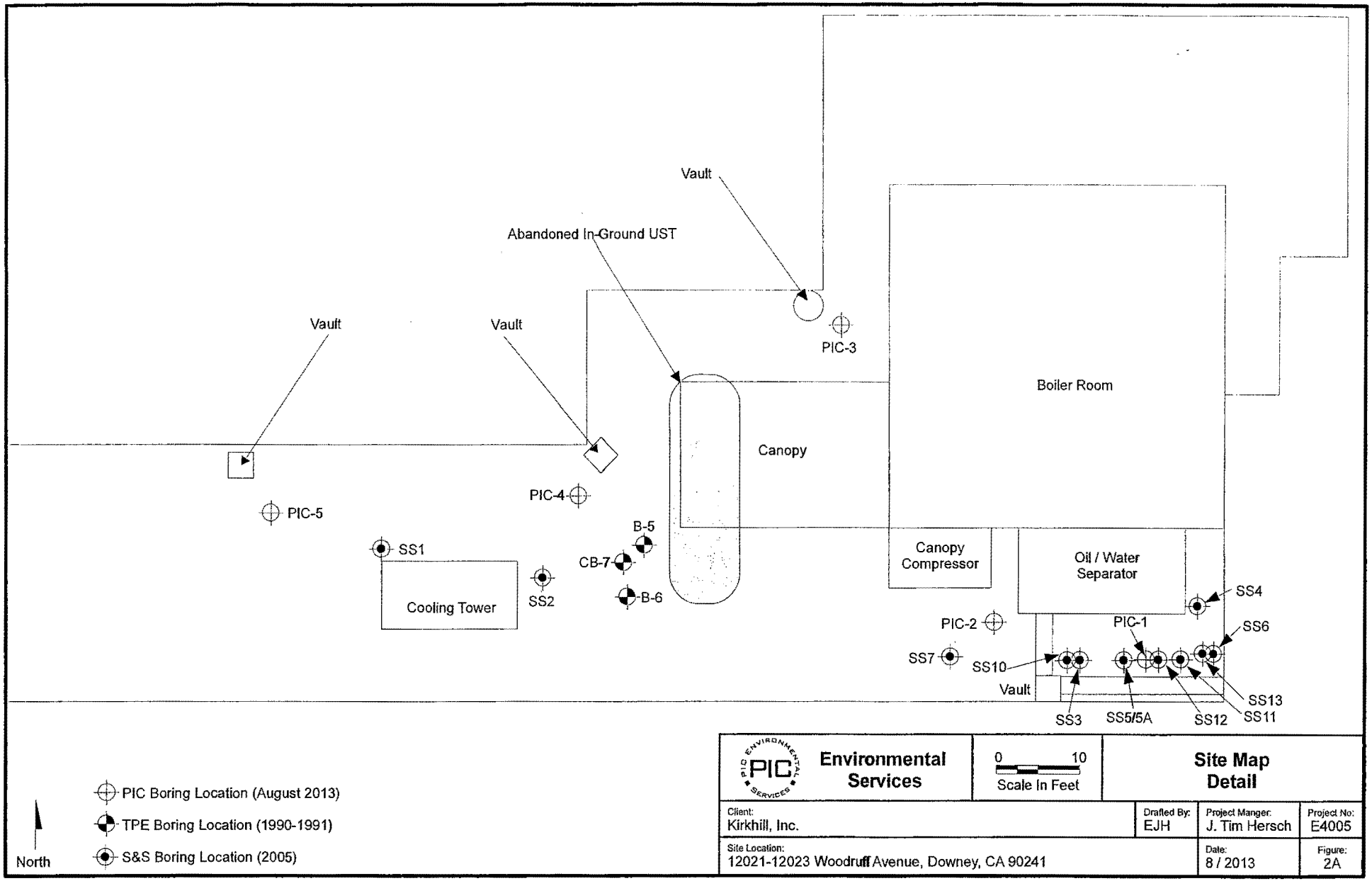


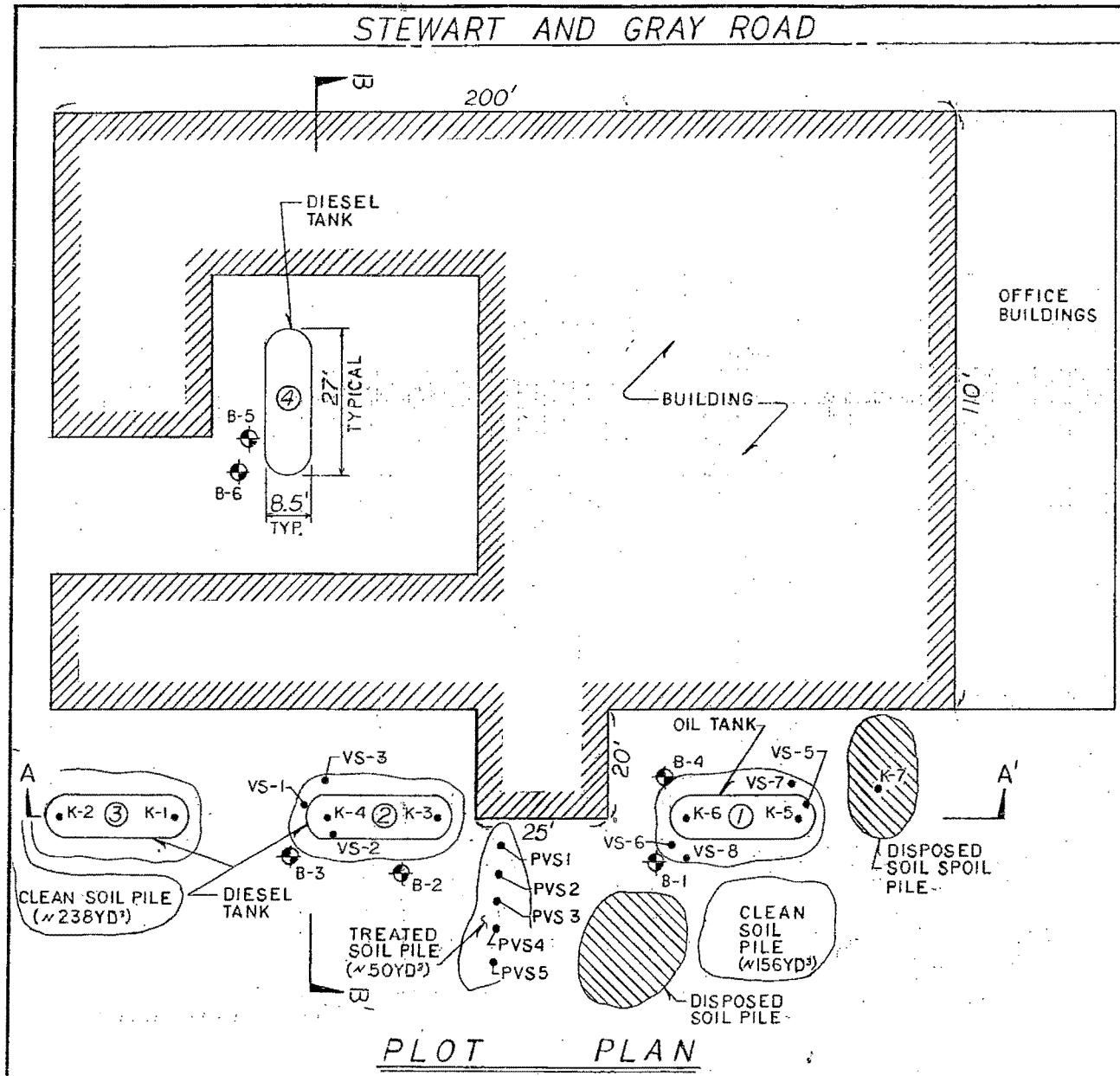

PIC Environmental Services

0 80
Scale In Feet

**Site Map**

| Client: | Drafted By: | Project Manger: | Project No: |
|---|---|---|---|
| Kirkhill, Inc. | EJH | J. Tim Hersch | E4005 |
| Site Location: 12021-12023 Woodruff Avenue, Downey, CA 90241 | | Date: 8 / 2013 | Figure: 2 |


Vault
Abandoned In-Ground UST
Vault
Vault
PIC-3
Boiler Room
Canopy
PIC-4
PIC-5
B-5
SS1
CB-7
B-6
Cooling Tower
SS2
Canopy Compressor
Oil / Water Separator
SS4
PIC-2
PIC-1
SS6
SS7
SS10
Vault
SS13
SS3
SS5/5A
SS12
SS11
North
PIC Boring Location (August 2013)
TPE Boring Location (1990-1991)
S&S Boring Location (2005)
PIC Environmental Services
0
10
Scale In Feet
Site Map Detail
Client: Kirkhill, Inc.
Drafted By: EJH
Project Manger: J. Tim Hersch
Project No: E4005
Site Location: 12021-12023 Woodruff Avenue, Downey, CA 90241
Date: 8 / 2013
Figure: 2A




PLOT PLAN

SCALE: 1" = 20'

## LEGEND

= TOTAL ≈ 54YD³

② = TANK NUMBERS

= BORE HOLES

K-1 = GRAB SAMPLES BELOW TANK JUST AFTER REMOVAL

VS-8 = GRAB SAMPLES FROM EXCAVATION BOTTOM & SIDEWALLS AFTER OVER EXCAVATION

PVS5 = POST TREATMENT GRAB SAMPLES

**PROJECT ADDRESS:**

12021 WOODRUFF AVENUE
DOWNEY, CALIFORNIA 90241

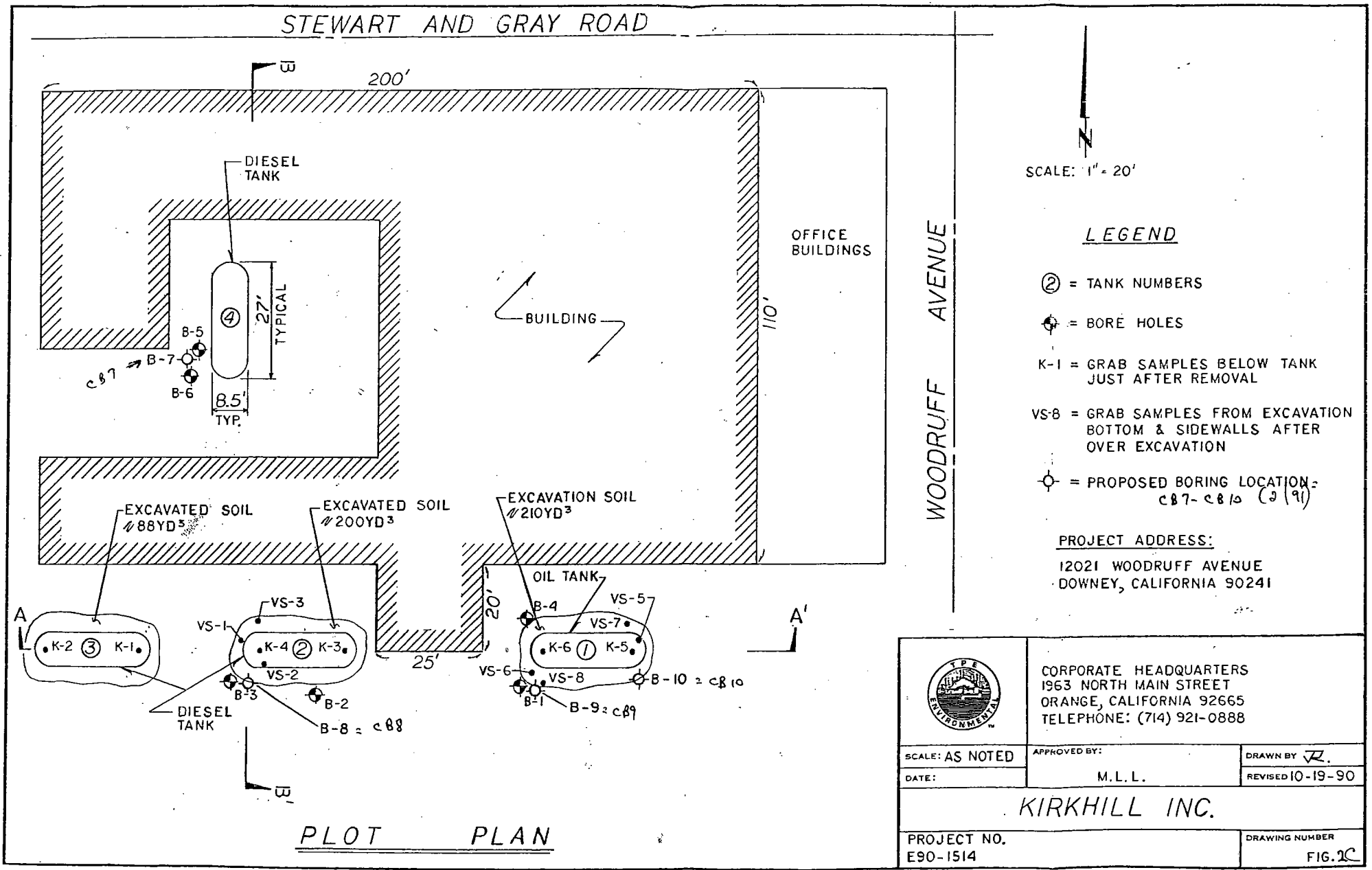

CORPORATE HEADQUARTERS
1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
TELEPHONE: (714) 921-0888


| | | |
|---|---|---|
| SCALE: AS NOTED | APPROVED BY: M.L.L. | DRAWN BY R. |
| DATE: | | REVISED 10-19-90 |

KIRKHILL INC.

| | |
|---|---|
| PROJECT NO. E90-1514 | DRAWING NUMBER FIG. 2B |

11 X 17 PRINTED ON NO. 1000H CLEARPRINT ■




PLOT PLAN

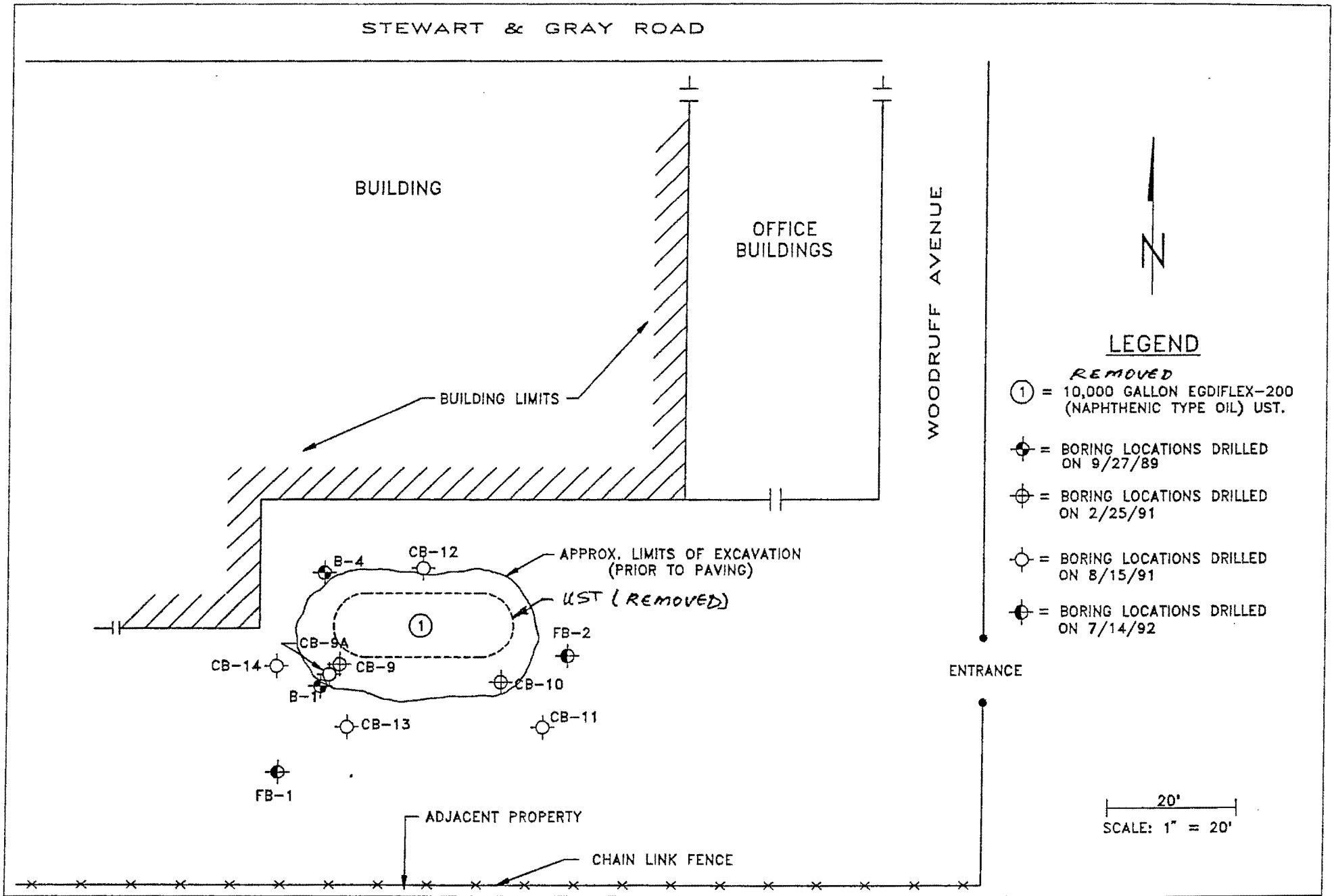

CORPORATE HEADQUARTERS
1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
TELEPHONE: (714) 921-0888


| | | |
|---|---|---|
| SCALE: AS NOTED | APPROVED BY: M.L.L. | DRAWN BY JR. |
| DATE: | | REVISED 10-19-90 |

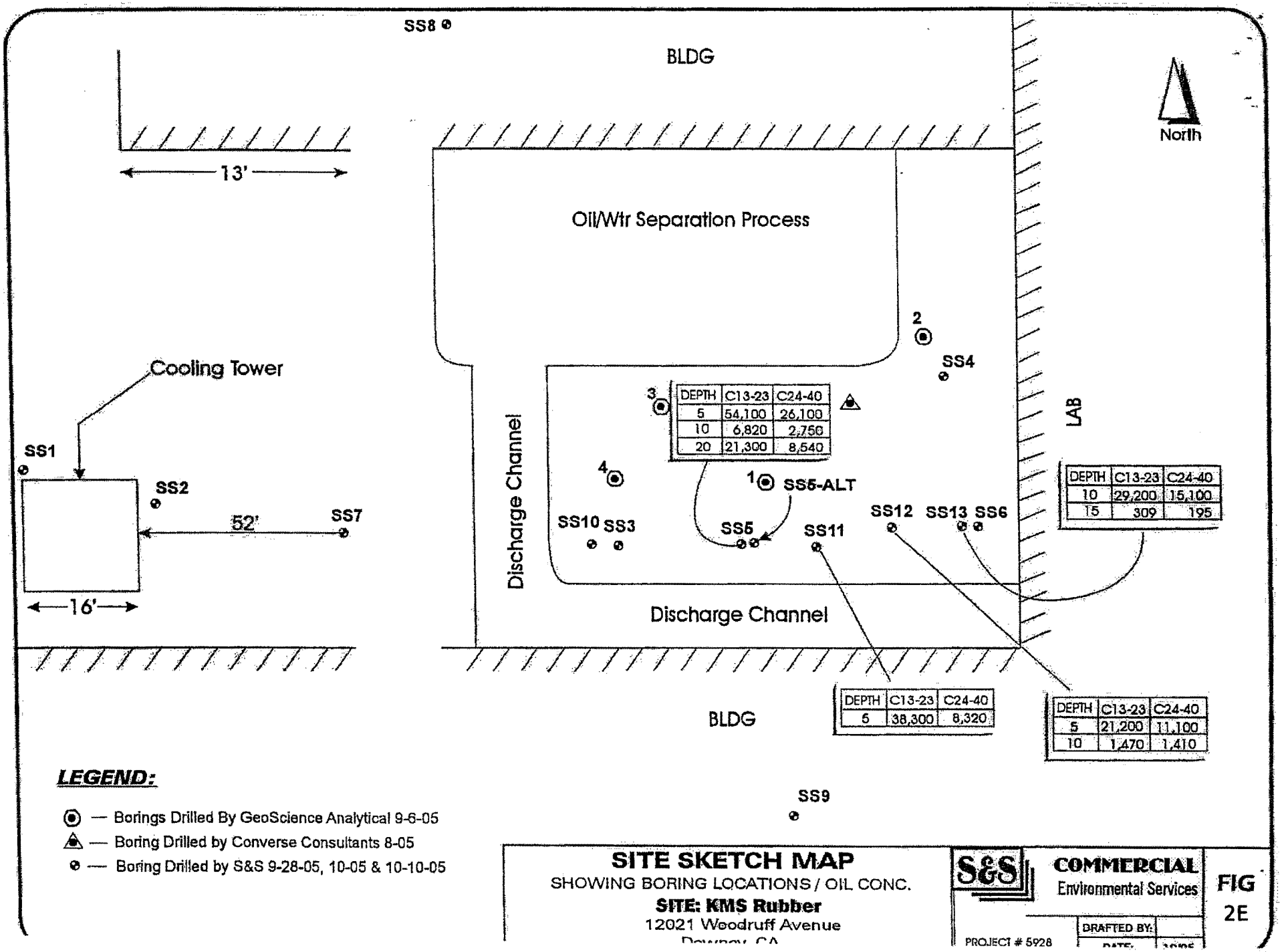
KIRKHILL INC.

| | |
|---|---|
| PROJECT NO. E90-1514 | DRAWING NUMBER FIG. 2C |

11 X 17 PRINTED ON NO. 1000H CLEARPRINT ®




| | | | |
|---|---|---|---|
| TPE ENVIRONMENTAL GROUP<br>1071 N. BATAVIA<br>ORANGE, CA. 92665 | ADDRESS:<br>KIRKHILL INC.<br>12021 WOODRUFF AVENUE<br>DOWNEY, CA. 90241 | SITE LOCATION MAP | DRAWN: P. LEWIS<br>APPROVED: R. PENDURTHI |
| | | DATE: 07/92 | JOB #/FILE: 220/KRKHILL1 |
| | | SCALE: AS NOTED | FIGURE: 2D |




**LEGEND:**

- ◉ — Borings Drilled By GeoScience Analytical 9-6-05
- ▲ — Boring Drilled by Converse Consultants 8-05
- ⊗ — Boring Drilled by S&S 9-28-05, 10-05 & 10-10-05

**SITE SKETCH MAP**

SHOWING BORING LOCATIONS / OIL CONC.

**SITE: KMS Rubber**

12021 Woodruff Avenue

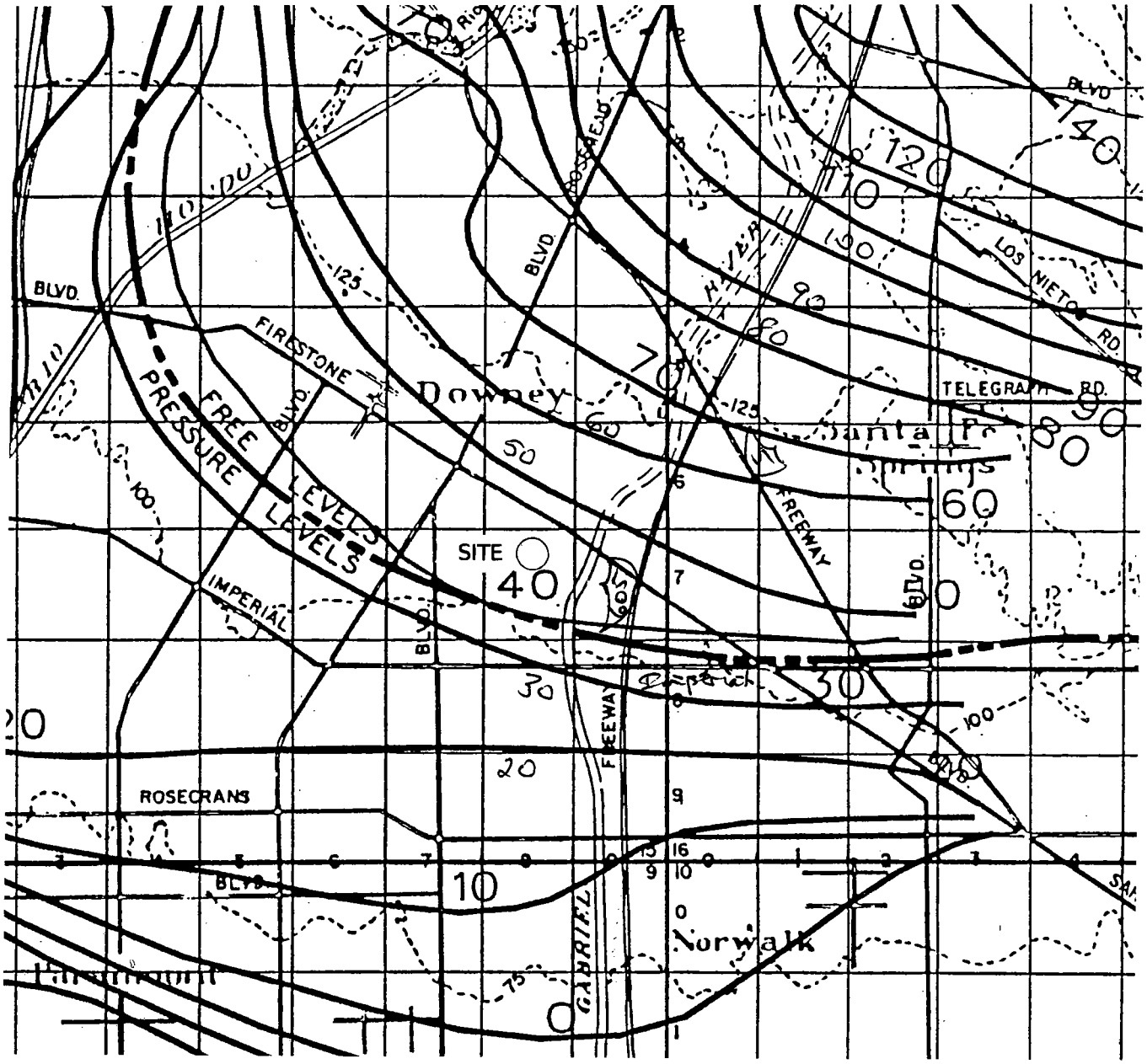
Downey, CA

S&S COMMERCIAL Environmental Services

PROJECT # 5928

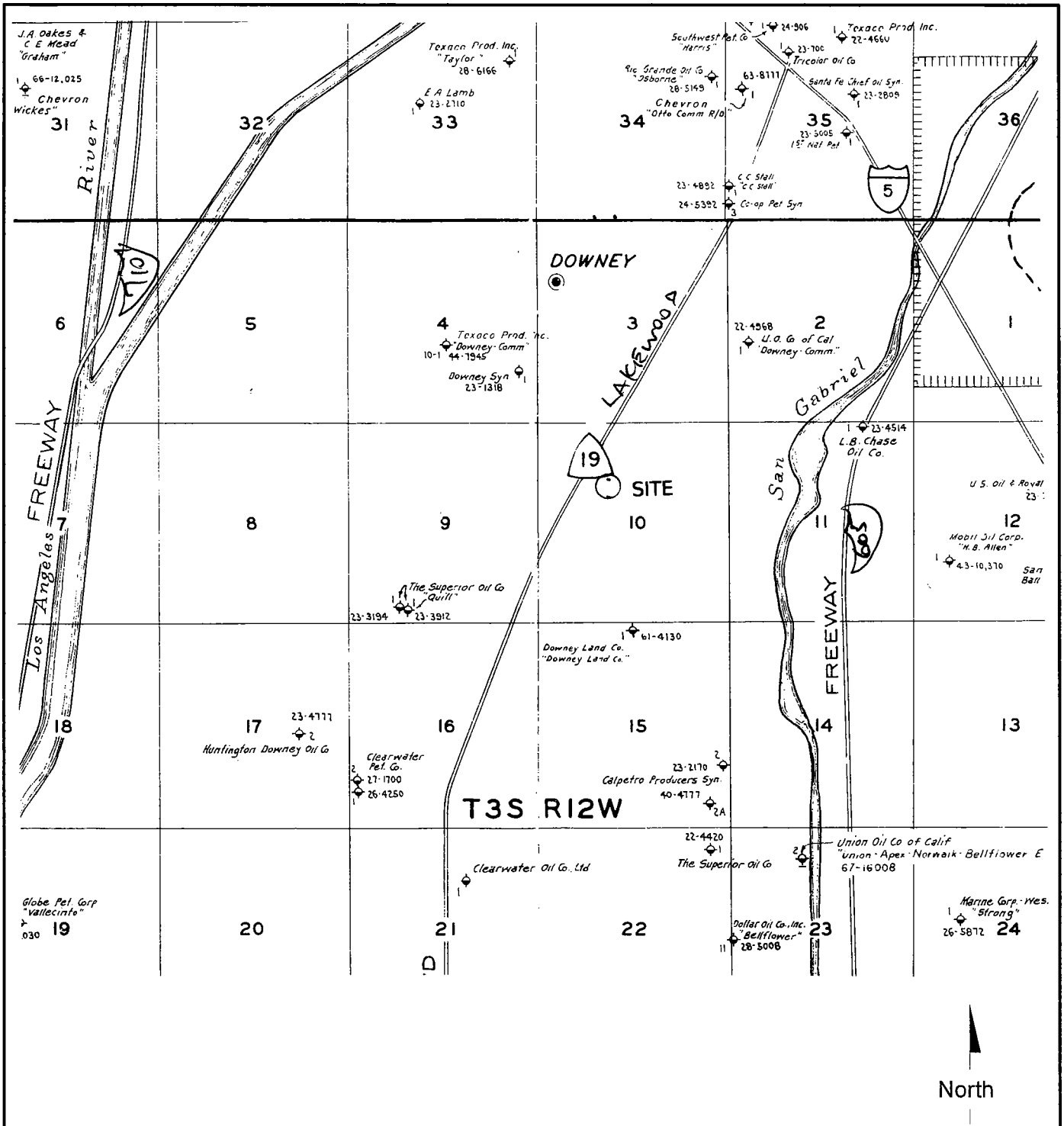
DRAFTED BY:

FIG 2E



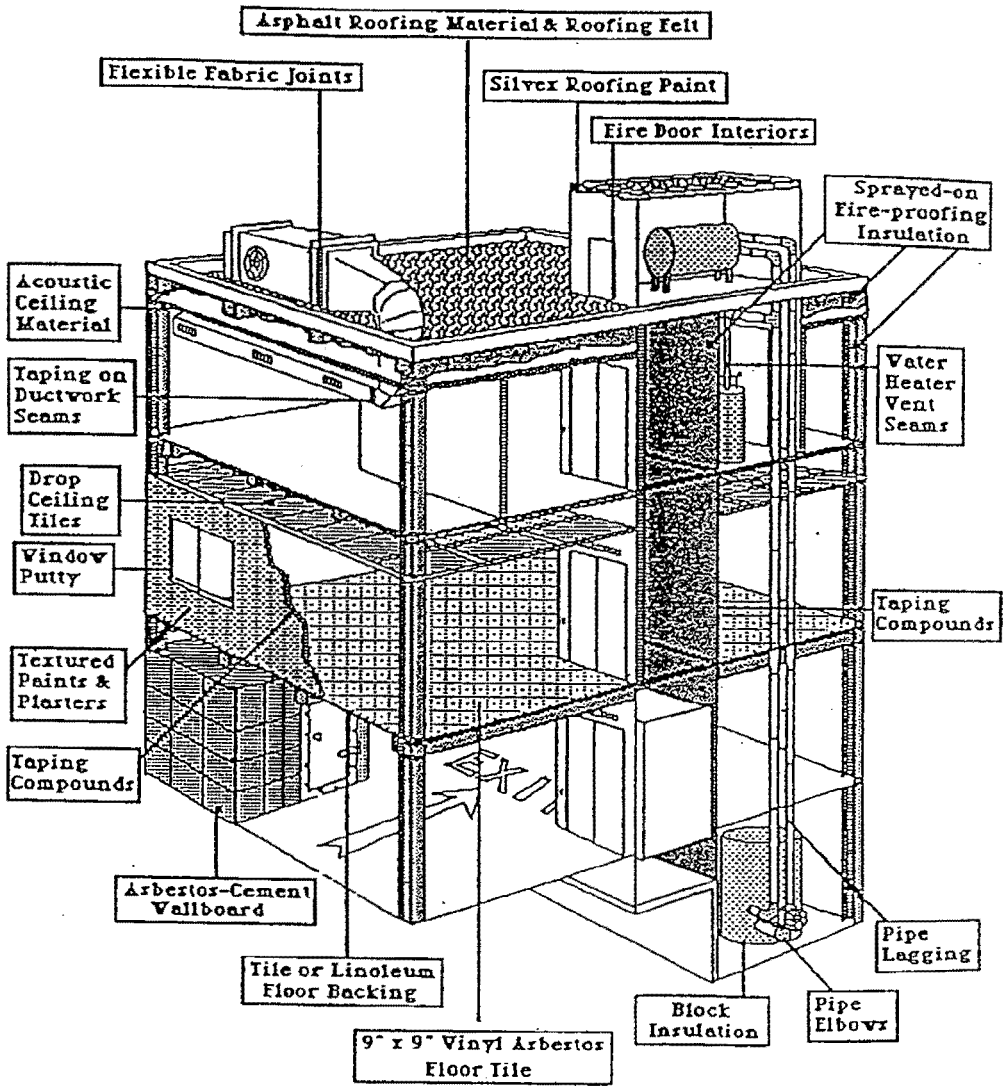

| | | |
|---|---|---|
| PIC Environmental Services | 0 5280 Scale In Feet | **Groundwater Contour Map** |

| | | | |
|---|---|---|---|
| Client: Kirkhill, Inc. | Drafted By: EJH | Project Manger: J. Tim Hersch | Project No: E4005 |
| Site Location: 12021-12023 Woodruff Avenue, Downey, CA 90241 | | Date: 8 / 2013 | Figure: 3 |



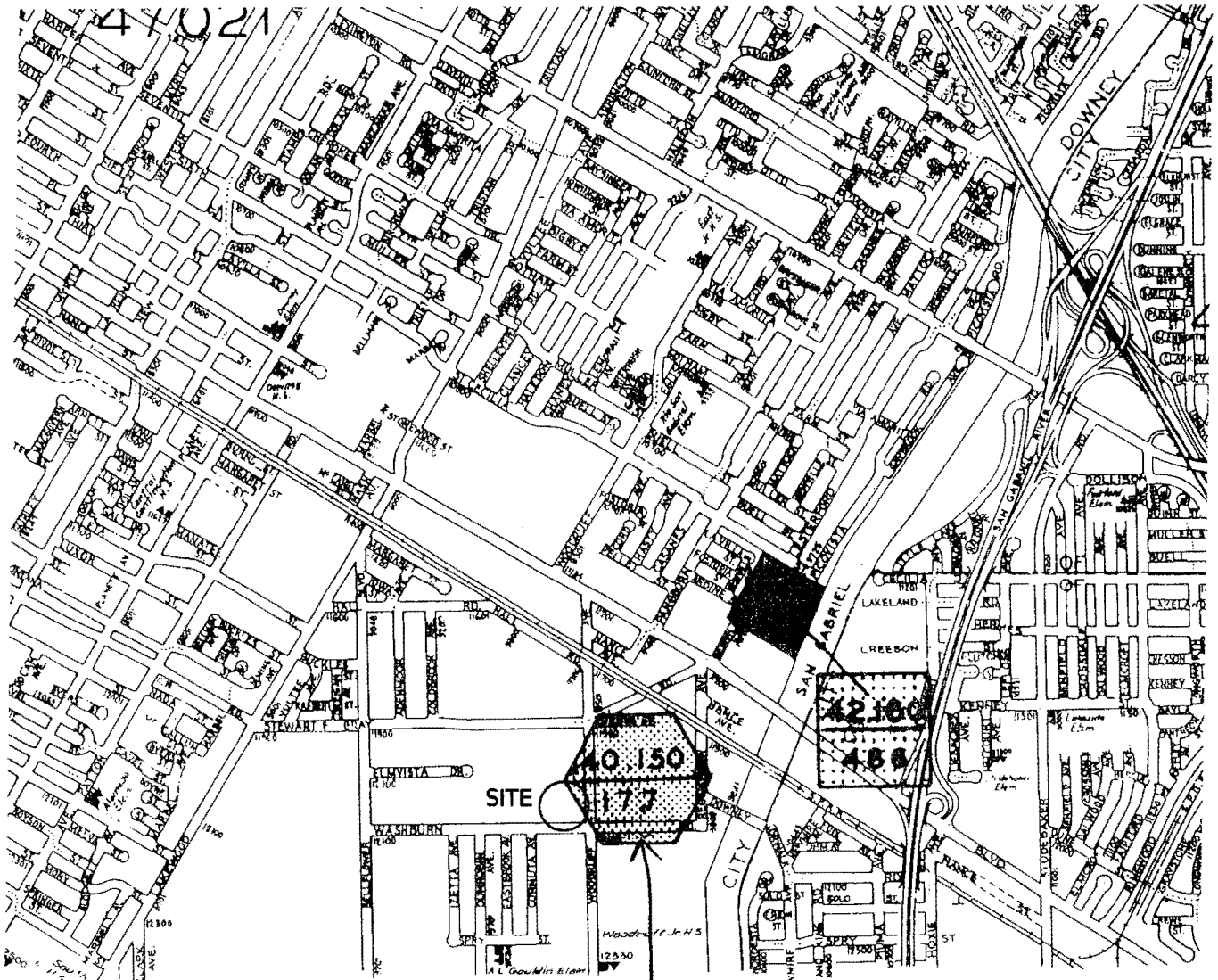

| | | | |
|---|---|---|---|
| PIC ENVIRONMENTAL SERVICES — **Environmental Services** | 0 4000 Scale In **Feet** | **Oil Well Map** | |
| Client: Kirkhill, Inc. | Drafted By: EJH | Project Manger: J. Tim Hersch | Project No: E4005 |
| Site Location: 12021-12023 Woodruff Avenue, Downey, CA 90241 | | Date: 8 / 2013 | Figure: 4 |

## Asbestos Containing Materials in Buildings



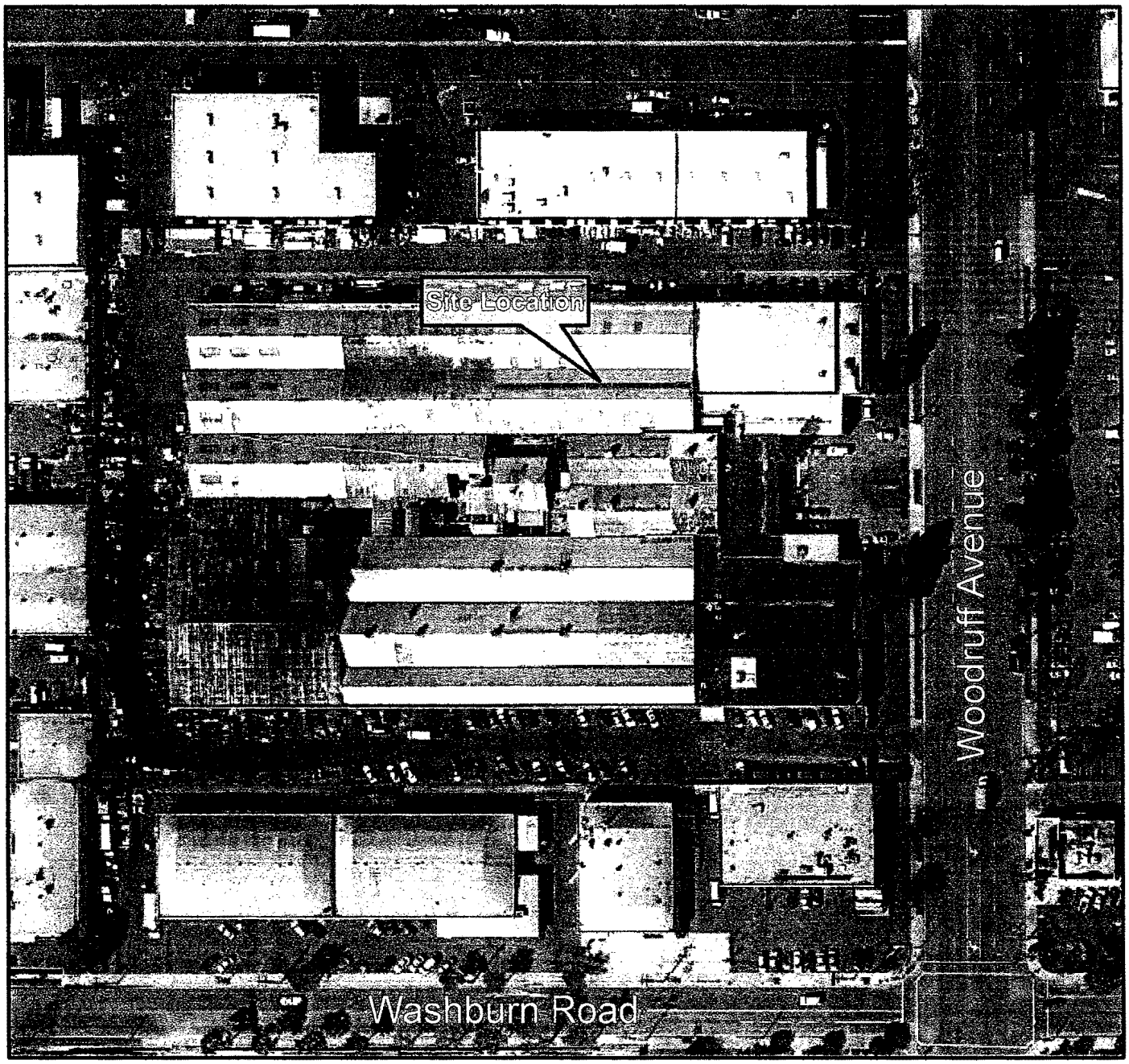

| | | |
|---|---|---|
| PIC Environmental Services | Not to Scale | **Common Asbestos Containing Materials (ASM's)** |

| Client: | Drafted By: | Project Manger: | Project No: |
|---|---|---|---|
| Kirkhill, Inc. | EJH | J. Tim Hersch | E4005 |
| **Site Location:** 12021-12023 Woodruff Avenue, Downey, CA 90241 | | **Date:** 8 / 2013 | **Figure:** 5 |




| | | |
|---|---|---|
| PIC ENVIRONMENTAL SERVICES — **Environmental Services** | 0 — 2000 Scale In Feet | **Landfill Map** |

| | | | |
|---|---|---|---|
| Client: Kirkhill, Inc. | Drafted By: EJH | Project Manger: J. Tim Hersch | Project No: E4005 |
| Site Location: 12021-12023 Woodruff Avenue, Downey, CA 90241 | | Date: 8 / 2013 | Figure: 6 |




North

| | | | |
|---|---|---|---|
| PIC Environmental Services | 0 120 Scale In Feet | **Aerial Photo March 2011** | |
| Client: Kirkhill, Inc. | Drafted By: EJH | Project Manger: J. Tim Hersch | Project No: E4005 |
| Site Location: 12021-12023 Woodruff Avenue, Downey, CA 90241 | | Date: 8 / 2013 | Figure: 7 |

# APPENDIX A:

# TITLE INFORMATION

A

NETRonline

## PROPERTY DETAIL REPORT

Prepared Exclusively for Ethan Hersch

Created: 7/30/2013
Expires: 8/29/2013

### TARGET PROPERTY

| | |
|---|---|
| **Site Address:** | 12021 WOODRUFF AVE DOWNEY, CA 90241 |
| **Mailing Address:** | 1400 E OLYMPIC BLVD 200 LOS ANGELES, CA 90021 |
| **Primary Owner:** | FREEWAY DRIVE LLC |
| **Secondary Owner:** | PAINTER AVENUE LLC |
| **Legal Description:** | RANCHO SANTA GERTRUDES SECTIONS, TOWNSHIP AND RANGE LOT (EX OF ST) COM N 175 FT FROM SE COR OF NE 1/4 OF SEC 10 T 3S R 12W TH N 432.15 FT TH W 686.27 FT TH S TO A LINE PARALLEL 1/4 OF NE 1/4 OF LOT 10 |
| **APN:** | 6284025018 |

| | | | |
|---|---|---|---|
| **Use Code** | IHEA (Click for description) | **Lot Size:** | 274,829 Sq. Ft. |
| **Number Of Units:** | 2 | **Fireplace:** | Unknown |
| **Square Feet:** | 108,451 Sq. Ft. | **Pool:** | Unknown |
| **Total Rooms:** | 0 | **Views:** | Unknown |
| **Bedrooms:** | 0 | **Year Built:** | 1951 |
| **Bathrooms:** | 0.00 | **Zoning:** | DOM2* |
| **Parking Structure:** | Garage | **Housing Tract:** | 0 |
| **Parking Spaces:** | Unknown | **Census Tract:** | 5511.02 |

| | | | |
|---|---|---|---|
| **Transfer Date:** | 2005-10-17T00:00:00 | **First Loan Amount:** | $4,500,000 |
| **Transfer Amount:** | $6,950,000 | **First Loan Type:** | Conventional |
| **Document Number:** | 2489834 | **Lender:** | FOOTHILL INDEPENDENT BANK |
| **Last Transaction:** | Resale | **Cost Per Sq. Ft.** | $64 |
| **Last Document:** | 0002489833 | | |

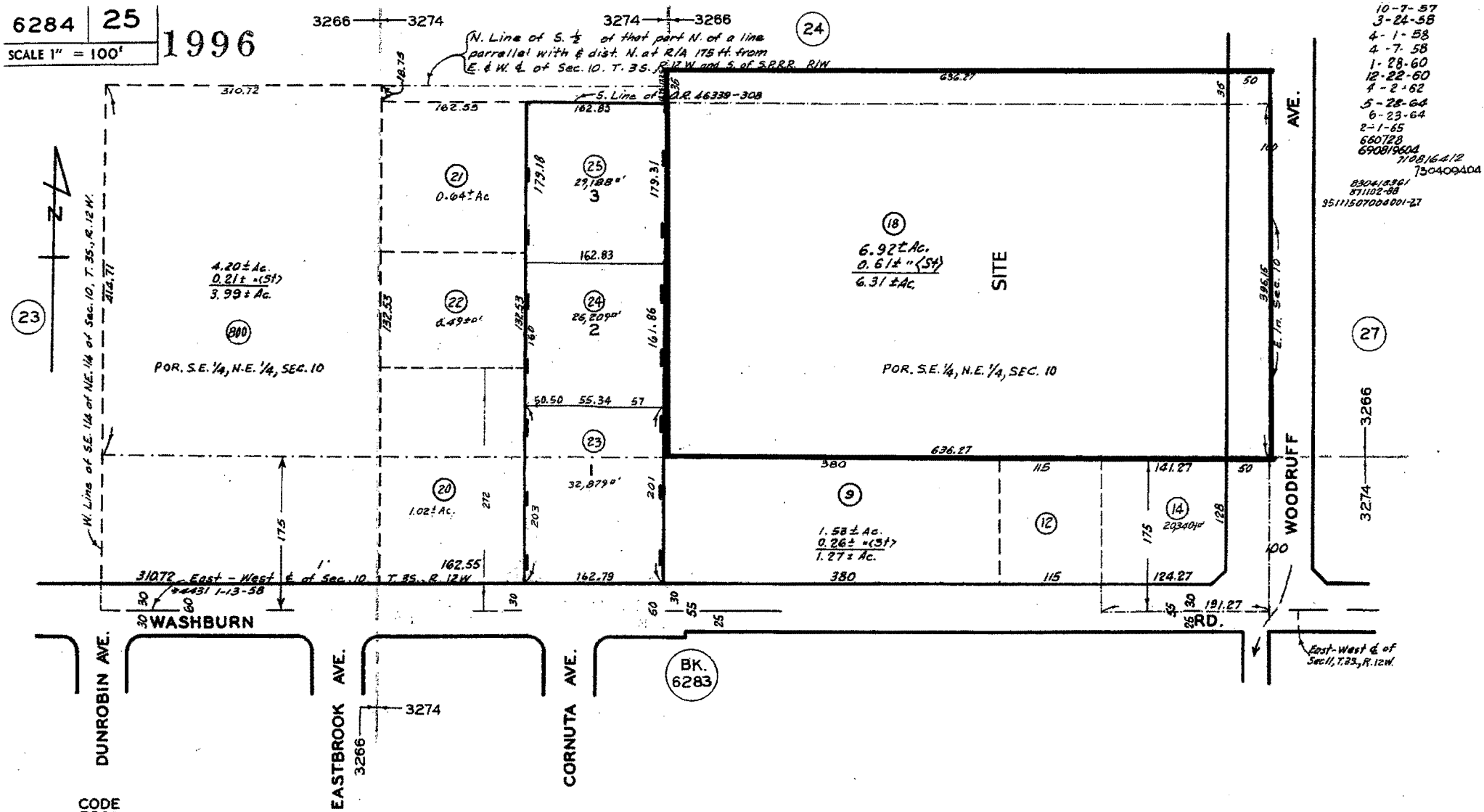
| | | | |
|---|---|---|---|
| **Assessed Value:** | $7,561,584 | **Tax Amount:** | $97,145.33 |
| **Land Value:** | $5,657,589 | **Tax Status:** | Current |
| **Improvement Value:** | $1,903,995 | **Owner Exemption:** | |
| **% Improvement:** | 25% | **Tax Rate Area:** | Unknown |

NETRonline and its data supplier(s) do not guarantee nor include any warranty of any kind whether expressed or implied, about the validity of all information in this report since this information is retrieved as it is recorded from the various agencies that make it available.

6284 | 25

SCALE 1" = 100'

1996




CODE
3266
3274

# RANCHO SANTA GERTRUDES
## SECTIONS, TOWNSHIP AND RANGE
## AS PER MISC. RECORDS BK. 32 P. 18
## M.R. 32 - 18

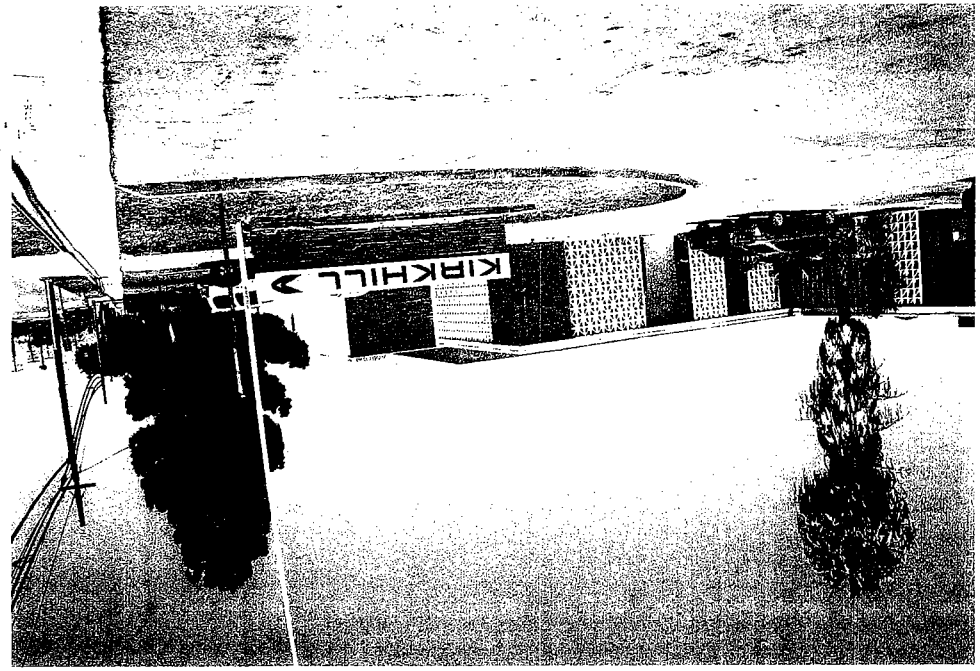
# PARCEL MAP
## P.M. 269-27-28

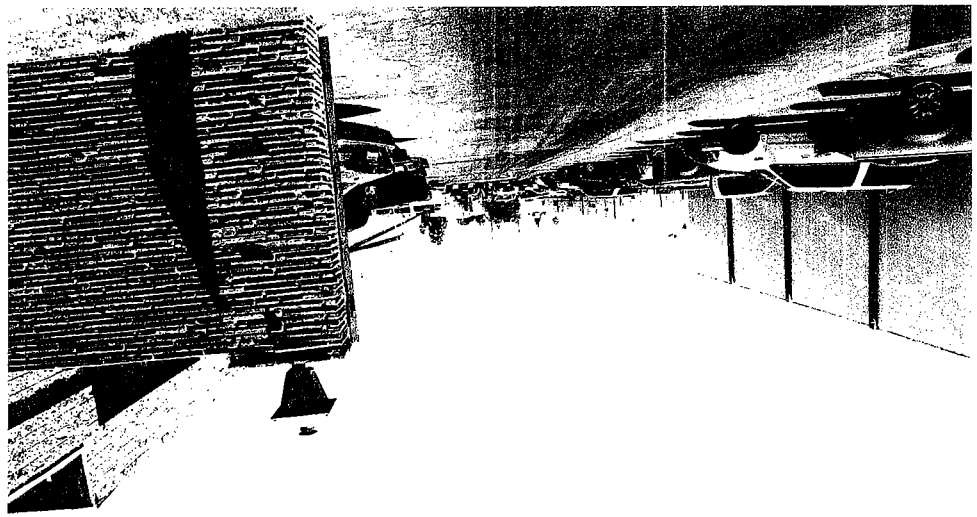
FOR PREV. ASSM'T. SEE:
6284 - 25

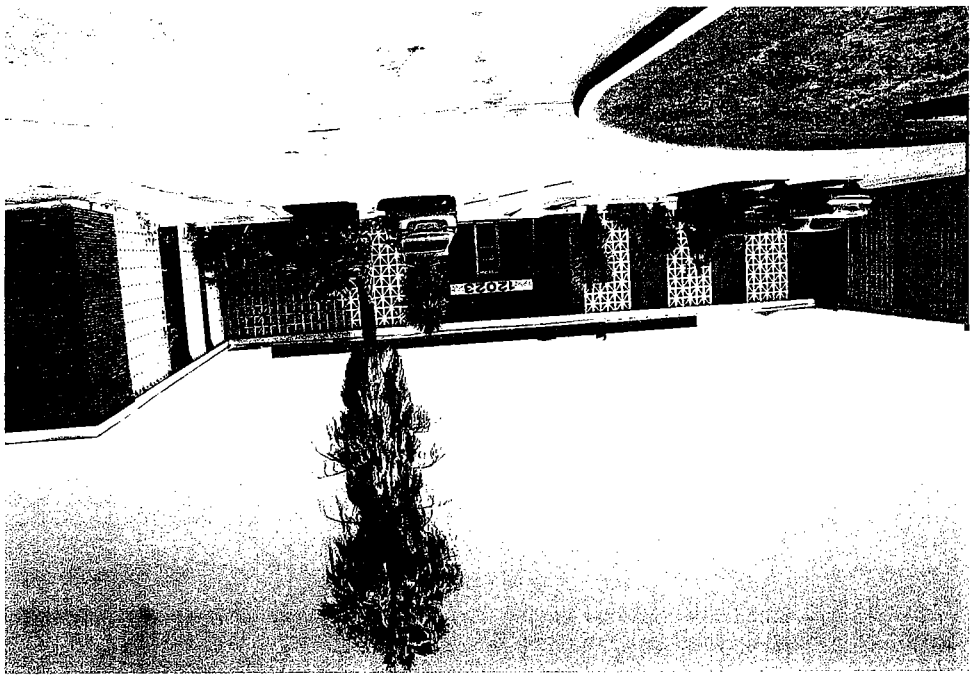
ASSESSOR'S MAP
COUNTY OF LOS ANGELES, CALIF.

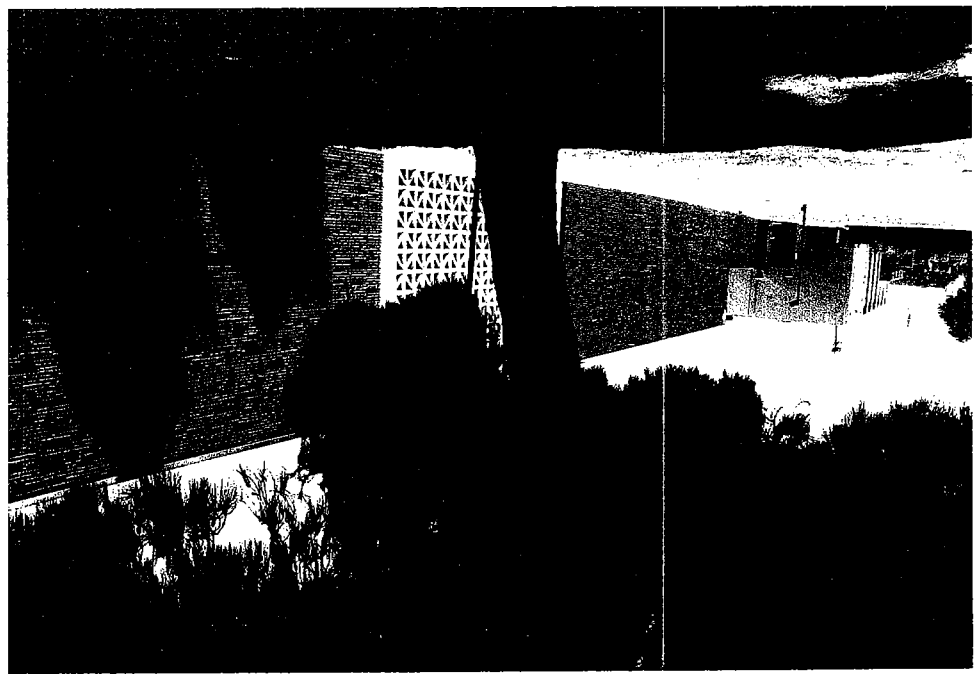
# APPENDIX B:

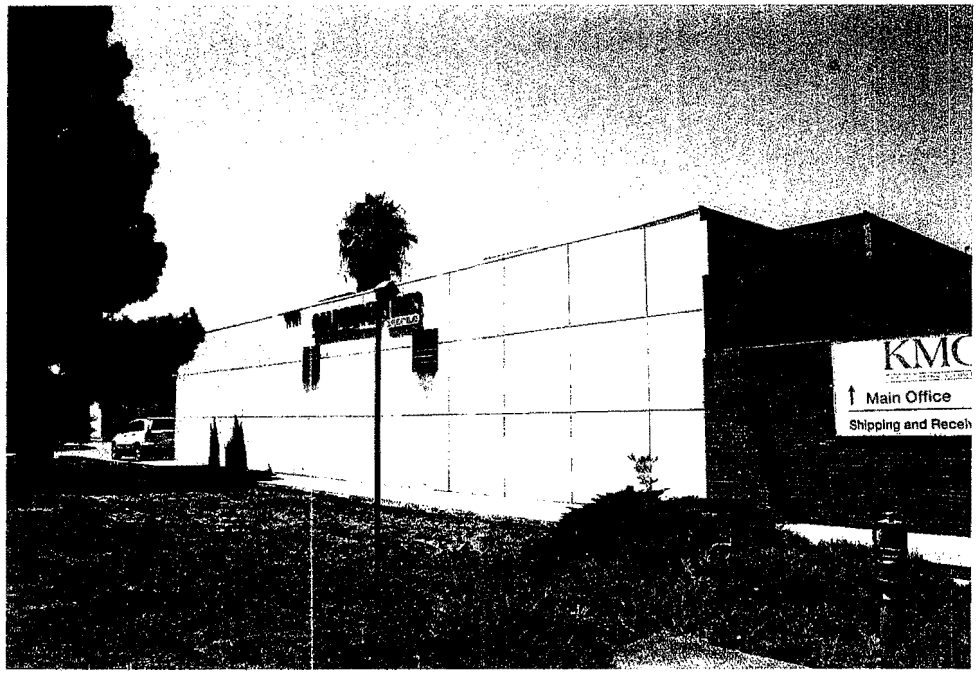
# SITE PHOTOGRAPHS

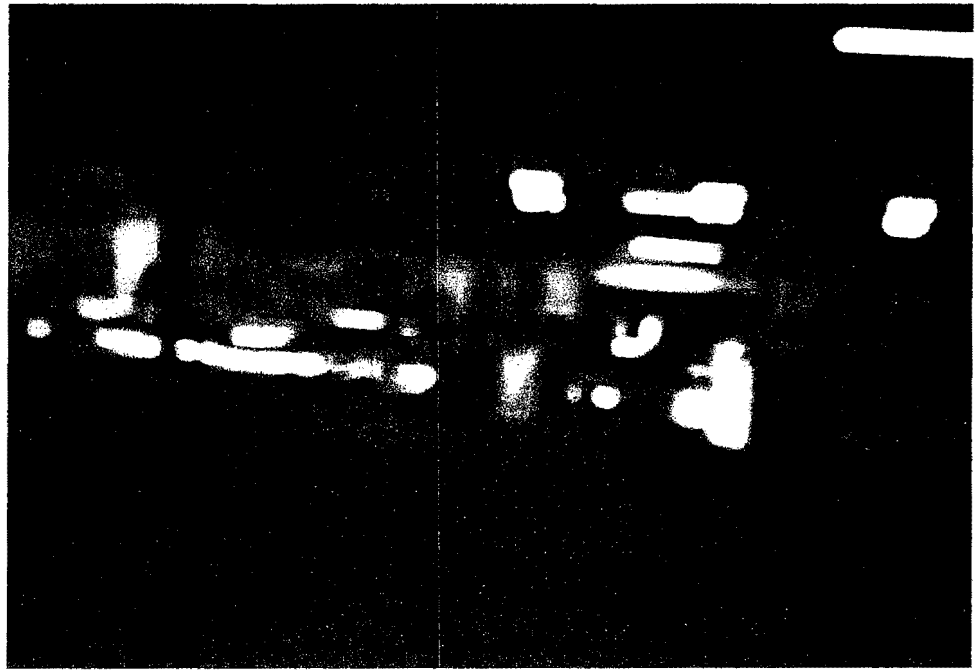

KIRKHILL

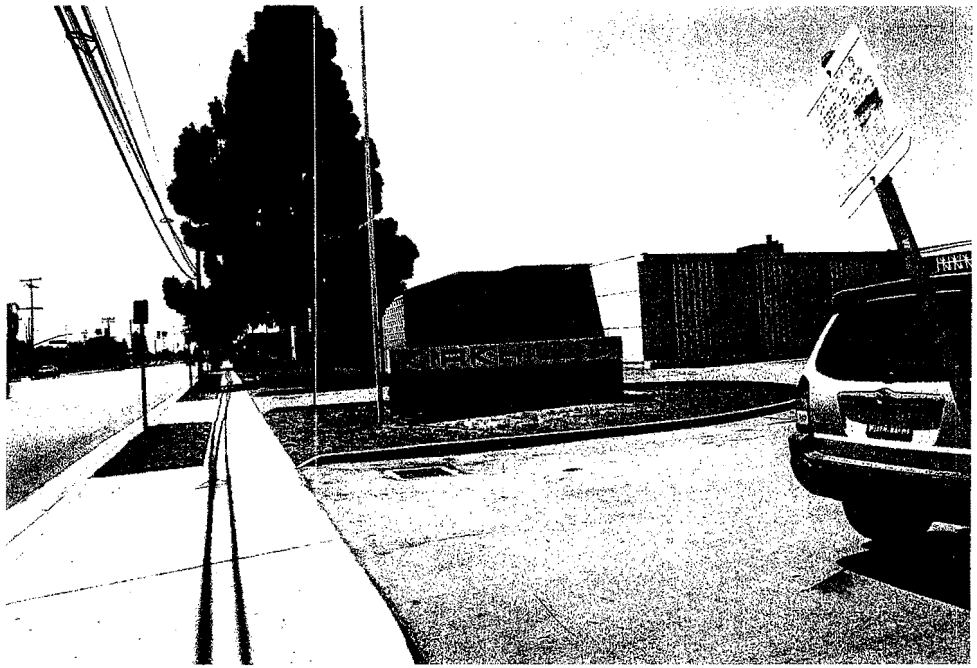


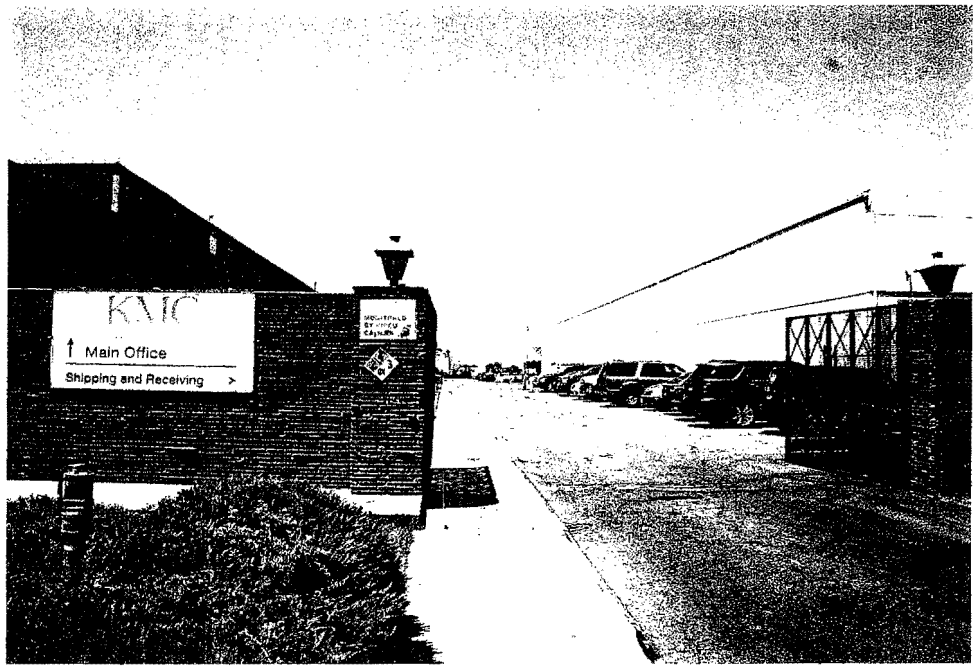


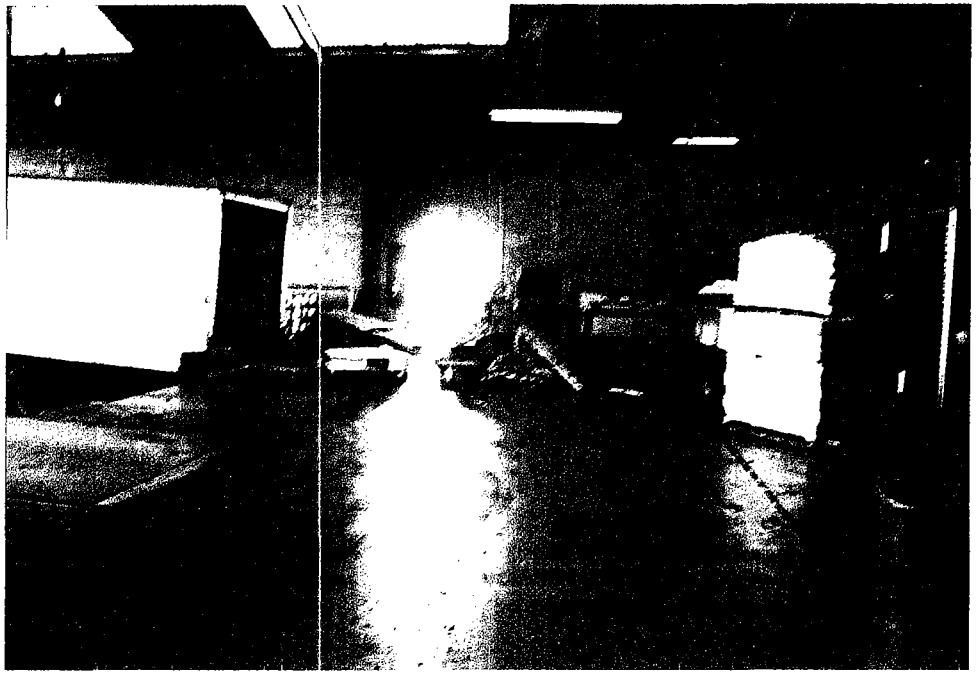


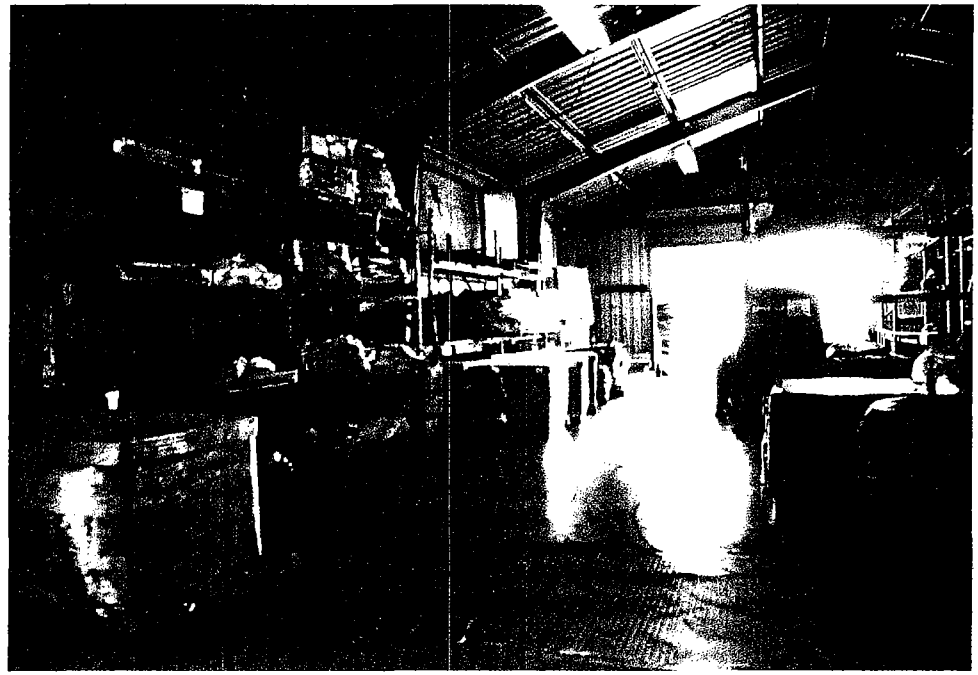

KMC
Main Office
Shipping and Receiv

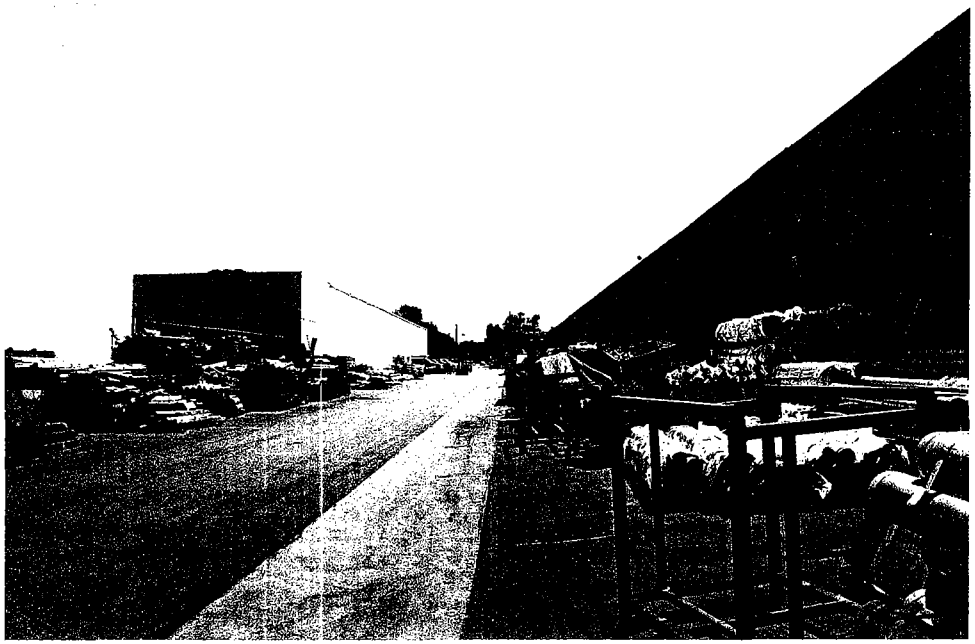


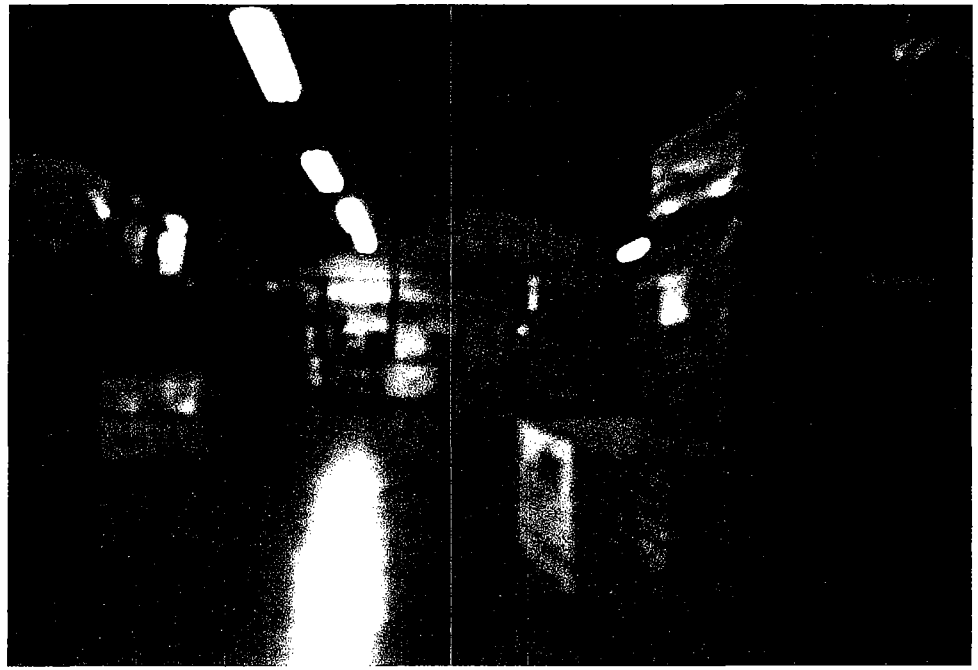


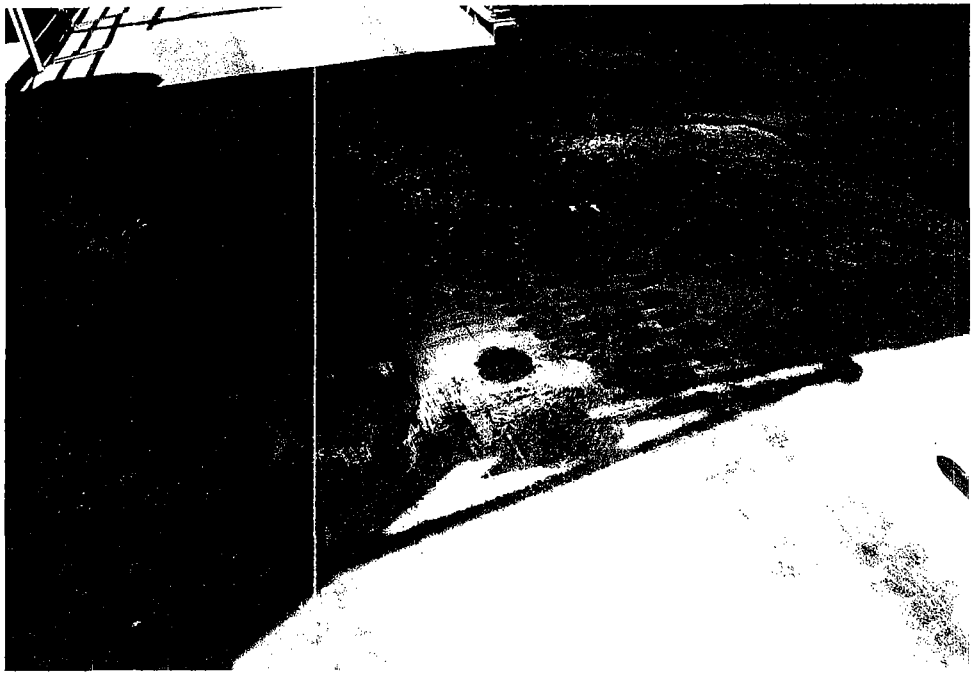

KMC
Main Office
Shipping and Receiving

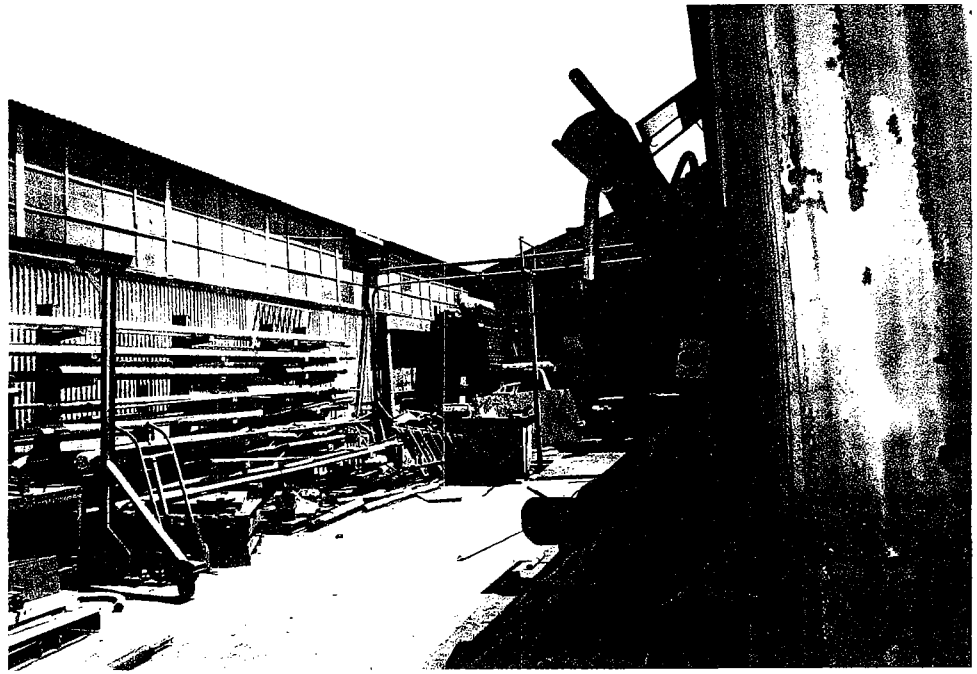


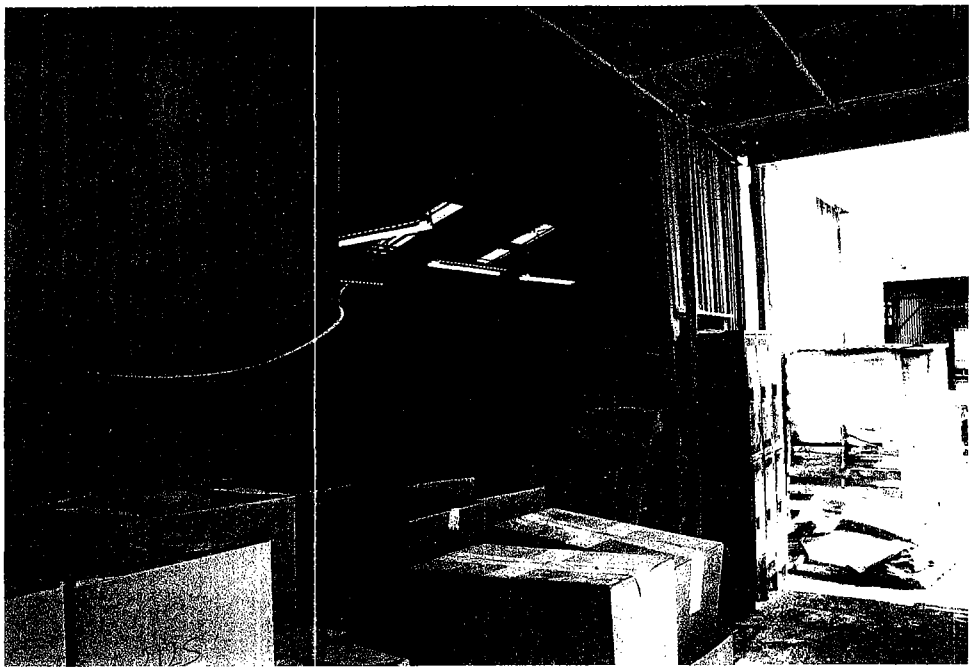


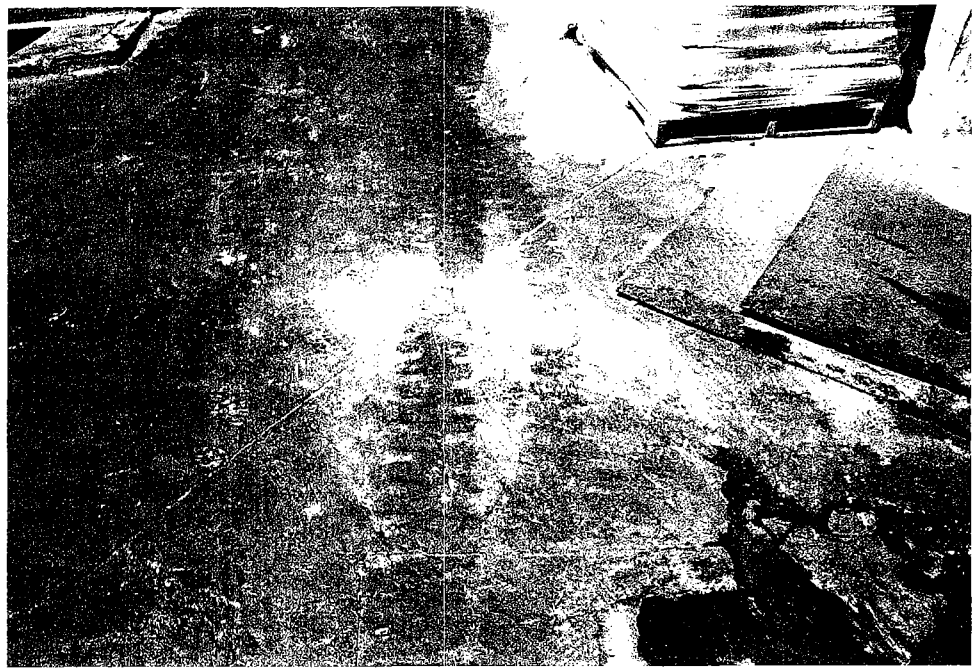


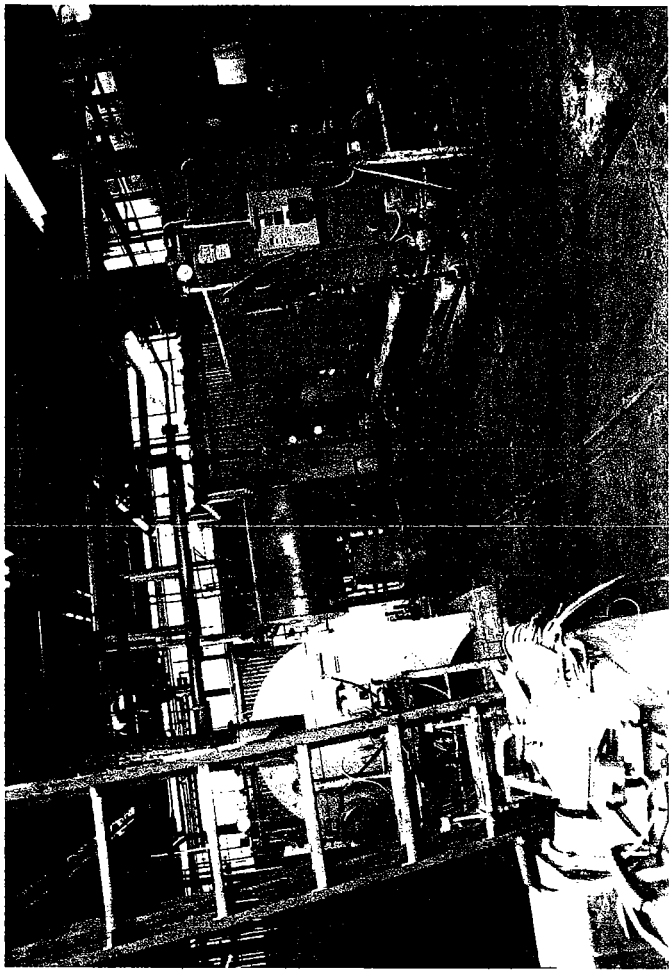






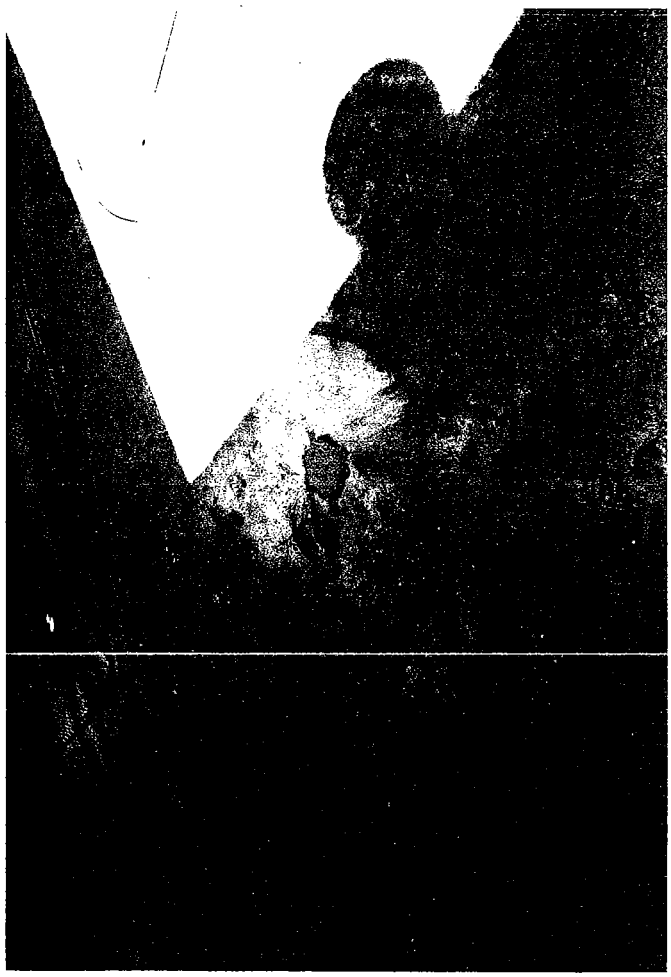


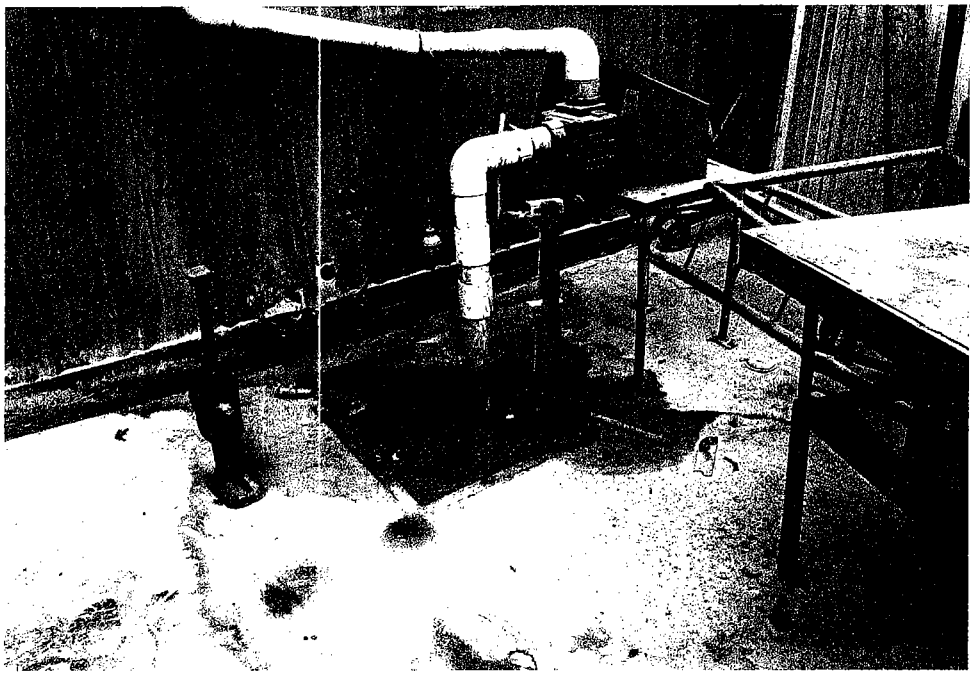


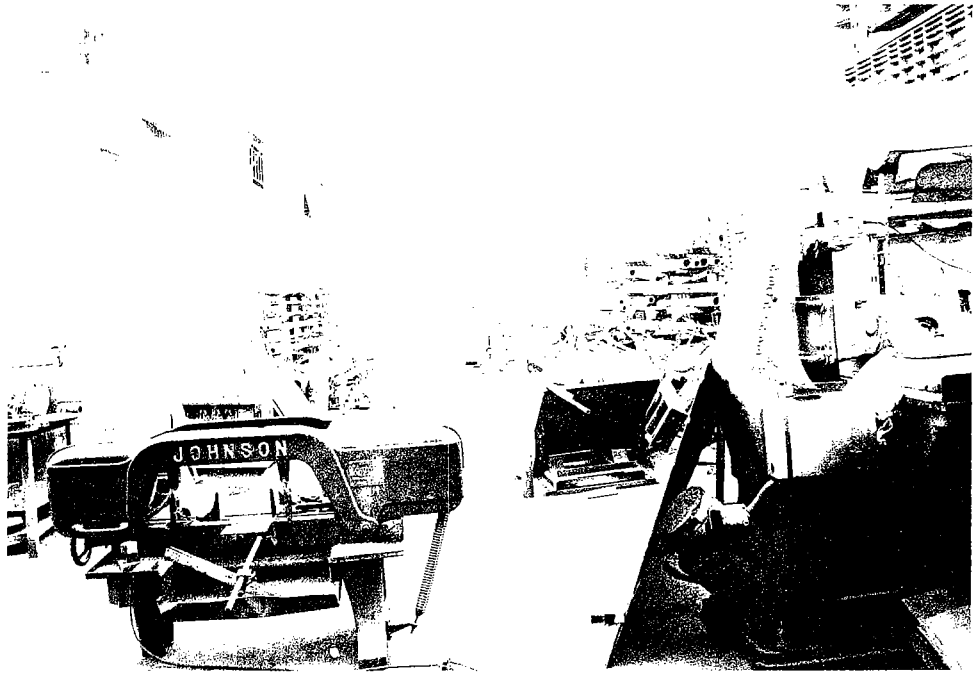


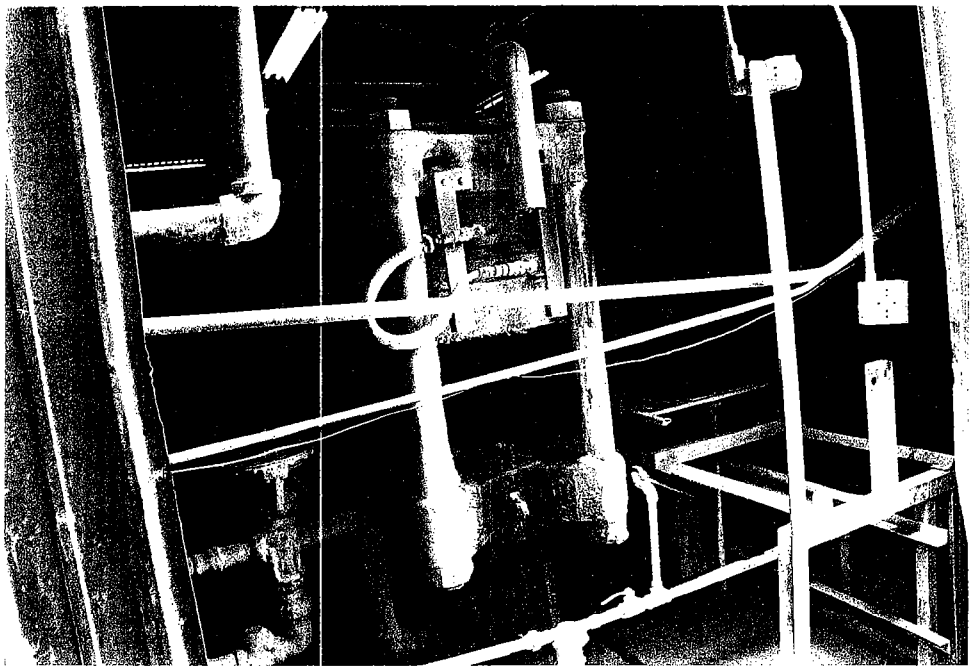




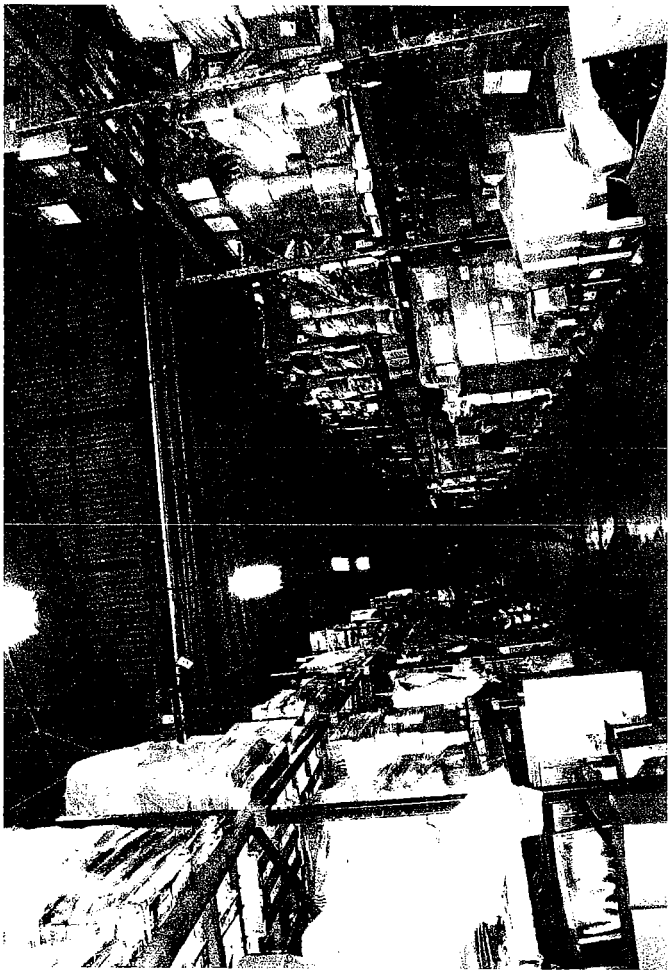


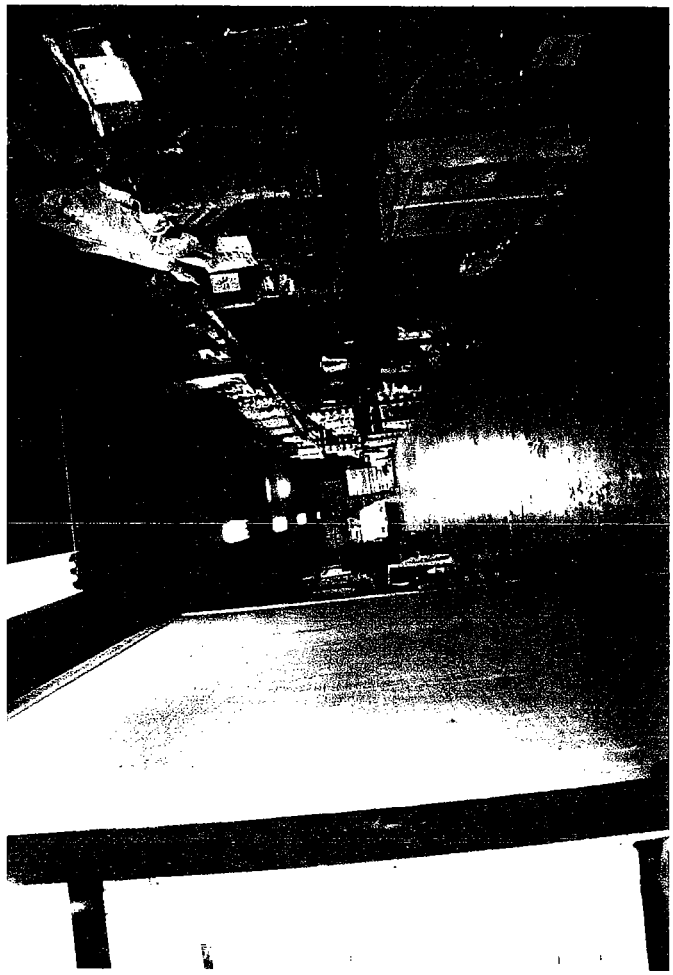


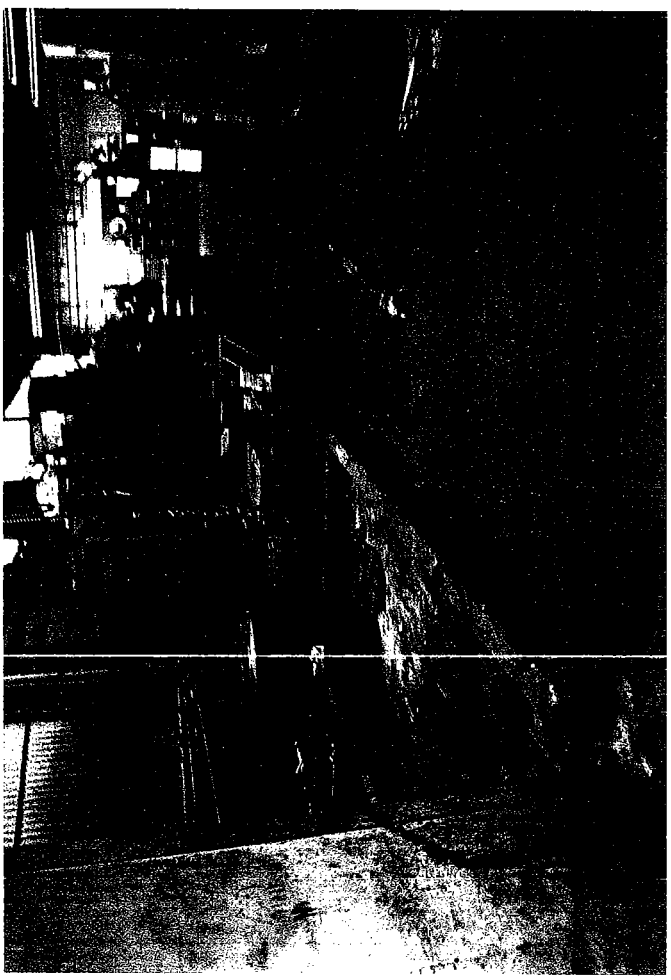

JOHNSON

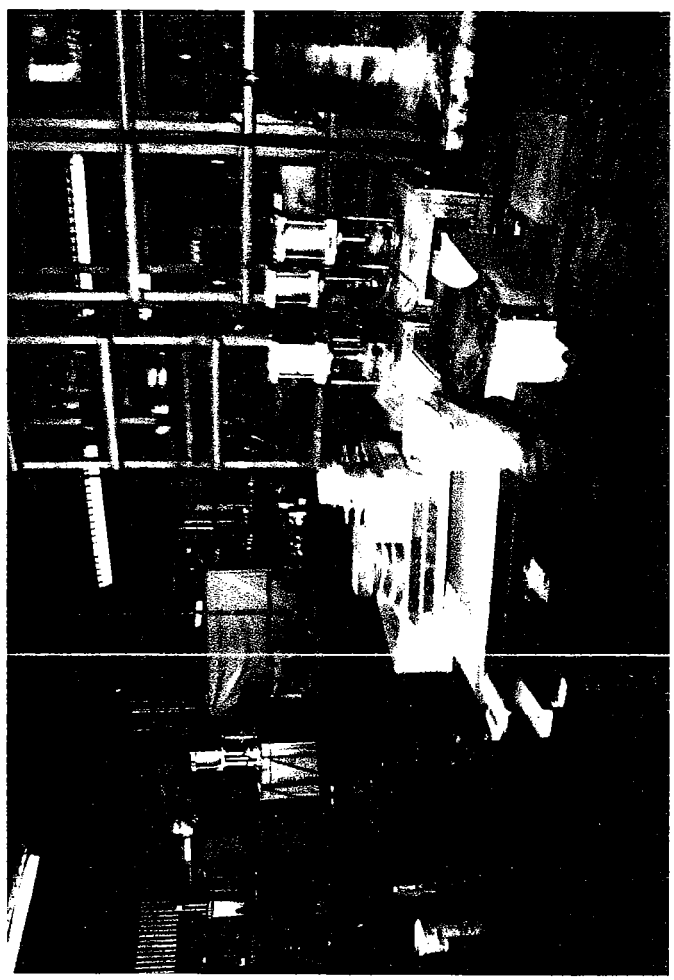








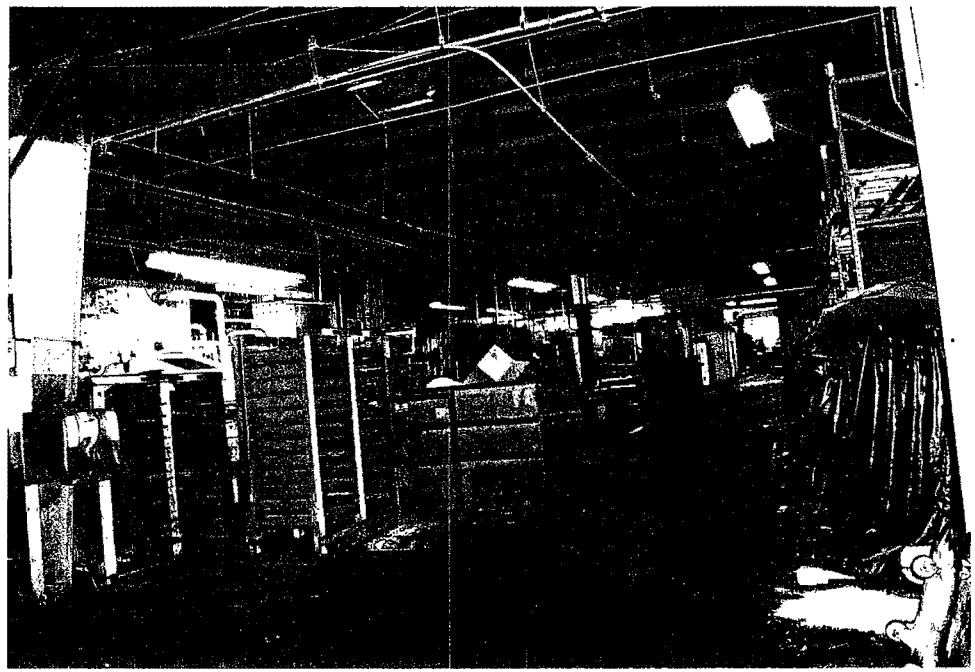


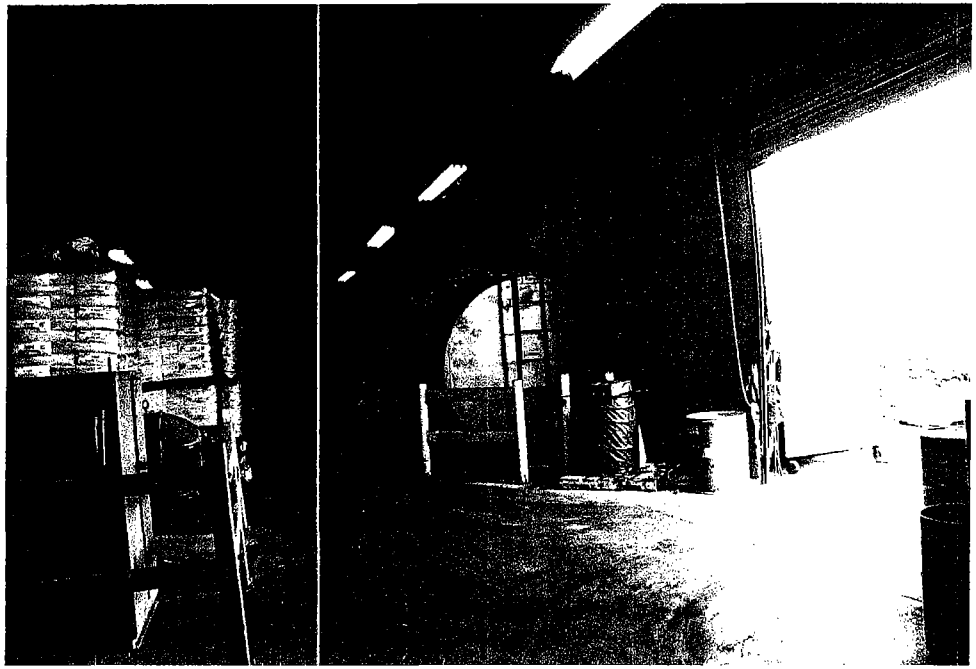


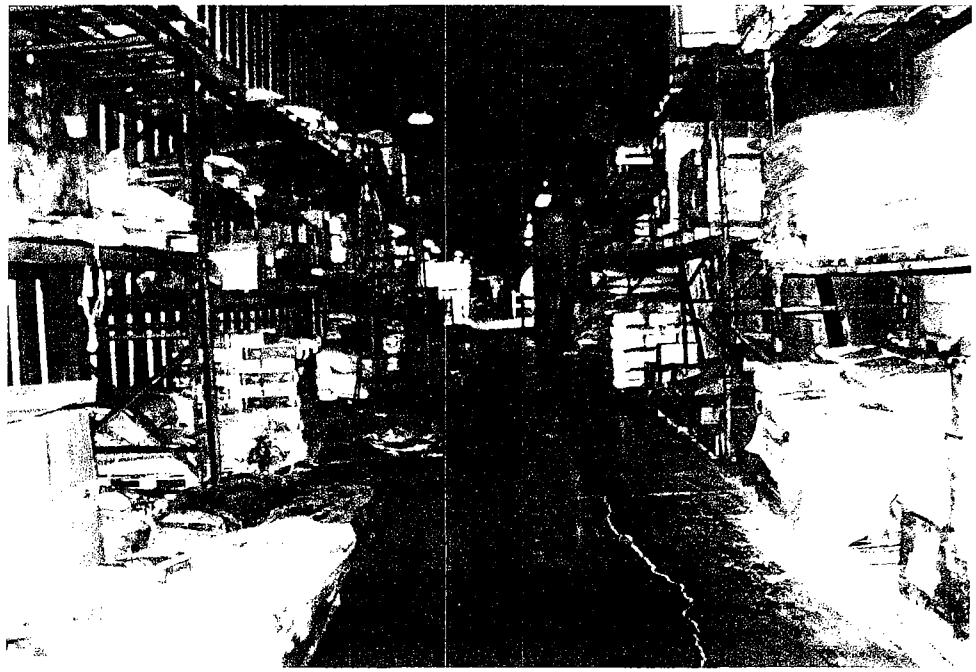


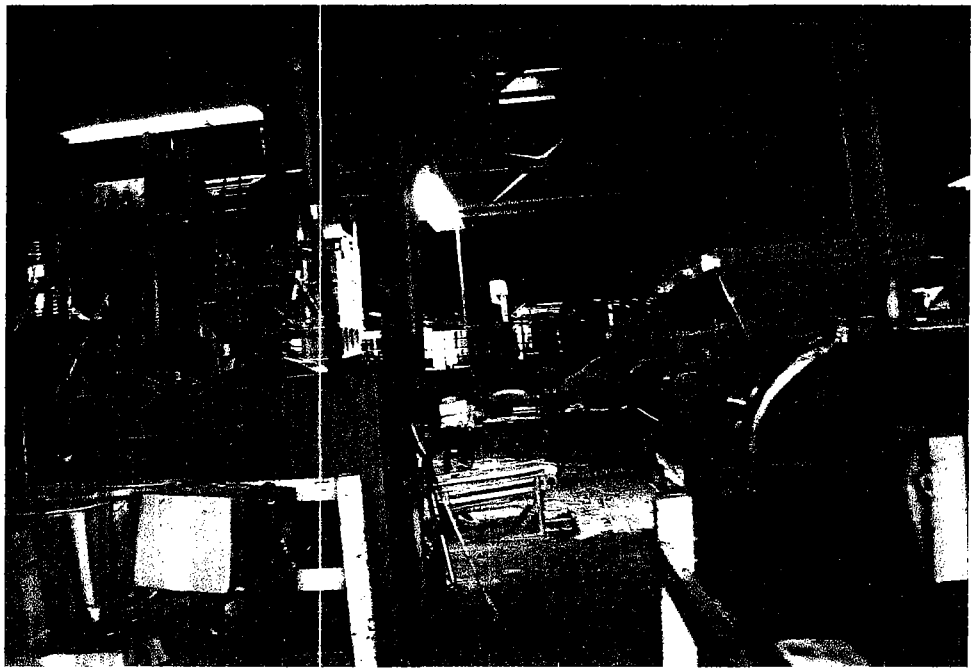


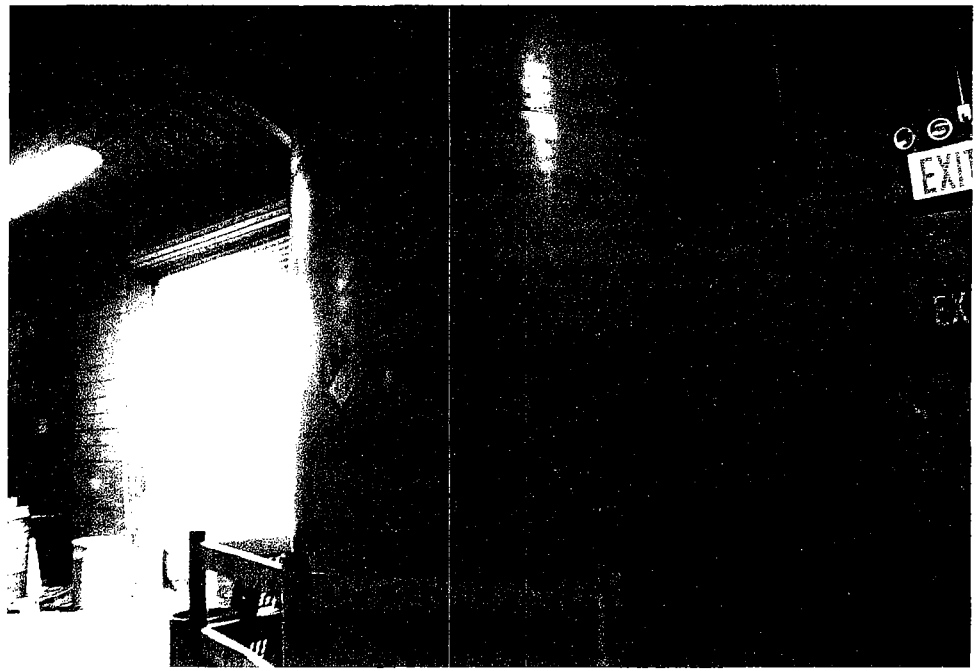


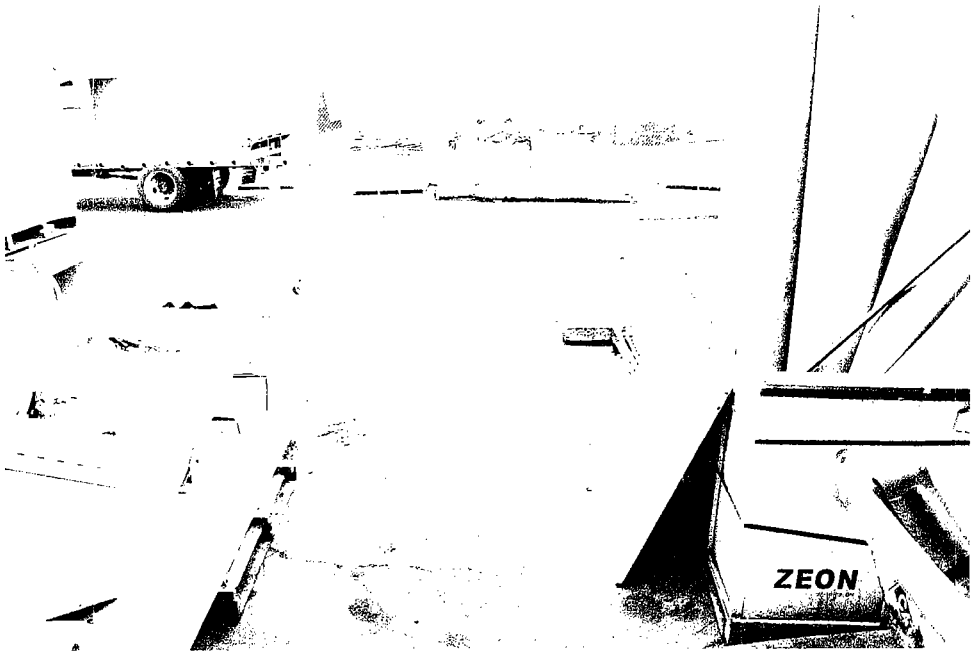


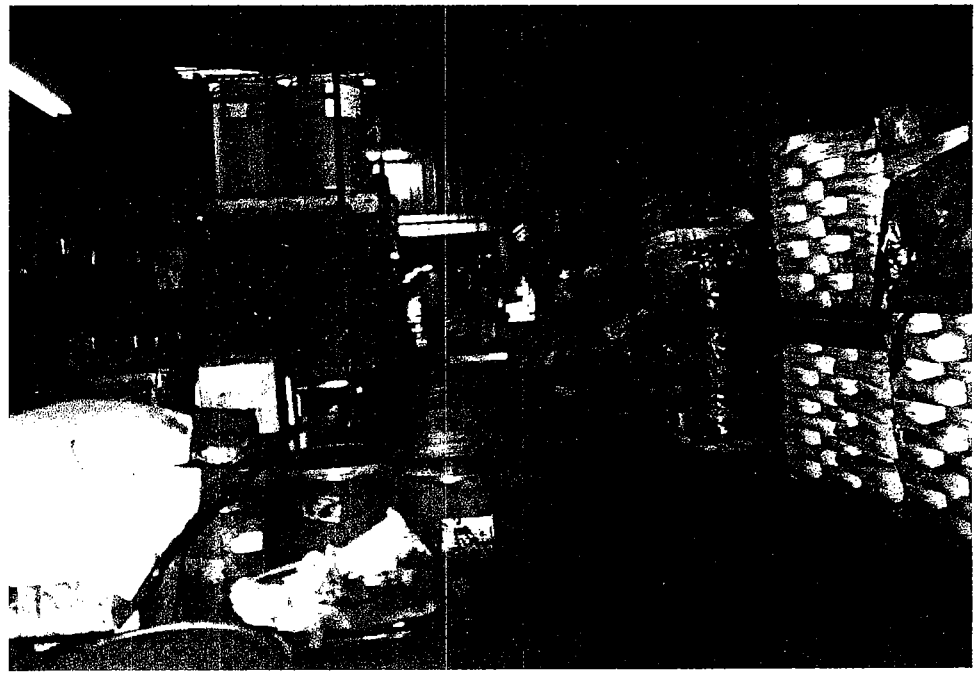






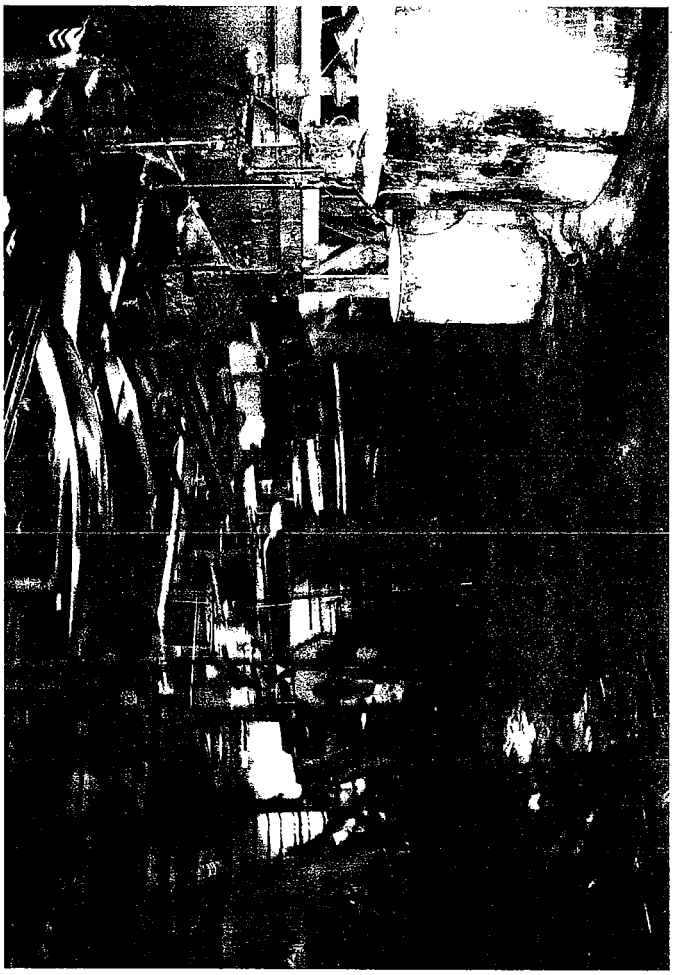

EXIT

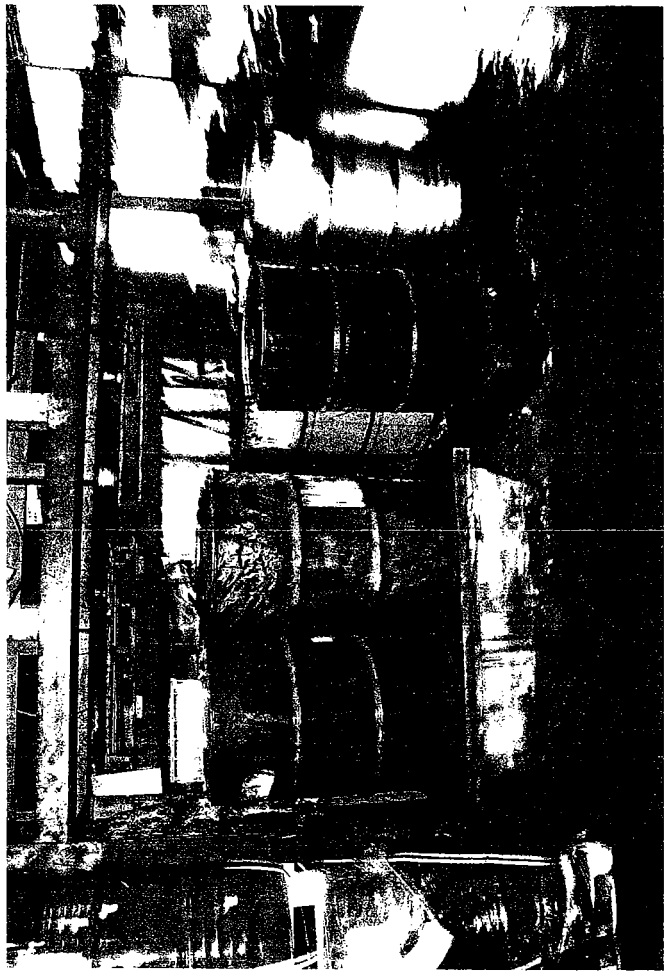

ZEON

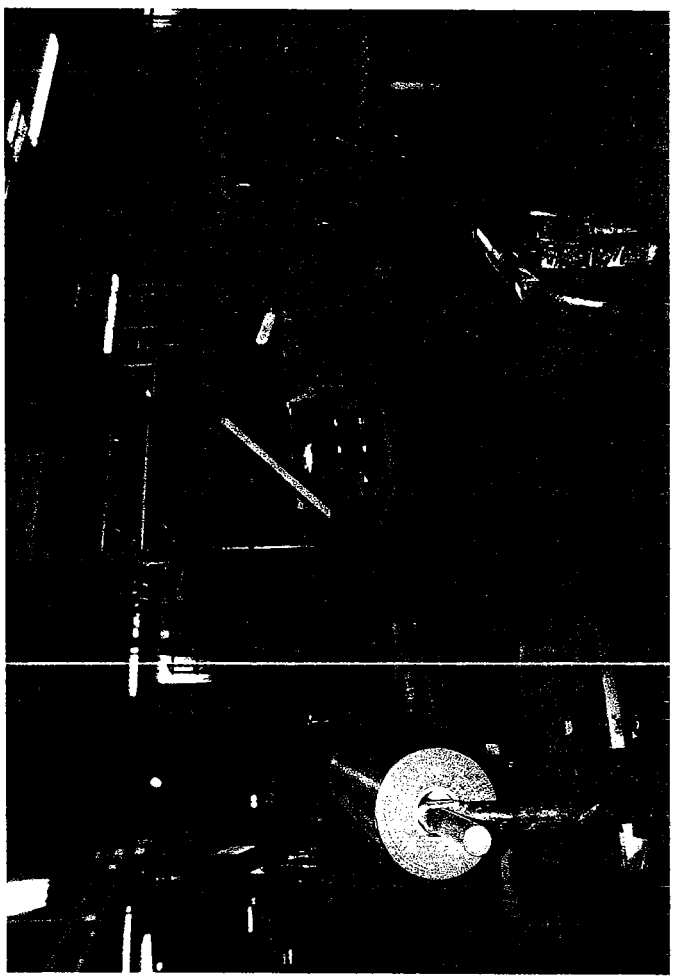


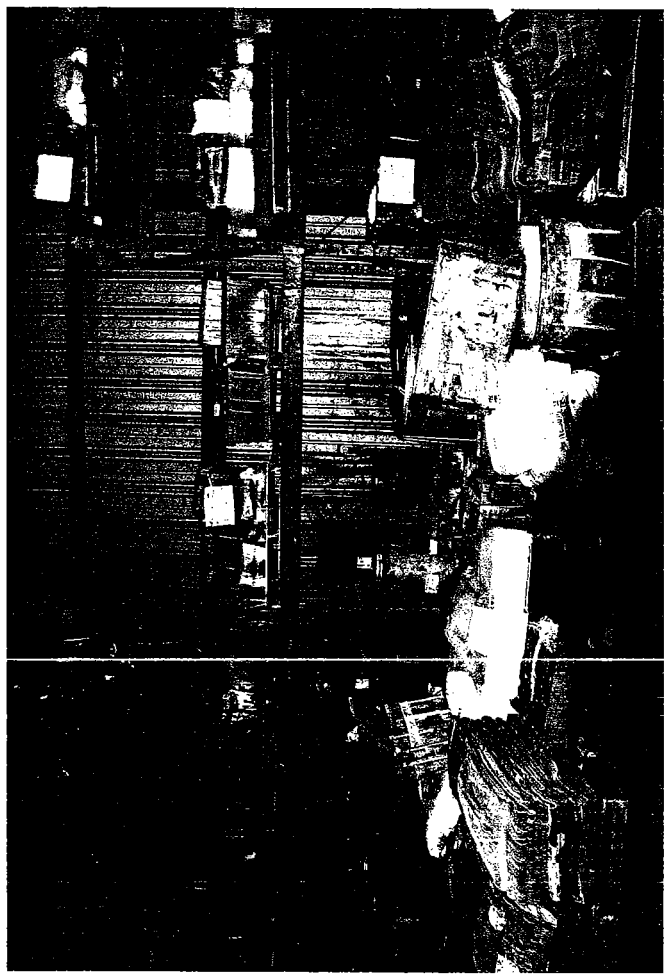


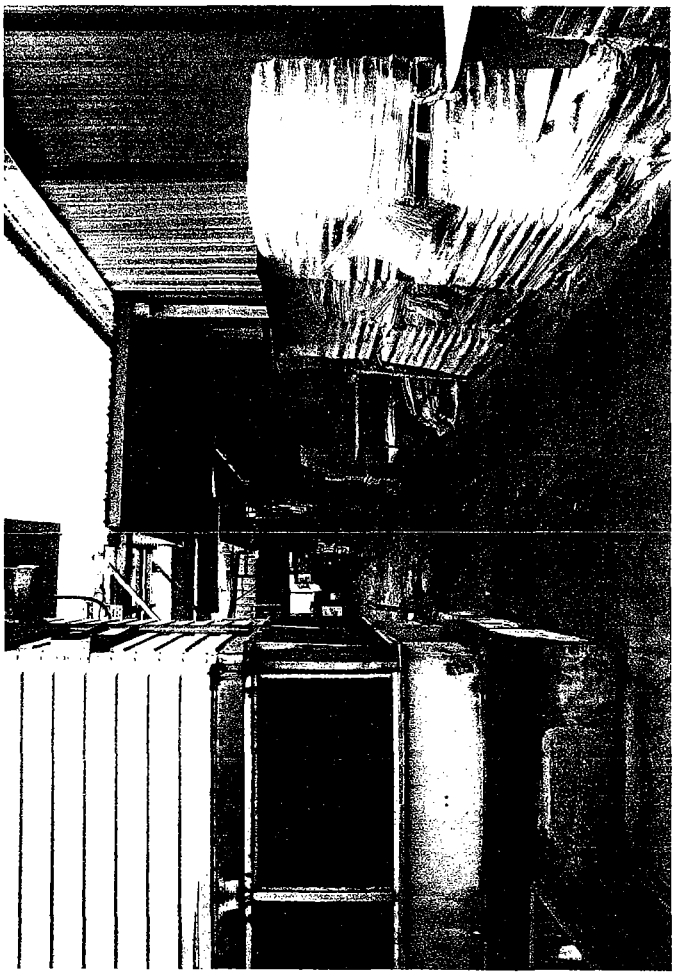


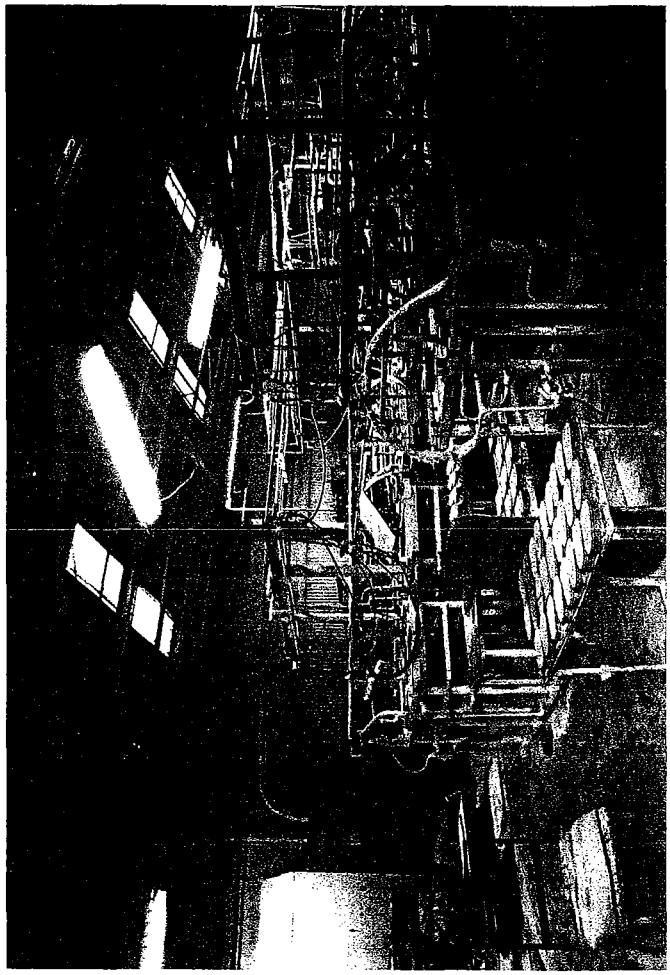


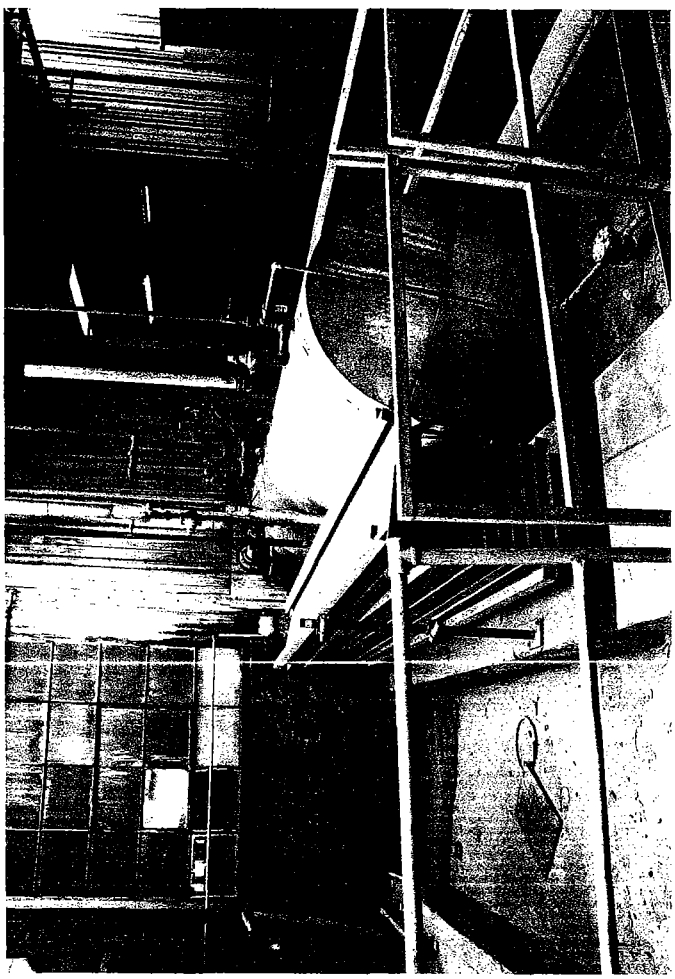


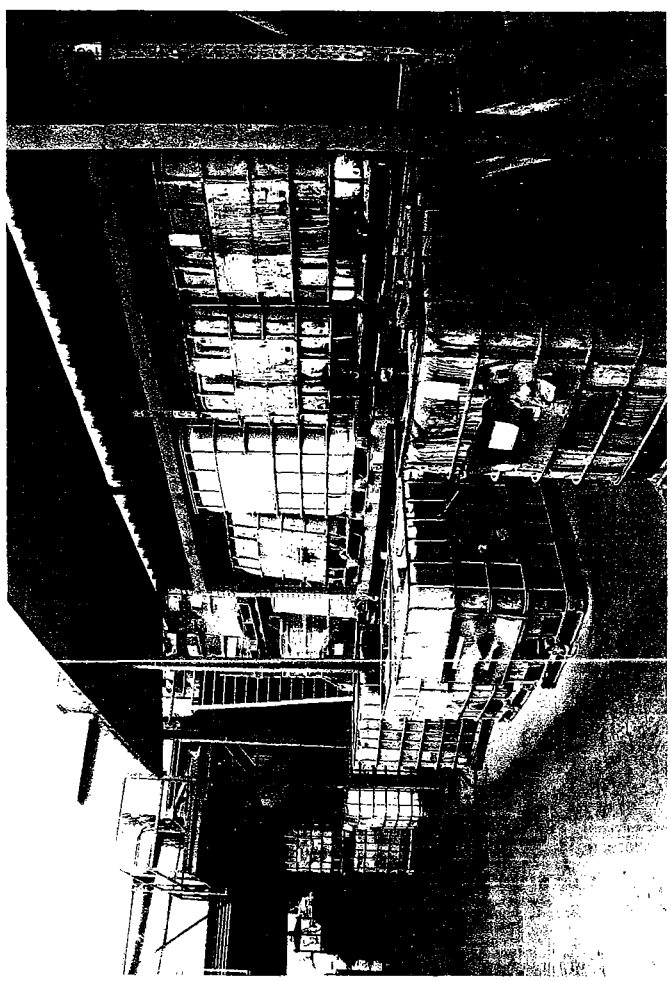


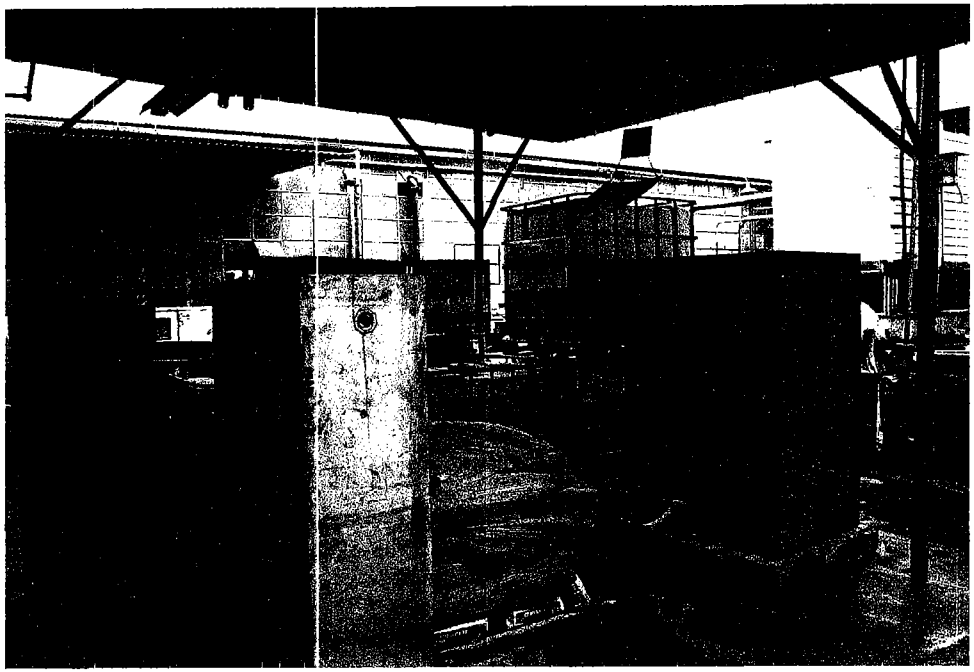


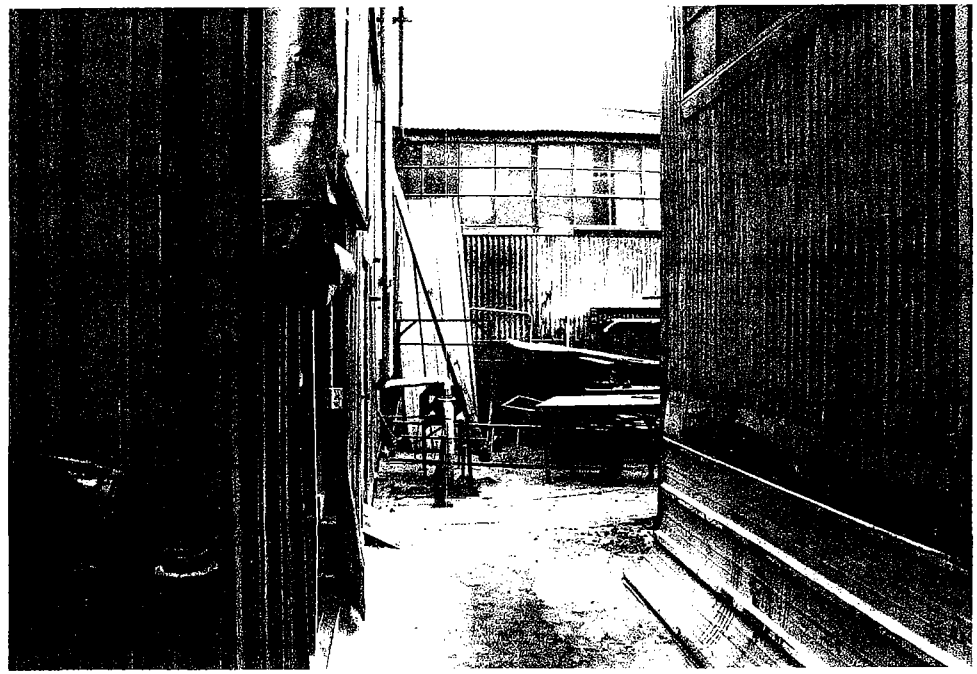


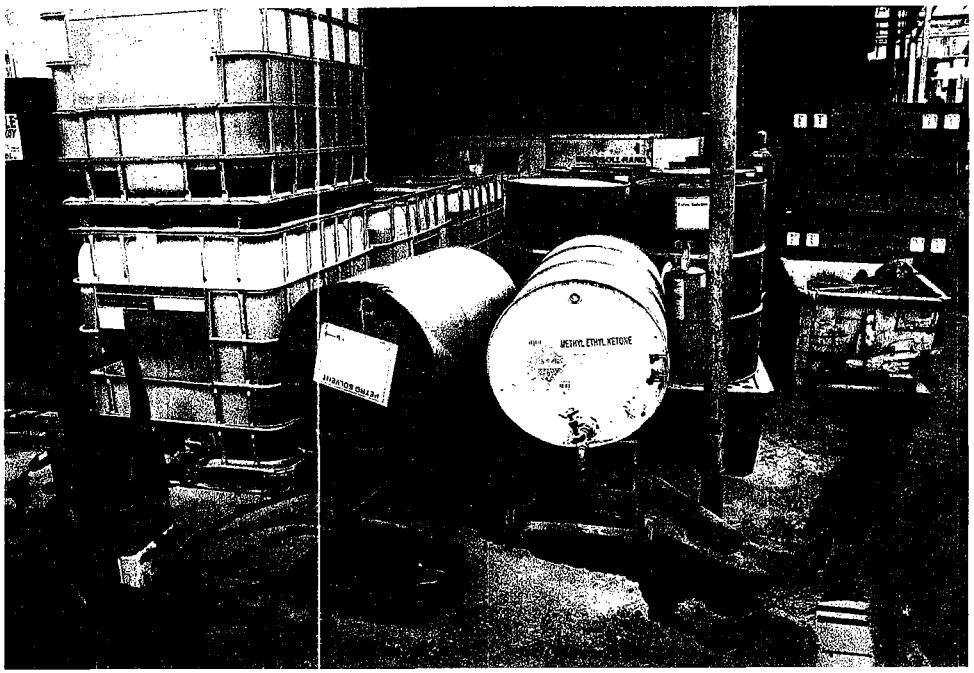


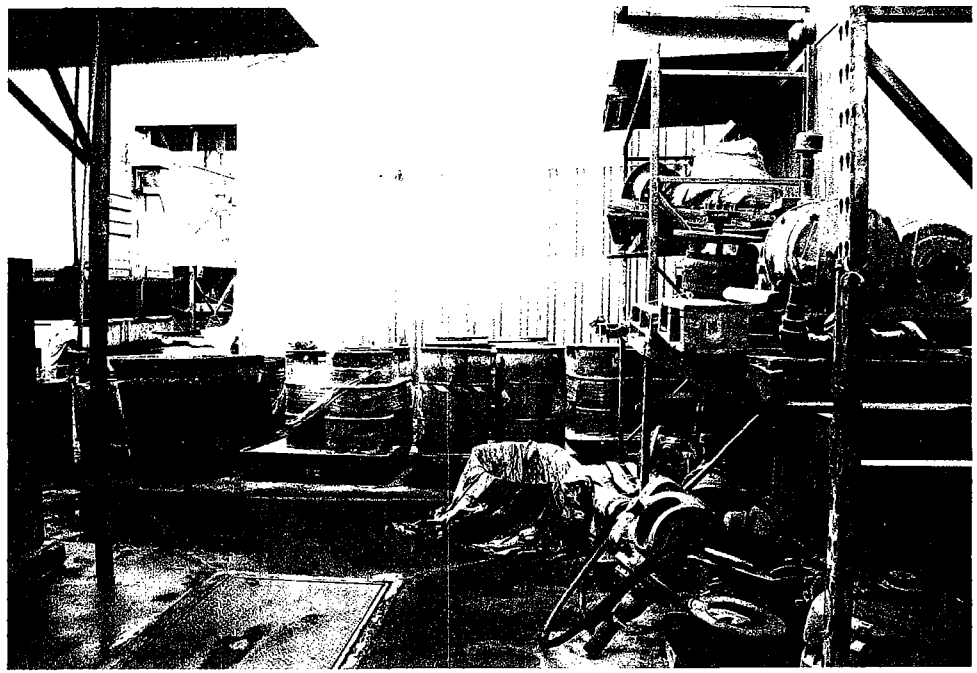


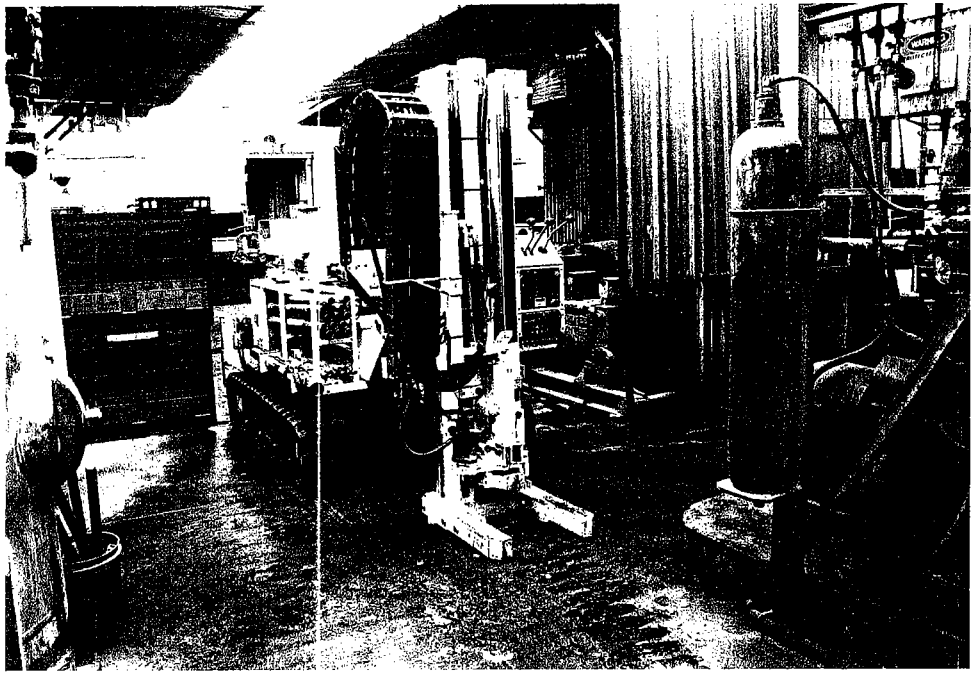


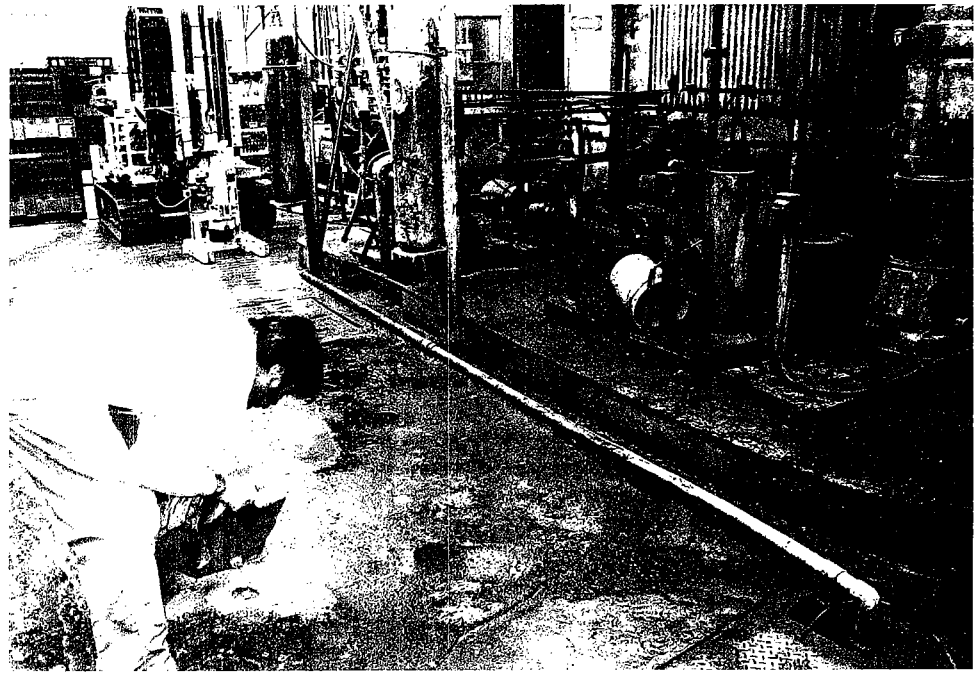


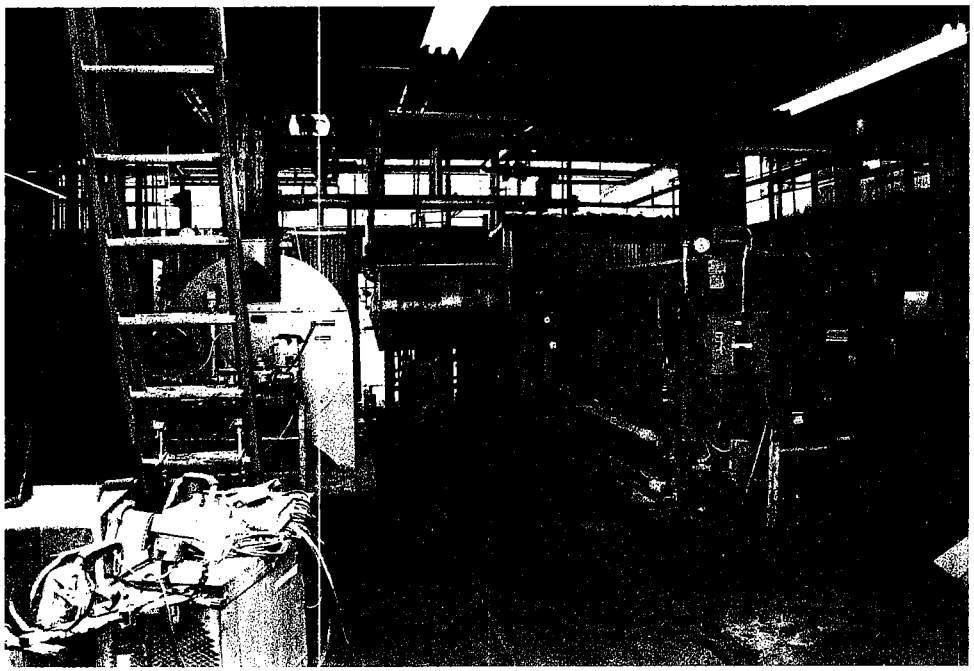


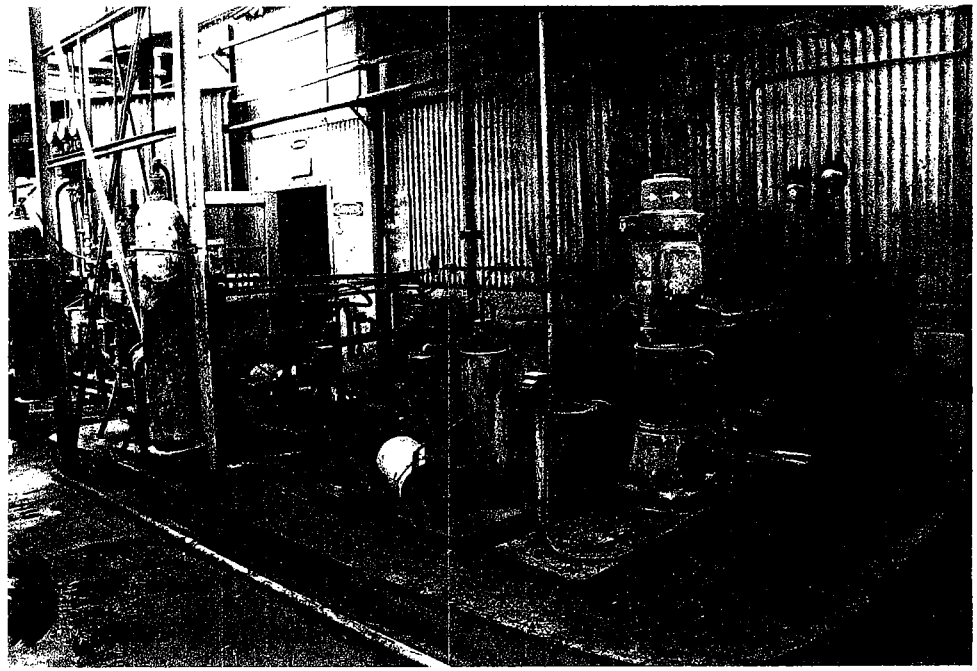

METHYL ETHYL KETONE











# APPENDIX C:

# COUNTY OF LOS ANGELES PERMIT RECORDS

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

August 6, 1992

IN REPLY PLEASE REFER TO FILE: I-12987

FINAL
VST
CLOSURE

Mr. Gary A. Riopelle
President and C. E. O.
Kirkhill, Inc.
P. O. Box 7012
Downey, CA 90241-0030

Dear Mr. Riopelle:

**HAZARDOUS MATERIALS UNDERGROUND STORAGE**
**SITE ASSESSMENT/REMEDIAL ACTION PLAN CLOSURE CERTIFICATION**
**FACILITY LOCATION: 12021 WOODRUFF AVENUE, DOWNEY**
**CLOSURE PERMIT NUMBER: 5999B**

This office has reviewed the final report submitted on August 5, 1992. Based on the information submitted, this letter confirms the completion of site investigation and remedial action at the above site. With the provision that the information provided to this agency was accurate and representative of existing conditions, it is our position that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present or future operations at this site. Nor does it relieve you of the responsibility to clean up existing, additional or previously unidentified conditions at the site which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Additionally, be advised that changes in the present or proposed use of the site may require further site characterization and mitigation activity. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings or site usage.

Any questions regarding this matter should be directed to Ofori Amoah at (818) 458-3573.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

P. A. Proano

Pat A. Proano
Supervising Civil Engineer II
Waste Management Division

OKA:rm
WP/12987-1

cc: California Regional Water Quality Control Board
Tank Protect Engineering

August 6, 1992

TO: Dave Yamahara

FROM: Pat Proano

**CHRONOLOGICAL SUMMARY OF SITE ACTIVITIES**
**KIRKILL, INC.**
**12021 WOODRUFF AVENUE, DOWNEY**

The following represents a summary of the events that have taken place for File I-12987:

| | |
|---|---|
| 9/13/86 | Tank integrity tests by Cal Tank Testing (10,000 gallon (naphthenic) oil tank failed the test). |
| 10/10/86 | The Hazardous Materials Underground Storage Permit (HUMSP) No. 4735 was applied for which documented one 10,000 gallon (naphthenic) processing oil tank, two 10,000 gallon diesel tanks and one 7,500 gallon diesel tank. |
| 6/12/87 | The deadline for the leak detection proposal (LDP) and the tank monitoring proposal (TMP) was set for September 14, 1987. |
| 9/18/87 | A letter was received proposing LDP/TMP. A detailed proposal was not submitted. |
| 9/22/87 | A County letter was sent disapproving of the interim monitoring plan. |
| 10/23/87 | A formal interim monitoring plan was submitted by Kirkill, Inc. |
| 11/23/87 | A County letter was sent conditionally approving the interim monitoring plan. The deadline was set for an application for tank closure by August 1, 1989, or the deadline was set for the LDP/TMP by July 1, 1989. |
| 11/24/87 | Tank integrity tests were received from Kirkill, Inc. All the tanks passed the test. |
| 8/9/89 | Closure Permit No. 5999B was pulled for three 10,000 gallon tanks (tank removal). Closure Permit No. 6000B was pulled for the 7,500 gallon tank (closure in place). |

| | |
|---|---|
| 8/24/89 | A County Inspector's Report was prepared after the tank removal occurred. Visual evidence of contamination was noted. |
| 12/11/89 | An incomplete Tank Closure Report was received from Tank Protect Engineering (TPE). Remedial excavation work was performed without written permission from the County. |
| 2/28/90 | An additional Tank Closure Report was received from TPE. Treatment was performed on the excavated soil, and the soil was backfilled in the open holes without written approval from the County. The treatment method utilized (hydrogen peroxide) by TPE did not appear to be an accepted technology according to the technologies investigated by the State Department of Health Services, Alternative Technology Section. It was reported that approximately 72 cubic yards of soil was hauled off-site for disposal. |
| 4/11/90 | A County Notice of Responsibility for Reimbursement letter was sent to Kirkill, Inc. |
| 5/17/90 | A County letter was sent requesting additional information to aid in the review process. |
| 6/22/90 | A report was received from TPE addressing the issues raised in the County letter dated May 17, 1990. |
| 7/30/90 | Additional cross-sections and plot plans were received from TPE. |
| 8/7/90 | A Health and Safety Plan along with manifests were received from TPE. This information was requested in the County letter dated May 17, 1990. |
| 9/17/90 | Additional information was received from TPE. This submittal was in response to a meeting dated August 17, 1990. The requested information was originally stated in the County letter dated May 17, 1990. |

| | |
|---|---|
| 10/11/90 | A County letter was sent reiterating some of the requested information of the County letter dated May 17, 1990. |
| 10/29/90 | A submittal was received from TPE which addressed the items raised in the County letter dated October 11, 1990. |
| 12/3/90 | A County geologic review was prepared by Steve Lipshie recommending further site assessment work. |
| 12/11/90 | Calculations estimating the volume of excavated soil were received. |
| 12/12/90 | A County inspection was performed by Scott Small and Stephen Groner to evaluate the current site status. The excavations were backfilled and paved over. |
| 1/15/91 | A Site Assessment Proposal was received from TPE to drill four borings. |
| 2/14/91 | A County letter was sent conditionally approving of the Site Assessment Proposal. |
| 2/26/91 | A County inspection was performed by Dave Lobato who observed the drilling process. The drilling and sampling protocol appeared adequate. |
| 4/18/91 | A Site Assessment Report was received from TPE. The deepest boring was drilled 35 feet deep. Contamination was detected in boring CB-9 and CB-10 as deep as 35 feet. |
| 5/9/91 | A County letter was sent requiring additional site assessment work to define the extent of the detected contamination. |
| 7/2/91 | A Site Assessment Proposal was received from TPE. |
| 7/11/91 | A Site Assessment Proposal addendum was received from TPE. |
| 7/22/91 | A County letter was sent conditionally approving of the Site Assessment Proposal. |

8/15/91 A County inspection was performed by Dave Lobato who observed the drilling of CB-9A (one of five borings). The Inspection Report did not mention inadequate drilling or sampling protocol. Four borings had been drilled prior to Dave Lobato arriving at the site.

11/1/91 HMUSP No. 4735B was renewed.

11/4/91 A Site Assessment Report was received from TPE. The deepest boring was drilled 50 feet deep. Lesser amounts of contamination were detected in each boring (<100 ppm) as deep as 45 feet. Contamination as high as 315 ppm was detected in boring CB-11.

12/4/91 A County letter was sent requiring further site assessment work and a Remedial Action Proposal to mitigate the existing contamination.

2/10/92 An inadequate Site Assessment Proposal was received from TPE.

3/9/92 A County letter was sent disapproving of the Site Assessment Proposal to drill one boring. The proposed boring would not have adequately defined the extent of the contamination.

8/5/92 A Final Confirmation Boring Report was received from TPE. Two borings were drilled to 30 feet. A total of 12 soil samples were collected and analyzed for the two borings drilled. Sample FB2 at 25 feet showed a TRPH concentration of 91 ppm. BTEX and PAHs concentration were nondetectable. Boring FB1 was provided. Soil disposal manifest was not provided. A TRPH concentration of 852 ppm of petroleum distillate previously discovered will be left in place, based on leading potential analyses. Risk assessment was not conducted.

SS:ts
WP/12987.MEM

Official Registration Form

**California Water Resources Control Board**

# Hazardous Substance Storage Statement

1985

**Who Must File:** Each person storing hazardous substances in any underground container must file this form no later than July 1, 1984 (After October 1, 1984 and no later than January 1, 1985 for tanks used on farms).

**Definition of Underground Containers:** The law applies to "concrete sumps, nonvaulted buried tanks or other underground containers." (Water Code section 13173) All containers, including earthen walled pits, ponds, lagoons and sumps, that are below the normal ground surface level must register. A tank sitting on the ground is not included. Containers partially beneath the surface are included. Lined or unlined pits, ponds and lagoons are covered if earth has been removed from the storage area to construct the facility. Normal grading is not considered construction below ground level.

**Definition of Hazardous Substance:** Any substance listed in Section 6382 of the Labor Code or in Section 25316 of the Health and Safety Code. This includes: gasoline, diesel fuel, all industrial solvents, pesticides, herbicides and fumigants. If the material must be carried by a registered hauler, disposed of at a hazardous waste site, is explosive, generates pressure due to heat or decomposition or would harm humans or wildlife you must register the tank. Wastes are included.

**Fee:** For each tank registered a $10 fee must be paid, except that retail gasoline stations pay $5 per tank.

**Penalties:** For failure to file, the penalty is $500-$5,000 per day. If you falsify information, you can be fined up to $20,000 for each day the information is incorrect and has not been corrected.

**Confidentiality:** If you have information protected by trade secret laws, please attach a list of the information on this form that is confidential and the justification for confidentiality, including specific citations of relevant statutory and case law.

**Multiple Containers:** Fill I and II on one form and leave it blank on all the remaining forms. Attach all forms together securely. If you own more than 50 tanks you can file information on computer tape. Call 916/324-1262 for information.

**This is not a Permit Application.** All Underground Tanks will be subject to local regulation. Some jurisdictions have already begun programs. Check with your local county government for further information.

**NOTE: ALL UNDERGROUND CONTAINERS MUST REGISTER EVEN IF STATE AND/OR LOCAL PERMITS ARE IN FORCE.**

## I Owner

| Name (Corporation, Individual or Public Agency) | | | |
|---|---|---|---|
| KIRKHILL, INC. | | | |
| **Street Address** | **City** | **State** | **ZIP** |
| 12021 Woodruff Avenue | Downey | CA | 90241 |

## II Facility

| Facility Name | Dealer/Foreman/Supervisor | | |
|---|---|---|---|
| Same | | | |
| **Street Address** | | **Nearest Cross Street** | |
| Same | | Washburn Road | |
| **City** | **County** | | **ZIP** |
| Same | Los Angeles | | |
| **Mailing Address** | **City** | **State** | **ZIP** |
| Same | | | |

Phone w/area code: (213) 803-3421

Type of Business: ☐ 01 Motor Vehicle Fuel Station ☒ 02 Other: Rubber Goods-Manufacture

| Number of Tanks at this Facility | Rural Areas Only: | Township | Range | Section |
|---|---|---|---|---|
| 4 | | | | |

## III 24 Hour Emergency Contact Person

| *Days* Name (last name first) and Phone w/area code | *Nights* Name (last name first) and Phone w/area code |
|---|---|
| Johnson, Sidnor A. (213) 803-3421 | Davis, David (213) 861-5891 |

**COMPLETE THE FOLLOWING ON A SEPARATE FORM FOR EACH CONTAINER**

## IV Description

A. ☒ 01 Tank ☐ 02 Sump ☐ 03 Lagoon, Pit or Pond ☐ 04 Other: _____ **Container Number** (If there is no number, assign one): 1

B. Manufacturer (if appropriate): _____ Year of Mfg.: _____ C. Year Installed: 1967 ☐ Unknown

D. Container Capacity: 10M gallons ☐ Unknown E. Container Repairs: ☒ 01 None ☐ 02 Unknown ☐ 03 Yes Year: _____

F. Is Container currently used? ☒ 01 Yes ☐ 02 No If No, year of last use: _____ ☐ 03 Unknown

G. Does the Container Store (Check One): ☐ 01 Waste ☒ 02 Product

H. Does the Container Store Motor Vehicle Fuel or Waste Oil? ☐ 01 Yes ☒ 02 No If Yes, Check appropriate box(es):

☐ 01 Unleaded ☐ 02 Regular ☐ 03 Premium ☐ 04 Diesel ☐ 05 Waste Oil ☐ 06 Other (List): _____

## V Container Construction

A. Thickness of Primary Containment: _____ ☐ Gauge ☐ Inches ☐ cm ☒ Unknown

B. ☐ 01 Vaulted (Located in an underground Vault.) ☒ 02 Non-vaulted ☐ 03 Unknown

C. ☐ 01 Double Walled ☒ 02 Single Walled ☐ 03 Lined ☐ 04 Wrapped ☐ 05 Unknown ☐ 06 None

D. ☒ 01 Carbon Steel ☐ 02 Stainless Steel ☐ 03 Fiberglass ☐ 04 Polyvinyl Chloride ☐ 05 Concrete ☐ 06 Aluminum

☐ 07 Steel Clad ☐ 08 Bronze ☐ 09 Composite ☐ 10 Non-metallic ☐ 11 Earthen Walls

☐ 12 Unknown ☐ 13 Other: _____

E. ☐ 01 Rubber Lined ☐ 02 Alkyd Lining ☐ 03 Epoxy Lining ☐ 04 Phenolic Lining ☐ 05 Glass Lining ☐ 06 Clay Lining

☒ 07 Unlined ☐ 08 Unknown ☐ 09 Other: _____

F. ☐ 01 Polyethlene Wrap ☐ 02 Vinyl Wrapping ☐ 03 Cathodic Protection ☐ 04 Unknown ☒ 05 None ☐ 09 Other: _____

## VI Piping

| | | | | |
|---|---|---|---|---|
| A. Associated Piping: | ☒ 01 Above Ground | ☒ 02 Underground | ☐ 03 Vaulted | |
| B. Underground Piping: | ☐ 01 Gravity | ☐ 02 Pressure | ☒ 03 Suction | ☐ 04 Unknown |
| C. Piping Repairs: | ☐ 01 None | ☐ 02 Unknown | ☒ 03 Yes, Year of most recent repair: 1985 | |

## VII Leak Detection

☒ 01 Visual ☒ 02 Stock Inventory ☐ 03 Tile Drain ☐ 04 Vapor Sniff Wells ☐ 05 Sensor Instrument

☐ 06 Ground Water Monitoring Wells ☐ 07 Pressure Test ☐ 08 Internal Inspection ☐ 09 None

☐ 10 Other: _____

## VIII Chemical Composition of Materials *Currently* or *Previously* Stored in Underground Containers

If you checked yes to IV-H you are not required to complete this section.

| currently stored | previously stored | CAS # (If known) | Chemical *Do Not Use Commercial Name* (Use additional paper for more room) |
|---|---|---|---|
| ☒ 01 | ☒ 02 | | Hydrocarbon Oils |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |

Is Container located on an Agricultural Farm? ☐ 01 Yes ☒ 02 No

## IX IMPORTANT! Read instructions before signing:

**Signature:** The form must be signed by 1) a principal executive officer at the level of vice-president or by an authorized representative. The representative must be responsible for the overall operation of the facility where the tank(s) are located. 2) a general partner proprietor, or 3) a principal executive officer, ranking elected official or authorized representative of a public agency.

This form has been completed under the penalty of perjury and, to the best of my knowledge, is true and correct.

| Signature | Date |
|---|---|
| Robert E. Harold | 7/19/85 |
| **Printed Name** | **Phone w/area code** |
| Robert E. Harold President | (213) 803-3421 |

**Send check to:** Hazardous Substance Storage Statement, State Water Re[illegible]us Control Board, P.O. Box 100, Sacramento, CA 95801-0100

| Person Filing Statement | Phone w/area code |
|---|---|
| Sidnor A. Johnson | (213) 803-3421 |

**For additional forms or more information call 916/324-1262**

## FOR STATE USE ONLY

| | | | | | |
|---|---|---|---|---|---|
| ID Number: | | Accounting No. | | [illegible] Number: | |
| Date Received | ☐ 01 | | ☐ 02 | | ☐ 03 |

Official Registration Form

**California Water Resources Control Board**

# Hazardous Substance Storage Statement

**Who Must File:** Each person storing hazardous substances in any underground container must file this form no later than July 1, 1984 (After October 1, 1984 and no later than January 1, 1985 for tanks used on farms).

**Definition of Underground Containers:** The law applies to "concrete sumps, nonvaulted buried tanks or other underground containers." (Water Code section 13173) All containers, including earthen walled pits, ponds, lagoons and sumps, that are below the normal ground surface level must register. A tank sitting on the ground is not included. Containers partially beneath the surface are included. Lined or unlined pits, ponds and lagoons are covered if earth has been removed from the storage area to construct the facility. Normal grading is not considered construction below ground level.

**Definition of Hazardous Substance:** Any substance listed in Section 6382 of the Labor Code or in Section 25316 of the Health and Safety Code. This includes: gasoline, diesel fuel, all industrial solvents, pesticides, herbicides and fumigants. If the material must be carried by a registered hauler, disposed of at a hazardous waste site, is explosive, generates pressure due to heat or decomposition or would harm humans or wildlife you must register the tank. Wastes are included.

**Fee:** For each tank registered a $10 fee must be paid, except that retail gasoline stations pay $5 per tank.

**Penalties:** For failure to file, the penalty is $500-$5,000 per day. If you falsify information, you can be fined up to $20,000 for each day the information is incorrect and has not been corrected.

**Confidentiality:** If you have information protected by trade secret laws, please attach a list of the information on this form that is confidential and the justification for confidentiality, including specific citations of relevant statutory and case law.

**Multiple Containers:** Fill I and II on one form and leave it blank on all the remaining forms. Attach all forms together securely. If you own more than 50 tanks you can file information on computer tape. Call 916/324-1262 for information.

**This is not a Permit Application.** All Underground Tanks will be subject to local regulation. Some jurisdictions have already begun programs. Check with your local county government for further information.

**NOTE: ALL UNDERGROUND CONTAINERS MUST REGISTER EVEN IF STATE AND/OR LOCAL PERMITS ARE IN FORCE.**

## I Owner

| Name (Corporation, Individual or Public Agency) | | | |
|---|---|---|---|
| Street Address | City | State | ZIP |
| | | | |

## II Facility

| Facility Name | | Dealer/Foreman/Supervisor | | |
|---|---|---|---|---|
| Street Address | | | Nearest Cross Street | |
| City | | County | | ZIP |
| Mailing Address | | City | State | ZIP |
| Phone w/area code | Type of Business<br>☐ 01 Motor Vehicle Fuel Station ☐ 02 Other: | | | |
| Number of Tanks at this Facility | **Rural Areas Only:** Township | Range | Section | |
| | | | | |

## III 24 Hour Emergency Contact Person

| *Days:* Name (last name first) and Phone w/area code | *Nights:* Name (last name first) and Phone w/area code |
|---|---|
| Johnson, Sidnor A. (213) 803-3421 | Davis, David (213) 861-5891 |

**COMPLETE THE FOLLOWING ON A SEPARATE FORM FOR EACH CONTAINER**

## IV Description

A. ☒ 01 Tank ☐ 02 Sump ☐ 03 Lagoon, Pit or Pond ☐ 04 Other: _____ **Container Number** (if there is no number, assign one) 2

B. Manufacturer (if appropriate): _____ Year of Mfg.: _____ C. Year Installed: 1973 ☐ Unknown

D. Container Capacity: 10M gallons ☐ Unknown E. Container Repairs: ☒ 01 None ☐ 02 Unknown ☐ 03 Yes Year: _____

F. Is Container currently used? ☒ 01 Yes ☐ 02 No If No, year of last use: _____ ☐ 03 Unknown

G. Does the Container Store (Check One): ☐ 01 Waste ☒ 02 Product

H. Does the Container Store Motor Vehicle Fuel or Waste Oil? ☐ 01 Yes ☒ 02 No If Yes, Check appropriate box(es):

☐ 01 Unleaded ☐ 02 Regular ☐ 03 Premium ☐ 04 Diesel ☐ 05 Waste Oil ☐ 06 Other (List): _____

## V Container Construction

A. Thickness of Primary Containment: _____ ☐ Gauge ☐ Inches ☐ cm ☒ Unknown

B. ☐ 01 Vaulted (Located in an underground Vault.) ☒ 02 Non-vaulted ☐ 03 Unknown

C. ☐ 01 Double Walled ☒ 02 Single Walled ☐ 03 Lined ☐ 04 Wrapped ☐ 05 Unknown ☐ 06 None

D. ☒ 01 Carbon Steel ☐ 02 Stainless Steel ☐ 03 Fiberglass ☐ 04 Polyvinyl Chloride ☐ 05 Concrete ☐ 06 Aluminum

☐ 07 Steel Clad ☐ 08 Bronze ☐ 09 Composite ☐ 10 Non-metallic ☐ 11 Earthen Walls

☐ 12 Unknown ☐ 13 Other: _____

E. ☐ 01 Rubber Lined ☐ 02 Alkyd Lining ☐ 03 Epoxy Lining ☐ 04 Phenolic Lining ☐ 05 Glass Lining ☐ 06 Clay Lining

☒ 07 Unlined ☐ 08 Unknown ☐ 09 Other: _____

F. ☐ 01 Polyethlene Wrap ☐ 02 Vinyl Wrapping ☐ 03 Cathodic Protection ☐ 04 Unknown ☒ 05 None ☐ 06 Other: _____

## VI Piping

| | | | | |
|---|---|---|---|---|
| A. Associated Piping: | ☒ 01 Above Ground | ☒ 02 Underground | ☐ 03 Vaulted | |
| B. Underground Piping: | ☐ 01 Gravity | ☐ 02 Pressure | ☒ 03 Suction | ☐ 04 Unknown |
| C. Piping Repairs: | ☒ 01 None | ☐ 02 Unknown | ☐ 03 Yes, Year of most recent repair: _____ | |

## VII Leak Detection

☒ 01 Visual ☒ 02 Stock Inventory ☐ 03 Tile Drain ☐ 04 Vapor Sniff Wells ☐ 05 Sensor Instrument

☐ 06 Ground Water Monitoring Wells ☐ 07 Pressure Test ☐ 08 Internal Inspection ☐ 09 None

☐ 10 Other: _____

## VIII Chemical Composition of Materials *Currently* or *Previously* Stored in Underground Containers

If you checked yes to IV-H you are not required to complete this section.

| currently stored | previously stored | CAS # (If known) | Chemical *Do Not Use Commercial Name* (Use additional paper for more room) |
|---|---|---|---|
| ☒ 01 | ☒ 02 | | #2 Diesel Boiler Fuel |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |

Is Container located on an Agricultural Farm? ☐ 01 Yes ☒ 02 No

## IX IMPORTANT! Read instructions before signing:

**Signature:** The form must be signed by 1) a principal executive officer at the level of vice-president or by an authorized representative. The representative must be responsible for the overall operation of the facility where the tank(s) are located. 2) a general partner proprietor, or 3) a principal executive officer, ranking elected official or authorized representative of a public agency.

This form has been completed under the penalty of perjury and, to the best of my knowledge, is true and correct.

| Signature | Date |
|---|---|
| Robert E. Harold | 7/19/85 |

| Printed Name | Title | Phone w/area code |
|---|---|---|
| Robert E. Harold | President | (213) 803-3421 |

**Send check to:** Hazardous Substance Storage Statement, State Water Resources Control Board, P.O. Box 100, Sacramento, CA 95801-0100

| Person Filing Statement | Phone w/area code |
|---|---|
| Sidnor A. Johnson | (213) 803-3421 |

**For additional forms or more information call 916/324-1262**

## FOR STATE USE ONLY

| ID Number: | Accounting Number: | County Number: | |
|---|---|---|---|
| Date Received: | ☐ 01 | ☐ 02 | ☐ 03 |

Official Registration Form

California Water Resources Control Board

# Hazardous Substance Storage Statement

**Who Must File:** Each person storing hazardous substances in any underground container must file this form no later than July 1, 1984 (After October 1, 1984 and no later than January 1, 1985 for tanks used on farms).

**Definition of Underground Containers:** The law applies to "concrete sumps, nonvaulted buried tanks or other underground containers." (Water Code section 13173) All containers, including earthen walled pits, ponds; lagoons and sumps, that are below the normal ground surface level must register. A tank sitting on the ground is not included. Containers partially beneath the surface are included. Lined or unlined pits, ponds and lagoons are covered if earth has been removed from the storage area to construct the facility. Normal grading is not considered construction below ground level.

**Definition of Hazardous Substance:** Any substance listed in Section 6382 of the Labor Code or in Section 25316 of the Health and Safety Code. This includes: gasoline, diesel fuel, all industrial solvents, pesticides, herbicides and fumigants. If the material must be carried by a registered hauler, disposed of at a hazardous waste site, is explosive, generates pressure due to heat or decomposition or would harm humans or wildlife you must register the tank. Wastes are included.

**Fee:** For each tank registered a $10 fee must be paid, except that retail gasoline stations pay $5 per tank.

**Penalties:** For failure to file, the penalty is $500-$5,000 per day. If you falsify information, you can be fined up to $20,000 for each day the information is incorrect and has not been corrected.

**Confidentiality:** If you have information protected by trade secret laws, please attach a list of the information on this form that is confidential and the justification for confidentiality, including specific citations of relevant statutory and case law.

**Multiple Containers:** Fill I and II on one form and leave it blank on all the remaining forms. Attach all forms together securely. If you own more than 50 tanks you can file information on computer tape. Call 916/324-1262 for information.

**This is not a Permit Application.** All Underground Tanks will be subject to local regulation. Some jurisdictions have already begun programs. Check with your local county government for further information.

**NOTE: ALL UNDERGROUND CONTAINERS MUST REGISTER EVEN IF STATE AND/OR LOCAL PERMITS ARE IN FORCE.**

## I Owner

| Name (Corporation, Individual or Public Agency) | | | |
|---|---|---|---|
| Street Address | City | State | ZIP |
| | | | |

## II Facility

| Facility Name | | Dealer/Foreman/Supervisor | | |
|---|---|---|---|---|
| Street Address | | | Nearest Cross Street | |
| City | | County | | ZIP |
| Mailing Address | | City | State | ZIP |
| Phone w/area code | Type of Business ☐ 01 Motor Vehicle Fuel Station ☐ 02 Other: | | | |
| Number of Tanks at this Facility | **Rural Areas Only:** Township | Range | Section | |

## III 24 Hour Emergency Contact Person

| *Days:* Name (last name first) and Phone w/area code | *Nights:* Name (last name first) and Phone w/area code |
|---|---|
| Johnson, Sidnor A. (213) 803-3421 | Davis, David (213) 861-5891 |

**COMPLETE THE FOLLOWING ON A SEPARATE FORM FOR EACH CONTAINER**

## IV Description

A. ☒ 01 Tank ☐ 02 Sump ☐ 03 Lagoon, Pit or Pond ☐ 04 Other: _____ **Container Number** (If there is no number, assign one): 3

B. Manufacturer (if appropriate): _____ Year of Mfg.: _____ C. Year Installed: 1976 ☐ Unknown

D. Container Capacity: 10M gallons ☐ Unknown E. Container Repairs: ☒ 01 None ☐ 02 Unknown ☐ 03 Yes Year: _____

F. Is Container currently used? ☒ 01 Yes ☐ 02 No If No, year of last use: _____ ☐ 03 Unknown

G. Does the Container Store (Check One): ☐ 01 Waste ☒ 02 Product

H. Does the Container Store Motor Vehicle Fuel or Waste Oil? ☐ 01 Yes ☒ 02 No If Yes, Check appropriate box(es):

☐ 01 Unleaded ☐ 02 Regular ☐ 03 Premium ☐ 04 Diesel ☐ 05 Waste Oil ☐ 06 Other (List): _____

## V Container Construction

A. Thickness of Primary Containment: _____ ☐ Gauge ☐ Inches ☐ cm ☒ Unknown

B. ☐ 01 Vaulted (Located in an underground Vault.) ☒ 02 Non-vaulted ☐ 03 Unknown

C. ☐ 01 Double Walled ☒ 02 Single Walled ☐ 03 Lined ☐ 04 Wrapped ☐ 05 Unknown ☐ 06 None

D. ☒ 01 Carbon Steel ☐ 02 Stainless Steel ☐ 03 Fiberglass ☐ 04 Polyvinyl Chloride ☐ 05 Concrete ☐ 06 Aluminum

☐ 07 Steel Clad ☐ 08 Bronze ☐ 09 Composite ☐ 10 Non-metallic ☐ 11 Earthen Walls

☐ 12 Unknown ☐ 13 Other: _____

E. ☐ 01 Rubber Lined ☐ 02 Alkyd Lining ☐ 03 Epoxy Lining ☐ 04 Phenolic Lining ☐ 05 Glass Lining ☐ 06 Clay Lining

☒ 07 Unlined ☐ 08 Unknown ☐ 09 Other: _____

F. ☐ 01 Polyethlene Wrap ☐ 02 Vinyl Wrapping ☐ 03 Cathodic Protection ☐ 04 Unknown ☒ 05 None ☐ 09 Other: _____

## VI Piping

| | | | | |
|---|---|---|---|---|
| A. Associated Piping: | ☒ 01 Above Ground | ☒ 02 Underground | ☐ 03 Vaulted | |
| B. Underground Piping: | ☐ 01 Gravity | ☐ 02 Pressure | ☒ 03 Suction | ☐ 04 Unknown |
| C. Piping Repairs: | ☒ 01 None | ☐ 02 Unknown | ☐ 03 Yes, Year of most recent repair: _____ | |

## VII Leak Detection

☒ 01 Visual ☒ 02 Stock Inventory ☐ 03 Tile Drain ☐ 04 Vapor Sniff Wells ☐ 05 Sensor Instrument

☐ 06 Ground Water Monitoring Wells ☐ 07 Pressure Test ☐ 08 Internal Inspection ☐ 09 None

☐ 10 Other: _____

## VIII Chemical Composition of Materials *Currently* or *Previously* Stored in Underground Containers

If you checked yes to IV-H you are not required to complete this section.

| currently stored | previously stored | CAS # (If known) | Chemical *Do Not Use Commercial Name* (Use additional paper for more room) |
|---|---|---|---|
| ☒ 01 | ☒ 02 | | #2 Diesel Boiler Fuel |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |

Is Container located on an Agricultural Farm? ☐ 01 Yes ☒ 02 No

## IX IMPORTANT! Read instructions before signing:

**Signature:** The form must be signed by 1) a principal executive officer at the level of vice-president or by an authorized representative. The representative must be responsible for the overall operation of the facility where the tank(s) are located. 2) a general partner proprietor, or 3) a principal executive officer, ranking elected official or authorized representative of a public agency.

This form has been completed under the penalty of perjury and, to the best of my knowledge, is true and correct.

| Signature | Date |
|---|---|
| Robert E. Harold | 7/19/85 |

| Printed Name | Title | Phone w/area code |
|---|---|---|
| Robert E. Harold | President | (213) 803-3421 |

**Send check to:** Hazardous Substance Storage Statement, State Water Resources Control Board, P.O. Box 100, Sacramento, CA 95801-0100

| Person Filing Statement | Phone w/area code |
|---|---|
| Sidnor A. Johnson | (213) 803-3421 |

**For additional forms or more information call 916/324-1262**

## FOR STATE USE ONLY

| ID Number: | Accounting Number: | County Number: | |
|---|---|---|---|
| Date Received: | ☐ 01 | ☐ 02 | ☐ 03 |

Official Registration Form

**California Water Resources Control Board**

# Hazardous Substance Storage Statement

**Who Must File:** Each person storing hazardous substances in any underground container must file this form no later than July 1, 1984 (After October 1, 1984 and no later than January 1, 1985 for tanks used on farms).

**Definition of Underground Containers:** The law applies to "concrete sumps, nonvaulted buried tanks or other underground containers." (Water Code section 13173) All containers, including earthen walled pits, ponds, lagoons and sumps, that are below the normal ground surface level must register. A tank sitting on the ground is not included. Containers partially beneath the surface are included. Lined or unlined pits, ponds and lagoons are covered if earth has been removed from the storage area to construct the facility. Normal grading is not considered construction below ground level.

**Definition of Hazardous Substance:** Any substance listed in Section 6382 of the Labor Code or in Section 25316 of the Health and Safety Code. This includes: gasoline, diesel fuel, all industrial solvents, pesticides, herbicides and fumigants. If the material must be carried by a registered hauler, disposed of at a hazardous waste site, is explosive, generates pressure due to heat or decomposition or would harm humans or wildlife you must register the tank. Wastes are included.

**Fee:** For each tank registered a $10 fee must be paid, except that retail gasoline stations pay $5 per tank.

**Penalties:** For failure to file, the penalty is $500-$5,000 per day. If you falsify information, you can be fined up to $20,000 for each day the information is incorrect and has not been corrected.

**Confidentiality:** If you have information protected by trade secret laws, please attach a list of the information on this form that is confidential and the justification for confidentiality, including specific citations of relevant statutory and case law.

**Multiple Containers:** Fill I and II on one form and leave it blank on all the remaining forms. Attach all forms together securely. If you own more than 50 tanks you can file information on computer tape. Call 916/324-1262 for information.

**This is not a Permit Application.** All Underground Tanks will be subject to local regulation. Some jurisdictions have already begun programs. Check with your local county government for further information.

**NOTE: ALL UNDERGROUND CONTAINERS MUST REGISTER EVEN IF STATE AND/OR LOCAL PERMITS ARE IN FORCE.**

## I Owner

| Name (Corporation, Individual or Public Agency) | | | |
|---|---|---|---|
| Street Address | City | State | ZIP |
| | | | |

## II Facility

| Facility Name | | Dealer/Foreman/Supervisor | | |
|---|---|---|---|---|
| Street Address | | | Nearest Cross Street | |
| City | | County | | ZIP |
| Mailing Address | | City | State | ZIP |
| Phone w/area code | Type of Business: ☐ 01 Motor Vehicle Fuel Station ☐ 02 Other: | | | |
| Number of Tanks at this Facility | Rural Areas Only: Township | Range | Section | |

## III 24 Hour Emergency Contact Person

| *Days:* Name (last name first) and Phone w/area code | *Nights:* Name (last name first) and Phone w/area code |
|---|---|
| Johnson, Sidnor A. (213) 803-3421 | Davis, David (213) 861-5891 |

**COMPLETE THE FOLLOWING ON A SEPARATE FORM FOR EACH CONTAINER**

## IV Description

A. ☒ 01 Tank ☐ 02 Sump ☐ 03 Lagoon, Pit or Pond ☐ 04 Other: _____ **Container Number** (If there is no number, assign one): 4

B. Manufacturer (if appropriate): _____ Year of Mfg.: _____ C. Year Installed: 1953 ☐ Unknown

D. Container Capacity: 7,500 gallons ☐ Unknown E. Container Repairs: ☒ 01 None ☐ 02 Unknown ☐ 03 Yes Year: _____

F. Is Container currently used? ☒ 01 Yes ☐ 02 No If No, year of last use: _____ ☐ 03 Unknown

G. Does the Container Store (Check One): ☐ 01 Waste ☒ 02 Product

H. Does the Container Store Motor Vehicle Fuel or Waste Oil? ☐ 01 Yes ☒ 02 No If Yes, Check appropriate box(es):

☐ 01 Unleaded ☐ 02 Regular ☐ 03 Premium ☐ 04 Diesel ☐ 05 Waste Oil ☐ 06 Other (List): _____

## V Container Construction

A. Thickness of Primary Containment: _____ ☐ Gauge ☐ Inches ☐ cm ☒ Unknown

B. ☐ 01 Vaulted (Located in an underground Vault.) ☒ 02 Non-vaulted ☐ 03 Unknown

C. ☐ 01 Double Walled ☒ 02 Single Walled ☐ 03 Lined ☐ 04 Wrapped ☐ 05 Unknown ☐ 06 None

D. ☒ 01 Carbon Steel ☐ 02 Stainless Steel ☐ 03 Fiberglass ☐ 04 Polyvinyl Chloride ☐ 05 Concrete ☐ 06 Aluminum

☐ 07 Steel Clad ☐ 08 Bronze ☐ 09 Composite ☐ 10 Non-metallic ☐ 11 Earthen Walls

☐ 12 Unknown ☐ 13 Other: _____

E. ☐ 01 Rubber Lined ☐ 02 Alkyd Lining ☐ 03 Epoxy Lining ☐ 04 Phenolic Lining ☐ 05 Glass Lining ☐ 06 Clay Lining

☒ 07 Unlined ☐ 08 Unknown ☐ 09 Other: _____

F. ☐ 01 Polyethlene Wrap ☐ 02 Vinyl Wrapping ☐ 03 Cathodic Protection ☐ 04 Unknown ☒ 05 None ☐ 09 Other: _____

## VI Piping

| | | | | |
|---|---|---|---|---|
| A. Associated Piping: | ☒ 01 Above Ground | ☒ 02 Underground | ☐ 03 Vaulted | |
| B. Underground Piping: | ☐ 01 Gravity | ☐ 02 Pressure | ☒ 03 Suction | ☐ 04 Unknown |
| C. Piping Repairs: | ☐ 01 None | ☐ 02 Unknown | ☒ 03 Yes, Year of most recent repair: 1985 | |

## VII Leak Detection

☒ 01 Visual ☒ 02 Stock Inventory ☐ 03 Tile Drain ☐ 04 Vapor Sniff Wells ☐ 05 Sensor Instrument

☐ 06 Ground Water Monitoring Wells ☐ 07 Pressure Test ☐ 08 Internal Inspection ☐ 09 None

☐ 10 Other: _____

## VIII Chemical Composition of Materials *Currently* or *Previously* Stored in Underground Containers

If you checked yes to IV-H you are not required to complete this section.

| currently stored | previously stored | CAS # (If known) | Chemical *Do Not Use Commercial Name* (Use additional paper for more room) |
|---|---|---|---|
| ☒ 01: | ☒ 02 | | #2 Diesel Boiler Fuel |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |
| ☐ 01 | ☐ 02 | | |

Is Container located on an Agricultural Farm? ☐ 01 Yes ☒ 02 No

## IX IMPORTANT! Read instructions before signing:

**Signature:** The form must be signed by 1) a principal executive officer at the level of vice-president or by an authorized representative. The representative must be responsible for the overall operation of the facility where the tank(s) are located. 2) a general partner proprietor, or 3) a principal executive officer, ranking elected official or authorized representative of a public agency.

This form has been completed under the penalty of perjury and, to the best of my knowledge, is true and correct.

| Signature | | Date |
|---|---|---|
| Robert E. Harold | | 7/19/85 |
| **Printed Name** | **Title** | **Phone w/area code** |
| Robert E. Harold | President | (213) 803-3421 |

**Send check to:** Hazardous Substance Storage Statement, State Water Resources Control Board, P.O. Box 100, Sacramento, CA 95801-0100

| Person Filing Statement | Phone w/area code |
|---|---|
| Sidnor A. Johnson | (213) 803-3421 |

**For additional forms or more information call 916/324-1262**

## FOR STATE USE ONLY

| ID Number: | Accounting Number: | County Number: | |
|---|---|---|---|
| Date Received | ☐ 01 | ☐ 02 | ☐ 03 |

I-12987-1F

Waste mgmt

RECEIVED

SEP 18 1987

DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION

KIRKHILL INC.

213-803-3421

12021 WOODRUFF AVENUE • BOX 7012 • DOWNEY, CALIFORNIA 90241-0030

810.25

702842

MD2

September 11, 1987

County of Los Angeles
Department of Public Works
Waste Management Division
2250 Alcazar Street
Los Angeles, CA 90033

RE: Provisional Hazardous Materials Underground Storage Permit #4735

Gentlemen:

On Monitoring Requirements we propose the following:

TMP - 3.2.1b

LDP - 3.6 Para 4, 3.7

We are awaiting your acceptance.

Sincerely yours,

KIRKHILL INC.

Ray Bellanger
Plant Manager

RB:elb

PROVISIONAL
HAZARDOUS MATERIALS UNDERGROUND STORAGE PERMIT
COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION
2250 ALCAZAR STREET
LOS ANGELES, CALIFORNIA 90033

PERMIT NO. 4735

EXPIRATION DATE DEC 14 1987

PERMISSION IS HEREBY GRANTED UNDER LACC TITLE 11, DIVISION 4 TO:

012987-1F <<<<<<<< FILE NUMBER

KIRKHILL RUBBER INC <<<<<<<< PERMITTEE
12021 WOODRUFF AVE
DOWNEY CA 90241

RE: 12021 WOODRUFF AVE <<<<<<<< FACILITY ADDRESS

TO STORE HAZARDOUS MATERIALS IN UNDERGROUND TANK(S) LOCATED AT THE FACILITY ABOVE.

NUMBER OF PERMITTED TANKS: 4

**THIS PROVISIONAL PERMIT IS SUBJECT TO THE FOLLOWING REQUIREMENTS:**

**PART A** — GENERAL CONDITIONS AND LIMITATIONS (ATTACHED).

**PART B** — AUTHORIZED HAZARDOUS MATERIAL STORAGE TANKS (ATTACHED).

**PART C** — SPECIFIC CONDITIONS AND LIMITATIONS:

1. THE PERMITTEE SHALL SUBMIT FOR APPROVAL AND IMPLEMENT A LEAK DETECTION PROGRAM (LDP) AND A TANK MONITORING PROGRAM (TMP) PREPARED IN ACCORDANCE WITH "UNDERGROUND STORAGE OF HAZARDOUS MATERIALS - GUIDELINES FOR EXISTING FACILITIES, OCTOBER 1986."

2. THE FOLLOWING TIME SCHEDULE SHALL APPLY TO SUBMITTALS REQUIRED BY THIS PROVISIONAL PERMIT:

   a. PERMIT FEE DUE BY (SEE INVOICE) to be billed

   b. TANK INTEGRITY TEST RESULTS DUE BY N/A

   c. PROPOSALS FOR LDP AND TMP DUE BY SEP 14 1987

3. PERMIT EFFECTIVE DATE 10-20-86
   NOTE: THE EFFECTIVE DATE IS DETERMINED BY ORIGINAL DATE OF PERMIT APPLICATION.

**PART D** — SPECIAL CONDITIONS AND LIMITATIONS ATTACHED. YES [ ] NO [X]

This Provisional Permit is valid only for the continued operation of tanks providing suitable storage and expires six (6) months from the date of issue. Permittee has until the expiration date to complete an approved LDP and to install and be in compliance with an approved TMP. Upon full compliance with the approved LDP and TMP and all other conditions and limitations, this Provisional Permit will be replaced by a full term Operational Permit for the remainder of the unexpired five (5) year term from the effective date unless otherwise noted in Part D above.

T. A. TIDEMANSON
DIRECTOR OF PUBLIC WORKS

BY _____ JUN 12 1987

WASTE MANAGEMENT DIVISION

PP801 10/86

HAZARDOUS MATERIALS UNDERGROUND STORAGE PERMIT

PART A — GENERAL CONDITIONS AND LIMITATIONS

TERM OF PERMIT

. The combined provisional and full term operational permits shall be valid for a maximum period of five (5) years from the effective date. However, if the Department of Public Works (DPW) finds that the life expectancy of a facility is less than five (5) years, the DPW may adjust the term of the permit to reflect such a condition.

FEES

. All fees shall be due and payable on the billing date established by the DPW. Fees not paid within 30 calendar days from the billing date shall be considered delinquent. Delinquent fees shall be subject to a 10 percent penalty fee for each 30 day period beyond the billing date that the fee is due. Permits for which the annual permit fee installment is delinquent for 90 days or more are subject to suspension.

REPORTS AND RECORDS

. At least annually and due by the anniversary of the effective date of this permit, a written report must be submitted to the Department of Public Works, Waste Management Division, P.O. Box 4089 Terminal Annex, Los Angeles, CA 90051 detailing (but not limited to) the following:

a. Any changes in the type of hazardous materials stored within the facility.

b. Any changes in the uses of the underground facility.

c. Changes or modifications to monitoring procedure.

d. A detailed account of any unauthorized discharges, and the remedial measures employed.

e. Any modifications to the facility except for routine required maintenance.

In the event there has been no change of operation nor unauthorized release, a negative declaration to that effect may be submitted.

The report or negative declaration shall be certified by the permittee or an authorized representative who is responsible for operations at the facility.

This report is required by local agencies to satisfy Section 25286(c) of the State of California Health and Safety Code. A report form will be made available to owners and operators to comply with this requirement. The report shall be delinquent 30 days after its due date and as such may result in suspension or revocation of the permit.

. Every permittee shall provide testing, monitoring (if applicable), and inspections in compliance with this permit and shall maintain records adequate to demonstrate compliance therewith.

. All required records shall be maintained by the permittee and made available for inspection for a period of time not less than three (3) years from the date of the required annual report for the year during which the testing, monitoring or inspection was performed. Said records shall be made available to the DPW, County Health Officer or Forester and Fire Warden during normal working hours and at any time upon reasonable notice.

RENEWALS AND EXTENSIONS

. If this is a provisional permit, it may be extended to a maximum of one (1) additional year upon written application stating the reasons for such a request and upon approval by the Director of Public Works.

. Every application for the renewal of a operational permit or extension of a provisional permit shall be made at least 30 days prior to the expiration date of such permit. If a timely application for renewal has been submitted, the permit shall remain in effect until the DPW has made a decision and any administrative appeal has been exhausted.

APPEALS

8. Any person dissatisfied with the decision of the DPW may appeal the decision, in writing, to the Appeals Board, setting forth with particularity the ground or grounds for the appeal. Such appeal shall be submitted within 30 days after notice of the decision has been given.

ADDITIONAL APPROVALS AND REPAIRS

9. Additional approvals shall be required for any of the following actions:

a. Tank repair.

b. Modifications.

c. Change or addition of hazardous materials stored.

d. Change of approved monitoring system.

10. Procedures for an application for a permit shall also apply to an application for an additional approval. Each application for an additional approval shall be accompanied by the appropriate fee and supporting information.

11. Any substantial modification or repair of a facility other than minor repairs or emergency repairs shall be in accordance with plans to be submitted to the DPW as an additional approval.

12. Permittee shall carry out routine maintenance, ordinary upkeep and minor repairs in a careful and safe manner. No permit will be required for such maintenance, upkeep and repairs.

13. Permittee may make emergency repairs to a facility in advance of seeking an additional approval whenever an immediate repair is required to prevent or contain an unauthorized discharge or to protect the integrity of the containment. However, within five (5) working days after such emergency repairs have been started, permittee shall seek additional approval by submitting drawings or other information adequate to describe the repairs to the DPW.

CLOSURES, DECONTAMINATION AND NEW CONSTRUCTION

14. Replacement of tanks at an existing facility shall be considered a closure of the tanks to be replaced and a new installation of tanks, and all fees shall be assessed accordingly.

15. No tank shall be abandoned. Tanks which are temporarily out of service, and are intended to be returned to use, must continue to be monitored and inspected. Any tank which is not being monitored and inspected must be closed or removed in a manner approved by the DPW.

16. Prior to any permanent or temporary closures being initiated, an Application for Closure form, the appropriate fee and required supporting information shall be filed with the DPW.

17. Plans for the decontamination of a facility shall be submitted to the DPW for approval no later than 30 days before the commencement of such operations. Other agencies having jurisdiction shall also be notified. These agencies include the California Regional Water Quality Control Board, the Los Angeles County Department of Health Services and the South Coast Air Quality Management District.

18. The installation of a new tank shall require submittal to the DPW of an application for new construction, the appropriate new construction plan clearance fee and supporting information as required by the DPW.

TRANSFERS

19. A Hazardous Materials Underground Storage Permit may be transferred to a new owner of the same facility provided:

a. The new owner accepts full responsibility for all obligations under this permit at the time of the transfer of the facility.

b. The transfer shall be documented on a form provided by the DPW within 30 days of transfer of ownership.

c. The appropriate fee is paid.

**PART B — TANK DATA**
**HAZARDOUS MATERIALS UNDERGROUND STORAGE PERMIT NO.** 4735

AUTHORIZED HAZARDOUS MATERIAL STORAGE TANKS

| TANK NUMBER | CAPACITY (GALLONS) | CONTENTS |
|---|---|---|
| 1 | 10,000 | processing oils |
| 2 | 10,000 | #2 diesel fuel |
| 3 | 10,000 | #2 diesel fuel |
| 4 | 7,500 | #2 diesel fuel |

# Cal Tank Testing

# Test Report

**Underground Storage Tank**

**3296 S. Mooney Blvd.**
**Visalia, CA 93277**
**(209) 625-9911**

Owner: Kirkhill, Inc.

Address: 12021 Woodruff Avenue

Downey, CA

Phone No. _____

| | Product | Capacity | High Test Result | Low Test Result | Tank Location | Certify Tight |
|---|---|---|---|---|---|---|
| 1. | Processing oil | 10,000 | (see worksheet) | | 12021 Woodruff Ave., Downey, CA | No |
| 2. | #2 Diesel | 10,000 | -.0308 | | 12021 Woodruff Ave., Downey, CA | Yes |
| 3. | #2 Diesel fuel oil | 10,000 | +.0084 | | 12021 Woodruff Ave., Downey, CA | Yes |
| ✓ 4. | #2 Diesel | 7,500 | -.0195 | | 12021 Woodruff Ave., Downey, CA | Yes |
| 5. | | | | | | |

17. Line Test Results

1. _____ 4. _____
2. _____ 5. _____
3. _____ 7. _____

18. Remarks: See back of worksheets for tester's remakrs.

Certified Operators Signature Doyle Quinn
Doyle Quinn by Linda Sisk

Date 9-13-86

# Cal Tank Testing

# Test Report

**Underground Storage Tank**

**3296 S. Mooney Blvd.**
**Visalia, CA 93277**
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| 3. | #2 Diesel fuel oil | 10,000 | +.0084 | | 12021 Woodruff Ave., Downey, CA | Yes |
| 4. | #2 Diesel | 7,500 | -.0195 | | 12021 Woodruff Ave., Downey, CA | Yes |
| 5. | | | | | | |

17. Line Test Results

1. _____ 4. _____
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Certified Operators Signature Doyle Quinn
Doyle Quinn by Linda Sisk

Date 9-13-86

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# Test Report

**Underground Storage Tank**

**3296 S. Mooney Blvd.**
**Visalia, CA 93277**
**(209) 625-9911**

Owner: Kirkhill, Inc.

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Downey, CA

Phone No. _____

| | Product | Capacity | High Test Result | Low Test Result | Tank Location | Certify Tight |
|---|---|---|---|---|---|---|
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| 4. | #2 Diesel | 7,500 | -.0195 | | 12021 Woodruff Ave., Downey, CA | Yes |
| 5. | | | | | | |

17. Line Test Results

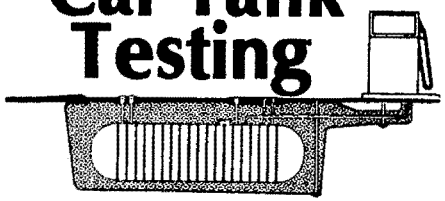
1. _____ 4. _____
2. _____ 5. _____
3. _____ 7. _____

18. Remarks: See back of worksheets for tester's remakrs.

Certified Operators Signature Doyle Quinn
Doyle Quinn by Linda Sisk

Date 9-13-86

# Cal Tank Testing



# Test Report

**Underground Storage Tank**

**3296 S. Mooney Blvd.**
**Visalia, CA 93277**
**(209) 625-9911**

Owner: Kirkhill, Inc.

Address: 12021 Woodruff Ave.

Downey, CA

Phone No. _____

| | Product | Capacity | High Test Result | Low Test Result | Tank Location | Certify Tight |
|---|---|---|---|---|---|---|
| ✓ 1. | Oil | 10,000 | -.0076 | | 12021 Woodruff Ave., Downey, CA | Yes |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. | | | | | | |

17. Line Test Results

1. _____ 4. _____

2. _____ 5. _____

3. _____ 7. _____

18. Remarks: See back of worksheet for tester's remarks.

Certified Operators Signature Manuel Mossa

Manuel Mossa by Linda Sisk

Date 9-15-86

HMUSP CHECK LIST

File No.
Permit No

Date Checker

**PROVISIONAL PERMIT**

[X] ____ ____ 1. Application supplement -- completed, signed and dated.

____ ____ [X] Submitted
____ ____ [ ] Not submitted

[ ] ____ ____ 2. Number of tanks under provisional permit _____.

[ ] ____ ____ 3. Correct number of Application for Permit to Operate Tank forms.
____ ____ Number of missing forms _____.

[ ] ____ ____ 4. Fees.
____ ____ Permit effective date _____.

____ ____ County 1st Year _____ State Surcharge _____
+ 2nd Year _____ - Amt Paid _____
- Amt Paid _____ = Total Due _____
- Amt in Trust _____
= Total Due _____

____ ____ Memo to Business & Finance? [ ]Y [ ]N

____ ____ 5. Request letter sent? [ ]Y [ ]N Date sent _____.

[ ] ____ ____ 6. Provisional permit issuance date _____.

>>>

# Cal Tank Testing

# Test Report

**Underground Storage Tank**

**3296 S. Mooney Blvd.**
**Visalia, CA 93277**
**(209) 625-9911**

Owner: Kirkhill, Inc.

Address: 12021 Woodruff Avenue

Downey, CA

Phone No. _____

| | Product | Capacity | High Test Result | Low Test Result | Tank Location | Certify Tight |
|---|---|---|---|---|---|---|
| √ 1. | Processing oil | 10,000 | (see worksheet) | | 12021 Woodruff Ave., Downey, CA | No |
| 2. | #2 Diesel | 10,000 | -.0308 | | 12021 Woodruff Ave., Downey, CA | Yes |
| 3. | #2 Diesel fuel oil | 10,000 | +.0084 | | 12021 Woodruff Ave., Downey, CA | Yes |
| 4. | #2 Diesel | 7,500 | -.0195 | | 12021 Woodruff Ave., Downey, CA | Yes |
| 5. | | | | | | |

17. Line Test Results

1. _____ 4. _____
2. _____ 5. _____
3. _____ 7. _____

18. Remarks: See back of worksheets for tester's remakrs.

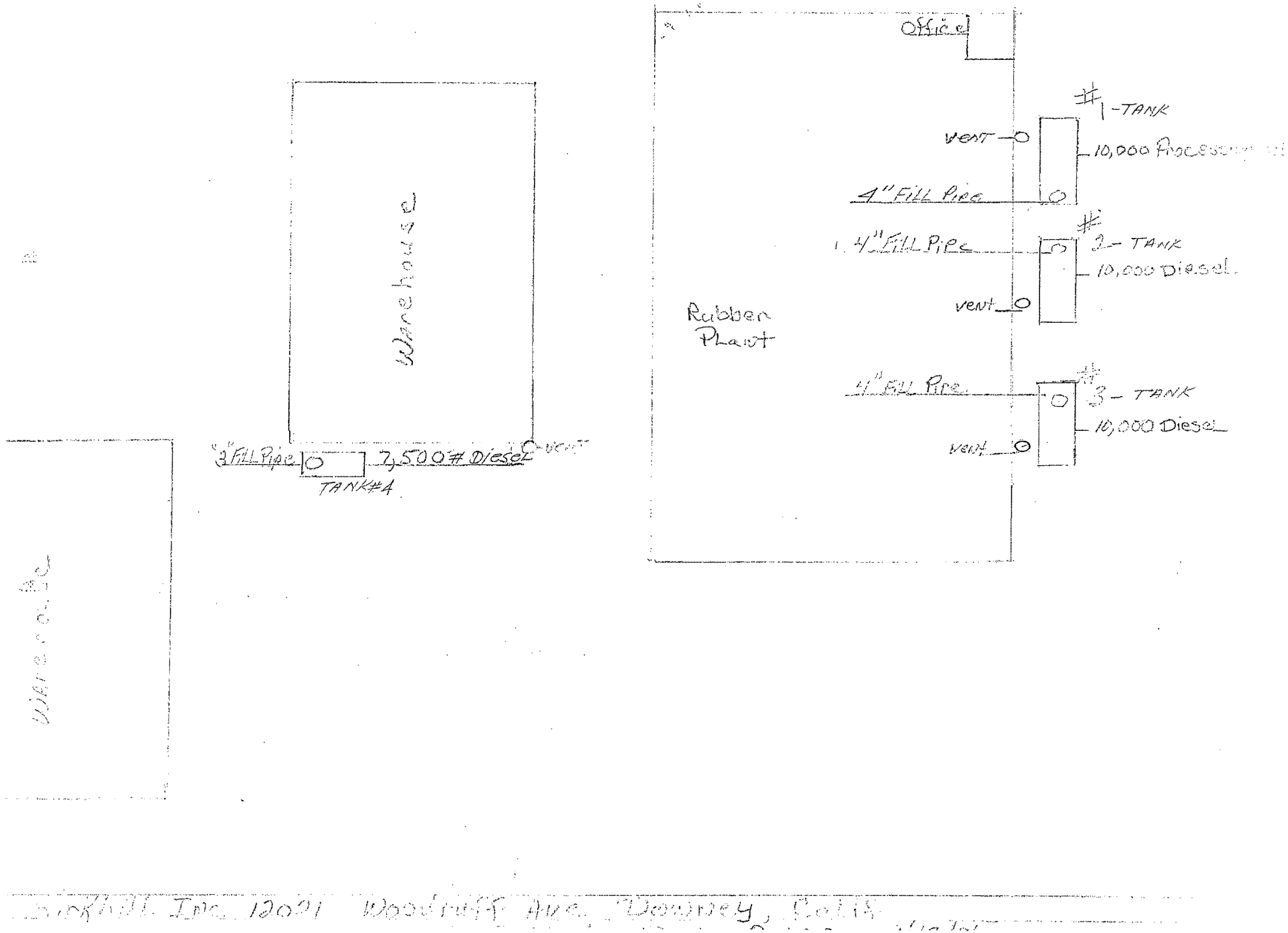
Certified Operators Signature Doyle Quinn
Doyle Quinn by Linda Sisk

Date 9-13-86

N TO FIRESTONE

Woodruff Ave

Gate




Parkhill Inc. 12021 Woodruff Ave. Downey, Calif.

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

1540 ALCAZAR STREET
LOS ANGELES, CALIFORNIA 90033
Telephone: (213) 226-8111

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 4089
LOS ANGELES, CALIFORNIA 90051


September 22, 1987

IN REPLY PLEASE REFER TO FILE: WM-1 I-12987-1F

Mr. Ray Bellanger, Plant Manager
KIRKHILL Inc.
P.O. Box 7012
Downey, CA 90241-0030

HAZARDOUS MATERIAL UNDERGROUND STORAGE PERMIT (HMUSP)
TANK MONITORING PLAN (TMP)/INTERIM OPTION
FACILITY LOCATION: 12021 Woodruff, Downey
PERMIT NO. 00004735

This office has reviewed the proposed Interim Monitoring Plan submitted on September 18, 1987 for the subject facility.

[ ] Your proposed Interim Monitoring Plan has been approved by this office. The HMUSP/Interim Monitoring Option is enclosed.

[x] Your proposed Interim Monitoring Plan has not been approved. Please submit the information indicated on the attached Additional Requirements sheet to this office by October 24, 1987.

If you have any questions regarding this matter, please contact Mr. David Esfandi of this office at (213) 226-4433.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By David Esfandi
Waste Management Division

Enc.

cc:

IM1001 8/87

INTERIM MONITORING ADDITIONAL REQUIREMENTS
PERMIT NO. 00004735

The additional information or requirements checked below must be submitted to the Los Angeles County Department of Public Works, Waste Management Division, P.O. Box 4089, Los Angeles, CA 90051, in order to complete the evaluation of your monitoring proposal.

[ ] Results of the initial tank integrity test must be submitted to this office prior to approval of your monitoring proposal.

[x] Please submit evidence that sufficient funds will be available to permanently close the tanks or implement an appropriate monitoring option by August 1, 1989.

[x] Owner must provide this office with a written statement stipulating that the tanks will be permanently closed by August 1, 1989, and that the facility will not be sold without prior closure of the tanks.

[x] Procedure for inventory reconciliation must be specified.

[x] Other: The owner shall request the interm monitoring option in writing.

IM1001A 8/87

T APPLICATION SUPPLEM ~T (PROVISIONAL)
OUS MATERIALS UNDERG .UND STORAGE PERMIT
.TY OF LOS ANGELES, DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES/WASTE MANAGEMENT DIVISION
2250 ALCAZAR STREET LOS ANGELES, CA 90033

DUE DATE OCT 17 1986

DPW USE
FILE # 12987
PERMIT # 4726
R/C CODE 1F
SIC CODE
STATE ID#
TGP TGC

THIS FORM MUST ACCOMPANY ALL APPLICATIONS
FOR PERMIT TO OPERATE EXISTING TANKS
**See instructions on back of this form**

IF THERE ARE NO UNDERGROUND TANKS AT THIS FACILITY, GO TO PARTS F & G

(A)
KIRKHILL INC. RUBBER CO
FACILITY NAME
12021 WOODRUFF AVE.
MAILING ADDRESS
DOWNEY, CA 90241
CITY STATE ZIP
SAME
FACILITY LOCATION

(B) APPLICATION IS HEREBY MADE FOR A HAZARDOUS MATERIAL UNDERGROUND STORAGE PERMIT (HMUSP) TO OPERATE AND MAINTAIN AN EXISTING FACILITY WITHIN LOS ANGELES COUNTY JURISDICTION.

NUMBER OF TANKS AT FACILITY: 4

(C) ASSESSOR PARCEL IDENTIFICATION (OBTAIN FROM PROPERTY TAX BILL):

MAP BOOK NUMBER 6284 PAGE NUMBER 025 PARCEL NUMBER 018

(D) THIS SUPPLEMENT MUST BE ACCOMPANIED BY:

[x] STATE APPLICATION FOR PERMIT TO OPERATE UNDERGROUND STORAGE TANK FOR EACH CONTAINER, OR COPIES OF HAZARDOUS SUBSTANCE STORAGE STATEMENTS AS FILED WITH STATE
[x] A STATEMENT VERIFYING SAFE STORAGE FOR EACH CONTAINER
[x] HMUSP APPLICATION FEE (COMPLETE PART E)

(E) HAZARDOUS MATERIALS UNDERGROUND STORAGE PERMIT (HMUSP) FEE SCHEDULE:

THE HMUSP APPLICATION FEE SHALL BE THE FIRST ANNUAL INSTALLMENT OF FIVE EQUAL ANNUAL INSTALLMENTS. CIRCLE AMOUNT REMITTED.

| NUMBER OF TANKS: | HMUSP FEE (FIRST INSTALLMENT) | | STATE SURCHARGE | | TOTAL FEES DUE |
|---|---|---|---|---|---|
| 1 | $89 | + | $56 | = | $145 |
| 2 | $106 | + | $112 | = | $218 |
| 3 | $123 | + | $168 | = | $291 |
| 4 | $140 | + | $224 | = | ($364) $437 |
| 5 | $157 | + | $280 | = | |
| 6 OR MORE | $72 + $17 PER TANK | + | $56 PER TANK | = | |

MAKE CHECKS PAYABLE TO "L. A. COUNTY DEPARTMENT OF PUBLIC WORKS"

(F) TO BE FILLED OUT BY PERSONS CLAIMING AN EXEMPTION TO REGULATION:

[ ] THERE ARE NO UNDERGROUND STORAGE TANKS WITHIN THIS FACILITY.
[ ] FINAL INTERCEPTOR(S) REGULATED UNDER INDUSTRIAL WASTE PERMIT #_____.
[ ] UNDERGROUND STORAGE TANK WITHIN THIS FACILITY IS USED ONLY FOR THE EMERGENCY SPILL CONTAINMENT FOR ABOVE GROUND STORAGE TANKS.
[ ] OTHER (ATTACH A WRITTEN STATEMENT)

(G) ALL PERSONS FILING THIS FORM MUST COMPLETE THIS SECTION:

SIGNATURE Gary A Riopelle TITLE PRESIDENT

PRINTED NAME GARY A. RIOPELLE DATE 10/10/86

4-15
PC one check $364.00

Revised 6/86

STATE ID NUMBER 051-4339-1

# APPLICATION FOR PERMIT TO OPERATE UNDERGROUND STORAGE TANK

(X) 01 NEW PERMIT ( ) 05 RENEWED PERMIT ( ) 07 TANK CLOSED ( ) 09 DELETE FROM FILE (NO FEE)
( ) 02 CONDITIONAL PERMIT ( ) 06 AMENDED PERMIT ( ) 08 MINOR CHANGE (NO SURCHARGE)

## I OWNER

| NAME(CORPORATION,INDIVIDUAL OR PUBLIC AGENCY) | PUBLIC AGENCY ONLY |
|---|---|
| KIRKHILL INC. | ( ) 01 FED ( ) 02 STATE ( ) 03 LOCAL |

| STREET ADDRESS | CITY | STATE | ZIP |
|---|---|---|---|
| 12021 WOODRUFF AVE. | DOWNEY | CA | 90241 |

## II FACILITY

| FACILITY NAME | DEALER/FOREMEN/SUPERVISOR | |
|---|---|---|
| SAME | | |
| STREET ADDRESS: SAME | NEAREST CROSS STREET: WASHBURN RD. | |
| CITY: SAME | COUNTY: LOS ANGELES | ZIP |

| MAILING ADDRESS | CITY | STATE | ZIP |
|---|---|---|---|
| SAME | | | |

| PHONE W/AREA CODE | TYPE OF BUSINESS |
|---|---|
| 213-803-3421 | ( ) 01 GASOLINE STATION (x) 02 OTHER |

| NUMBER OF CONTAINERS | RURAL AREAS ONLY : | TOWNSHIP | RANGE | SECTION |
|---|---|---|---|---|
| 4 | | | | |

## III 24 HOUR EMERGENCY CONTACT PERSON

| DAYS: NAME(LAST NAME FIRST) AND PHONE W/AREA CODE | NIGHTS: NAME(LAST NAME FIRST) AND PHONE W/AREA CODE |
|---|---|
| JOHNSON, SIDNOR A. - -(213)-803-3421 | DAVIS, DAVID - - (213)-861-5891 |

COMPLETE THE FOLLOWING ON A SEPARATE FORM FOR EACH CONTAINER

## IV DESCRIPTION

| | |
|---|---|
| A. (X) 01 TANK ( ) 02 OTHER: | CONTAINER NUMBER 1 |
| B. MANUFACTURER (IF APPROPRIATE): YEAR MFG: | C. YEAR INSTALLED 1967 ( ) UNKNOWN |
| D. CONTAINER CAPACITY: 10M GALLONS ( ) UNKNOWN | E. DOES THE CONTAINER STORE: ( ) 01 WASTE (X) 02 PRODUCT |

F. DOES THE CONTAINER STORE MOTOR VEHICLE FUEL OR WASTE OIL ? ( ) 01 YES (X) 02 NO IF YES CHECK APPROPRIATE BOX(ES):
( ) 01 UNLEADED ( ) 02 REGULAR ( ) 03 PREMIUM ( ) 04 DIESEL ( ) 05 WASTE OIL ( ) 06 OTHER

## V CONTAINER CONSTRUCTION

A. THICKNESS OF PRIMARY CONTAINMENT: ( ) GAUGE ( ) INCHES ( ) CM (X) UNKNOWN

B. ( ) 01 VAULTED (LOCATED IN AN UNDERGROUND VAULT) (X) 02 NON-VAULTED ( ) 03 UNKNOWN

C. ( ) 01 DOUBLE WALLED (X) 02 SINGLE WALLED ( ) 03 LINED

D. (X) 01 CARBON STEEL ( ) 02 STAINLESS STEEL ( ) 03 FIBERGLASS ( ) 04 POLYVINYL CHLORIDE ( ) 05 CONCRETE
( ) 06 ALUMINUM ( ) 07 STEEL CLAD ( ) 08 BRONZE ( ) 09 COMPOSITE ( ) 10 NON-METALLIC
( ) 12 UNKNOWN ( ) 13 OTHER:

STATE ID NUMBER 051-4339-1

# APPLICATION FOR PERMIT TO OPERATE UNDERGROUND STORAGE TANK

(X) 01 NEW PERMIT ( ) 05 RENEWED PERMIT ( ) 07 TANK CLOSED ( ) 09 DELETE FROM FILE (NO FEE)
( ) 02 CONDITIONAL PERMIT ( ) 06 AMENDED PERMIT ( ) 08 MINOR CHANGE (NO SURCHARGE)

## I OWNER

| NAME(CORPORATION,INDIVIDUAL OR PUBLIC AGENCY) | PUBLIC AGENCY ONLY | | |
|---|---|---|---|
| KIRKHILL INC. | ( ) 01 FED ( ) 02 STATE ( ) 03 LOCAL | | |
| STREET ADDRESS | CITY | STATE | ZIP |
| 12021 WOODRUFF AVE. | DOWNEY, | CA | 90241 |

## II FACILITY

| FACILITY NAME | DEALER/FOREMEN/SUPERVISOR | |
|---|---|---|
| SAME | | |
| STREET ADDRESS | NEAREST CROSS STREET | |
| SAME | WASHBURN RD. | |
| CITY | COUNTY | ZIP |
| SAME | LOS ANGELES | |
| MAILING ADDRESS | CITY | STATE ZIP |
| SAME | | |
| PHONE W/AREA CODE | TYPE OF BUSINESS | |
| - - (213) 803-3421 | ( ) 01 GASOLINE STATION (XX) 02 OTHER | |
| NUMBER OF CONTAINERS | RURAL AREAS ONLY : TOWNSHIP | RANGE SECTION |
| 4 | | |

## III 24 HOUR EMERGENCY CONTACT PERSON

| DAYS: NAME(LAST NAME FIRST) AND PHONE W/AREA CODE | NIGHTS: NAME(LAST NAME FIRST) AND PHONE W/AREA CODE |
|---|---|
| JOHNSON, SIDNOR A. - -(213) 803-3421 | DAVIS, DAVID - -(213) 861-5891 |

COMPLETE THE FOLLOWING ON A SEPARATE FORM FOR EACH CONTAINER

## IV DESCRIPTION

| | |
|---|---|
| A. (XX) 01 TANK ( ) 02 OTHER: | CONTAINER NUMBER 2 |
| B. MANUFACTURER (IF APPROPRIATE): YEAR MFG: | C. YEAR INSTALLED 1973 ( ) UNKNOWN |
| D. CONTAINER CAPACITY: 10M GALLONS ( ) UNKNOWN | E. DOES THE CONTAINER STORE: ( ) 01 WASTE (XX) 02 PRODUCT |

F. DOES THE CONTAINER STORE MOTOR VEHICLE FUEL OR WASTE OIL ? (XX) 01 YES (X) 02 NO IF YES CHECK APPROPRIATE BOX(ES):
( ) 01 UNLEADED ( ) 02 REGULAR ( ) 03 PREMIUM ( ) 04 DIESEL ( ) 05 WASTE OIL ( ) 06 OTHER

## V CONTAINER CONSTRUCTION

A. THICKNESS OF PRIMARY CONTAINMENT: ( ) GAUGE ( ) INCHES ( ) CM (XX) UNKNOWN

B. ( ) 01 VAULTED (LOCATED IN AN UNDERGROUND VAULT) (XX) 02 NON-VAULTED ( ) 03 UNKNOWN

C. ( ) 01 DOUBLE WALLED (XX) 02 SINGLE WALLED ( ) 03 LINED

D. (XX) 01 CARBON STEEL ( ) 02 STAINLESS STEEL ( ) 03 FIBERGLASS ( ) 04 POLYVINYL CHLORIDE ( ) 05 CONCRETE
( ) 06 ALUMINUM ( ) 07 STEEL CLAD ( ) 08 BRONZE ( ) 09 COMPOSITE ( ) 10 NON-METALLIC
( ) 12 UNKNOWN ( ) 13 OTHER:

STATE ID NUMBER 051-4339-1

# APPLICATION FOR PERMIT TO OPERATE UNDERGROUND STORAGE TANK

(X) 01 NEW PERMIT ( ) 05 RENEWED PERMIT ( ) 07 TANK CLOSED ( ) 09 DELETE FROM FILE (NO FEE)
( ) 02 CONDITIONAL PERMIT ( ) 06 AMENDED PERMIT ( ) 08 MINOR CHANGE (NO SURCHARGE)

## I OWNER

| NAME(CORPORATION,INDIVIDUAL OR PUBLIC AGENCY) | PUBLIC AGENCY ONLY |
|---|---|
| KIRKHILL INC. | ( ) 01 FED ( ) 02 STATE ( ) 03 LOCAL |

| STREET ADDRESS | CITY | STATE | ZIP |
|---|---|---|---|
| 12021 WOODRUFF AVE. | DOWNEY | CA | 90241 |

## II FACILITY

| FACILITY NAME | DEALER/FOREMEN/SUPERVISOR |
|---|---|
| SAME | |
| STREET ADDRESS: SAME | NEAREST CROSS STREET: WASHBURN RD. |
| CITY: SAME | COUNTY: LOS ANGELES, ZIP: |

| MAILING ADDRESS | CITY | STATE | ZIP |
|---|---|---|---|
| SAME | | | |

| PHONE W/AREA CODE | TYPE OF BUSINESS |
|---|---|
| - - (213) 803-3421 | ( ) 01 GASOLINE STATION (XX) 02 OTHER |

| NUMBER OF CONTAINERS | RURAL AREAS ONLY : | TOWNSHIP | RANGE | SECTION |
|---|---|---|---|---|
| 4 | | | | |

## III 24 HOUR EMERGENCY CONTACT PERSON

| DAYS: NAME(LAST NAME FIRST) AND PHONE W/AREA CODE | NIGHTS: NAME(LAST NAME FIRST) AND PHONE W/AREA CODE |
|---|---|
| JOHNSON, SIDNOR A. - -(213) 803-3421 | DAVIS, DAVID - - (213) 861-5891 |

COMPLETE THE FOLLOWING ON A SEPARATE FORM FOR EACH CONTAINER

## IV DESCRIPTION

| A. (X) 01 TANK ( ) 02 OTHER: | CONTAINER NUMBER 3 |
|---|---|
| B. MANUFACTURER (IF APPROPRIATE): YEAR MFG: | C. YEAR INSTALLED 1976 ( ) UNKNOWN |
| D. CONTAINER CAPACITY: 10M GALLONS ( ) UNKNOWN | E. DOES THE CONTAINER STORE: ( ) 01 WASTE (XX) 02 PRODUCT |

F. DOES THE CONTAINER STORE MOTOR VEHICLE FUEL OR WASTE OIL ? ( ) 01 YES (XX) 02 NO IF YES CHECK APPROPRIATE BOX(ES):
( ) 01 UNLEADED ( ) 02 REGULAR ( ) 03 PREMIUM ( ) 04 DIESEL ( ) 05 WASTE OIL ( ) 06 OTHER

## V CONTAINER CONSTRUCTION

A. THICKNESS OF PRIMARY CONTAINMENT: ( ) GAUGE ( ) INCHES ( ) CM (X) UNKNOWN

B. ( ) 01 VAULTED (LOCATED IN AN UNDERGROUND VAULT) (XX) 02 NON-VAULTED ( ) 03 UNKNOWN

C. ( ) 01 DOUBLE WALLED (XX) 02 SINGLE WALLED ( ) 03 LINED

D. (XX) 01 CARBON STEEL ( ) 02 STAINLESS STEEL ( ) 03 FIBERGLASS ( ) 04 POLYVINYL CHLORIDE ( ) 05 CONCRETE
( ) 06 ALUMINUM ( ) 07 STEEL CLAD ( ) 08 BRONZE ( ) 09 COMPOSITE ( ) 10 NON-METALLIC
( ) 12 UNKNOWN ( ) 13 OTHER:

STATE ID NUMBER 051-4339-1

# APPLICATION FOR PERMIT TO OPERATE UNDERGROUND STORAGE TANK

(X) 01 NEW PERMIT ( ) 05 RENEWED PERMIT ( ) 07 TANK CLOSED ( ) 09 DELETE FROM FILE (NO FEE)
( ) 02 CONDITIONAL PERMIT ( ) 06 AMENDED PERMIT ( ) 08 MINOR CHANGE (NO SURCHARGE)

## I OWNER

| NAME(CORPORATION,INDIVIDUAL OR PUBLIC AGENCY) | PUBLIC AGENCY ONLY | | |
|---|---|---|---|
| KIRKHILL INC. | ( ) 01 FED ( ) 02 STATE ( ) 03 LOCAL | | |
| STREET ADDRESS | CITY | STATE | ZIP |
| 12021 WOODRUFF AVE. | DOWNEY | CA | 90241 |

## II FACILITY

| FACILITY NAME | DEALER/FOREMEN/SUPERVISOR | |
|---|---|---|
| SAME. | | |
| STREET ADDRESS | NEAREST CROSS STREET | |
| SAME | WASHBURN RD. | |
| CITY | COUNTY | ZIP |
| SAME | LOS ANGELES | |
| MAILING ADDRESS | CITY | STATE / ZIP |
| SAME | | |
| PHONE W/AREA CODE | TYPE OF BUSINESS | |
| - - (213) 803-3421 | ( ) 01 GASOLINE STATION (X) 02 OTHER | |
| NUMBER OF CONTAINERS | RURAL AREAS ONLY : | TOWNSHIP / RANGE / SECTION |
| 4 | | |

## III 24 HOUR EMERGENCY CONTACT PERSON

| DAYS: NAME(LAST NAME FIRST) AND PHONE W/AREA CODE | NIGHTS: NAME(LAST NAME FIRST) AND PHONE W/AREA CODE |
|---|---|
| JOHNSON, SIDNOR A - - (213) 803-3421 | DAVIS, DAVID - - (213) 861-5891 |

COMPLETE THE FOLLOWING ON A SEPARATE FORM FOR EACH CONTAINER

## IV DESCRIPTION

| | |
|---|---|
| A. (XX) 01 TANK ( ) 02 OTHER: | CONTAINER NUMBER 4 |
| B. MANUFACTURER (IF APPROPRIATE): YEAR MFG: | C. YEAR INSTALLED 1953 ( ) UNKNOWN |
| D. CONTAINER CAPACITY: 7,500 GALLONS ( ) UNKNOWN | E. DOES THE CONTAINER STORE: ( ) 01 WASTE (XX) 02 PRODUCT |

F. DOES THE CONTAINER STORE MOTOR VEHICLE FUEL OR WASTE OIL ? ( ) 01 YES (XX) 02 NO IF YES CHECK APPROPRIATE BOX(ES):
( ) 01 UNLEADED ( ) 02 REGULAR ( ) 03 PREMIUM ( ) 04 DIESEL ( ) 05 WASTE OIL ( ) 06 OTHER

## V CONTAINER CONSTRUCTION

A. THICKNESS OF PRIMARY CONTAINMENT: ( ) GAUGE ( ) INCHES ( ) CM (XXX) UNKNOWN

B. ( ) 01 VAULTED (LOCATED IN AN UNDERGROUND VAULT) (XX) 02 NON-VAULTED ( ) 03 UNKNOWN

C. ( ) 01 DOUBLE WALLED (XX) 02 SINGLE WALLED ( ) 03 LINED

D. (XX) 01 CARBON STEEL ( ) 02 STAINLESS STEEL ( ) 03 FIBERGLASS ( ) 04 POLYVINYL CHLORIDE ( ) 05 CONCRETE
( ) 06 ALUMINUM ( ) 07 STEEL CLAD ( ) 08 BRONZE ( ) 09 COMPOSITE ( ) 10 NON-METALLIC
( ) 12 UNKNOWN ( ) 13 OTHER:

KIRKHILL INC.

810.35
213-803-3421

12021 WOODRUFF AVENUE • BOX 7012 • DOWNEY, CALIFORNIA 90241-0030

November 18, 1987

I-12987-1F

704367
MDE

County of Los Angeles
Department of Public Works
Waste Management Division
2250 Alcazar St.
Los Angeles, CA 90033

Attn: David Esfandi

Re: Provisional HMUSP #4735

Dear Mr. Esfandi:

Attached are the results of our second testing for container safe storage, done October 30, 1987.

Truly yours,

KIRKHILL INC.

Ray Bellanger

Ray Bellanger
Plant Manager

RB:rf

Attach. 1

RECEIVED
NOV 24 1987
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION

# Cal Tank Testing

# Test Report

**Underground Storage Tank**

**3296 S. Mooney Blvd.**
**Visalia, CA 93277**
**(209) 625-9911**

**Owner:** KIRKHILL, INC.

**Address:** 12021 Woodruff Avenue

Downey, CA

**Phone No.**

| Tank # | Product | Capacity | High Test Result | Low Test Result | Tank Location | Certify Tight |
|---|---|---|---|---|---|---|
| #1 | 15 wt oil | 10,000 | -.0328 | | 12021 Woodruff Ave., Downey | Yes |
| #2 | Diesel | 10,000 | -.0178 | | 12021 Woodruff Ave., Downey | Yes |
| #3 | Diesel | 10,000 | +.0018 | | 12021 Woodruff Ave., Downey | Yes |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Remarks:** See back of worksheets for tester's remarks.

**Certified Operators Signature** Manuel Mossa

Manuel Mossa by Linda Sisk

**Date** 10-30-87

# Cal Tank Testing

# Test Report

**Underground Storage Tank**

**3296 S. Mooney Blvd.**
**Visalia, CA 93277**
**(209) 625-9911**

**Owner:** KIRKHILL, INC.

**Address:** 12021 Woodruff Avenue

Downey, CA

**Phone No.**

| Tank # | Product | Capacity | High Test Result | Low Test Result | Tank Location | Certify Tight |
|---|---|---|---|---|---|---|
| #4 | Diesel | 7,500 | -.0332 | | 12021 Woodruff Ave., Downey | Yes |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Remarks:** See back of worksheet for tester's remarks.

**Certified Operators Signature** Manuel Mossa

Manuel Mossa by Linda Sisk

**Date** 11-3-87

# Cal Tank Testing

# Test Report

**Underground Storage Tank**

**3296 S. Mooney Blvd.**
**Visalia, CA 93277**
**(209) 625-9911**

**Owner:** KIRKHILL, INC.

**Address:** 12021 Woodruff Avenue

Downey, CA

**Phone No.**

| Tank # | Product | Capacity | High Test Result | Low Test Result | Tank Location | Certify Tight |
|---|---|---|---|---|---|---|
| #1 | 15 wt oil | 10,000 | -.0328 | | 12021 Woodruff Ave., Downey | Yes |
| #2 | Diesel | 10,000 | -.0178 | | 12021 Woodruff Ave., Downey | Yes |
| #3 | Diesel | 10,000 | +.0018 | | 12021 Woodruff Ave., Downey | Yes |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Remarks:** See back of worksheets for tester's remarks.

**Certified Operators Signature** Manuel Mossa

Manuel Mossa by Linda Sisk

**Date** 10-30-87

# Cal Tank Testing



# Test Report

**Underground Storage Tank**

**3296 S. Mooney Blvd.**
**Visalia, CA 93277**
**(209) 625-9911**

**Owner:** KIRKHILL, INC.

**Address:** 12021 Woodruff Avenue

Downey, CA

**Phone No.**

| Tank # | Product | Capacity | High Test Result | Low Test Result | Tank Location | Certify Tight |
|---|---|---|---|---|---|---|
| #1 | 15 wt oil | 10,000 | -.0328 | | 12021 Woodruff Ave., Downey | Yes |
| #2 | Diesel | 10,000 | -.0178 | | 12021 Woodruff Ave., Downey | Yes |
| #3 | Diesel | 10,000 | +.0018 | | 12021 Woodruff Ave., Downey | Yes |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Remarks:** See back of worksheets for tester's remarks.

**Certified Operators Signature** Manuel Mossa

Manuel Mossa by Linda Sisk

**Date** 10-30-87

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

1540 ALCAZAR STREET
LOS ANGELES, CALIFORNIA 90033
Telephone: (213) 226-8111

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 4089
LOS ANGELES, CALIFORNIA 90051


November 23, 1987

IN REPLY PLEASE REFER TO FILE: WM-1
I-12987-1F

Letter No. 8703831

Mr. Ray Bellanger, Plant Manager
Kirkhill Inc.
P. O. Box 7012
Downey, CA 90241-0030

Dear Mr. Bellanger:

HAZARDOUS MATERIAL UNDERGROUND STORAGE PERMIT (HMUSP)
TANK MONITORING PLAN (TMP)/INTERIM OPTION
FACILITY LOCATION: 12021 Woodruff Avenue, Downey
PERMIT NO. 00004735

This office has reviewed the proposed Interim Monitoring Plan submitted on October 29, 1987 for the subject facility.

[X] Your proposed Interim Monitoring Plan has been approved by this office. The HMUSP/Interim Monitoring Option is enclosed.

[ ] Your proposed Interim Monitoring Plan has not been approved. Please submit the information indicated on the attached Additional Requirements sheet to this office by _____.

If you have any questions regarding this matter, please contact Mr. David Esfandi of this office at (213) 226-4033.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By David E. Romoli
Waste Management Division

Enc.

cc:

IM1001 8/87

HAZARDOUS MATERIAL UNDERGROUND STORAGE PERMIT
INTERIM MONITORING OPTION

PERMIT NO. 4735

EXPIRATION DATE: August 1, 1989

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION
P.O. BOX 4089, TERMINAL ANNEX
LOS ANGELES, CALIFORNIA 90051

PERMISSION IS HEREBY GRANTED UNDER LACC TITLE 11. DIVISION 4 TO:

012987-1F <<<<<<<< FILE NUMBER

KIRKHILL RUBBER INC <<<<<<<< PERMITTEE
12021 WOODRUFF AVE
DOWNEY CA 90241

RE: 12021 WOODRUFF AVE <<<<<<<< FACILITY ADDRESS

TO STORE HAZARDOUS MATERIALS IN UNDERGROUND TANK(S) LOCATED AT THE FACILITY ABOVE.

NUMBER OF PERMITTED TANKS: 4

THIS PERMIT IS SUBJECT TO THE FOLLOWING REQUIREMENTS:

PART A -- GENERAL CONDITIONS AND LIMITATIONS (ATTACHED).

PART B -- AUTHORIZED HAZARDOUS MATERIAL STORAGE TANKS (ATTACHED).

PART C -- SPECIFIC CONDITIONS AND LIMITATIONS:

1. The results of the second annual tank tests must be submitted to the Department of Public Works (DPW) by August 1, 1988.

2. The results of the third annual tank tests must be submitted to DPW by August 1, 1989, unless Application for Closure has been filed prior to that date.

3. Records of daily inventory reconciliation must be kept for a period of three years. If any allowable variation is exceeded, the permittee must notify DPW within 24 hours. See attached Inventory Reconciliation Requirements.

PART D -- SPECIAL CONDITIONS AND LIMITATIONS.

[X] An Application for Closure must be on file with DPW prior to August 1, 1989.

or

[X] Proposals for Leak Detection and Tank Monitoring must be submitted to DPW by July 1, 1989.

T. A. TIDEMANSON
Director of Public Works

By _____
Waste Management Division

Issue Date 11/19/87

Attach.

**PART B — TANK DATA**
**HAZARDOUS MATERIALS UNDERGROUND STORAGE PERMIT NO.** 4735

AUTHORIZED HAZARDOUS MATERIAL STORAGE TANKS

| TANK NUMBER | CAPACITY (GALLONS) | CONTENTS |
|---|---|---|
| 1 | 10,000 | Processing Oils |
| 2 | 10,000 | #2 Diesel Fuel |
| 3 | 10,000 | #2 Diesel Fuel |
| 4 | 7,500 | #2 Diesel Fuel |

# STATE OF CALIFORNIA — WATER RESOURCES CONTROL BOARD

**FORM 'A':**

# SITE

## UNDERGROUND STORAGE TANK PROGRAM
## FACILITY/SITE, INFORMATION and/or PERMIT APPLICATION

**COMPLETE THIS FORM FOR EACH FACILITY/SITE**

**MARK ONLY ONE ITEM**

- ☐ 1 NEW PERMIT
- ☐ 2 INTERIM PERMIT
- ☐ 3 RENEWAL PERMIT
- ☐ 4 AMENDED PERMIT
- ☐ 5 CHANGE OF INFORMATION
- ☐ 6 TEMPORARY SITE CLOSURE
- ☐ 7 PERMANENTLY CLOSED SITE

## I. FACILITY/SITE INFORMATION & ADDRESS — (MUST BE COMPLETED)

| FACILITY/SITE NAME | CARE OF ADDRESS INFORMATION |
|---|---|
| Kirkhill Inc | |
| ADDRESS: 12021 Woodruff | NEAREST CROSS STREET: Imperial |
| CITY NAME: Downey | STATE: CA / ZIP CODE: 90241 / SITE PHONE #, WITH AREA CODE: (213) 803-3421 |

✓ Box to indicate: ☐ CORPORATION ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ LOCAL-AGENCY ☐ COUNTY-AGENCY ☐ STATE-AGENCY ☐ FEDERAL-AGENCY

TYPE OF BUSINESS: ☐ 1 GAS STATION ☐ 2 DISTRIBUTOR ☐ 3 FARM ☐ 4 PROCESSOR ☑ 5 OTHER

✓ Box if INDIAN RESERVATION or TRUST LANDS ☐

EPA ID # | # of TANK's AT THIS SITE

| EMERGENCY CONTACT PERSON (PRIMARY) | | EMERGENCY CONTACT PERSON (SECONDARY) | |
|---|---|---|---|
| DAYS: NAME (LAST, FIRST) | PHONE # WITH AREA CODE | DAYS: NAME (LAST, FIRST) | PHONE # WITH AREA CODE |
| Ballinger Raymond | (213) 803-3421 | Rose Doug | (714) 921-[illegible] |
| NIGHTS: NAME (LAST, FIRST) | PHONE # WITH AREA CODE | NIGHTS: NAME (LAST, FIRST) | PHONE # WITH AREA CODE |
| Ballinger Raymond | (213) 803-3421 | Rose Doug | (714) 921-[illegible] |

## II. PROPERTY OWNER INFORMATION & ADDRESS — (MUST BE COMPLETED)

| NAME | CARE OF ADDRESS INFORMATION |
|---|---|
| Kirkhill Inc | |
| MAILING or STREET ADDRESS: 12021 Woodruff | ✓ Box to indicate: ☑ CORPORATION ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ LOCAL-AGENCY ☐ COUNTY-AGENCY ☐ STATE-AGENCY ☐ FEDERAL-AGENCY |
| CITY NAME: Downey | STATE: CA / ZIP CODE: 90241 / PHONE #, WITH AREA CODE: (213) 803-3421 |

## III. TANK OWNER INFORMATION & ADDRESS — (MUST BE COMPLETED)

| NAME | CARE OF ADDRESS INFORMATION |
|---|---|
| Kirkhill Inc | |
| MAILING or STREET ADDRESS: 12021 Woodruff | ✓ Box to indicate: ☑ CORPORATION ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ LOCAL-AGENCY ☐ COUNTY-AGENCY ☐ STATE-AGENCY ☐ FEDERAL-AGENCY |
| CITY NAME: Downey | STATE: CA / ZIP CODE: 90241 / PHONE #, WITH AREA CODE: (213) 803-3421 |

## IV. LEGAL NOTIFICATION AND BILLING ADDRESS

**CHECK ONE (1) BOX INDICATING WHICH ABOVE ADDRESS SHOULD BE USED FOR BOTH LEGAL NOTIFICATION AND BILLING:** I. ☑ II. ☐ III. ☐

*THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT.*

| APPLICANT'S NAME (PRINTED & SIGNATURE) | DATE |
|---|---|
| William Fuller William Fuller | 8-9-89 |

## LOCAL AGENCY USE ONLY

| COUNTY # | JURISDICTION # | AGENCY # | FACILITY ID # | # of TANKS at SITE |
|---|---|---|---|---|
| 19 | 000 | 101 | 012287 | 4 |

| CURRENT LOCAL AGENCY FACILITY ID # | APPROVED BY NAME | PHONE # WITH AREA CODE |
|---|---|---|
| | | |

| PERMIT NUMBER | PERMIT APPROVAL DATE | PERMIT EXPIRATION DATE |
|---|---|---|
| 4735 | 6-12-87 | |

| LOCATION CODE | CENSUS TRACT # | SUPERVISOR-DISTRICT CODE | BUSINESS PLAN FILED | DATE FILED |
|---|---|---|---|---|
| | | | YES ☐ NO ☐ | |

| CHECK # | PERMIT AMOUNT | SURCHARGE AMOUNT | FEE CODE | RECEIPT # | BY: |
|---|---|---|---|---|---|
| | | | | | |

**THIS FORM MUST BE ACCOMPANIED BY AT LEAST (1) OR MORE TANK PERMIT FORM 'B' APPLICATION(S), UNLESS THIS IS A CHANGE OF SITE INFORMATION ONLY.**

FORM A (3-2-88)

LOCAL AGENCY COPY

# STATE OF CALIFORNIA — WATER RESOURCES CONTROL BOARD

**FORM 'B': TANK** — UNDE :OUND STORAGE TANK PRC AM

## TANK PERMIT APPLICATION INFORMATION

**COMPLETE A SEPARATE FORM WITH THE FOLLOWING INFORMATION FOR EACH TANK.**

**MARK ONLY ONE ITEM**

- ☐ 1 NEW PERMIT
- ☐ 2 INTERIM PERMIT
- ☐ 3 RENEWAL PERMIT
- ☐ 4 AMENDED PERMIT
- ☐ 5 CHANGE OF INFORMATION
- ☐ 6 TEMPORARY TANK CLOSURE
- ☐ 7 PERMANENTLY CLOSED TANK
- ☑ 6 TANK REMOVED

**FACILITY/SITE NAME WHERE TANK IS INSTALLED:** **FARM TANK - YES** ☐ **NO** ☑

## . TANK DESCRIPTION — COMPLETE ALL ITEMS - IF UNKNOWN — SO SPECIFY

| | |
|---|---|
| A. OWNERS TANK ID # \| | B. MANUFACTURED BY: unknown |
| C. YEAR INSTALLED unknown | D. TANK CAPACITY IN GALLONS: 10,000 |

## I. TANK CONTENTS — IF (A.1), IS MARKED, COMPLETE ITEM C. IF (A.1), IS NOT MARKED, COMPLETE ITEM D.

A.
- ☑ 1 MOTOR VEHICLE FUEL
- ☐ 2 PETROLEUM
- ☐ 3 CHEMICAL PRODUCT
- ☐ 4 OIL
- ☐ 5 HAZARDOUS
- ☐ 80 EMPTY
- ☐ 95 UNKNOWN

B.
- ☑ 1 PRODUCT
- ☐ 2 WASTE

C.
- ☐ 1 UNLEADED
- ☐ 2 LEADED
- ☑ 3 DIESEL
- ☐ 4 GASAHOL
- ☐ 5 JET FUEL
- ☐ 6 AVIATION GAS
- ☐ 7 METHANOL
- ☐ 99 OTHER (DESCRIBE IN ITEM D, BELOW)

D. IF NOT MOTOR VEHICLE FUEL, ENTER NAME OF HAZARDOUS SUBSTANCE STORED & C.A.S. # — C.A.S. #:

## II. TANK CONSTRUCTION — MARK ONE ITEM ONLY IN BOX A, B, C, & D

**A. TYPE OF SYSTEM**
- ☐ 1 DOUBLE WALLED
- ☐ 2 SINGLE WALLED
- ☐ 3 SINGLE WALLED WITH EXTERIOR LINER
- ☐ 4 SECONDARY CONTAINMENT
- ☑ 95 UNKNOWN
- ☐ 99 OTHER

**B. TANK MATERIAL**
- ☐ 1 STEEL/IRON
- ☐ 2 STAINLESS STEEL
- ☐ 3 FIBERGLASS
- ☐ 4 STEEL CLAD W/FIBERGLASS REINFORCED PLASTIC
- ☐ 5 CONCRETE
- ☐ 6 POLYVINYL CHLORIDE
- ☐ 7 ALUMINUM
- ☐ 8 100% METHANOL COMPATIBLE FRP
- ☐ 9 BRONZE
- ☐ 10 GALVANIZED STEEL
- ☑ 95 UNKNOWN
- ☐ 99 OTHER

**C. INTERIOR LINING**
- ☐ 1 RUBBER LINED
- ☐ 2 ALKYD LINING
- ☐ 3 EPOXY LINING
- ☐ 4 PHENOLIC LINING
- ☐ 5 GLASS LINING
- ☐ 6 UNLINED
- ☑ 95 UNKNOWN
- ☐ IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? ☐ YES ☐ NO
- ☐ 99 OTHER

**D. CORROSION PROTECTION**
- ☐ 1 POLYETHLENE WRAP
- ☐ 2 TAR OR ASPHALT
- ☐ 3 VINYL WRAP
- ☐ 4 FIBERGLASS REINFORCED PLASTIC
- ☐ 5 CATHODIC PROTECTION
- ☐ 91 NONE
- ☑ 95 UNKNOWN
- ☐ 99 OTHER

## V. PIPING INFORMATION — CIRCLE A IF ABOVE GROUND, U IF UNDERGROUND, BOTH IF APPLICABLE

| | | | | | | |
|---|---|---|---|---|---|---|
| **A. SYSTEM TYPE** | A (U) 1 SUCTION | A U 2 PRESSURE | A U 3 GRAVITY | A U 91 NONE | A U 95 UNKNOWN | A U 99 OTHER |
| **B. CONSTRUCTION** | A (U) 1 SINGLE WALLED | A U 2 DOUBLE WALLED | A U 3 LINED TRENCH | A U 91 NONE | A U 95 UNKNOWN | A U 99 OTHER |
| **C. MATERIAL** | A (U) 1 STEEL/IRON | A U 2 STAINLESS STEEL | A U 3 POLYVINYL CHLORIDE (PVC) | A U 4 FIBERGLASS PIPE | A U 91 NONE | |
| | A U 5 ALUMINUM | A U 8 CONCRETE | A U 7 STEEL CLAD W/FRP | A U 8 100% METHANOL COMPATIBLE FRP | | |
| | A U 9 GALVANIZED STEEL | A U (95) UNKNOWN | A U 99 OTHER | | | |

## V. LEAK DETECTION SYSTEM — CIRCLE P FOR PRIMARY, OR S FOR SECONDARY, A PRIMARY LEAK DETECTION SYSTEM MUST BE CIRCLED.

P S 1 VISUAL CHECK — P S 2 INVENTORY RECONCILIATION — P S 3 VADOSE WELLS — P S 4 ELECTRONIC MONITOR — P S 5 GROUND WATER MONITORING WELLS
P S 6 PRECISION TESTING — P S 7 PRESSURE TESTING — P S 91 NONE — P S (95) UNKNOWN — P S 99 OTHER

## VI. INFORMATION ON TANK PERMANENTLY CLOSED IN PLACE

| 1. ESTIMATED DATE LAST USED (MO/YR) | 2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING IN GALLONS | 3. WAS TANK FILLED WITH INERT MATERIAL? |
|---|---|---|
| unknown | unknown | ☐ YES ☑ NO |

*THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT.*

| APPLICANT'S NAME (PRINTED & SIGNATURE) | DATE |
|---|---|
| William Fuller William Fuller | 8-9-89 |

## LOCAL AGENCY USE ONLY

| COUNTY # | JURISDICTION # | AGENCY # | FACILITY ID # | TANK ID # |
|---|---|---|---|---|
| 19 | 000 | 001 | 01298 | 8A |

| CURRENT LOCAL AGENCY FACILITY ID # | APPROVED BY NAME | PHONE # WITH AREA CODE |
|---|---|---|
| | | |

| PERMIT NUMBER | PERMIT APPROVAL DATE | PERMIT EXPIRATION DATE |
|---|---|---|
| 5999 B | 8-9-89 | |

| CHECK # | PERMIT AMOUNT | SURCHARGE AMT. | FEE CODE | RECEIPT # | BY: |
|---|---|---|---|---|---|
| | | | | | |

FORM B (6-29-88) THIS FORM MUST BE ACCOMPANIED BY A FACILITY/SITE APPLICATION, **FORM 'A'**, UNLESS A CURRENT FORM 'A' HAS BEEN FILED

DATA PROCESSING COPY

STATE OF CALIFORNIA — WATER RESOURCES CONTROL BOARD

# FORM 'B': TANK — UNDERGROUND STORAGE TANK PROGRAM
## TANK PERMIT APPLICATION INFORMATION

COMPLETE A SEPARATE FORM WITH THE FOLLOWING INFORMATION FOR EACH TANK.

**MARK ONLY ONE ITEM**

- ☐ 1 NEW PERMIT
- ☐ 2 INTERIM PERMIT
- ☐ 3 RENEWAL PERMIT
- ☐ 4 AMENDED PERMIT
- ☐ 5 CHANGE OF INFORMATION
- ☐ 6 TEMPORARY TANK CLOSURE
- ☐ 7 PERMANENTLY CLOSED TANK
- ☑ 8 TANK REMOVED

FACILITY/SITE NAME WHERE TANK IS INSTALLED: FARM TANK - YES ☐ NO ☑

## TANK DESCRIPTION — COMPLETE ALL ITEMS - IF UNKNOWN — SO SPECIFY

| | |
|---|---|
| A. OWNERS TANK ID # 2 | B. MANUFACTURED BY: unknown |
| C. YEAR INSTALLED unknown | D. TANK CAPACITY IN GALLONS: 10,000 |

## . TANK CONTENTS — IF (A.1), IS MARKED, COMPLETE ITEM C. IF (A.1), IS NOT MARKED, COMPLETE ITEM D.

A. ☑ 1 MOTOR VEHICLE FUEL ☐ 2 PETROLEUM ☐ 3 CHEMICAL PRODUCT ☐ 4 OIL ☐ 5 HAZARDOUS ☐ 80 EMPTY ☐ 95 UNKNOWN

B. ☑ 1 PRODUCT ☐ 2 WASTE

C. ☐ 1 UNLEADED ☐ 2 LEADED ☑ 3 DIESEL ☐ 4 GASAHOL ☐ 5 JET FUEL ☐ 6 AVIATION GAS ☐ 7 METHANOL ☐ 99 OTHER (DESCRIBE IN ITEM D. BELOW)

D. IF NOT MOTOR VEHICLE FUEL, ENTER NAME OF HAZARDOUS SUBSTANCE STORED & C.A.S. # C.A.S. #:

## I. TANK CONSTRUCTION — MARK ONE ITEM ONLY IN BOX A, B, C, & D

**A. TYPE OF SYSTEM**
☐ 1 DOUBLE WALLED ☐ 2 SINGLE WALLED ☐ 3 SINGLE WALLED WITH EXTERIOR LINER ☐ 4 SECONDARY CONTAINMENT ☑ 95 UNKNOWN ☐ 99 OTHER

**B. TANK MATERIAL**
☐ 1 STEEL/IRON ☐ 2 STAINLESS STEEL ☐ 3 FIBERGLASS ☐ 4 STEEL CLAD W/FIBERGLASS REINFORCED PLASTIC
☐ 5 CONCRETE ☐ 6 POLYVINYL CHLORIDE ☐ 7 ALUMINUM ☐ 8 100% METHANOL COMPATIBLE FRP
☐ 9 BRONZE ☐ 10 GALVANIZED STEEL ☑ 95 UNKNOWN ☐ 99 OTHER

**C. INTERIOR LINING**
☐ 1 RUBBER LINED ☐ 2 ALKYD LINING ☐ 3 EPOXY LINING ☐ 4 PHENOLIC LINING
☐ 5 GLASS LINING ☐ 6 UNLINED ☑ 95 UNKNOWN
☐ IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? ☐ YES ☐ NO ☐ 99 OTHER

**D. CORROSION PROTECTION**
☐ 1 POLYETHILENE WRAP ☐ 2 TAR OR ASPHALT ☐ 3 VINYL WRAP ☐ 4 FIBERGLASS REINFORCED PLASTIC
☐ 5 CATHODIC PROTECTION ☐ 91 NONE ☑ 95 UNKNOWN ☐ 99 OTHER

## '. PIPING INFORMATION — CIRCLE A IF ABOVE GROUND, U IF UNDERGROUND, BOTH IF APPLICABLE

| | | | | | |
|---|---|---|---|---|---|
| **A. SYSTEM TYPE** | A U 1 SUCTION | A U 2 PRESSURE | A U 3 GRAVITY | A U 91 NONE | A U (95) UNKNOWN A U 99 OTHER |
| **B. CONSTRUCTION** | A U 1 SINGLE WALLED | A U 2 DOUBLE WALLED | A U 3 LINED TRENCH | A U 91 NONE | A U (95) UNKNOWN A U 99 OTHER |
| **C. MATERIAL** | A U 1 STEEL/IRON | A U 2 STAINLESS STEEL | A U 3 POLYVINYL CHLORIDE (PVC) | A U 4 FIBERGLASS PIPE | A U 91 NONE |
| | A U 5 ALUMINUM | A U 6 CONCRETE | A U 7 STEEL CLAD W/FRP | A U 8 100% METHANOL COMPATIBLE FRP | |
| | A U 9 GALVANIZED STEEL | A U (95) UNKNOWN | A U 99 OTHER | | |

## . LEAK DETECTION SYSTEM — CIRCLE P FOR PRIMARY, OR S FOR SECONDARY, A PRIMARY LEAK DETECTION SYSTEM MUST BE CIRCLED.

P S 1 VISUAL CHECK P S 2 INVENTORY RECONCILIATION P S 3 VADOSE WELLS P S 4 ELECTRONIC MONITOR P S 5 GROUND WATER MONITORING WELLS
P S 6 PRECISION TESTING P S 7 PRESSURE TESTING P S 91 NONE P S (95) UNKNOWN P S 99 OTHER

## I. INFORMATION ON TANK PERMANENTLY CLOSED IN PLACE

| 1. ESTIMATED DATE LAST USED (MO/YR) | 2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING IN GALLONS | 3. WAS TANK FILLED WITH INERT MATERIAL? |
|---|---|---|
| unknown | unknown | ☐ YES ☑ NO |

*THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT.*

| APPLICANT'S NAME (PRINTED & SIGNATURE) | DATE |
|---|---|
| William Fuller William Fuller | 8-9-89 |

## LOCAL AGENCY USE ONLY

| COUNTY # | JURISDICTION # | AGENCY # | FACILITY ID # | TANK ID # |
|---|---|---|---|---|
| 19 | 000 | 001 | 012987 | 0002 |

| CURRENT LOCAL AGENCY FACILITY ID # | APPROVED BY NAME | PHONE # WITH AREA CODE |
|---|---|---|
| | | |

| PERMIT NUMBER | PERMIT APPROVAL DATE | PERMIT EXPIRATION DATE |
|---|---|---|
| 5999B | 8-9-89 | |

| CHECK # | PERMIT AMOUNT | SURCHARGE AMT. | FEE CODE | RECEIPT # | BY: |
|---|---|---|---|---|---|
| | | | | | JH |

FORM B (6-29-88) THIS FORM MUST BE ACCOMPANIED BY A FACILITY/SITE APPLICATION, FORM 'A', UNLESS A CURRENT FORM 'A' HAS BEEN FILED

DATA PROCESSING COPY

STATE OF CALIFORNIA — WATER RESOURCES CONTROL BOARD

FORM 'B': UNDER GROUND STORAGE TANK PROGRAM

# TANK TANK PERMIT APPLICATION INFORMATION

COMPLETE A SEPARATE FORM WITH THE FOLLOWING INFORMATION FOR EACH TANK.

**MARK ONLY ONE ITEM**

- ☐ 1 NEW PERMIT
- ☐ 2 INTERIM PERMIT
- ☐ 3 RENEWAL PERMIT
- ☐ 4 AMENDED PERMIT
- ☐ 5 CHANGE OF INFORMATION
- ☐ 6 TEMPORARY TANK CLOSURE
- ☐ 7 PERMANENTLY CLOSED TANK
- ☑ 8 TANK REMOVED

FACILITY/SITE NAME WHERE TANK IS INSTALLED: FARM TANK - YES ☐ NO ☑

## TANK DESCRIPTION COMPLETE ALL ITEMS - IF UNKNOWN — SO SPECIFY

| | |
|---|---|
| A. OWNERS TANK ID # 3 | B. MANUFACTURED BY: unknown |
| C. YEAR INSTALLED unknown | D. TANK CAPACITY IN GALLONS: 10,000 |

## I. TANK CONTENTS IF (A.1), IS MARKED, COMPLETE ITEM C. IF (A.1), IS NOT MARKED, COMPLETE ITEM D.

A.
- ☐ 1 MOTOR VEHICLE FUEL
- ☐ 2 PETROLEUM
- ☐ 3 CHEMICAL PRODUCT
- ☑ 4 OIL
- ☐ 5 HAZARDOUS
- ☐ 80 EMPTY
- ☐ 95 UNKNOWN

B.
- ☐ 1 PRODUCT
- ☑ 2 WASTE

C.
- ☐ 1 UNLEADED
- ☐ 2 LEADED
- ☐ 3 DIESEL
- ☐ 4 GASAHOL
- ☐ 5 JET FUEL
- ☐ 6 AVIATION GAS
- ☐ 7 METHANOL
- ☑ 99 OTHER (DESCRIBE IN ITEM D, BELOW)

D. IF NOT MOTOR VEHICLE FUEL, ENTER NAME OF HAZARDOUS SUBSTANCE STORED & C.A.S. # Cutting oil - Edgeflex C.A.S. #:

## I. TANK CONSTRUCTION MARK ONE ITEM ONLY IN BOX A, B, C, & D

**A. TYPE OF SYSTEM**
- ☐ 1 DOUBLE WALLED
- ☐ 2 SINGLE WALLED
- ☐ 3 SINGLE WALLED WITH EXTERIOR LINER
- ☐ 4 SECONDARY CONTAINMENT
- ☑ 95 UNKNOWN
- ☐ 99 OTHER

**B. TANK MATERIAL**
- ☐ 1 STEEL/IRON
- ☐ 2 STAINLESS STEEL
- ☐ 3 FIBERGLASS
- ☐ 4 STEEL CLAD W/FIBERGLASS REINFORCED PLASTIC
- ☐ 5 CONCRETE
- ☐ 6 POLYVINYL CHLORIDE
- ☐ 7 ALUMINUM
- ☐ 8 100% METHANOL COMPATIBLE FRP
- ☐ 9 BRONZE
- ☐ 10 GALVANIZED STEEL
- ☑ 95 UNKNOWN
- ☐ 99 OTHER

**C. INTERIOR LINING**
- ☐ 1 RUBBER LINED
- ☐ 2 ALKYD LINING
- ☐ 3 EPOXY LINING
- ☐ 4 PHENOLIC LINING
- ☐ 5 GLASS LINING
- ☐ 6 UNLINED
- ☑ 95 UNKNOWN
- ☐ IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? ☐ YES ☐ NO
- ☐ 99 OTHER

**D. CORROSION PROTECTION**
- ☐ 1 POLYETHLENE WRAP
- ☐ 2 TAR OR ASPHALT
- ☐ 3 VINYL WRAP
- ☐ 4 FIBERGLASS REINFORCED PLASTIC
- ☐ 5 CATHODIC PROTECTION
- ☐ 91 NONE
- ☑ 95 UNKNOWN
- ☐ 99 OTHER

## I. PIPING INFORMATION CIRCLE A IF ABOVE GROUND, U IF UNDERGROUND, BOTH IF APPLICABLE

| | | | | | | |
|---|---|---|---|---|---|---|
| **A. SYSTEM TYPE** | A (U) 1 SUCTION | A U 2 PRESSURE | A U 3 GRAVITY | A U 91 NONE | A U 95 UNKNOWN | A U 99 OTHER |
| **B. CONSTRUCTION** | A (U) 1 SINGLE WALLED | A U 2 DOUBLE WALLED | A U 3 LINED TRENCH | A U 91 NONE | A U (95) UNKNOWN | A U 99 OTHER |
| **C. MATERIAL** | A (U) 1 STEEL/IRON | A U 2 STAINLESS STEEL | A U 3 POLYVINYL CHLORIDE (PVC) | A U 4 FIBERGLASS PIPE | A U 91 NONE | |
| | A U 5 ALUMINUM | A U 6 CONCRETE | A U 7 STEEL CLAD W/FRP | A U 8 100% METHANOL COMPATIBLE FRP | | |
| | A U 9 GALVANIZED STEEL | A U (95) UNKNOWN | A U 99 OTHER | | | |

## . LEAK DETECTION SYSTEM CIRCLE P FOR PRIMARY, OR S FOR SECONDARY, A PRIMARY LEAK DETECTION SYSTEM MUST BE CIRCLED.

P S 1 VISUAL CHECK P S 2 INVENTORY RECONCILIATION P S 3 VADOSE WELLS P S 4 ELECTRONIC MONITOR P S 5 GROUND WATER MONITORING WELLS
P S 6 PRECISION TESTING P S 7 PRESSURE TESTING P S 91 NONE P S (95) UNKNOWN P S 99 OTHER

## I. INFORMATION ON TANK PERMANENTLY CLOSED IN PLACE

| 1. ESTIMATED DATE LAST USED (MO/YR) | 2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING IN | 3. WAS TANK FILLED WITH INERT MATERIAL? |
|---|---|---|
| unknown | unknown GALLONS | ☐ YES ☑ NO |

*THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT.*

| APPLICANT'S NAME (PRINTED & SIGNATURE) | DATE |
|---|---|
| William Fuller William Fuller | 8-9-89 |

## LOCAL AGENCY USE ONLY

| COUNTY # | JURISDICTION # | AGENCY # | FACILITY ID # | TANK ID # |
|---|---|---|---|---|
| 19 | 000 | 001 | 012987 | 0003 |

| CURRENT LOCAL AGENCY FACILITY ID # | APPROVED BY NAME | PHONE # WITH AREA CODE |
|---|---|---|
| | | |

| PERMIT NUMBER | PERMIT APPROVAL DATE | PERMIT EXPIRATION DATE |
|---|---|---|
| 5999 B | 8-9-89 | |

| CHECK # | PERMIT AMOUNT | SURCHARGE AMT. | FEE CODE | RECEIPT # | BY: |
|---|---|---|---|---|---|
| | | | | | |

FORM B (6-29-88) THIS FORM MUST BE ACCOMPANIED BY A FACILITY/SITE APPLICATION, FORM 'A', UNLESS A CURRENT FORM 'A' HAS BEEN FILED

DATA PROCESSING COPY

PLICATION FOR CLOSURE
ZARDOUS MATERIALS UNDERGROUND STORAGE
UNTY OF LOS ANGELES-DEPARTMENT OF PUBLIC WORKS
STE MANAGEMENT DIVISION
0 S. FREMONT AVENUE
HAMBRA, CALIFORNIA 91803-1331

Permit 5999 B
File 1287 R/C 1F
Fee $ 217.00
Check [4] Cash [ ]

WNER: Name Raymond Ballanger Phone (213) 803-3421
Mailing Address 12021 Woodruff City Downey State CA Zip 90241

ACILITY:
Occupant Name Kirkhill Inc. Phone (213) 803-3421
Site Address 12021 Woodruff City Downey Zip 90241
Mailing Address 12021 Woodruff City Downey State CA Zip 90241
Contact Person Dave Davis Title

ONTRACTOR [X], complete below: OWNER/OPERATOR AS CONTRACTOR [ ]
Name Tank Protect Engineering Phone (714) 921-0855
State License No. 451994 Class B, A

LOSURE REQUESTED:
[X] PERMANENT, TANK REMOVAL (See Conditions A and C Attached)
How many underground tanks will remain after this closure? 1
[ ] PERMANENT, CLOSURE IN PLACE (See Conditions A and D Attached)
[ ] TEMPORARY (See Conditions A and B Attached)

ANK DESCRIPTION: PLOT PLAN ATTACHED [X] EXISTING HMUSP NO.

| Tank No. | Tank Mat'l | Age | Capacity | Materials Stored (Past/Present) |
|---|---|---|---|---|
| 1 | steel | N/A | 10,000 | Diesel |
| 2 | steel | N/A | 10,000 | Diesel |
| 3 | steel | N/A | 10,000 | cutting oil |

OMPLETE THE FOLLOWING:

| | YES | NO |
|---|---|---|
| Has an unauthorized release ever occurred at this site? | [ ] | [X] |
| Have structural repairs ever been made to these tanks? | [ ] | [X] |
| Will new underground tanks be installed after closure? | [ ] | [X] |
| Will any wells, including monitoring wells, be abandoned? | [ ] | [X] |

NOTICE: CONTAMINATED TANKS AND RESIDUES THAT MAY BE LEFT IN TANKS TO BE CLOSED MAY BE A HAZARDOUS WASTE WHICH MUST BE TRANSPORTED AND DISPOSED OF PURSUANT TO CHAPTER 6.5, CALIFORNIA HEALTH & SAFETY CODE. FAILURE TO COMPLY MAY BE PROSECUTED AS A FELONY VIOLATION.

By signature below the applicant certifies that all statements and disclosures above are true and correct and that they have read and agree to abide by this permit and all conditions and limitations attached.

Applicant's Signature Cyrus D. Namini Date 8-9-89
(Print Name) Cyrus D. Namini Phone (714) 921-0855
Owner [ ] Operator [ ] Contractor [X]

TO BE COMPLETED BY THE DEPARTMENT OF PUBLIC WORKS

PURSUANT TO SECTION 11.80.070B, LOS ANGELES COUNTY CODE, PERMISSION IS HEREBY GRANTED TO PROCEED WITH THE CLOSURE DESCRIBED ABOVE SUBJECT TO THE ATTACHED CONDITIONS AND LIMITATIONS [X]. THIS PERMIT EXPIRES 180 DAYS FROM THE DATE BELOW.

T.A. TIDEMANSON T.A. Tidemanson 8-9-89

CLOSURE PERMIT SUPPLEMENT
HAZARDOUS MATERIALS UNDERGROUND STORAGE
LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION
900 S. FREMONT AVENUE
ALHAMBRA, CA 91803

Closure Permit No. [illegible] B
File No. I- 12987-1F

To satisfy the permanent closure requirements for underground storage tanks previously storing hazardous materials, site integrity must be demonstrated by the analysis of soil samples and, if applicable, groundwater samples as outlined below. These requirements are in addition to the conditions listed on the Application for closure or contained in an approved Closure Plan.

1. Samples shall be obtained at the sampling points (SP) indicated on the attached plot plan.

2. For each SP, samples shall be obtained at the following depths:

| SP | Depth(s) | Compounds | Analysis Method |
|---|---|---|---|
| 1A, B, 2A | 2 4' Below ramp bottom | TPH | 418.1 |
| 3A, 3B | | TPH | 418.1 - Rev. |
| | | | |
| | | | |

3. All soil samples obtained shall be undisturbed and unexposed prior to analysis. The method used to obtain the samples and the date of sampling shall be included in the final report.

4. If groundwater is encountered during sampling, a groundwater monitoring well shall be established at the most downgradient sampling point. The well shall be developed by removing a minimum of four well volumes and a groundwater sample shall be obtained and analyzed.

5. The analysis results for all soil samples shall be expressed in milligrams per kilogram (mg/kg). Analysis results for groundwater samples shall be expressed in parts per billion (ppb).

6. Analysis results shall be reported on laboratory letterhead and shall include the following information: a) The date the analysis was conducted; b) The method of extraction (if applicable); c) The method of analysis.

7. All soil/groundwater samples obtained shall be handled and transported to laboratory in strict accordance with applicable EPA regulations utilizing chain-of-custody procedures. Chain-of-custody documentation shall be included in the final report.

8. If the soil/groundwater analysis indicates undefined contamination at the facility, additional sampling shall be required to define the vertical and lateral extent present.

9. A final report that contains all of the above required information shall be submitted to the office above within one (1) month from the sampling date or 180 days from the date of this permit, whichever earlier.

cg1/FORMPERMIT

ATTENTION CONTRACTOR

NOTIFICATION REQUIREMENTS

Pursuant to Los Angeles County Code, Section 11.78.045, and the Conditions and Limitations of the attached Hazardous Materials Underground Storage Closure Permit, you are required to complete **ALL** of the agency notifications indicated below within the time period specified prior to commencement of work on this closure.

[ X ] 72 HOURS - DEPARTMENT OF PUBLIC WORKS INDUSTRIAL WASTE ENGINEERING INSPECTOR:

>>Unless otherwise noted DPW inspectors are available at the following offices between 8:00 a.m. and 9:30 a.m. ONLY.<<

[ X ] BELLFLOWER DISTRICT - (213) 804-2584
16600 Civic Center Dr., Bellflower, CA 90607

[ ] CENTINELA VALLEY REGION - (213) 534-4862
24320 S. Narbonne Ave., Lomita, CA 90717

[ ] LENNOX DISTRICT - (213) 419-5650
4353 Lennox Blvd., Lennox, CA 90304

[ ] SAN GABRIEL VALLEY DISTRICT - (818) 574-0962
1245 S. Baldwin Ave., Arcadia, CA 91006

[ ] EAST LOS ANGELES DISTRICT - (213) 260-3466
5141 E. Pomona Blvd., Los Angeles, CA 90022

[ ] SAN DIMAS REGION - (818) 339-6281
201 E. Bonita Ave., San Dimas, CA 91773

[ ] NEWHALL REGION - (805) 253-7207
23757 W. Valencia Blvd., Santa Clarita, CA 91355

[ X ] 24 HOURS (OR AS REQUIRED) - LOCAL FIRE DEPARTMENT FIRE PREVENTION INSPECTOR:

[ ] City of Duarte

[ ] Los Angeles County Fire Department

[ X ] 24 HOURS - SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(818) 572-6195

FAILURE TO PROVIDE NOTICE AS REQUIRED ABOVE MAY RESULT IN PERMIT REVOCATION, ADDITIONAL SITE ASSESSMENT REQUIREMENTS AND/OR ADMINISTRATIVE PENALTIES AS PROVIDED BY LAW.

CLOSENOTE
12/88

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
CLOSURE REPORT REQUIREMENTS

A closure report shall be submitted to the Los Angeles County Department of Public Works, Waste Management Division, P.O. Box 1460, Alhambra, CA 91802 containing:

1. File number of facility and closure permit number.

2. Plot plan to scale showing locations of tanks, sampling points, buildings, adjacent streets and north arrow.

3. Description of methods for obtaining, handling and transporting samples.

4. Time and date samples were obtained.

5. If borings were established, boring logs certified by a CA Registered Geologist, CA Certified Engineering Geologist or CA Registered Civil Engineer with sufficient experience in soils.

6. Chain-of-custody documentation initiated by person obtaining sample through person at State Department of Health Services certified laboratory.

7. Disposal destination of tanks and evidence of legal disposal.

8. Analysis results by a State certified laboratory submitted on laboratory letterhead showing analysis date, methods of extraction and methods of analysis.

9. Documentation as to depth of groundwater at facility.

10. Manifests to documentation hazardous waste disposal of any removed soil and rinseate.

11. Any observations of site contamination.

12. Remedial action plan to mitigate contamination.

13. Report to be signed by CA Registered Geologist, CA Certified Engineering Geologist or CA Registered Civil Engineer with sufficient experience in soils.

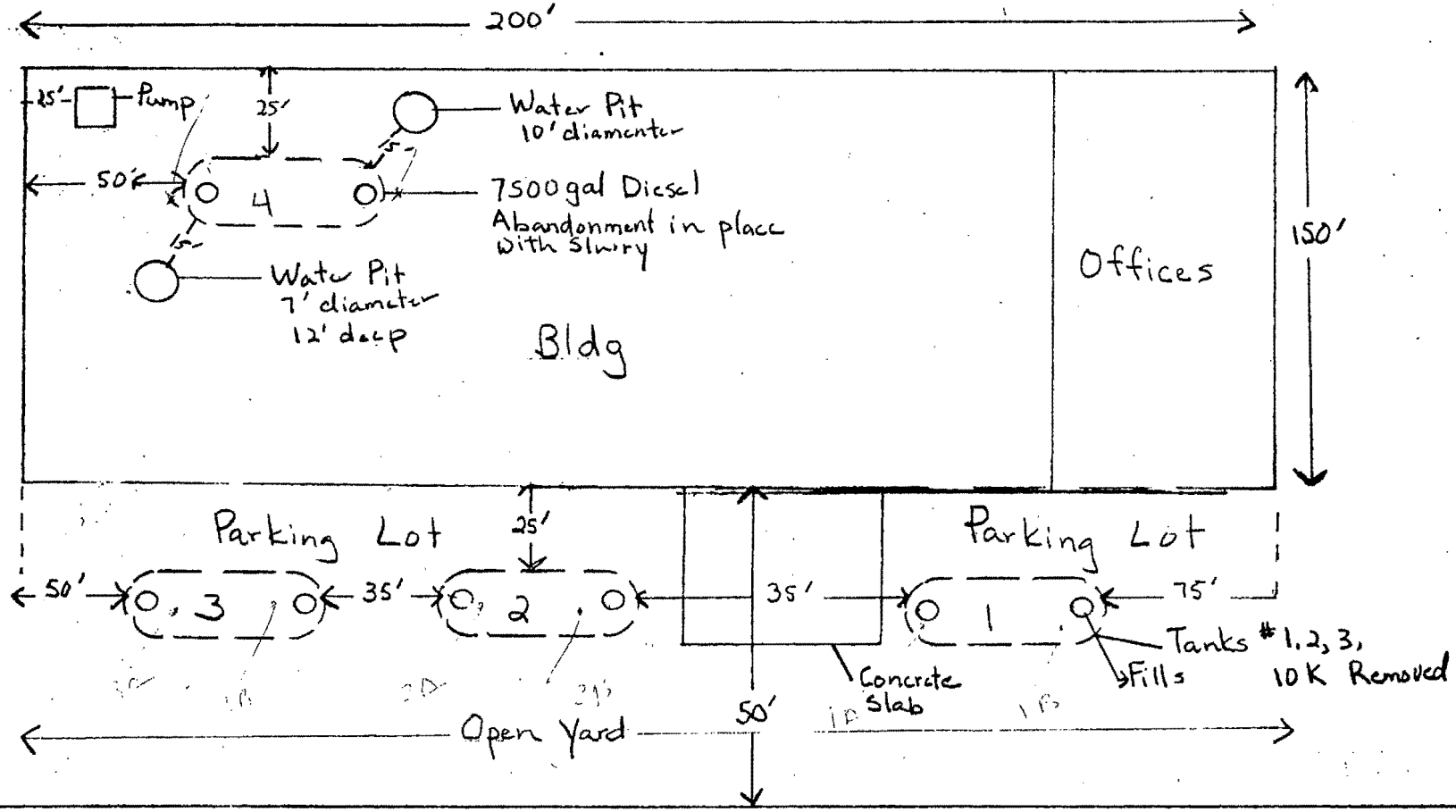
Signature William Faller Date 8-9-89

cg2/CLOSURE

**TANK PROTECT ENGINEERING**

1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
TEL: (714) 921-0888 (213) 592-4771
FAX: (714) 921-1832

N




KirKhill Inc.
12021 Woodruff
Downey CA. 90241

PPLICATION FOR CLOSURE
AZARDOUS MATERIALS UNDERGROUND STORAGE
OUNTY OF LOS ANGELES-DEPARTMENT OF PUBLIC WORKS
ASTE MANAGEMENT DIVISION
00 S. FREMONT AVENUE
LHAMBRA, CALIFORNIA 91803-1331

Permit 6080 B
File 12987 R/C IF
Fee $ 141.00
Check [✓] Cash [ ]

WNER: Name Raymond Ballanger Phone (213) 803-3421
Mailing Address 12021 Woodruff City Downey State CA Zip 90241

ACILITY:
Occupant Name Kirkhill Inc Phone 213/803-3421
Site Address 12021 Woodruff City Downey Zip 90241
Mailing Address Kirkhill Inc City Downey State CA Zip 90241
Contact Person Dave Davis Title Vice President

ONTRACTOR [✓], complete below: OWNER/OPERATOR AS CONTRACTOR [✓]
Name Tank Protect Engineering Phone (714) 921-0989
State License No. 489994 Class B+A

LOSURE REQUESTED:
[ ] PERMANENT, TANK REMOVAL (See Conditions A and C Attached)
How many underground tanks will remain after this closure? 1
[✓] PERMANENT, CLOSURE IN PLACE (See Conditions A and D Attached)
[ ] TEMPORARY (See Conditions A and B Attached)

ANK DESCRIPTION: PLOT PLAN ATTACHED [✓] EXISTING HMUSP NO. _____

| Tank No. | Tank Mat'l | Age | Capacity | Materials Stored (Past/Present) |
|---|---|---|---|---|
| 4 | Steel | N/A | 7,500 | ~~Unleaded~~ Diesel |

OMPLETE THE FOLLOWING:

| | YES | NO |
|---|---|---|
| Has an unauthorized release ever occurred at this site? | [ ] | [✓] |
| Have structural repairs ever been made to these tanks? | [ ] | [✓] |
| Will new underground tanks be installed after closure? | [ ] | [✓] |
| Will any wells, including monitoring wells, be abandoned? | [ ] | [✓] |

NOTICE: CONTAMINATED TANKS AND RESIDUES THAT MAY BE LEFT IN TANKS TO BE CLOSED MAY BE A HAZARDOUS WASTE WHICH MUST BE TRANSPORTED AND DISPOSED OF PURSUANT TO CHAPTER 6.5, CALIFORNIA HEALTH & SAFETY CODE. FAILURE TO COMPLY MAY BE PROSECUTED AS A FELONY VIOLATION.

By signature below the applicant certifies that all statements and disclosures above are true and correct and that they have read and agree to abide by this permit and all conditions and limitations attached.

Applicant's Signature Cyrus D. Ramini Date 8-9-89
(Print Name) Cyrus D. Ramini Phone (714) 921-0888
Owner [ ] Operator [ ] Contractor [✓]

TO BE COMPLETED BY THE DEPARTMENT OF PUBLIC WORKS

PURSUANT TO SECTION 11.80.070B, LOS ANGELES COUNTY CODE, PERMISSION IS HEREBY GRANTED TO PROCEED WITH THE CLOSURE DESCRIBED ABOVE SUBJECT TO THE ATTACHED CONDITIONS AND LIMITATIONS [X]. THIS PERMIT EXPIRES 180 DAYS FROM THE DATE BELOW.

T.A. TIDEMANSON
Director of Public Works T.A. Tidemanson 8-9-89

CLOSURE PERMIT SUPPLEMENT
HAZARDOUS MATERIALS UNDERGROUND STORAGE
LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION
900 S. FREMONT AVENUE
ALHAMBRA, CA 91803

Closure Permit No. 5999 B
File No. I-12987-1F

To satisfy the permanent closure requirements for underground storage tanks previously storing hazardous materials, site integrity must be demonstrated by the analysis of soil samples and, if applicable, groundwater samples as outlined below. These requirements are in addition to the conditions listed on the Application for closure or contained in an approved Closure Plan.

1. Samples shall be obtained at the sampling points (SP) indicated on the attached plot plan.

2. For each SP, samples shall be obtained at the following depths:

| SP | Depth(s) | Compounds | Analysis Method |
|---|---|---|---|
| 1A, 1B, 2A, 2B | 2-4' Below tank invert | TPH | 418.1 |
| 3A, 3B | | TPH | 418.1 + 8015 |
| | | | |
| | | | |

3. All soil samples obtained shall be undisturbed and unexposed prior to analysis. The method used to obtain the samples and the date of sampling shall be included in the final report. ←

4. If groundwater is encountered during sampling, a groundwater monitoring well shall be established at the most downgradient sampling point. The well shall be developed by removing a minimum of four well volumes and a groundwater sample shall be obtained and analyzed. NO

5. The analysis results for all soil samples shall be expressed in milligrams per kilogram (mg/kg). Analysis results for groundwater samples shall be expressed in parts per billion (ppb). ✓

6. Analysis results shall be reported on laboratory letterhead and shall include the following information: a) The date the analysis was conducted; b) The method of extraction (if applicable); c) The method of analysis. ✓

7. All soil/groundwater samples obtained shall be handled and transported to laboratory in strict accordance with applicable EPA regulations utilizing chain-of-custody procedures. Chain-of-custody documentation shall be included in the final report. ✓

8. If the soil/groundwater analysis indicates undefined contamination at the facility, additional sampling shall be required to define the vertical and lateral extent present. NO

9. A final report that contains all of the above required information shall be submitted to the office above within one (1) month from the sampling date or 180 days from the date of this permit, whichever earlier. 12/5/89 GK

cg1/FORMPERMIT

CLOSURE PERMIT SUPPLEMENT
HAZARDOUS MATERIALS UNDERGROUND STORAGE
LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION
900 S. FREMONT AVENUE
ALHAMBRA, CA 91803

Closure Permit No. 6000 B
File No. I- 12987-1F

To satisfy the permanent closure requirements for underground storage tanks previously storing hazardous materials, site integrity must be demonstrated by the analysis of soil samples and, if applicable, groundwater samples as outlined below. These requirements are in addition to the conditions listed on the Application for closure or contained in an approved Closure Plan.

1. Samples shall be obtained at the sampling points (SP) indicated on the attached plot plan.

2. For each SP, samples shall be obtained at the following depths:

| SP | Depth(s) | Compounds | Analysis Method |
|---|---|---|---|
| 4A, 4B | Two 40' Borings Below Tank invert | TPH | 418-1 |
| | | | |
| | | | |
| | | | |

3. All soil samples obtained shall be undisturbed and unexposed prior to analysis. The method used to obtain the samples and the date of sampling shall be included in the final report.

4. If groundwater is encountered during sampling, a groundwater monitoring well shall be established at the most downgradient sampling point. The well shall be developed by removing a minimum of four well volumes and a groundwater sample shall be obtained and analyzed.

5. The analysis results for all soil samples shall be expressed in milligrams per kilogram (mg/kg). Analysis results for groundwater samples shall be expressed in parts per billion (ppb).

6. Analysis results shall be reported on laboratory letterhead and shall include the following information: a) The date the analysis was conducted; b) The method of extraction (if applicable); c) The method of analysis.

7. All soil/groundwater samples obtained shall be handled and transported to laboratory in strict accordance with applicable EPA regulations utilizing chain-of-custody procedures. Chain-of-custody documentation shall be included in the final report.

8. If the soil/groundwater analysis indicates undefined contamination at the facility, additional sampling shall be required to define the vertical and lateral extent present.

9. A final report that contains all of the above required information shall be submitted to the office above within one (1) month from the sampling date or 180 days from the date of this permit, whichever earlier.

cg1/FORMPERMIT

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

Waste Management Division

**FORM 'A':**
**SITE**

## UNDERGROUND STORAGE TANK PROGRAM

### FACILITY/SITE INFORMATION

**COMPLETE THIS FORM FOR EACH FACILITY/SITE**

Waste

810.25

| MARK ONLY ONE ITEM | | | | |
|---|---|---|---|---|
| ☐ 1 NEW PERMIT | ☐ 3 RENEWAL PERMIT | ☒ 5 CHANGE OF INFORMATION | ☒ 7 PERMANENTLY CLOSED SITE | |
| ☐ 2 INTERIM PERMIT | ☐ 4 AMENDED PERMIT | ☐ 6 TEMPORARY SITE CLOSURE | ☒ 8 TANK REMOVAL | |

## I. FACILITY/SITE INFORMATION & ADDRESS — (MUST BE COMPLETED)

| FACILITY/SITE NAME | CARE OF ADDRESS INFORMATION |
|---|---|
| KIRKHILL ~~RUBBER~~ INC | |
| ADDRESS: 12021 WOODRUFF AVE | NEAREST CROSS STREET: WASHBURN Rd; ✓ Box to indicate: ☐ PARTNERSHIP ☐ STATE-AGENCY ☑ CORPORATION ☐ LOCAL-AGENCY ☐ FEDERAL-AGENCY ☐ INDIVIDUAL ☐ COUNTY-AGENCY |
| CITY NAME: DOWNEY | STATE: CA; ZIP CODE: 90241; SITE PHONE #, WITH AREA CODE: (213) 8033421 |
| TYPE OF BUSINESS: ☐ 1 GAS STATION ☐ 2 DISTRIBUTOR ☐ 3 FARM ☒ 4 PROCESSOR ☐ 5 OTHER; ✓ Box if INDIAN RESERVATION or TRUST LANDS ☐ | EPA ID #: CAC000199973; # of TANK's AT THIS SITE: 4 |

| EMERGENCY CONTACT PERSON (PRIMARY) | EMERGENCY CONTACT PERSON (SECONDARY) |
|---|---|
| DAYS: NAME (LAST, FIRST): BELLANGER, RAY; PHONE # WITH AREA CODE: 2138033421 | DAYS: NAME (LAST, FIRST): DAVIS, DAVE; PHONE # WITH AREA CODE: 213 8033421 |
| NIGHTS: NAME (LAST, FIRST): BELLANGER, RAY; PHONE # WITH AREA CODE: 213 9291987 | NIGHTS: NAME (LAST, FIRST): DAVIS, DAVE; PHONE # WITH AREA CODE: 213 864 0641 |

## II. PROPERTY OWNER INFORMATION & ADDRESS — (MUST BE COMPLETED)

| NAME | CARE OF ADDRESS INFORMATION |
|---|---|
| KIRKHILL INC "SAME AS SITE" | |
| MAILING or STREET ADDRESS: 12021 WOODRUFF AVE | ✓ Box to indicate: ☑ CORPORATION ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ LOCAL-AGENCY ☐ COUNTY-AGENCY ☐ STATE-AGENCY ☐ FEDERAL-AGENCY |
| CITY NAME: DOWNEY | STATE: CA; ZIP CODE: 90241; PHONE #, WITH AREA CODE: 213 8033421 |

## III. TANK OWNER INFORMATION & ADDRESS — (MUST BE COMPLETED)

| NAME | CARE OF ADDRESS INFORMATION |
|---|---|
| KIRKHILL ~~RUBBER~~ INC "SAME AS SITE" | |
| MAILING or STREET ADDRESS: 12021 WOODRUFF AVE | ✓ Box to indicate: ☑ CORPORATION ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ LOCAL-AGENCY ☐ COUNTY-AGENCY ☐ STATE-AGENCY ☐ FEDERAL-AGENCY |
| CITY NAME: DOWNEY | STATE: CA; ZIP CODE: 90241 0000; PHONE #, WITH AREA CODE: 213 8033421 |

## IV. LEGAL NOTIFICATION AND BILLING ADDRESS

CHECK ONE (1) BOX INDICATING **WHICH ABOVE ADDRESS** SHOULD BE USED FOR **BOTH** LEGAL NOTIFICATION AND BILLING: I. ☒ II. ☐ III. ☐

*THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT.*

| APPLICANT'S NAME (PRINTED & SIGNATURE) | DATE |
|---|---|
| RAYMOND BELLANGER Raymond Bellanger | 12/12/89 |

## LOCAL AGENCY USE ONLY

| COUNTY # | JURISDICTION # | AGENCY # | FILE # | # of TANKS at SITE |
|---|---|---|---|---|
| 19 | 000 | 001 | 012987 | |

| CURRENT LOCAL AGENCY FACILITY ID # | APPROVED BY NAME | PHONE # WITH AREA CODE |
|---|---|---|
| 00000000000 | | |

| PERMIT NUMBER | PERMIT APPROVAL DATE | PERMIT EXPIRATION DATE |
|---|---|---|
| 00004735 | 10/20/86 | |

| LOCATION CODE | CENSUS TRACT # | SUPERVISOR-DISTRICT CODE | BUSINESS PLAN FILED | DATE FILED |
|---|---|---|---|---|
| 1 F | | | YES ☐ NO ☐ | |

| CHECK # | PERMIT AMOUNT | SURCHARGE AMOUNT | FEE CODE | RECEIPT # | BY: |
|---|---|---|---|---|---|
| | | | | | |

# LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
## Waste Management Division
## UNDERGROUND STORAGE TANK PROGRAM
## FACILITY/SITE INFORMATION
### COMPLETE THIS FORM FOR EACH FACILITY/SITE

**FORM 'B':**
**TANK**

| MARK ONLY ONE ITEM | | | | |
|---|---|---|---|---|
| | ☐ 1 NEW PERMIT | ☐ 3 RENEWAL PERMIT | ☒ 5 CHANGE OF INFORMATION | ☐ 7 PERMANENTLY CLOSED TANK |
| | ☐ 2 INTERIM PERMIT | ☐ 4 AMENDED PERMIT | ☐ 6 TEMPORARY TANK CLOSURE | ☒ 8 TANK REMOVED |

**FACILITY/SITE NAME WHERE TANK IS INSTALLED:** **FARM TANK - YES** ☐ **NO** ☐

## I. TANK DESCRIPTION COMPLETE ALL ITEMS - IF UNKNOWN — SO SPECIFY

| | |
|---|---|
| A. OWNERS TANK ID # # 1 | B. MANUFACTURED BY: UNKNOWN |
| C. YEAR INSTALLED 8/16/73 | D. TANK CAPACITY IN GALLONS: 10,000 |

## II. TANK CONTENTS IF (A.1), IS MARKED, COMPLETE ITEM C. IF (A.1), IS NOT MARKED, COMPLETE ITEM D.

A. ☐ 1 MOTOR VEHICLE FUEL ☒ 2 PETROLEUM ☐ 3 CHEMICAL PRODUCT ☐ 4 OIL ☐ 5 HAZARDOUS ☐ 80 EMPTY ☐ 95 UNKNOWN

B. ☐ 1 PRODUCT ☐ 2 WASTE

C. ☐ 1 UNLEADED ☐ 2 LEADED ☐ 3 DIESEL ☐ 4 GASAHOL ☐ 5 JET FUEL ☐ 6 AVIATION GAS ☐ 7 METHANOL ☐ 99 OTHER (DESCRIBE IN ITEM D, BELOW)

D. IF NOT MOTOR VEHICLE FUEL, ENTER NAME OF HAZARDOUS SUBSTANCE STORED & C.A.S. # NAPHTHENIC TYPE OIL C.A.S. #: 64741-53-3

## III. TANK CONSTRUCTION MARK ONE ITEM ONLY IN BOX A, B, C, & D

**A. TYPE OF SYSTEM**
☐ 1 DOUBLE WALLED ☐ 3 SINGLE WALLED WITH EXTERIOR LINER ☐ 95 UNKNOWN
☒ 2 SINGLE WALLED ☐ 4 SECONDARY CONTAINMENT ☐ 99 OTHER ____

**B. TANK MATERIAL**
☒ 1 STEEL/IRON ☐ 2 STAINLESS STEEL ☐ 3 FIBERGLASS ☐ 4 STEEL CLAD W/FIBERGLASS REINFORCED PLASTIC
☐ 5 CONCRETE ☐ 6 POLYVINYL CHLORIDE ☐ 7 ALUMINUM ☐ 8 100% METHANOL COMPATIBLE FRP
☐ 9 BRONZE ☐ 10 GALVANIZED STEEL ☐ 95 UNKNOWN ☐ 99 OTHER ____

**C. INTERIOR LINING**
☐ 1 RUBBER LINED ☐ 2 ALKYD LINING ☐ 3 EPOXY LINING ☐ 4 PHENOLIC LINING
☐ 5 GLASS LINING ☒ 6 UNLINED ☐ 95 UNKNOWN
☐ IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? ☐ YES ☐ NO ☐ 99 OTHER ____

**D. CORROSION PROTECTION**
☐ 1 POLYETHLENE WRAP ☒ 2 TAR OR ASPHALT ☐ 3 VINYL WRAP ☐ 4 FIBERGLASS REINFORCED PLASTIC
☐ 5 CATHODIC PROTECTION ☐ 91 NONE ☐ 95 UNKNOWN ☐ 99 OTHER ____

## IV. PIPING INFORMATION CIRCLE A IF ABOVE GROUND, U IF UNDERGROUND, BOTH IF APPLICABLE

| | | | | | |
|---|---|---|---|---|---|
| **A. SYSTEM TYPE** | (A) (U) 1 SUCTION | (A) U 2 PRESSURE | A U 3 GRAVITY | A U 91 NONE | A U 95 UNKNOWN A U 99 OTHER |
| **B. CONSTRUCTION** | (A) (U) 1 SINGLE WALLED | A U 2 DOUBLE WALLED | A U 3 LINED TRENCH | A U 91 NONE | A U 95 UNKNOWN A U 99 OTHER |
| **C. MATERIAL** | (A) (U) 1 STEEL/IRON | A U 2 STAINLESS STEEL | A U 3 POLYVINYL CHLORIDE (PVC) | A U 4 FIBERGLASS PIPE | A U 91 NONE |
| | A U 5 ALUMINUM | A U 6 CONCRETE | A U 7 STEEL CLAD W/FRP | A U 8 100% METHANOL COMPATIBLE FRP | |
| | A U 9 GALVANIZED STEEL | A U 95 UNKNOWN | A U 99 OTHER ____ | | |

## V. LEAK DETECTION SYSTEM CIRCLE P FOR PRIMARY, OR S FOR SECONDARY, A PRIMARY LEAK DETECTION SYSTEM MUST BE CIRCLED.

P S 1 VISUAL CHECK P (S) 2 INVENTORY RECONCILIATION P S 3 VADOSE WELLS P S 4 ELECTRONIC MONITOR P S 5 GROUND WATER MONITORING WELLS
P S 6 PRECISION TESTING (P) S 7 PRESSURE TESTING P S 91 NONE P S 95 UNKNOWN P S 99 OTHER ____

## VI. INFORMATION ON TANK PERMANENTLY CLOSED IN PLACE

| 1. ESTIMATED DATE LAST USED (MO/YR) | 2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING IN ____ GALLONS | 3. WAS TANK FILLED WITH INERT MATERIAL? ☐ YES ☐ NO |
|---|---|---|
| | | |

*THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT.*

| APPLICANT'S NAME (PRINTED & SIGNATURE) | DATE |
|---|---|
| RAYMOND BELLANGER Ray Bellanger | 12/12/89 |

## LOCAL AGENCY USE ONLY

| COUNTY # | JURISDICTION # | AGENCY # | FILE # | TANK ID # |
|---|---|---|---|---|
| 19 | 000 | 001 | 012987 | |

| CURRENT LOCAL AGENCY FACILITY ID # | APPROVED BY NAME | PHONE # WITH AREA CODE |
|---|---|---|
| 00000000004 | | |

| PERMIT NUMBER | PERMIT APPROVAL DATE | PERMIT EXPIRATION DATE |
|---|---|---|
| | | |

| CHECK # | PERMIT AMOUNT | SURCHARGE AMT. | FEE CODE | RECEIPT # | BY: |
|---|---|---|---|---|---|
| | | | | | |

# LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
## Waste Management Division
## UNDERGROUND STORAGE TANK PROGRAM
## FACILITY/SITE INFORMATION
COMPLETE THIS FORM FOR EACH FACILITY/SITE

**FORM 'B':**
**TANK**

| MARK ONLY ONE ITEM | | | | |
|---|---|---|---|---|
| ☐ 1 NEW PERMIT | ☐ 3 RENEWAL PERMIT | ☒ 5 CHANGE OF INFORMATION | ☐ 7 PERMANENTLY CLOSED TANK |
| ☐ 2 INTERIM PERMIT | ☐ 4 AMENDED PERMIT | ☐ 6 TEMPORARY TANK CLOSURE | ☒ 8 TANK REMOVED |

FACILITY/SITE NAME WHERE TANK IS INSTALLED: KIRKHILL INC FARM TANK - YES ☐ NO ☒

## I. TANK DESCRIPTION COMPLETE ALL ITEMS - IF UNKNOWN — SO SPECIFY

| | |
|---|---|
| A. OWNERS TANK ID # # 2 | B. MANUFACTURED BY: UNKNOWN |
| C. YEAR INSTALLED 8-16-73 | D. TANK CAPACITY IN GALLONS: 10,000 |

## II. TANK CONTENTS IF (A.1), IS MARKED, COMPLETE ITEM C. IF (A.1), IS NOT MARKED, COMPLETE ITEM D.

| A. | B. | C. |
|---|---|---|
| ☒ 1 MOTOR VEHICLE FUEL ☐ 2 PETROLEUM | ☐ 1 PRODUCT | ☐ 1 UNLEADED ☐ 2 LEADED ☒ 3 DIESEL |
| ☐ 3 CHEMICAL PRODUCT ☐ 4 OIL | ☐ 2 WASTE | ☐ 4 GASAHOL ☐ 5 JET FUEL ☐ 6 AVIATION GAS |
| ☐ 5 HAZARDOUS ☐ 80 EMPTY ☐ 95 UNKNOWN | | ☐ 7 METHANOL ☐ 99 OTHER (DESCRIBE IN ITEM D, BELOW) |

D. IF NOT MOTOR VEHICLE FUEL, ENTER NAME OF HAZARDOUS SUBSTANCE STORED & C.A.S. # C.A.S. #:

## III. TANK CONSTRUCTION MARK ONE ITEM ONLY IN BOX A, B, C, & D

| | | | | |
|---|---|---|---|---|
| **A. TYPE OF SYSTEM** | ☐ 1 DOUBLE WALLED | ☐ 3 SINGLE WALLED WITH EXTERIOR LINER | ☐ 95 UNKNOWN | |
| | ☒ 2 SINGLE WALLED | ☐ 4 SECONDARY CONTAINMENT | ☐ 99 OTHER | |
| **B. TANK MATERIAL** | ☒ 1 STEEL/IRON | ☐ 2 STAINLESS STEEL | ☐ 3 FIBERGLASS | ☐ 4 STEEL CLAD W/FIBERGLASS REINFORCED PLASTIC |
| | ☐ 5 CONCRETE | ☐ 6 POLYVINYL CHLORIDE | ☐ 7 ALUMINUM | ☐ 8 100% METHANOL COMPATIBLE FRP |
| | ☐ 9 BRONZE | ☐ 10 GALVANIZED STEEL | ☐ 95 UNKNOWN | ☐ 99 OTHER |
| **C. INTERIOR LINING** | ☐ 1 RUBBER LINED | ☐ 2 ALKYD LINING | ☐ 3 EPOXY LINING | ☐ 4 PHENOLIC LINING |
| | ☐ 5 GLASS LINING | ☒ 6 UNLINED | | ☐ 95 UNKNOWN |
| | ☐ IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? | ☐ YES ☐ NO | | ☐ 99 OTHER |
| **D. CORROSION PROTECTION** | ☐ 1 POLYETHLENE WRAP | ☒ 2 TAR OR ASPHALT | ☐ 3 VINYL WRAP | ☐ 4 FIBERGLASS REINFORCED PLASTIC |
| | ☐ 5 CATHODIC PROTECTION | ☐ 91 NONE | ☐ 95 UNKNOWN | ☐ 99 OTHER |

## IV. PIPING INFORMATION CIRCLE A IF ABOVE GROUND, U IF UNDERGROUND, BOTH IF APPLICABLE

| | | | | | | |
|---|---|---|---|---|---|---|
| **A. SYSTEM TYPE** | (A) U 1 SUCTION | A (U) 2 PRESSURE | A U 3 GRAVITY | A U 91 NONE | A U 95 UNKNOWN | A U 99 OTHER |
| **B. CONSTRUCTION** | (A) (U) 1 SINGLE WALLED | A U 2 DOUBLE WALLED | A U 3 LINED TRENCH | A U 91 NONE | A U 95 UNKNOWN | A U 99 OTHER |
| **C. MATERIAL** | (A) (U) 1 STEEL/IRON | A U 2 STAINLESS STEEL | A U 3 POLYVINYL CHLORIDE (PVC) | A U 4 FIBERGLASS PIPE | A U 91 NONE | |
| | A U 5 ALUMINUM | A U 6 CONCRETE | A U 7 STEEL CLAD W/FRP | A U 8 100% METHANOL COMPATIBLE FRP | | |
| | A U 9 GALVANIZED STEEL | A U 95 UNKNOWN | A U 99 OTHER | | | |

## V. LEAK DETECTION SYSTEM CIRCLE P FOR PRIMARY, OR S FOR SECONDARY, A PRIMARY LEAK DETECTION SYSTEM MUST BE CIRCLED.

| | | | | |
|---|---|---|---|---|
| P S 1 VISUAL CHECK | P (S) 2 INVENTORY RECONCILIATION | P S 3 VADOSE WELLS | P S 4 ELECTRONIC MONITOR | P S 5 GROUND WATER MONITORING WELLS |
| P S 6 PRECISION TESTING | (P) S 7 PRESSURE TESTING | P S 91 NONE | P S 95 UNKNOWN | P S 99 OTHER |

## VI. INFORMATION ON TANK PERMANENTLY CLOSED IN PLACE

| 1. ESTIMATED DATE LAST USED (MO/YR) | 2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING IN GALLONS | 3. WAS TANK FILLED WITH INERT MATERIAL? ☐ YES ☐ NO |
|---|---|---|
| | | |

*THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT.*

| APPLICANT'S NAME (PRINTED & SIGNATURE) | DATE |
|---|---|
| RAYMOND BELLANGER Ray Bellanger | 12/12/89 |

## LOCAL AGENCY USE ONLY

| COUNTY # | JURISDICTION # | AGENCY # | FILE # | TANK ID # |
|---|---|---|---|---|
| 19 | 000 | 001 | 012987 | |

| CURRENT LOCAL AGENCY FACILITY ID # | APPROVED BY NAME | PHONE # WITH AREA CODE |
|---|---|---|
| 00000000000 4 | | |

| PERMIT NUMBER | PERMIT APPROVAL DATE | PERMIT EXPIRATION DATE |
|---|---|---|
| | | |

| CHECK # | PERMIT AMOUNT | SURCHARGE AMT. | FEE CODE | RECEIPT # | BY: |
|---|---|---|---|---|---|
| | | | | | |

# LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
## Waste Management Division
## UNDERGROUND STORAGE TANK PROGRAM
## FACILITY/SITE INFORMATION
COMPLETE THIS FORM FOR EACH FACILITY/SITE

**FORM 'B':**
**TANK**

| MARK ONLY ONE ITEM | | | | |
|---|---|---|---|---|
| ☐ 1 NEW PERMIT | ☐ 3 RENEWAL PERMIT | ☒ 5 CHANGE OF INFORMATION | ☐ 7 PERMANENTLY CLOSED TANK |
| ☐ 2 INTERIM PERMIT | ☐ 4 AMENDED PERMIT | ☐ 6 TEMPORARY TANK CLOSURE | ☒ 8 TANK REMOVED |

FACILITY/SITE NAME WHERE TANK IS INSTALLED: KIRKHILL INC FARM TANK - YES ☐ NO ☒

## I. TANK DESCRIPTION COMPLETE ALL ITEMS - IF UNKNOWN — SO SPECIFY

| | |
|---|---|
| A. OWNERS TANK ID # #3 | B. MANUFACTURED BY: UNKNOWN |
| C. YEAR INSTALLED 1976 6/29 | D. TANK CAPACITY IN GALLONS: 10,000 |

## II. TANK CONTENTS IF (A.1), IS MARKED, COMPLETE ITEM C. IF (A.1), IS NOT MARKED, COMPLETE ITEM D.

A. ☒ 1 MOTOR VEHICLE FUEL ☐ 2 PETROLEUM ☐ 3 CHEMICAL PRODUCT ☐ 4 OIL ☐ 5 HAZARDOUS ☐ 80 EMPTY ☐ 95 UNKNOWN

B. ☐ 1 PRODUCT ☐ 2 WASTE

C. ☐ 1 UNLEADED ☐ 2 LEADED ☒ 3 DIESEL ☐ 4 GASAHOL ☐ 5 JET FUEL ☐ 6 AVIATION GAS ☐ 7 METHANOL ☐ 99 OTHER (DESCRIBE IN ITEM D, BELOW)

D. IF NOT MOTOR VEHICLE FUEL, ENTER NAME OF HAZARDOUS SUBSTANCE STORED & C.A.S. # C.A.S. #:

## III. TANK CONSTRUCTION MARK ONE ITEM ONLY IN BOX A, B, C, & D

**A. TYPE OF SYSTEM**
☐ 1 DOUBLE WALLED ☒ 2 SINGLE WALLED ☐ 3 SINGLE WALLED WITH EXTERIOR LINER ☐ 4 SECONDARY CONTAINMENT ☐ 95 UNKNOWN ☐ 99 OTHER

**B. TANK MATERIAL**
☒ 1 STEEL/IRON ☐ 2 STAINLESS STEEL ☐ 3 FIBERGLASS ☐ 4 STEEL CLAD W/FIBERGLASS REINFORCED PLASTIC ☐ 5 CONCRETE ☐ 6 POLYVINYL CHLORIDE ☐ 7 ALUMINUM ☐ 8 100% METHANOL COMPATIBLE FRP ☐ 9 BRONZE ☐ 10 GALVANIZED STEEL ☐ 95 UNKNOWN ☐ 99 OTHER

**C. INTERIOR LINING**
☐ 1 RUBBER LINED ☐ 2 ALKYD LINING ☐ 3 EPOXY LINING ☐ 4 PHENOLIC LINING ☐ 5 GLASS LINING ☒ 6 UNLINED ☐ 95 UNKNOWN ☐ IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? ☐ YES ☐ NO ☐ 99 OTHER

**D. CORROSION PROTECTION**
☐ 1 POLYETHLENE WRAP ☒ 2 TAR OR ASPHALT ☐ 3 VINYL WRAP ☐ 4 FIBERGLASS REINFORCED PLASTIC ☐ 5 CATHODIC PROTECTION ☐ 91 NONE ☐ 95 UNKNOWN ☐ 99 OTHER

## IV. PIPING INFORMATION CIRCLE A IF ABOVE GROUND, U IF UNDERGROUND, BOTH IF APPLICABLE

| | | | | | | |
|---|---|---|---|---|---|---|
| A. SYSTEM TYPE | A (U) 1 SUCTION | (A) U 2 PRESSURE | A U 3 GRAVITY | A U 91 NONE | A U 95 UNKNOWN | A U 99 OTHER |
| B. CONSTRUCTION | (A U) 1 SINGLE WALLED | A U 2 DOUBLE WALLED | A U 3 LINED TRENCH | A U 91 NONE | A U 95 UNKNOWN | A U 99 OTHER |
| C. MATERIAL | (A U) 1 STEEL/IRON | A U 2 STAINLESS STEEL | A U 3 POLYVINYL CHLORIDE (PVC) | A U 4 FIBERGLASS PIPE | A U 91 NONE | |
| | A U 5 ALUMINUM | A U 6 CONCRETE | A U 7 STEEL CLAD W/FRP | A U 8 100% METHANOL COMPATIBLE FRP | | |
| | A U 9 GALVANIZED STEEL | A U 95 UNKNOWN | A U 99 OTHER | | | |

## V. LEAK DETECTION SYSTEM CIRCLE P FOR PRIMARY, OR S FOR SECONDARY, A PRIMARY LEAK DETECTION SYSTEM MUST BE CIRCLED.

P S 1 VISUAL CHECK P (S) 2 INVENTORY RECONCILIATION P S 3 VADOSE WELLS P S 4 ELECTRONIC MONITOR P S 5 GROUND WATER MONITORING WELLS
P S 6 PRECISION TESTING (P) S 7 PRESSURE TESTING P S 91 NONE P S 95 UNKNOWN P S 99 OTHER

## VI. INFORMATION ON TANK PERMANENTLY CLOSED IN PLACE

| 1. ESTIMATED DATE LAST USED (MO/YR) | 2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING IN GALLONS | 3. WAS TANK FILLED WITH INERT MATERIAL? |
|---|---|---|
| | | ☐ YES ☒ NO |

*THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT.*

| APPLICANT'S NAME (PRINTED & SIGNATURE) | DATE |
|---|---|
| RAYMOND BELLANGER Ray Bellanger | 12/12/89 |

## LOCAL AGENCY USE ONLY

| COUNTY # | JURISDICTION # | AGENCY # | FILE # | TANK ID # |
|---|---|---|---|---|
| 19 | 000 | 001 | 012987 | |

| CURRENT LOCAL AGENCY FACILITY ID # | APPROVED BY NAME | PHONE # WITH AREA CODE |
|---|---|---|
| 00000000004 | | |

| PERMIT NUMBER | PERMIT APPROVAL DATE | PERMIT EXPIRATION DATE |
|---|---|---|
| | | |

| CHECK # | PERMIT AMOUNT | SURCHARGE AMT. | FEE CODE | RECEIPT # | BY: |
|---|---|---|---|---|---|
| | | | | | |

# LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
## Waste Management Division
## UNDERGROUND STORAGE TANK PROGRAM
## FACILITY/SITE INFORMATION
COMPLETE THIS FORM FOR EACH FACILITY/SITE

**FORM 'B':**
**TANK**

| MARK ONLY ONE ITEM | | | | |
|---|---|---|---|---|
| ☐ 1 NEW PERMIT | ☐ 2 INTERIM PERMIT | ☐ 3 RENEWAL PERMIT | ☐ 4 AMENDED PERMIT | ☒ 5 CHANGE OF INFORMATION | ☐ 6 TEMPORARY TANK CLOSURE | ☒ 7 PERMANENTLY CLOSED TANK | ☐ 8 TANK REMOVED |

FACILITY/SITE NAME WHERE TANK IS INSTALLED: KIRKHILL INC — FARM TANK - YES ☐ NO ☒

## I. TANK DESCRIPTION COMPLETE ALL ITEMS - IF UNKNOWN — SO SPECIFY

| | |
|---|---|
| A. OWNERS TANK ID # #4 | B. MANUFACTURED BY: UNKNOWN |
| C. YEAR INSTALLED 1952 | D. TANK CAPACITY IN GALLONS: 7500 |

## II. TANK CONTENTS IF (A.1), IS MARKED, COMPLETE ITEM C. IF (A.1), IS NOT MARKED, COMPLETE ITEM D.

| A. | B. | C. |
|---|---|---|
| ☒ 1 MOTOR VEHICLE FUEL ☐ 2 PETROLEUM ☐ 3 CHEMICAL PRODUCT ☐ 4 OIL ☐ 5 HAZARDOUS ☐ 80 EMPTY ☐ 95 UNKNOWN | ☐ 1 PRODUCT ☐ 2 WASTE | ☐ 1 UNLEADED ☐ 2 LEADED ☒ 3 DIESEL ☐ 4 GASAHOL ☐ 5 JET FUEL ☐ 6 AVIATION GAS ☐ 7 METHANOL ☐ 99 OTHER (DESCRIBE IN ITEM D, BELOW) |

D. IF NOT MOTOR VEHICLE FUEL, ENTER NAME OF HAZARDOUS SUBSTANCE STORED & C.A.S. # — C.A.S. #:

## III. TANK CONSTRUCTION MARK ONE ITEM ONLY IN BOX A, B, C, & D

| | | | | |
|---|---|---|---|---|
| **A. TYPE OF SYSTEM** | ☐ 1 DOUBLE WALLED | ☐ 3 SINGLE WALLED WITH EXTERIOR LINER | ☐ 95 UNKNOWN | |
| | ☒ 2 SINGLE WALLED | ☐ 4 SECONDARY CONTAINMENT | ☐ 99 OTHER | |
| **B. TANK MATERIAL** | ☒ 1 STEEL/IRON | ☐ 2 STAINLESS STEEL | ☐ 3 FIBERGLASS | ☐ 4 STEEL CLAD W/FIBERGLASS REINFORCED PLASTIC |
| | ☐ 5 CONCRETE | ☐ 6 POLYVINYL CHLORIDE | ☐ 7 ALUMINUM | ☐ 8 100% METHANOL COMPATIBLE FRP |
| | ☐ 9 BRONZE | ☐ 10 GALVANIZED STEEL | ☐ 95 UNKNOWN | ☐ 99 OTHER |
| **C. INTERIOR LINING** | ☐ 1 RUBBER LINED | ☐ 2 ALKYD LINING | ☐ 3 EPOXY LINING | ☐ 4 PHENOLIC LINING |
| | ☐ 5 GLASS LINING | ☒ 6 UNLINED | | ☐ 95 UNKNOWN |
| | ☐ IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? | ☐ YES ☐ NO | | ☐ 99 OTHER |
| **D. CORROSION PROTECTION** | ☐ 1 POLYETHLENE WRAP | ☒ 2 TAR OR ASPHALT | ☐ 3 VINYL WRAP | ☐ 4 FIBERGLASS REINFORCED PLASTIC |
| | ☐ 5 CATHODIC PROTECTION | ☐ 91 NONE | ☐ 95 UNKNOWN | ☐ 99 OTHER |

## IV. PIPING INFORMATION CIRCLE A IF ABOVE GROUND, U IF UNDERGROUND, BOTH IF APPLICABLE

| | | | | | |
|---|---|---|---|---|---|
| **A. SYSTEM TYPE** | (A) U 1 SUCTION | A (U) 2 PRESSURE | A U 3 GRAVITY | A U 91 NONE | A U 95 UNKNOWN A U 99 OTHER |
| **B. CONSTRUCTION** | A U 1 SINGLE WALLED | A U 2 DOUBLE WALLED | (U) 3 LINED TRENCH | A U 91 NONE | A U 95 UNKNOWN A U 99 OTHER |
| **C. MATERIAL** | A (U) 1 STEEL/IRON | A U 2 STAINLESS STEEL | A U 3 POLYVINYL CHLORIDE (PVC) | A U 4 FIBERGLASS PIPE | A U 91 NONE |
| | A U 5 ALUMINUM | A (U) 6 CONCRETE | A U 7 STEEL CLAD W/FRP | A U 8 100% METHANOL COMPATIBLE FRP | |
| | A U 9 GALVANIZED STEEL | A U 95 UNKNOWN | A U 99 OTHER | | |

## V. LEAK DETECTION SYSTEM CIRCLE P FOR PRIMARY, OR S FOR SECONDARY, A PRIMARY LEAK DETECTION SYSTEM MUST BE CIRCLED.

P S 1 VISUAL CHECK — P (S) 2 INVENTORY RECONCILIATION — P S 3 VADOSE WELLS — P S 4 ELECTRONIC MONITOR — P S 5 GROUND WATER MONITORING WELLS
P S 6 PRECISION TESTING — (P) S 7 PRESSURE TESTING — P S 91 NONE — P S 95 UNKNOWN — P S 99 OTHER

## VI. INFORMATION ON TANK PERMANENTLY CLOSED IN PLACE Closure Permit # 5999

| 1. ESTIMATED DATE LAST USED (MO/YR) | 2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING IN | 3. WAS TANK FILLED WITH INERT MATERIAL? |
|---|---|---|
| 10/89 | NONE GALLONS | ☒ YES ☐ NO |

*THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT.*

| APPLICANT'S NAME (PRINTED & SIGNATURE) | DATE |
|---|---|
| RAYMOND BELLANGER Raymond Bellanger | 12-12-89 |

## LOCAL AGENCY USE ONLY

| COUNTY # | JURISDICTION # | AGENCY # | FILE # | TANK ID # |
|---|---|---|---|---|
| 19 | 000 | 001 | 012987 | |

| CURRENT LOCAL AGENCY FACILITY ID # | APPROVED BY NAME | PHONE # WITH AREA CODE |
|---|---|---|
| 00000000004 | | |

| PERMIT NUMBER | PERMIT APPROVAL DATE | PERMIT EXPIRATION DATE |
|---|---|---|
| | | |

| CHECK # | PERMIT AMOUNT | SURCHARGE AMT. | FEE CODE | RECEIPT # | BY: |
|---|---|---|---|---|---|
| | | | | | |

I-12987-1F

# UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY ☐ YES ☒ NO

HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? ☐ YES ☒ NO

REPORT DATE: 03/15/90 | CASE #:

**FOR LOCAL AGENCY USE ONLY**
I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT I HAVE REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 OF THE HEALTH AND SAFTY CODE.
SIGNED: Carl U. Sjoberg DATE: 3/30/90

**REPORTED BY**
NAME OF INDIVIDUAL FILING REPORT: David Esfandi | PHONE: (818)458-3509 | SIGNATURE: D. Esfandi
REPRESENTING ☐ OWNER/OPERATOR ☐ REGIONAL BOARD ☒ LOCAL AGENCY ☐ OTHER | COMPANY OR AGENCY NAME: LA Co. Dept. of public Works
ADDRESS: 900 S STREET Fremont Ave CITY Alhambra STATE CA ZIP 91803

**RESPONSIBLE PARTY**
NAME: KirKhill Inc. ☐ UNKNOWN | CONTACT PERSON: Raymond Ballanger | PHONE: (213)803-3421
ADDRESS: 12021 STREET Woodruff Ave CITY Downey STATE CA ZIP 90241

**SITE LOCATION**
FACILITY NAME (IF APPLICABLE): KirKhill Inc. | OPERATOR: Raymond Ballanger | PHONE: (213)803-3421
ADDRESS: 12021 STREET Woodruff Ave CITY Downey COUNTY LA ZIP 90241
CROSS STREET: Imperial Highway

**IMPLEMENTING AGENCIES**
LOCAL AGENCY / AGENCY NAME: LA Co. D.P.W. | CONTACT PERSON: Carl SJoberg | PHONE: (818)458-3539
REGIONAL BOARD: Los Angeles Region | Joshua Workman | PHONE: (213)266-7561

**SUBSTANCES INVOLVED**
(1) NAME: Diesel | QUANTITY LOST (GALLONS): ☒ UNKNOWN
(2) Cutting Oil ☒ UNKNOWN

**DISCOVERY/ABATEMENT**
DATE DISCOVERED: 03/12/90 | HOW DISCOVERED: ☐ TANK TEST ☐ INVENTORY CONTROL ☒ TANK REMOVAL ☐ SUBSURFACE MONITORING ☐ OTHER ☐ NUISANCE CONDITIONS
DATE DISCHARGE BEGAN: ☒ UNKNOWN
HAS DISCHARGE BEEN STOPPED? ☒ YES ☐ NO IF YES, DATE 03/12/90
METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY): ☐ REMOVE CONTENTS ☐ REPLACE TANK ☒ CLOSE TANK ☐ REPAIR TANK ☐ REPAIR PIPING ☐ CHANGE PROCEDURE ☐ OTHER

**SOURCE/CAUSE**
SOURCE OF DISCHARGE: ☐ TANK LEAK ☒ UNKNOWN ☐ PIPING LEAK ☐ OTHER
CAUSE(S): ☐ OVERFILL ☐ RUPTURE/FAILURE ☐ SPILL ☐ CORROSION ☒ UNKNOWN ☐ OTHER

**CASE TYPE**
CHECK ONE ONLY: ☒ UNDETERMINED ☐ SOIL ONLY ☐ GROUNDWATER ☐ DRINKING WATER - (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)

**CURRENT STATUS**
CHECK ONE ONLY: ☒ NO ACTION TAKEN ☐ LEAK BEING CONFIRMED ☐ REMEDIATION PLAN ☐ PRELIMINARY SITE ASSESSMENT WORKPLAN SUBMITTED ☐ PRELIMINARY SITE ASSESSMENT UNDERWAY ☐ CASE CLOSED (CLEANUP COMPLETED OR UNNECESSARY) ☐ POLLUTION CHARACTERIZATION ☐ POST CLEANUP MONITORING IN PROGRESS ☐ CLEANUP UNDERWAY

**REMEDIAL ACTION**
CHECK APPROPRIATE ACTION(S) (SEE BACK FOR DETAILS)
☐ CAP SITE (CD) ☐ CONTAINMENT BARRIER (CB) ☐ VACUUM EXTRACT (VE) ☐ EXCAVATE & DISPOSE (ED) ☐ EXCAVATE & TREAT (ET) ☐ NO ACTION REQUIRED (NA) ☒ OTHER (OT) Not Specified ☐ REMOVE FREE PRODUCT (FP) ☐ PUMP & TREAT GROUNDWATER (GT) ☐ TREATMENT AT HOOKUP (HU) ☐ ENHANCED BIO DEGRADATION (IT) ☐ REPLACE SUPPLY (RS) ☐ VENT SOIL (VS)

**COMMENTS**

HSC 05 (11/89)

APPENDIX C

SUMMARY SOIL SAMPLES ANALYSIS REPORT

| FILE | SAMPLE NO. | DATE | DEPTH | TPH DIESEL mg/kg | TRPH mg/kg | ETHYL BENZENE mg/kg | TOLUENE mg/kg | TOTAL XYLENE mg/kg |
|---|---|---|---|---|---|---|---|---|
| | | 1989 | | | | | | |
| F-404 | K-1 | 08/24 | 3' | ND<20 | 52 | | | |
| F-405 | K-2 | 08/24 | 3' | ND<20 | 32 | | | |
| F-406 | K-3 | 08/24 | 3' | | 32 | | | |
| F-407 | K-4 | 08/24 | 3' | | 325 | | | |
| F-408 | K-5 | 08/24 | 3' | | 45,714 | | | |
| F-409 | K-6 | 08/24 | 3' | | 1 | | | |
| F-410 | K-7 | 08/24 | 3' | | 5,030 | | | |
| F-912 | B-1 | 09/26 | 15' | | 10 | | | |
| F-913 | B-2 | 09/26 | 20' | | ND<10 | | | |
| F-914 | B-3 | 09/26 | 20' | | 285 | | | |
| F-915 | B-4 | 09/26 | 20' | | 12 | | | |
| F-916 | B-4 | 09/26 | 30' | | 14 | | | |
| | B-5 | 09/27 | 20' | | 27 | | | |
| | B-6 | 09/27 | 20' | | 158 | | | |
| G-112 | B-6 | 10/17 | 15' | ND<10 | | | | |
| G-113 | B-6 | 10/17 | 30' | ND<10 | | | | |
| G-114 | B-6 | 10/17 | 40' | ND<10 | | | | |
| G-115 | B-5 | 10/17 | 15' | ND<10 | | | | |
| G-116 | B-5 | 10/17 | 30' | ND<10 | | | | |
| | VS-1 | 10/31 | 23' | ND<10 | | | | |
| | VS-2 | 10/31 | 22' | ND<10 | | | | |
| | VS-3 | 10/31 | 23' | | | | | |
| | VS-5 | 10/31 | 21' | ND<10 | | | | |
| | VS-6 | 10/31 | 23' | 27,100 | | | | |
| | VS-7 | 10/31 | 23' | ND<10 | | | | |
| | VS-8 | 10/31 | 25' | 55 | (Resample after further excavation) | | | |
| G-486 | VS-1 | 11/22 | | 33 | | | | |
| G-487 | VS-2 | 11/22 | | 17 | | | | |
| G-488 | VS-3 | 11/22 | | 37 | Stockpile samples after treatment | | | |
| G-489 | VS-4 | 11/22 | | 87 | | | | |
| G-490 | VS-5 | 11/22 | | 55 | | | | |

K-1 thru K-6 depths measured from excavation floor ??

2-26-90

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

file

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

IN REPLY PLEASE
REFER TO FILE:

APR 1 1 1990

WM-1
12987

Mr. Raymond Ballanger
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballanger:

NOTIFICATION OF RESPONSIBILITY FOR REIMBURSEMENT FOR COSTS INCURRED IN ADMINISTERING THE UNDERGROUND STORAGE TANK CLEANUP PROGRAM
SITE ADDRESS: 12021 WOODRUFF AVE., DOWNEY, CA 90241

The purpose of this letter is to inform responsible parties that the Los Angeles County Department of Public Works has entered into an agreement with the State of California to oversee the cleanup of contaminated sites, resulting from the unauthorized release of hazardous substances from underground storage tanks. The cleanup of these sites is necessary to protect the public and environment from unnecessary exposure to hazardous chemicals.

The cleanup program developed by Los Angeles County is funded by State and Federal monies, and is subject to the reimbursement requirements associated with the use of these funds. In order to comply with the reimbursement requirement, it will be necessary to account for all time and materials expended by County staff at each cleanup site. On a routine basis, site specific amounts detailing the time and expenses expended for each site will be provided to the State. The State will then invoice the responsible party for all direct and indirect costs associated with the cleanup of the site.

For your information, please find the enclosed Notice of Reimbursement. This is your formal notification concerning reimbursement requirements for the responsible party. If any of the information contained in the Notice of Reimbursement is incorrect, or if you have any questions regarding the reimbursement requirements, please contact Pat Proano from the Underground Storage Tank Cleanup Program at (818) 458-3979. Any correspondence should be sent to:

Los Angeles County Department of Public Works
Waste Management Division
UST Pilot Program
Attention Pat Proano
P.O. Box 1460
Alhambra, CA 91803-1331

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

P. A. Proano

Pat A. Proano
Supervising Civil Engineer II
Waste Management Division

PAP:vc/12987

Enc.

cc: State Water Resources Control Board
California Regional Water Quality Control Board,
Los Angeles Region

State Water Resources Control Board
Division of Water Quality
UST Cleanup Program

Notice of Reimbursement
When State Funds are Used

Site Code 12987 Date First Reported 03-12-90

Site Name Kirkhill, Inc. Substance 12034

Address 12021 Woodruff Avenue Petroleum (X) Yes ( ) No

City/State/Zip Downey, CA 90241

The following information has been provided to:

Responsible Party Mr. Raymond Ballanger

Company Name Kirkhill, Inc.

Address P.O. Box 7012

City/State/Zip Downey, CA 90241-0030

Whereas the Legislature has appropriated funds from the California Hazardous Substance Cleanup Fund to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks; and Whereas the direct and indirect costs of overseeing removal or remedial action at the above site are funded, in whole or in part, from the Hazardous Substance Cleanup Fund; and Whereas the above individual(s) or entity(ies) have been identified as the party or parties responsible for investigation and cleanup of the above site; YOU ARE HEREBY NOTIFIED that pursuant to Section 25360 of the Health and Safety Code, the above Responsible Party or Parties shall reimburse the State Water Resources Control Board for all direct and indirect costs incurred by any and all state and local agencies while overseeing the cleanup of the above underground storage tank site, and the above Responsible Party or Parties shall make full payment of such costs within 30 days of receipt of a detailed invoice from the State Resources Control Board.

Contract Project Director:

P. A. Pirano (818)458-3549 Date 4/5/90

Signature Telephone Number

PAP:vc/012987

WATER RESOURCES CONTROL BOARD - DIVISION OF WATER QUALITY

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION - UST PILOT PROGRAM

# SITE SPECIFIC QUARTERLY REPORT

CONTRACTOR NO: 19000 SOURCE OF FUNDS: F SUBSTANCE: 12034

SITE NO: 12987 FEDERAL EXEMPT: N PETROLEUM: Y

SITE NAME: Kirkhill, Inc. DATE REPORTED: 03/12/90

ADDRESS: 12021 Woodruff Avenue DATE CONFIRMED: 03/15/90

CITY/ZIP Downey 90241 CATEGORY: R

## SITE STATUS

CASE TYPE: S CONTRACT STATUS: EMERGENCY RESPONSE:

RP SEARCH: S DATE UNDERWAY: 03/15/90 DATE COMPLETED: 03/15/90

PRELIMINARY ASSESSMENT: DATE UNDERWAY: DATE COMPLETED:

SITE INVESTIGATION: DATE UNDERWAY: DATE COMPLETED:

REMEDIAL ACTION: DATE UNDERWAY: DATE COMPLETED:

POST REMEDIAL ACTION MONITORING: DATE UNDERWAY: DATE COMPLETED:

ENFORCEMENT ACTION TAKEN: TYPE: DATE TAKEN:

LUFT CATEGORY: CASE CLOSED: DATE CLOSED:

DATE EXCAVATION STARTED: REMEDIAL ACTIONS TAKEN:

## RESPONSIBLE PARTY

CONTACT NAME: Raymond Ballanger

COMPANY NAME: Kirkhill, Inc.

ADDRESS: P.O. Box 7012

CITY/STATE: Downey , CA 90241-0030

UNDERGROUND STORAGE TANK PILOT PROGRAM
SITE SELECTION WORKSHI

A

WRCB No. 8-119-550-0

SITE INFORMATION:

Site Name Kirkhill Inc. File No. 12987 R/C 1F

Site Address 12021 Woodruff Ave Unincorporated Area [ ] City Downey [X]

Responsible Party Kirkhill Inc.

PROPERTY OWNER [X] TANK OWNER [ ] OPERATOR [ ] OTHER [ ]

Contact Name Raymond Ballanger Phone No. (213) 803-3421

Mailing Address P.O. Box 7012

City Downey State CA Zip 90241-0030

| RESPONSIBLE PARTY | Yes | No | Defer | Date/By |
|---|---|---|---|---|
| Identify Confirmation: | | | | |
| Property/Land title records | [ ] | [X] | | |
| HMUSP/Closure permit application. | [X] | [ ] | | 8-9-89 MDE |
| Notification by RP. | [ ] | [X] | | |
| Other | [ ] | [X] | | |
| Exclusion criteria reviewed. | [X] | [ ] | | 3-15-90 MDE |
| LEAK INFORMATION | | | | |
| Hazardous Material Released: | | | | |
| Petroleum Hydrocarbons. | [X] | [ ] | | 3-12-90 MDE |
| Heavy Metals* | [ ] | [X] | | |
| Chlorinated Solvents* | [ ] | [X] | | |
| Pesticides/Herbicides*. | [ ] | [X] | | |
| Other* | [ ] | [X] | | |
| State Form HSC 05 submitted. | [~~X~~] | [X] | [ ] | ~~3-15-90 MDE~~ |
| Soil contamination confirmed | [X] | [ ] | [ ] | 3-12-90 MDE |
| Groundwater contamination confirmed. | [ ] | [X] | [ ] | |
| Proposition 65 report submitted | [ ] | [X] | [ ] | |
| Free floating product | [ ] | [X] | [ ] | |
| Perched aquifer | [ ] | [ ] | [X] | |
| Regional aquifer. | [ ] | [ ] | [X] | |
| Within Superfund area | [ ] | [X] | [ ] | |
| SITE STATUS | | | | |
| New Site | [ ] | [X] | | |
| Unauthorized release letter sent. | [ ] | [ ] | [X] | |
| Preliminary Assessment completed | [ ] | [X] | [ ] | |
| Remedial Action in progress. | [ ] | [X] | [ ] | |
| PILOT PROGRAM NOTIFICATIONS | | | | |
| Notification of Responsibility to RP | [ ] | [ ] | | |
| Notice of Reimbursement (Form UST01/02). | [ ] | [ ] | | |
| Initial Site Specific Quarterly Report | [ ] | [ ] | [ ] | |
| *Notification to State DOHS (Form HSC 05). | [X] | [ ] | [ ] | 3-15-90 MDE |

FUNDING State [ ] Federal [X]

Form JOBT submitted [V] [ ] E

JOB NUMBER W 20 12987

COMMENTS OA

SITE RECOMMENDED Stuart Gallem 3/27/90
UNIT HEAD DATE

APPROVAL T. A. Prince 4/5/90
PROJECT MANAGER DATE

PILOTWKS 11/89

JOBT

# COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS - JOB CONTROL

| J B | P W | DOCUMENT NO: | JOB NO: W20129877 | START DATE: M M D D Y Y 03 01 90 | EXP DATE: M M D D Y Y 06 30 99 | DEPOSIT (Y/N): N | CASH (Y/N): |
|---|---|---|---|---|---|---|---|

| ☑ E - ORG ☐ M - ADJ | JOB DESCRIPTION (30 CHARACTER MAXIMUM): | JOB TYPE: E | BILLING TYPE: M | PROJECT FUND: | PROJECT: |
|---|---|---|---|---|---|
| | 12021 WOODRUFF AVE DOWNEY | | | | |

| FAID NO: | RPT CAT | RESTRICT (Y/N): | CUSTOMER NAME: | CUSTOMER ADDRESS: |
|---|---|---|---|---|
| | | | STATE OF CALIF | 2014 T STREET<br>P.O. BOX 944212<br>SACRAMENTO, CA 94244-212 |

| SERV-ICER | FUND: | DEPT | ORG: | SUB ORG | APPR: | MINOR OBJ: | PROGRAM: | SUB PGM | REV SRC | SUB REV | RPT CAT: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A01 | P.W | 47900 | | | | E042 | | 9795 | | |

| REQU-ESTER | FUND | DEPT | ORG: | SUB ORG | PROGRAM | SUB PGM | MINOR OBJ | SUB EXP | APPR CODE | JOB: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

| REF PO DEPT: | REF PURCHASE ORDER NO | REF PO LINE: | CUSTOMER: P W 243609 | RPT CA |
|---|---|---|---|---|
| | | | | |

| COST-ING | METHOD (P/D): | CLASS 1: | RATE 1: | CLASS 2: | RATE 2: | DEFAULT: | CLASS 3: | RATE 3: | CLASS 4: | RATE 4: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

| EXCL OBJS | OBJ 1: | OBJ 2: | OBJ 3: | OBJ 4: | OBJ 5: | DEPOSIT HOLD: | BILLING FLAGS | OPT: | LVL: | A/DST: | HOLD: | CYC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |

JOBD

| RESP ORG: | JOB BUDGET: | I/D: |
|---|---|---|
| 47900 | | D |

| ISF TRANSFER REVENUE DISTRIB. | REV SRC: | SUB REV: | APPR ACCT: |
|---|---|---|---|
| | 9795 | | |

| | ISF FUND: | ISF ORG: | ISF SUB ORG |
|---|---|---|---|
| | | | |

| SPECIAL FUND EXPEND. DISTRIB. | FUND: | MIN OBJ: | SUB EXP | APPR ACCT |
|---|---|---|---|---|
| | A01 | | | |

| | PROGRAM | SUB PGM: | SPL ORG: | SPL SUB: |
|---|---|---|---|---|
| | E042 | | | |

| DPW JOB REFERENCE DATA | S/DIST: | FACILITY ID | LAST DATE BILLED |
|---|---|---|---|
| | 5 | | |

| COMMENT REF NO | JOB OPEN INDICATOR: |
|---|---|
| | |

PREPARED BY: Brady Jones

APPROVED BY: [signature]

DATE: 4/6/90

DEP DIRECTOR APPROVAL: ☐ REQUIRED ☐ NOT REQD

| STATE REPORTS | INDICATOR | MAX BILLING AMT: | OH ID |
|---|---|---|---|
| | | | |

| SUB RPT CAT | F/G/P | TYPE | JURISDICTION | PERCEN |
|---|---|---|---|---|
| | | | | |

| JURISDICTION | PERCENT | JURISIDCTION | PERCEN |
|---|---|---|---|
| | | | |

JOAT ☐ A ☐ C ☐ D

| ORGANIZATION NAME | ORG CODE | AMOUNT |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

COMMENTS: STATE WATER RESOURCES CONTROL BOARD

DEP DIR APPROVAL: _____ DATE: _____

FEDERAL

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


IN REPLY PLEASE
REFER TO FILE:
I-12987

May 17, 1990

Mr. Raymond Ballange
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballange:

CLOSURE SITE ASSESSMENT
SOIL REMEDIATION REPORT
12021 WOODRUFF AVENUE, DOWNEY

This office has reviewed the report submitted on February 28, 1990 which contained information on the Site Assessment and the remediation of soil contaminated with cutting oil and diesel subsequent to the removal of three underground storage tanks. The following information must be submitted to our office to aid the review process:

1. Provide a cross-section of the plume under each tank.

2. Indicate the total volume of the soil removed. Support your answer with calculations for the each tank pit.

3. Indicate the post-excavation samples from each pit and/or stockpile.

4. Submit the field raw-data boring logs and the refined boring logs showing depths and contamination levels. Boring logs must include the description of the earth material (USCS), drilling date, company methods and signed by either a registered Civil Engineer with sufficient experience in soil or engineering geologist/geologist.

5. Identify all sample shown on the laboratory report.

6. Explain why borings were terminated at depth which showed contamination.

7. Describe the handling protocol.

8. Explain why the presence of napthtalene was not indicated on the closure permit application.

9. Describe the treatment process (including progress reports) used for the remediation and the laboratory results of the confirmation samples.

10. Provide evidence of proper soil compaction.

11. Submit a legible location map and a plot plan showing two adjacent cross streets and a north arrow.

12. Describe site hydrogeology and its features.

13. Provide information on site history (past and present business operation).

14. Submit detailed information on abandonment-of-tank-in-place.

15. Submit the site Health and Safety Plan used during the excavation and the treatment process.

Please submit the request by June 22, 1990.

Pleas fell free to contact Ofori Amoah at (818) 458-3573 for any further assistance.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By _____
Ofori Amoah
UST Pilot Program
Waste Management Division

Reviewed _____
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

Enc.

cc: California Regional Water Quality Control Board
Tank Protect Engineering

PP100 4/90

ts(3)/12987

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

October 11, 1990

IN REPLY PLEASE
REFER TO FILE:
I-12987

Mr. Raymond Ballanger
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballanger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**HAZARDOUS MATERIALS UNDERGROUND STORAGE**
**REMEDIAL ACTION REPORT**
**CLOSURE PERMIT NO. 5999B AND 6000B**
**FACILITY: 12021 WOODRUFF AVENUE, DOWNEY**

This office has reviewed the subject document(s) submitted on September 17, 1990, dated August 30, 1990. The comments in this letter must be addressed and submitted to this office by November 8, 1990.

In order to better evaluate the Remedial Action Report, the information listed below must be submitted:

Note: The estimated quantity of soil that was or is in each stockpile on the site.

The end use of the stockpiled soil directly east of the oil tank excavation.

Compaction test results.

Clarification of samples from borings B5 and B6 being designated as grab samples.

A risk assessment report must be submitted for leaving the contamination in place under the diesel tank that was abandoned in place.

You are cautioned that any contaminated soils or hazardous materials generated during the approved operation must be manifested and transported to a hazardous waste disposal facility as required by California Health and Safety Code, Division 20, Chapter 6.5, unless evidence is presented indicating that the material may be disposed of at a less restricted facility. Copies of all completed manifests shall be submitted to this office as part of the final report.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Scott Small at (818) 458-3996.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By Scott Small
Scott Small
UST Local Oversight Program
Waste Management Division

Reviewed P. A. Proano
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

Enc.

cc: California Regional Water Quality Control Board
Mr. Michael L. Leonard, Sr., TPE Environmental, Inc.

PP100 4/90

ts(7)/12987

Kirkhill Inc., Downey  Date 11-29-90

NOTES TO THE GEOLOGY FILE

Consultant TPE Environmental  File No. I-12987

SUMMARY

4 tanks:

1 - 10K gal. processing oil tank (cutting oil) (Tank 1)
2 - 10K gal. diesel tanks (Tanks 2 & 3)
1 - 7500 gal. diesel tank (Tank 4)

12-5-89:

3 tanks removed on 8-24-89:

1 - 10K gal. processing oil tank
2 - 10K gal. diesel tanks

7 samples coll. (K-1 thru K-7) @ 3' depth

* K-1 thru K-6 (from tank excav.) not shown on map (Shown in 2-26-90 report by TPE)

K-7 from spoils pile

TPH content (ppm):

* K-1 = 52, K-2 & K-3 = 32, K-4 = 325
K-5 = 45,714, K-6 = 1, K-7 = 5030

* Soil contam. under tanks 1, 2, & 4 (High @ #1, low @ #2, #4)

6 borings (B-1 thru B-6) drilled to TD = 40'

* Contam. in B-3 & B-6 @ 20'

GW reportedly @ -89' depth (LACDPW well 1587, 4/89)

↖ 1587Y??

Well 1587Y (~½ blk. S of site)

(1950-87)

High GW level: -48' (5,6/72)
Low " " : -146' (8/57)
Latest " " : -79' (11/87)

Perfs.: 465'-510'

0-14': sand
14-26': sandy clay
26-36': clayey sand
36-50': sandy clay
50-113': sand & gravel
113-136': sandy clay

* Why is VS-8 OK @ 25' when VS-6 has 27,100 ppm TPH @ 23'?
* Boring logs lack:
  Name of logger (see 6-5-90)
  Contacts betw. earth mat'ls. (to nearest ft)
  Detailed descriptions
  Graphic column
  Surface elev.
  TD
  OVA readings
  On slant borings, have inclined depths been corrected to vertical? (see 6-5-90)
  20° inclination from vert. ⟹ 6% decrease in depth
* "SO" on log for B-2 isn't a USC symbol (see 6-5-90)
  Soil excav. from tank pits to 23' depth
  SW part of tank pit #1 excav. to 25' depth
  Remed. proposal:
  Oil-contam. soil to be hauled to disposal site
  Other contam. soil to be treated & then backfilled
  Oxidize HC's using $H_2O_2$ w/ $SiO_2$ catalyst
  TPE proposes to "slurfy in place the diesel tank #4."

2-26-90:

Tank #4 abandoned in place. (filled w/ slurry)
~72 cu yd of oil-contam. hauled away
Other stockpiled soil treated (cleaned to TPH < 100 ppm)
~50 cu yd of soil

3-9-90:

Identical to 2-26-90 report

6-5-90:

54 cu yd of contam. soil removed from tank pits 1 & 2
Hauled away to disposal site

50 cu yd. of contam. soil treated & backfilled

Boring logs revised:
Now have name of logger
"SO" corrected to "SP"
Vert. depths calc. from slant depths
No other changes

X-sec. $A_1$-$A_2$: (E-W)
Horiz. extent of contam. not defined W of B-3 in pit 2
" " " " " " E of K-5 " " 1
Should have analyzed 25' sample from B-4

X-sec. $B_1$-$B_2$: (N-S)
Horiz. extent of contam. @ K-4 (~13' depth) not defined in pit 2
Horiz. extent of contam. not defined S of B-6 (@ 20' depth) in pit 4
~~Vert & horiz. extent of contam. not defined for K-7 plume~~

* Compaction done "anticipating that there will not be any future construction at the excavated site"

Soil: 0-22', clay
22'-30', sand
30'-40'+, silt & silty sand

Top of Gaspur Aquifer ~60' below surface
TPE wants to use LUFT manual's general risk appraisal approach for tank #4
Acceptable TPH (diesel) = 1000 ppm
Due to proximity of bldg.

8-30-90:

Same info as previous report, but figures redrafted for neatness

10-19-90:

Includes revised LUFT risk analysis
⇒ 44 points, total

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
Waste Management Division, UST Pilot Program
Annex Building, P. O. Box 1460
Alhambra, CA 91802-1460
(818) 458-3979
Monday - Thursday
7:00 a.m. to 5:00 p.m.

# HYDROGEOLOGIC REPORT CORRECTION/REVIEW SHEET

REVIEW OF UNDERGROUND STORAGE TANK REPORTS INCLUDE:

| | | |
|---|---|---|
| ____ | Closure Report | |
| ____ | Site Assessment Proposal | |
| ✓ | Site Assessment Report | 3-9-90 |
| ____ | Site Remediation Proposal | 6-5-90 |
| ✓ | Site Remediation Report | 10-19-90 |
| ____ | Post Remediation Monitoring Report | |
| ____ | Final Monitoring Report | |
| ____ | Other | |

OUR FILE NUMBER I- 12987

By the consulting Firm TPE Environmental Their Job Number E90-1514
Consultants Phone (714) 921-0888 Contact Person Michael L. Leonard

Site Name Kirkhill, Inc. RP Name Raymond Ballanger
Site Address 12021 Woodruff Ave. RP Address P.O. Box 7012
Downey, CA 90241 Downey, CA 90241

ACTION

____ Hydrogeologic Section Approved:
____ Hydrogeologic Section Approved, Yet Subject to Conditions Below:
____ Prior to Hydrogeologic Approval, Satisfy Conditions Below:

Horizontal extent of contamination needs to be defined south & west of boring B-3, south & east of sample location K-5, and west or southwest of boring B-6. The maximum extent of the contamination plume should be defined by "clean" (uncontaminated) soil samples, as analyzed by a State-certified lab.
Locations of borings, sampling localities, excavations, tanks, & the building do not match between the two cross-sections & the plan view. These discrepancies should be resolved.

✓ Satisfy Conditions on the Attached Supplemental Hydrogeologic Report Correction/Review Sheet for Site Assessment Reports

Report reviewed by Steve Lipshie Date 12-3-90
Steve Lipshie

12/4/90

A. G. Keene C.E.G. No. 16 Date 12-4-90

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
Waste Management Division, UST Pilot Program
Annex Building, P. O. Box 1460
Alhambra, CA 91802-1460
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# HYDROGEOLOGIC REPORT CORRECTION/REVIEW SHEET

REVIEW OF UNDERGROUND STORAGE TANK REPORTS INCLUDE:

| | | |
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| ____ | Closure Report | |
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| ____ | Post Remediation Monitoring Report | |
| ____ | Final Monitoring Report | |
| ____ | Other | |

OUR FILE NUMBER I- 12987

By the consulting Firm TPE Environmental Their Job Number E90-1514
Consultants Phone (714) 921-0888 Contact Person Michael L. Leonard

Site Name Kirkhill, Inc. RP Name Raymond Ballanger
Site Address 12021 Woodruff Ave. RP Address P.O. Box 7012
Downey, CA 90241 Downey, CA 90241

ACTION

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____ Hydrogeologic Section Approved, Yet Subject to Conditions Below:
____ Prior to Hydrogeologic Approval, Satisfy Conditions Below:

Horizontal extent of contamination needs to be defined south & west of boring B-3, south & east of sample location K-5, and west or southwest of boring B-6. The maximum extent of the contamination plume should be defined by "clean" (uncontaminated) soil samples, as analyzed by a State-certified lab.
Locations of borings, sampling localities, excavations, tanks, & the building do not match between the two cross-sections & the plan view. These discrepancies should be resolved.

✓ Satisfy Conditions on the Attached Supplemental Hydrogeologic Report Correction/Review Sheet for Site Assessment Reports

Report reviewed by Steve Lipshie Date 12-3-90
Steve Lipshie

[signature] C.E.G. No. 6 Date 12-4-90

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
Waste Management Division, UST Pilot Program
Annex Building, P. O. Box 1460
Alhambra, CA 91802-1460
(818) 458-3979
Monday - Thursday
7:00 a.m. to 5:00 p.m.

# SUPPLEMENTAL HYDROGEOLOGIC REPORT CORRECTION/REVIEW SHEET

Satisfy Conditions Below:

1. ____ Describe the regional hydrogeologic setting. Cite all references.
2. ____ Describe the site specific hydrogeologic setting. Cite all references.
3. ✓ Provide a Plan view of:
   a. ✓ the maximum surface and subsurface extent of contamination.
   b. ____ groundwater features.
   c. ____ unique site features.
4. ✓ Provide a cross section of:
   a. ✓ the vertical and horizontal extent of contamination.
   b. ____ groundwater features.
   c. ____ unique site features.
5. ____ Verify the hydraulic gradient, direction of groundwater flow, and the high water.
6. ____ Provide a professional's wet ink signature and registration or certification number.
7. ____ Provide a complete index map.
8. ✓ Provide complete boring logs.
9. ____ Provide piezometer and/or monitor well construction detail(s) and procedures for installation.

COMMENTS:

3 & 4. A boundary line indicating the maximum extent of contamination (as defined by lab analyses of soil samples) should be shown on the plan view and cross-sections. It would also be helpful to plot lab analysis data on the cross-sections.

8. Boring logs should contain the following additional information:
Contact lines between different earth materials, determined to the nearest foot.
Lithographic column
Depth scale graduated in 1-ft increments
Surface elevation, in feet

Report reviewed by Steve Lipshie Date 12-3-90
Steve Lipshie

[signature] C.E.G. No. 6 Date 12-4-90

HYDROGEOLOGIC REPORT CORRECTION/REVIEW

DETAILED SUMMARY OF THE SUPPLEMENTAL
HYDROGEOLOGIC REPORT CORRECTION/REVIEW
SHEET FOR SITE ASSESSMENT REPORTS

This is to be used only as a guideline, and may include, but is not limited to the items listed below).

1. Address the hydrogeologic setting, cite all references, and include the following in reference to the subject site:

   A. Discharge and Recharge Areas
   B. Groundwater Basins
   C. Depositional Basins and Stratigraphy
   D. Formations and Members
   E. Surficial Deposits
   F. Aquifer System

2. Address the site specific hydrogeologic setting, cite all references, and include the following in reference to the subject site:

   A. Local search of well records in close proximity.
   B. Identify local uses of groundwater.
   C. Local search of nearby contamination assessment reports.
   D. Groundwater features

      1). Vadose zone
      2). Saturated zones
      3). Capillary fringe
      4). Piezometric surface or water table level contours
      5). Aquifers, aquitards, and aquiclude
      6). Recharge and discharge sources
      7). Representative transmissivities

   E. Unique Site Features - (Physical characteristics of the site which could influence the movement and direction of contaminants through the subsurface)

      1). Earth material contacts - (Contact lines between the items listed below)

         a. Faults, fractures, and joints
         b. Soil horizons
         c. Bedrock materials
         d. Weathered zones
         e. Isolated lenses
         f. Fill materials

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2). Man-made conduit contacts - (Contact lines between he items listed below)

a. Sewer line backfill
b. Utility trench backfill
c. Bedding material under footings
d. Wall backfill
e. Swales and berms
f. Surficial obstructions

F. Provide stratigraphic interpretation between well borings

3. Provide a plan view depicting the extent of contamination relative to all groundwater features and unique site features. Provide north arrow, scale, elevations, site boundaries, legend, trace of section lines, boring locations with representative contaminant concentrations, and topographic contours.

4. Provide a cross-section depicting the vertical and horizontal extent of contamination relative to all groundwater features and unique site features. Show interpolation between well borings. Provide direction of section lines, elevations, scale, legend, and boring locations with representative contamination concentrations shown at depth.

5. Establish the site specific hydraulic gradient, direction of groundwater flow, and the high water table level based on original field data. Resolve discrepancies between regional and local data Site all references for regional data.

6. Provide a registered or certified professional's wet ink signature.

7. Provide a complete index map which is clearly legible; preferably from the "Thomas Guide."

8. Provide complete and legible boring logs which may include the following:

A. Description of earth materials
B. Lithographic column with abbreviations and symbols
C. Thickness of floating product
D. Sample localities at depth
E. Depth to the piezometric or groundwater surface
F. Depths in feet
G. Penetration in blows per foot
H. Surface elevation in feet
I. Project name
J. Name of Field Geologist
K. Boring number

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L. Termination depth in feet
M. Scale
N. Type of equipment and methods used
O. Isolated lenses
P. All borings for volatile and/or semi-volatile organic compound must show the field meter screening readings, supported by core analysis
Q. The termination of the boring depth must be established by non-detectable levels of contaminants (by core analysis)
R. Where groundwater proximity is close to the bottom of contamination envelope or the bottom of borings, groundwater well must be installed, developed, sampled and analyzed.

9. Provide piezometer and/or monitor well construction detail(s) and procedures for installation. Refer to the California Mitigation Decision Tree Document (DHS, 1986), Chapter 3.4.

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TANK PROTECT ENGINEERING
1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
Tel: (714) 921 - 0888
Fax: (714) 549 - 0739

3-9-90

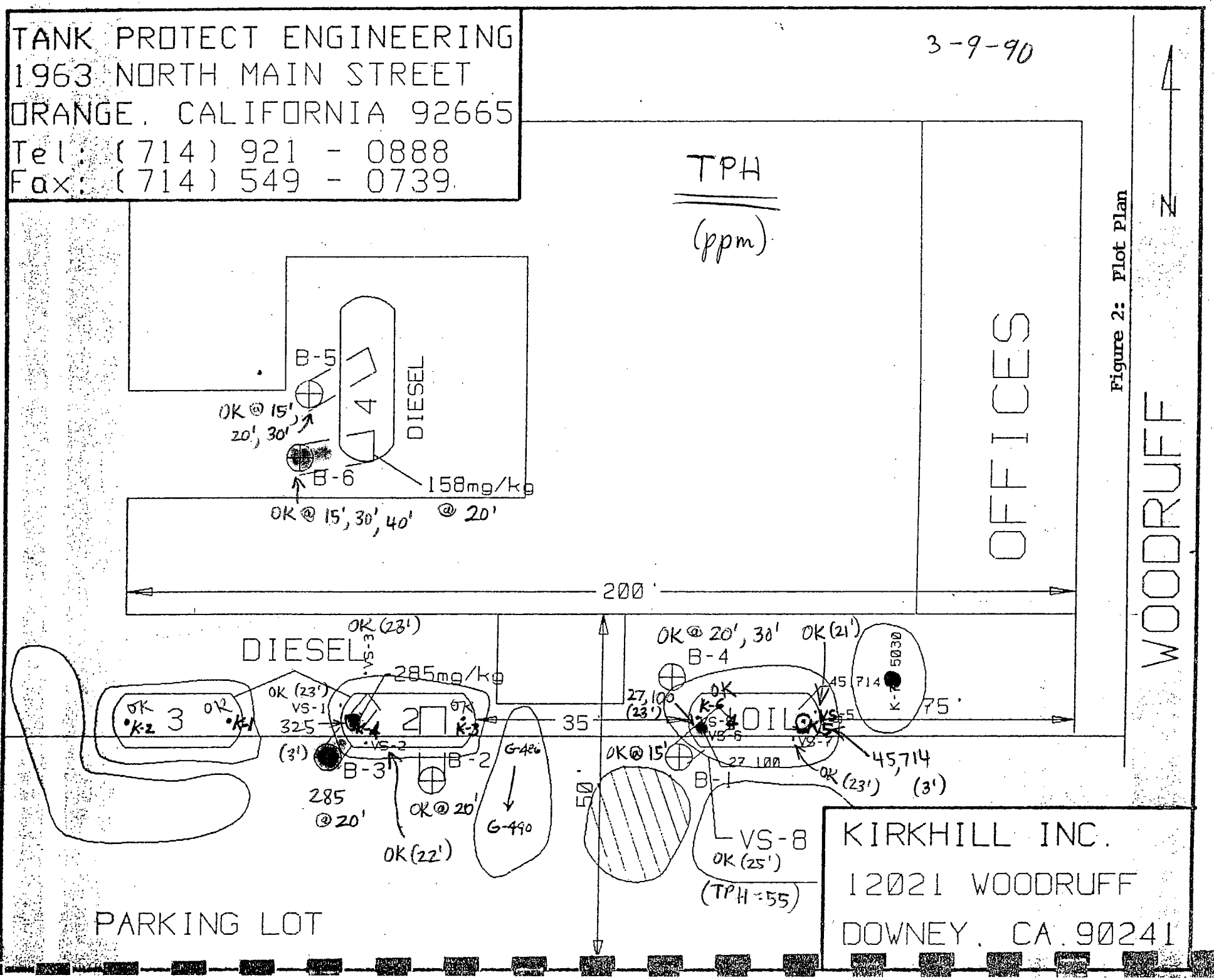
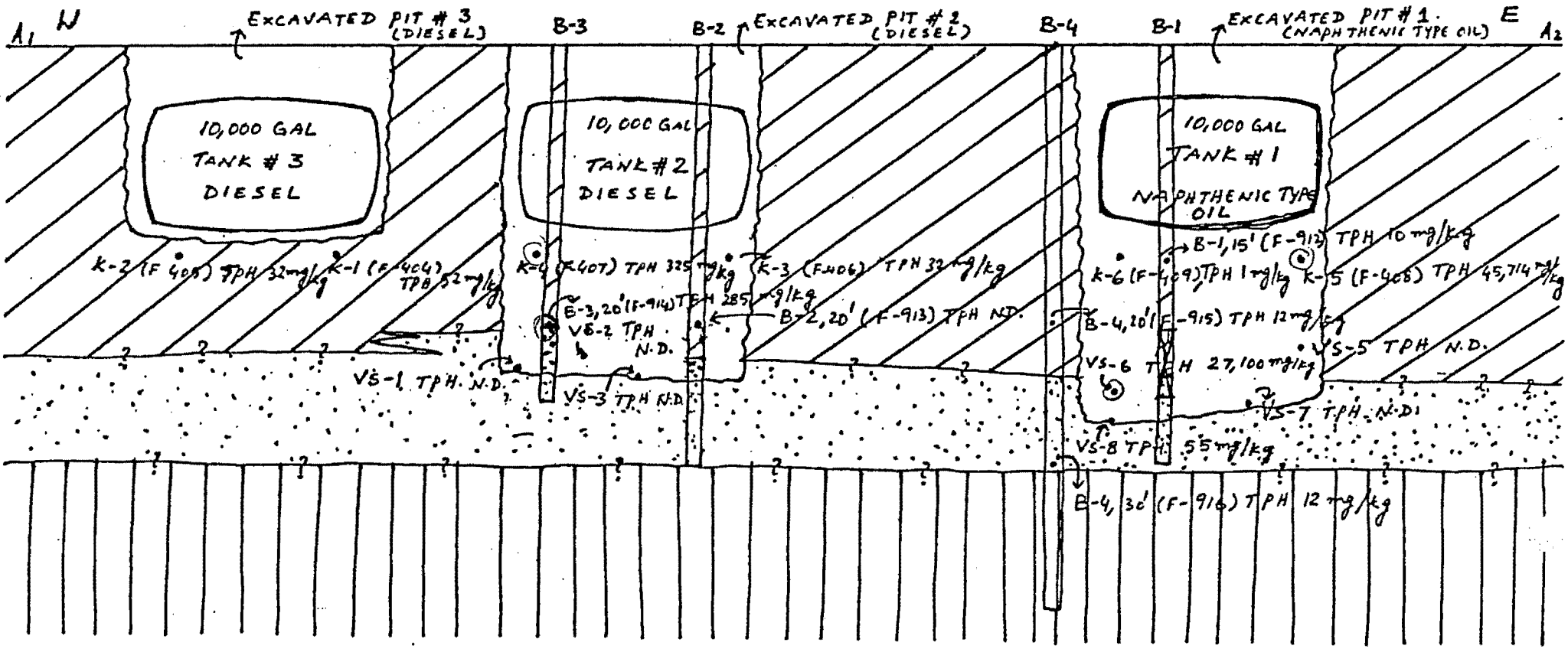



Figure 2: Plot Plan

FIGURE 1: GEOLOGICAL CROSS-SECTION ALONG $A_1$-$A_2$ OF PLOT PLAN

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Groundwater Detected in Borings (Published Nearest Well Data Indicates Groundwater at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were indicated in Parentesis.

Scale: 1" = 10'. (H&V)
B-1, B-2, B-3, B-4: Projected Bore Hole Names
K__, B__, VS__: Sample Names
? = Interpreted Lithology

CLAY (CL) SILTS (ML)
SAND (SP) NO RECOVERY

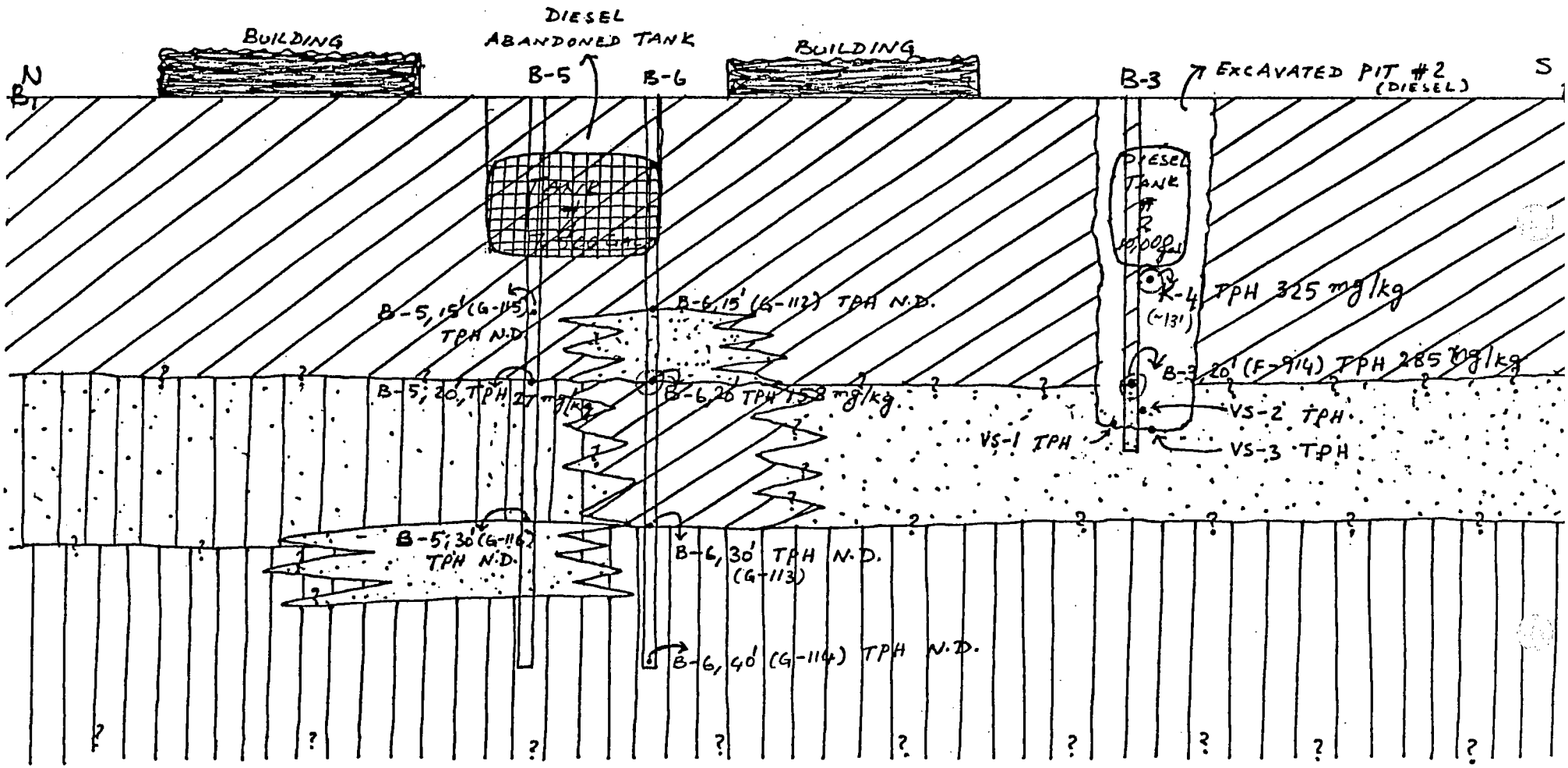
Prepared by: R.P. Pendurthi, Staff Hydrogeologist RPP.
Approved by: M.L. Leonard, Certified C.E. MLL

6-5-90

# FIGURE 2: GEOLOGICAL CROSS-SECTION ALONG $B_1$-$B_2$ OF PLOT PLAN

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Groundwater Detected in Borings (Published Nearest Well Data Indicates Groundwater at about 90').
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3. Special Numbers used in Laboratory Analyses were Indicated in Parenthesis.

6-5-90

Scale: 1" = 10' (H&V)
B-3, B-5, B-6: Bore Hole Names (Projected)
K__, B__, VS__: Sample Names
? = Interpreted Lithology

CLAY (CL)
SILTY SAN (SM
SAND (SP)
SILTS (ML

Prepared by: R.P. Pendurthi, Staff Hydrogeologist rpp.
Approved by: M.L. Leonard, Certified C.E. mdl

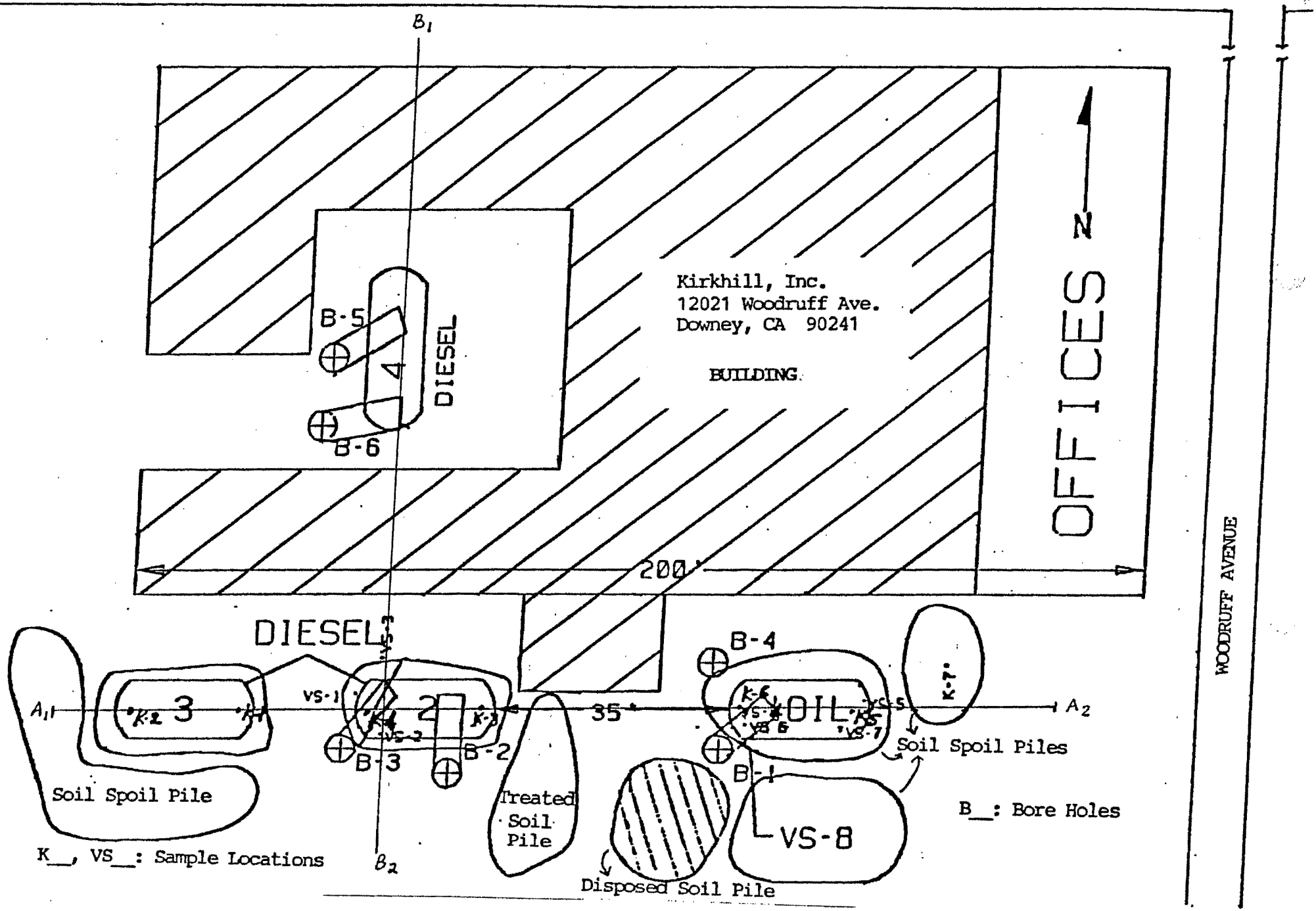


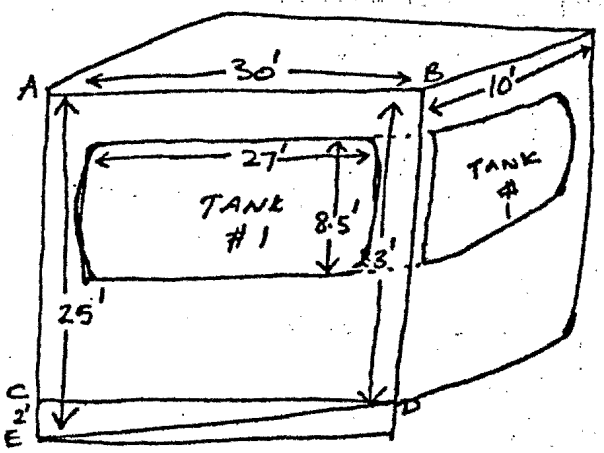

FIGURE 3 - PLOT PLAN AND CROSS-SECTION PLANES

6-5-90

Kimball Report June 5 1990
E90-1514A.

# CALCULATION OF EXCAVATED SOIL VOLUMES

TANK # 1 : Naphthenic Type Oil




12467

RECEIVED
DEC 11 1990
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION

Pit Volume of Tank #1 Pit (V)

V = Length x Width x Height

ABCD Volume ($V_1$) = 30' x 10' x 23' = 6,900 $ft^3$

CED Section Volume ($V_2$) = $\frac{1}{2}$ 30 x 10 x 2 = 300 $ft^3$

Total Tank #1 Pit Volume (V) = $V_1 + V_2$ = 7,200 $ft^3$

= $7200/27$ = 266.7 $yd^3$

Tank #1 Volume ($T_0$)

Tank outer Diameter = 8.5' Length (h) = 27'

Tank Volume (T) $\approx \pi r^2 h$

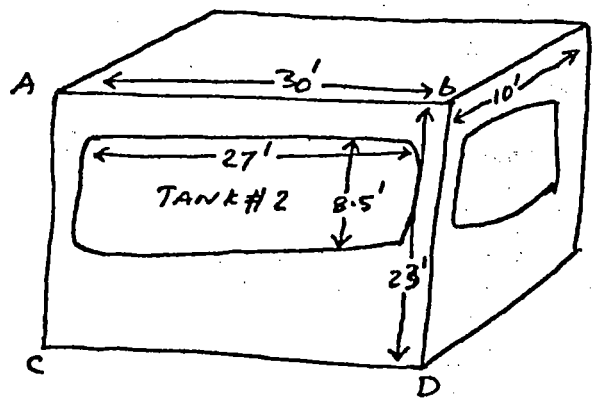
$T = \pi \times (4.25)^2 \times 27 = 1532.7\ ft^3$

= $1532.7/27$ = 56.8 yd

Volume of Soil Excavated (S) = V − T

S = 266.7 − 56.8 = 209.9 $yd^3$

Tank # 2 : Diesel Tank

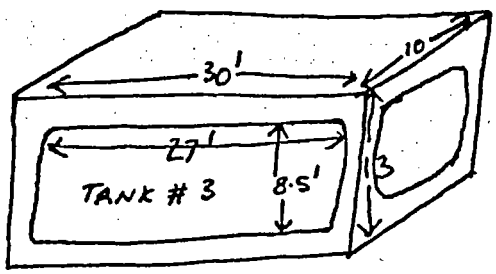



Pit volume = $30' \times 23' \times 10'$ = 6,900 $ft^3$
= 255.6 $yd^3$

Tank volume = $\pi (4.25)^2 27$ = 1532.7 $ft^3$
= 56.8 $yd^3$

Excavated Soil vol. = 255.6 − 56.8 = 198.8 $yd^3$

Tank # 3 : Diesel Tank




Pit Volume = $30' \times 13' \times 10'$ = 3900 $ft^3$
= 144.5 $yd^3$

Tank Volume = $\pi (4.25)^2 27$ = 1532.7 $ft^3$ ?
= 56.8 $yd^3$

Excavated Soil vol. = 144.5 − 56.8 = 87.7 $yd^3$

Total Volume of Three Tank Pits.

$= 7200 + 6900 + 3900 = 18,000\ ft^3$

$= 666.7\ yd^3$

Total Volume of Three Tanks Removed

$= 1532.7 \times 3 = 4598.1\ ft^3$

$= 170.3\ yd^3$

Total Volume of Soil Excavated

$= 666.7 - 170.3 = 496.4\ yd^3$

Volume of Soil Disposed at a State Certified Disposal Facility $= 18\ yd^3 + 18\ yd^3 + 18\ yd^3 = 54\ yd^3$

Volume of Soil treated using TPE's Special Silica catalyst and hydrogen peroxide method

$\approx 50\ yd^3$

Uncontaminated Soil Excavated from Three Tank pits

$= 496.4 - (54 + 50) = 392.4\ yd^3$

Volume of Clean Soil Imported for Backfilling Three Excavated Tank pits.

$= 666.7 - (50 + 392.4) = \underline{224.3\ yd^3}$

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

Waste Management Division

INSPECTOR'S REPORT

TO: DAVE LOBATO DATE: 12/12/90

FROM: SCOTT SMALL FILE: I - 12987

INDUSTRY: KIRKHILL, INC.
12021 S. WOODRUFF AVE., DOWNEY

REPORT: Steve Groner and I visited this site during the morning and met with Ray Ballenger. He took us around the site and showed us the four ~~tanks~~ previous tank locations. There was evidence of a small amount of settlement in the southern parking lot (paved area) where three tanks had been removed. Mr. Ballenger also showed us the location of the diesel tank which has been abandoned in place. I noticed a few drums of oil product in this area. They were placed on top of ~~safety~~ precautionary catch basins. All excavations were backfilled. There were no signs that were observed to indicate contamination. The company manufactures rubber products and is involved in the plumbing industry.

38-0002 DPW 10/86

D. F.

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


February 14, 1991

IN REPLY PLEASE
REFER TO FILE I-12987

Mr. Raymond Ballenger
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballenger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**HAZARDOUS MATERIALS UNDERGROUND STORAGE**
**CONFIRMATION PROPOSAL**
**CLOSURE PERMIT NOS. 5999B AND 6000B**
**FACILITY: 12021 WOODRUFF AVENUE, DOWNEY**

This office has reviewed the subject document(s) submitted on January 15, 1991, dated January 9, 1991. The comments in this letter must be addressed and submitted to this office by April 25, 1991.

The Confirmation Proposal has been reviewed and found adequate, and must incorporate the comment below. You may proceed with the plan as proposed.

> Boring B-7 should be drilled at the same angle and direction as the previously drilled borings B-5 and B-6. Samples must be taken and analyzed every five feet. The borings should extend at least ten feet below non-detectable levels. Detection limits for the lab analyses must comply with the Los Angeles County Guidelines.

You are cautioned that any contaminated soils or hazardous materials generated during the approved operation must be manifested and transported to a hazardous waste disposal facility as required by California Health and Safety Code, Division 20, Chapter 6.5, unless evidence is presented indicating that the material may be disposed of at a less restricted facility. Copies of all completed manifests shall be submitted to this office as part of the final report.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Scott Small at (818) 458-3996.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By Scott Small
Scott Small
UST Local Oversight Program
Waste Management Division

Reviewed P. A. Proano
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

SS:ts(11)/12987

cc: California Regional Water Quality Control Board
Mr. Michael L. Leonard Sr., TPE Environmental

OFFICE FILE

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

Waste Management Division

INSPECTOR'S REPORT

TO: FILE/ SMALL DATE: 2-26-91

FROM: DANIE LOBATO FILE: I-12987

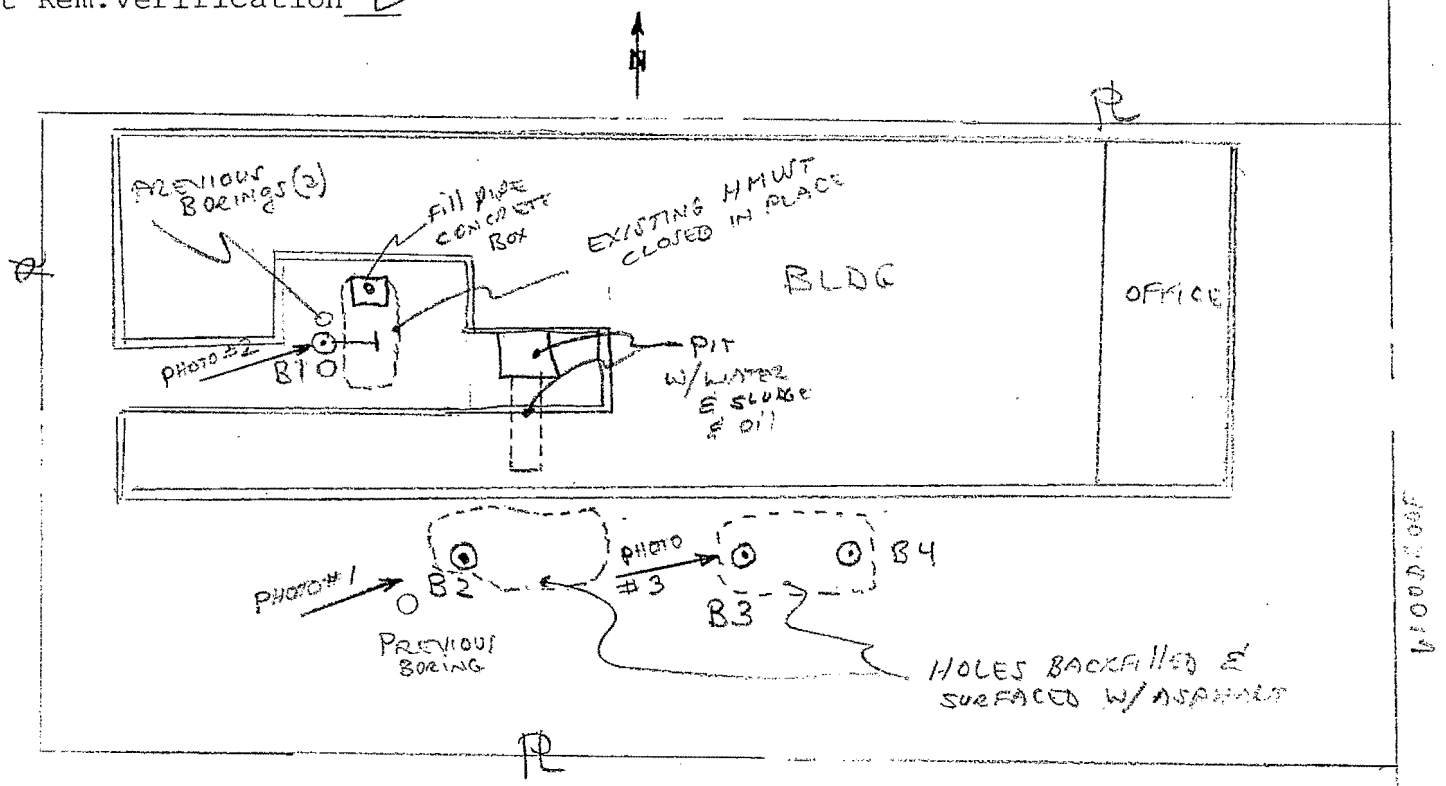
INDUSTRY: KIRKHILL, INC.
12021 WOODRUFF AVE. DOWNEY

REPORT: THIS WAS AN OVERSIGHT INSPECTION TO WITNESS THE DRILLING & "SPLIT" SAMPLES OF 4 CONFIRMATION BORINGS. I MET MR. TONY LIZZI, GEOLOGIST FOR TPE ENVIR., WHO SHOWED ME THE SITE. I ARRIVED AFTER THEY HAD DRILLED THE SLANT BORING (OUR B1) AND WAS UNABLE TO SPLIT THIS SAMPLE, HOWEVER I DID SPLIT SAMPLES FOR BORINGS B2 & B3 (OUR NOTATION). THE DRILLING & SAMPLING PROTOCOL APPEARED ADEQUATE. THE COMPANY IS FULLY OPERATIONAL. THEY MANUFACTURE VARIOUS RUBBER PRODUCTS IN WHICH NAPHTHALENIC OIL IS USED IN THE CURING PROCESS. THE DIESEL HMUSTS WERE FOR FUELING THE STEAM BOILERS. AN INSPECTION OF THE PLANT SHOWED THAT THERE IS A LARGE COOLING WATER RECIRCULATION SUMP AND ASSOCIATED TRENCHES INSIDE & OUTSIDE THE BUILDING WHICH CONTAIN WATER, OILS & SLUDGE WHICH COULD BE CONSIDERED HMUST (IF ANALYSIS SHOWED HAZARDOUS MATERIALS). THERE IS, ALSO, AN INDUSTRIAL WASTEWATER INTERCEPTOR BEING USED, PROBABLY, PERMITTED BY L.A. CO. SANITATION DISTRICTS. REGARDING THE DIESEL TANK CLOSED IN PLACE, THERE REMAINS AN EXPOSED FILL PIPE & CONCRETE BOX AROUND IT. THESE STRUCTURES WOULD, NORMALLY, BE BACKFILLED & RESURFACED. MR. BALLENGER OF KIRKHILL, INC. SAID THEY WOULD BACKFILE & RESURFACE WHEN THEY RECEIVED OUR FINAL CLOSURE LETTER.

# SAMPLE LOG SHEET

DATE: 2-25-91 FILE: I-12987
INSPECTOR: D. COBATO

Tank Closure ___, Initial Assessment ___, Final Assessment ___, Remediation ___
Post Rem.Verification ✓




Laboratory: Fixed: ✓ Mobil: License#:

| SAMPLE I.D. | SAMPLE I.D. (RP) | GRAB | COMP | SOIL | WATER | FIELD SCREEN HNu ppm | FIELD SCREEN RP ppm FID | SAMPLE CONTAINER glass | SAMPLE CONTAINER metal | ANALYSIS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|---|
| B2-30 | CB8@30' | | | ✓ | | | 0 | | ✓ | 8015M (Diesel) |
| B3-35 | CB9@35' | | | ✓ | | | 0 | | ✓ | 418.1 |
| | | | | | | | | | | |
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GROUNDWATER ENCOUNTERED: YES ___, NO ✓; DEPTH ___ ft.Below Ground Surface
SAMPLE I.D. (All containers to be marked with File No.):
Excavation(E), Soil pile(SP), Boring(B), Monitor well(MW), Remediation cell(R
FIELD QA/QC (CONSULTANT): Duplicate NO, Trip blank NO, Field blank NO,
Equipment blank NO, Chain of Custody ✓, Ice chest w/ice ✓,
Sample container adequate ✓, Sample label ✓, Sample seal ✓, Equip. decon. ✓
FIELD INSTRUMENT: OVA ___, PID ___, CGM ___, OTHER FID SENSIDYNE
COMMENTS: CONCRETE BOX AROUND FILL PIPE NOT YET BACKFILLED AT HMUT NEAR B1. LARGE SUMP & TRENCHES SERVING PRESS MACHINES CONTAINS WATER, OIL & SLUDGE - COULD BE CONSIDERED HMUT NEEDS ANALYSIS OF OIL & SLUDGE -

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

Waste Management Division

INSPECTOR'S REPORT

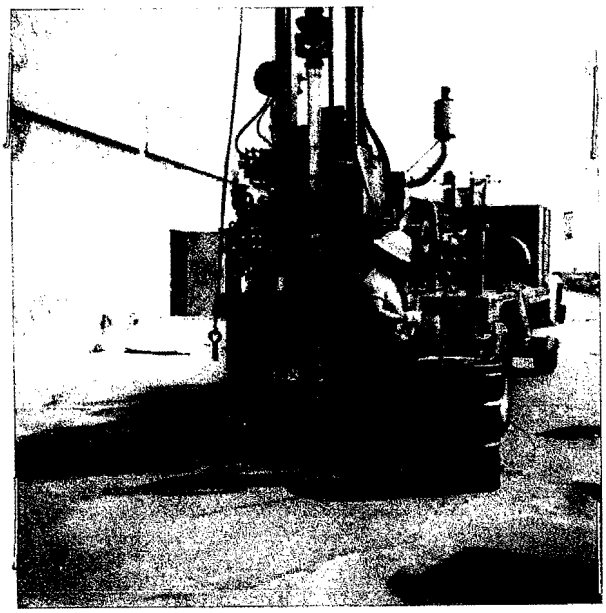
TO: FILE/SMALL DATE: 2-26-91

FROM: DAVE LOBATO FILE: I-12987

INDUSTRY: KIRKHILL, INC.

REPORT:

2-26-91



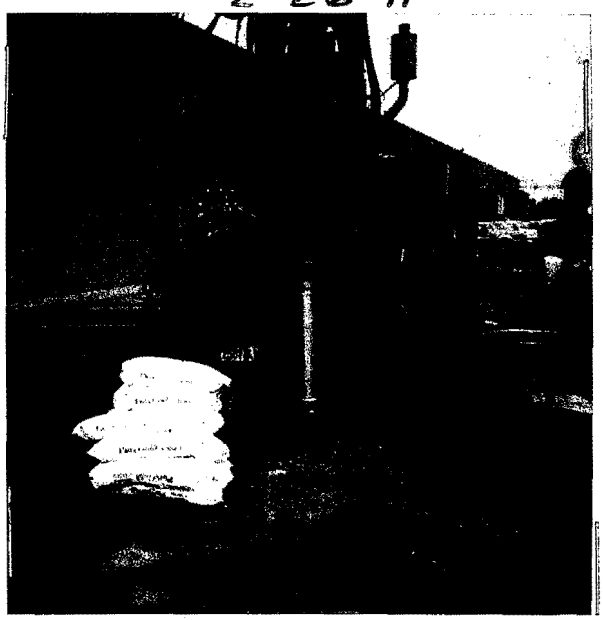
#1. Drilling of Boring B2
NOTE PREVIOUS BORING TO RT. OF DRUM

2-26-91



#2. CLOSING BORING B1. NOTE PREVIOUS BORINGS NEXT TO B1 (UNDER WORKER'S FOOT)

2-26-91



#3. BORING B3

# INSPECTION REQUEST

Call Date: 2-20-91

Inspection Date: 2-~~26~~25-91

Caller: TONY LIZZI

Time: 8:00 - 2:00

From: TANK PROJECT ENGR.

File No.: I- 12987

Telephone: 714 282 - 5642

Project Engr.: SMALL

Site Name: KIRKHILL INK

Site Address: 12021 WOODROOF DOWNEY

Oversight Samples Requested By Project Engineer
(✓ Yes* per Scott ( ) No

Reason: _____

| Purpose | Type | Sampling | | Soil | Water | Comments |
|---|---|---|---|---|---|---|
| | | Yes | No | | | |
| Tank Closure | | | | | | 4 - CONFIRMATION BORINGS IN EXCAVATION HAVING TREATED SOIL |
| Initial Site Assessment | | | | | | |
| Final Site Assessment | | | | | | |
| Remediation | | | | | | |
| Post Remediation Verification | ✓ | ✓ | | ✓ | | |

Work Plan Approval: Letter ✓ By SMALL Date 2-14-91
Verbal ___

Work Request: Letter ___ By _____ Date _____
Verbal ___

Type of Contamination: DIESEL

Health and Safety Plan Submitted and In File: Yes ✓ No ___

Will Mail ___ Will Federal Express ___ Will Fax ___

Will Hand Deliver ___ Will Have Copy on Site ___

Assigned Inspector: D. LOBATO

* If samples are requested, Project Engineer to determine number, location and depth.

Comments: _____

Form completed by: D.L.

DL:ts(3)/IR

# REPORT


## TRUESDAIL LABORATORIES, INC.

CHEMISTS - MICROBIOLOGISTS - ENGINEERS
RESEARCH — DEVELOPMENT — TESTING

14201 FRANKLIN AVENUE
TUSTIN, CALIF. 92680
AREA CODE 714 • 730-6239
AREA CODE 213 • 225-1564
FAX 714 • 730-6462


CLIENT: **County of Los Angeles**
Dept. of Public Works
900 S. Fremont Avenue
Alhambra, California 91803-1331
Attention: Mark Cheung

DATE: March 7, 1991

RECEIVED: February 27, 1991

LABORATORY NO.: 46488(1-2)

SAMPLE: **Two Soils #1-55115 and #2-55116**
Sample Condition: Chilled
Project Name: I-12987

**DATE SAMPLED:** 2/25/91
**DATE ANALYZED:** 2/27/91-3/04/91

INVESTIGATION: **As Requested**

---

## RESULTS

**MILLIGRAM PER KILOGRAM**

| Parameter | Method | Detection Limit | Concentration #55115 | Concentration #55116 |
|---|---|---|---|---|
| Diesel | EPA 8015M | 10.0 | ND | -- |
| Total Petroleum Hydrocarbons | EPA 418.1 | 1.0 | -- | 8.82 |

ND= Not detected, below detection limit.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Julia Nayberg, Manager
Inorganic Chemistry


This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from these Laboratories.

# TRUESDAIL LABORATORIES, INC.

14201 Franklin Avenue
Tustin, California 92680
(714) 730-6239

DATE 2-25-91 PAGE 1 OF 1

## CHAIN-OF-CUSTODY RECORD

PROJECT NAME F-12987
COMPANY NAME LA CO DPW
REFERENCE
ADDRESS
SAMPLERS (SIGNATURE) David W. Lobat

| | SAMPLE I.D. | DATE | TIME | LOCATION | METHODS: 8015M (Diesel) | METHODS: 418.1 | NUMBER OF CONTAINERS | COMMENTS/ CONTAINER TYPE |
|---|---|---|---|---|---|---|---|---|
| 1. | 55115 | 2-25-91 | 11:00 | B2-30 | ✓ | | 1 | 1 BRASS RING |
| 2. | 55116 | 2-25-91 | 1315 | B3-35 | | ✓ | 1 | 1 " " |



| | RELINQUISHED BY | DATE | RECEIVED BY | DATE |
|---|---|---|---|---|
| 1 | SIGNATURE: David W. Lobat<br>PRINTED NAME: DAVID W. LOBATO<br>COMPANY: LA CO DPW | 2/26/91<br>TIME: 1645 | 2 SIGNATURE: Leonard E. Popp<br>PRINTED NAME: TRUESDAIL LAB<br>COMPANY | TIME |
| 3 | SIGNATURE<br>PRINTED NAME<br>COMPANY | TIME | 4 SIGNATURE<br>PRINTED NAME<br>COMPANY | TIME |
| 5 | SIGNATURE<br>PRINTED NAME<br>COMPANY | TIME | 6 SIGNATURE: Ken Anderson<br>PRINTED NAME: TRUESDAIL LABORATORIES, INC.<br>COMPANY | DATE: 2/27/1991<br>TIME: 7:30 am |

2 TOTAL NUMBER OF CONTAINERS

SAMPLE CONDITIONS
RECEIVED ON ICE (YES / NO)
SEALED KA (YES / NO)

SPECIAL SHIPMENT / HANDLING OR STORAGE REQUIREMENTS:
SUBMIT: RECEIVED, EXTRACTED, ANALYZED, & RECORDED DATES, GIVE METHOD OF EXTRACTION & ANALYSIS.
FAX RESULTS TO (818) 458-4992
ATTN: DAVE LOBATO

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

May 9, 1991

IN REPLY PLEASE
REFER TO FILE:
I-12987

Mr. Raymond Ballanger
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballanger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**HAZARDOUS MATERIALS UNDERGROUND STORAGE**
**SITE ASSESSMENT REPORT**
**CLOSURE PERMIT NOS. 5999B AND 6000B**
**FACILITY: 12021 WOODRUFF AVENUE, DOWNEY**

This office has reviewed the subject document(s) submitted on April 18, 1991, dated April 15, 1991.

In order to better evaluate the site status, the information indicated below must be submitted:

1. Based on the results of borings CB-9 and CB-10, a Site Assessment proposal must be submitted to define the extent of all remaining contamination.

2. According to the report dated March 9, 1990, there appears to be a missing hazardous waste soil manifest. The report states that 72 cubic yards were hauled away for disposal, but only 54 cubic yards are accounted for on the manifests (#88243329, #88243343, and # 89469174).

You are cautioned that any contaminated soils or hazardous materials generated during any operation must be manifested and transported to a hazardous waste disposal facility as required by California Health and Safety Code, Division 20, Chapter 6.5, unless evidence is presented indicating that the material may be disposed of at a less restricted facility. Copies of all completed manifests shall be submitted to this office as part of the final report.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Scott Small at (818) 458-3996.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By Scott Small
Scott Small
UST Local Oversight Program
Waste Management Division

Reviewed P. J. Proano
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

SS:ts/12987

cc: California Regional Water Quality Control Board
Mr. Anthony Lizzi, Tank Protect Engineering

r IVV

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

July 22, 1991

IN REPLY PLEASE
REFER TO FILE I-12987

Mr. Raymond Ballenger
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballenger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**SITE ASSESSMENT PROPOSAL**
**PREPARED BY: TANK PROTECT ENGINEERING**
**REPORT DATE: JULY 8, 1991**
**CLOSURE PERMIT NO: 5999B AND 6000B**
**LOCATION: 12021 WOODRUFF AVENUE, DOWNEY**

The proposal to drill borings has been reviewed and found adequate. You may proceed with the plan with the following modifications:

1. Samples should be taken at five foot intervals and analyzed discretely at a State certified lab for EPA 418.1.

2. Boring CB-9A needs to be sampled only at 30, 35, 40, 45, and 50 feet.

Submit a Site Assessment Report to this office by October 3, 1991.

Correspondence should be submitted to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Scott Small at (818) 458-3996.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By Scott Small
Scott Small
UST Local Oversight Program
Waste Management Division

OK

Reviewed P. A. Proano
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

SS:bb(ts)/101808/July 11, 1991
WP/12987-1

cc: California Regional Water Quality Control Board
Mr. Tony Lizzi, Tank Protect Engineering

Office file

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

Waste Management Division

INSPECTOR'S REPORT

TO: FILE/SMALL DATE: 8-15-91

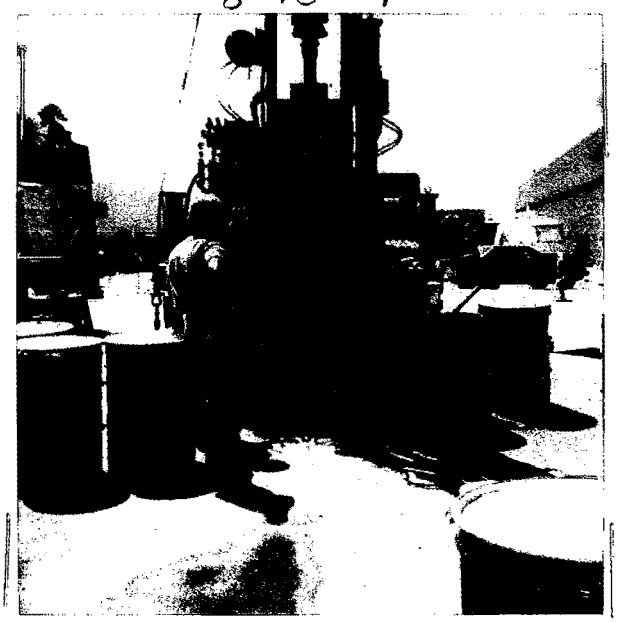
FROM: DAVE LOBATO FILE: I-12987

INDUSTRY: KIRKHILL, INC.
12021 S. WOODRUFF DOWNEY

REPORT: THIS WAS AN OVERSIGHT INSPECTION TO WITNESS THE DRILLING & SAMPLING OF FIVE (5) SOIL BORINGS. I MET MR. TONY LIZZI, GEOLOGIST FOR TPE, WHO EXPLAINED THE JOB STATUS. WHEN I ARRIVED THEY HAD COMPLETED 4 OF THE 5 BORINGS AND WERE JUST STARTING TO DRILL CB-9A. INSTEAD OF RE-DRILLING CB-9 THEY DRILLED AN OFFSET OF A FEW INCHES. THEY FOUND A GREY GREEN CLAYEY SILT 5 TO 10 FEET THICK AT ABOUT 40 FEET DEPTH. THIS CLAYEY SILT HAS ORGANIC PARTICLES. I CHECKED THE BORING LOGS AND THEY ALL SHOWED NO HEADSPACE (PLASTIC BAGGIES). THEY USED A BACHARACH SNIFFER 503A WHICH IS CGI INSTRUMENT. IT IS SUSPECT WHEN TRYING TO READ LOW PPM OF VOCS. I CROSS CHECKED HEADSPACE READINGS FOR CB-9A WITH OUR HNU.

| DEPTH | BACHARACH SNIFFER | HNU |
|---|---|---|
| 30' | ND | 6 ppm |
| 35' | ND | 9 " |
| 40' | ND | 3 " |
| 45' | ND | 11 " |
| 50' | ND | 3 " |

8-15-91



DRILLING CB-9A

38-0002 DPW 10/86

**PERMIT APPLICATION SUPPLEMENTARY TO FILE**
**HAZARDOUS MATERIALS UNDERGROUND STORAGE PERMIT**
Los Angeles County Department of Public Works
Waste Management Division
900 South Fremont Avenue
Alhambra, CA 91803-1331

DUE DATE: _____

DPW USE ONLY
FILE # 12987
PERMIT # R0004735
R/C CODE 1F
SIC CODE _____
STATE ID # _____
TGP _____ TGC _____

10/91

THIS FORM MUST ACCOMPANY ALL TANK PERMIT APPLICATIONS TO OPERATE UNDERGROUND STORAGE TANKS
***See instructions on back of this form****

**IF THERE ARE NO UNDERGROUND TANKS AT THIS FACILITY, GO TO PARTS F & G.**

(A)

KIRKHILL INC
FACILITY NAME
12021 WOODRUFF AVE
MAILING ADDRESS
DOWNEY CA 90241
CITY STATE ZIP
SAME
FACILITY LOCATION

(B) APPLICATION IS HEREBY MADE FOR A HAZARDOUS MATERIAL UNDERGROUND STORAGE PERMIT (*HMUSP*) TO OPERATE AND MAINTAIN UNDERGROUND STORAGE TANKS WITHIN LOS ANGELES COUNTY JURISDICTION.

**NEW PERMIT** ☐ **EXISTING PERMIT RENEWAL** ☒

EXISTING PERMIT NUMBER R0004735
NUMBER OF TANKS AT FACILITY (1) CLOSED IN PLACE

(C) ASSESSOR PARCEL IDENTIFICATION (OBTAIN FROM PROPERTY TAX BILL):

MAP BOOK NUMBER 6284 PAGE NUMBER 025 PARCEL NUMBER 018

(D) THIS SUPPLEMENT MUST BE ACCOMPANIED BY:

|1| ONE COPY OF STATE FORM "A", FACILITY/SITE INFORMATION, FOR EACH SITE.
|2| ONE COPY OF STATE FORM "B", TANK PERMIT APPLICATION INFORMATION, FOR EACH TANK.
|3| LEAK DETECTION PROGRAM (*LDP*) AND TANK MONITORING PROGRAM (*TMP*) PROPOSALS.
|4| HMUSP APPLICATION FEE (COMPLETE PART E)

(E) HAZARDOUS MATERIALS UNDERGROUND STORAGE PERMIT (HMUSP) FEE SCHEDULE:

THE HMUSP APPLICATION FEE SHALL BE THE FIRST ANNUAL PERMIT MAINTENANCE FEE.
CIRCLE AMOUNT REMITTED.

| NUMBER OF TANKS: | HMUSP (APPLICATION FEE) | | ANNUAL PERMIT MAINTENANCE FEE | | STATE SURCHARGE | | TOTAL FEES DUE |
|---|---|---|---|---|---|---|---|
| 1 | $171 | + | $119 | + | $ 56 | = | $346 |
| 2 | $201 | + | $139 | + | $112 | = | $452 |
| 3 | $231 | + | $159 | + | $168 | = | $558 |
| 4 | $261 | + | $179 | + | $224 | = | $664 |
| 5 | $291 | + | $199 | + | $280 | = | $770 |
| 6 or more tanks | $141 + $30 per tank | + | ~~$90~~ $99 + $20 per tank | + | $56 per tank | = | _____ |

MAKE CHECKS PAYABLE TO: ***"L. A. COUNTY DEPARTMENT OF PUBLIC WORKS"***

(F) FACILITIES CLAIMING AN EXEMPTION TO REGULATION MUST COMPLETE THIS SECTION:

☒ THERE ARE NO UNDERGROUND STORAGE TANKS WITHIN THIS FACILITY.
☐ FINAL INTERCEPTOR(S) REGULATED UNDER INDUSTRIAL WASTE PERMIT No. _____.
☐ UNDERGROUND CONTAINERS WITHIN THIS FACILITY ARE USED ONLY FOR EMERGENCY SPILL CONTAINMENT FOR ABOVE GROUND STORAGE TANKS.
☐ OTHER (ATTACH A WRITTEN STATEMENT)

(G) ALL PERSONS FILING THIS FORM MUST COMPLETE THIS SECTION:

SIGNATURE Ray Bellanger TITLE Plant Manager
PRINTED NAME RAY BELLANGER DATE NOV. 11, 91

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

# UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM A

COMPLETE THIS FORM FOR EACH FACILITY/SITE

MARK ONLY ONE ITEM: ☐ 1 NEW PERMIT ☒ 3 RENEWAL PERMIT ☐ 5 CHANGE OF INFORMATION ☐ 7 PERMANENTLY CLOSED SITE ☐ 2 INTERIM PERMIT ☐ 4 AMENDED PERMIT ☐ 6 TEMPORARY SITE CLOSURE

## I. FACILITY/SITE INFORMATION & ADDRESS - (MUST BE COMPLETED)

| DBA OR FACILITY NAME | NAME OF OPERATOR | |
|---|---|---|
| KIRKHILL INC | | |
| ADDRESS | NEAREST CROSS STREET | PARCEL # (OPTIONAL) |
| 12021 WOODRUFF | WASHBURN Rd | |
| CITY NAME | STATE / ZIP CODE | SITE PHONE # WITH AREA CODE |
| DOWNEY CA 90241 | CA 90241 | 310 8033421 |

✓ BOX TO INDICATE: ☒ CORPORATION ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ LOCAL-AGENCY DISTRICTS ☐ COUNTY-AGENCY ☐ STATE-AGENCY ☐ FEDERAL-AGENCY

| TYPE OF BUSINESS | ✓ IF INDIAN RESERVATION OR TRUST LANDS | # OF TANKS AT SITE | E. P. A. I. D. # (optional) |
|---|---|---|---|
| ☐ 1 GAS STATION ☐ 2 DISTRIBUTOR ☐ 3 FARM ☐ 4 PROCESSOR ☐ 5 OTHER | ☐ | NONE | |

| EMERGENCY CONTACT PERSON (PRIMARY) | | EMERGENCY CONTACT PERSON (SECONDARY) - optional | |
|---|---|---|---|
| DAYS: NAME (LAST, FIRST) | PHONE # WITH AREA CODE | DAYS: NAME (LAST, FIRST) | PHONE # WITH AREA CODE |
| BELLANGER RAY | 310 | | |
| NIGHTS: NAME (LAST, FIRST) | PHONE # WITH AREA CODE | NIGHTS: NAME (LAST, FIRST) | PHONE # WITH AREA CODE |
| " " | 310 929 1987 | | |

## II. PROPERTY OWNER INFORMATION - (MUST BE COMPLETED)

| NAME | CARE OF ADDRESS INFORMATION | | |
|---|---|---|---|
| See ABOVE | | | |
| MAILING OR STREET ADDRESS | ✓ box to indicate ☐ INDIVIDUAL ☐ LOCAL-AGENCY ☐ STATE-AGENCY ☐ CORPORATION ☐ PARTNERSHIP ☐ COUNTY-AGENCY ☐ FEDERAL-AGENCY | | |
| CITY NAME | STATE | ZIP CODE | PHONE # WITH AREA CODE |
| | | | |

## III. TANK OWNER INFORMATION - (MUST BE COMPLETED)

| NAME OF OWNER | CARE OF ADDRESS INFORMATION | | |
|---|---|---|---|
| SEE ABOVE | | | |
| MAILING OR STREET ADDRESS | ✓ box to indicate ☐ INDIVIDUAL ☐ LOCAL-AGENCY ☐ STATE-AGENCY ☐ CORPORATION ☐ PARTNERSHIP ☐ COUNTY-AGENCY ☐ FEDERAL-AGENCY | | |
| CITY NAME | STATE | ZIP CODE | PHONE # WITH AREA CODE |
| | | | |

## IV. BOARD OF EQUALIZATION UST STORAGE FEE ACCOUNT NUMBER - Call (916) 323-9555 if questions arise.

TY (TK) HQ 44- ☐☐☐☐☐☐

## V. PETROLEUM UST FINANCIAL RESPONSIBILITY - (MUST BE COMPLETED) – IDENTIFY THE METHOD(S) USED

✓ box to indicate: ☐ 1 SELF-INSURED ☐ 2 GUARANTEE ☐ 3 INSURANCE ☐ 4 SURETY BOND ☐ 5 LETTER OF CREDIT ☐ 6 EXEMPTION ☐ 99 OTHER

## VI. LEGAL NOTIFICATION AND BILLING ADDRESS

Legal notification and billing will be sent to the tank owner unless box I or II is checked.

CHECK ONE BOX INDICATING WHICH ABOVE ADDRESS SHOULD BE USED FOR LEGAL NOTIFICATIONS AND BILLING: I. ☒ II. ☐ III. ☐

*THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT*

| APPLICANT'S NAME (PRINTED & SIGNATURE) | APPLICANT'S TITLE | DATE MONTH/DAY/YEAR |
|---|---|---|
| RAY BELLANGER Ray Bellanger | Plant Manager | Nov. 01, 91 |

## LOCAL AGENCY USE ONLY

| COUNTY # | JURISDICTION # | FACILITY # |
|---|---|---|
| 19 | 000 | 12987 |

| LOCATION CODE - *OPTIONAL* | CENSUS TRACT # - *OPTIONAL* | SUPVISOR - DISTRICT CODE - *OPTIONAL* |
|---|---|---|
| | | |

THIS FORM MUST BE ACCOMPANIED BY AT LEAST (1) OR MORE PERMIT APPLICATION - FORM B, UNLESS THIS IS A CHANGE OF SITE INFORMATION ONLY.

TICKET TO LISA / PICK UP TO TIM camb

COUNTY OF LOS ANGELES
**DEPARTMENT RECEIPT**

077864

DATE 11-6 19 91

PLAN CHECK FEE $
LDMA SURCHARGE $
TAX SECURITY $
IMP. SECURITY $
FF/RF $
$

RECEIVED FROM: Kirkhill Inc. $346.00

Three Hundred forty six NO/100 DOLLARS

FOR: HMUSP 012987 R0004735
A01- 9390 # 171.00
A01- 9397 119.00
V09- 7700 56.00 C1c15872
911106012 11-5

C.C. NO.
R.S. NO.
OTHER
TRACT NO.
PARCEL NO.
76D301B 22-0064 DPW 5/87

BY M. Garcia DEPUTY
DEPARTMENT OF PUBLIC WORKS

CUSTOMER COPY

---

KIRKHILL RUBBER INC
12021 WOODRUFF AVE

HAZARDOUS MATERIAL UNDERGROUND STORAGE PROGRAM
FIRST ANNUAL PERMIT MAINTENANCE FEE

DR#077864
PERMIT NO: R0004735
FILE NO: 012987 R/C 1F

NUMBER OF PERMITTED TANKS: 1
EFFECTIVE DATE: 10/20/86

MAKE CHECK PAYABLE TO: L.A. COUNTY DEPARTMENT OF PUBLIC WORKS

| | | |
|---|---|---|
| ANNUAL FEE: | 119.00 | (P) |
| RENEWAL APPLICATION: | 171.00 | (X) |
| STATE SURCHARGE: | 56.00 | (S) |
| ##### TOTAL DUE: | 346.00 | ##### |
| DUE DATE: | 11/01/91 | |

REFER ALL INQUIRES TO : WASTE MANAGEMENT DIVISON (818)458-3517
OFFICE HOURS: MONDAY THROUGH THURSDAY, 7:00 A.M. TO 5:30 P.M.

KIRKHILL RUBBER INC
12021 WOODRUFF AVE
DOWNEY CA 90241

RETURN TO:
LOS ANGELES DEPARMTMENT OF PUBLIC WORKS
CASHIER UNIT
P. O. BOX 1460
ALHAMBRA, CA 91802-1460

* RETURN THIS PORTION WITH PAYMENT *

RECEIVED
NOV 06 1991
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION

077864

16-24/637
1220(7)

# KIRKHILL INC.

12021 WOODRUFF AVENUE, DOWNEY, CALIFORNIA

NO. 15872

DATE 11-5-91

PAY REGISTERED 8P135514 346 00 CTS $ 346.00

TO THE ORDER OF L. A. County Department of Public Works

KIRKHILL INC.

By _____

By _____

**WELLS FARGO BANK**
NATIONAL ASSOCIATION
8151 E. Third Street
Downey, CA 90241

9-11/1260/2

⑈015872⑈ ⑆122000247⑆4637 41230 5⑈

KIRKHILL INC.

DETACH BEFORE DEPOSITING

| DATE | ITEMS | AMT | DISC. | DEDUCTIONS | NET |
|---|---|---|---|---|---|
| | PER YOUR STATEMENT<br>annual permit maintenance fee | 346.00 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| ACCOUNT | | | | 830-20 | | |
| AMOUNT | | | | 346.00 | | |

YOUR ENDORSEMENT ON THE REVERSE SIDE OF THIS CHECK, WHEN CLEARED, WILL BE YOUR ACKNOWLEDGEMENT OF FULL PAYMENT AS SPECIFIED.

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


Decenber 4, 1991

IN REPLY PLEASE REFER TO FILE. I-12987

Mr. Ray Ballanger
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballanger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**SITE ASSESSMENT REPORT**
**PREPARED BY: TANK PROTECT ENGINEERING**
**REPORT DATE: OCTOBER 30, 1991**
**CLOSURE PERMIT NOS. 5999B AND 6000B**
**LOCATION: 12021 WOODRUFF AVENUE, DOWNEY**

The report documenting the drilling of five borings has been reviewed and found adequate with the following exceptions:

1. Submit a Remedial Action Proposal to mitigate the contamination.
2. The extent of contamination needs to be defined in the area of borings CB-10 and CB-11.
3. A water sample was reported. Specify the location and reason why this sample was obtained.
4. Future soil samples will need to be tested at a State certified lab for EPA 418.1, EPA 8100, and EPA 8020.

Submit all the requested information to this office by February 6, 1992.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted in duplicate to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Scott Small at (818) 458-3996.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By Scott Small
Scott Small
UST Local Oversight Program
Waste Management Division

Reviewed P. A. Proano
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

SS:ts/103026/November 4, 1991
WP/12987

cc: California Regional Water Quality Control Board

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


March 9, 1992

IN REPLY PLEASE REFER TO FILE I-12987

Mr. Ray Ballenger
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballenger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**SITE ASSESSMENT PROPOSAL**
**PREPARED BY: TANK PROTECT ENGINEERING**
**REPORT DATE: FEBRUARY 5, 1992**
**CLOSURE PERMIT NOS. 5999B AND 6000B**
**LOCATION: 12021 WOODRUFF AVENUE, DOWNEY**

The proposal to drill one boring has not been approved for the following reasons:

> The boring will not define the lateral extent of the contamination. A boring is required to the north, south, and east of the previous borings designated as CB-10 and CB-11. A boring also needs to be drilled adjacent to the previously drilled boring CB-9 to investigate the soil at 35 feet if it is believed that no contamination exists at this depth.

Submit the revised Site Assessment Proposal to this office by May 14, 1992.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted in duplicate to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Scott Small at (818) 458-3996.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By Scott Small
Scott Small
UST Local Oversight Program
Waste Management Division

OKA

Reviewed P. A. Proano
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

SS:ts/200441/February 10, 1992
WP/12987-1

cc: California Regional Water Quality Control Board
Mr. Tony Lizzi, Tank Protect Engineering

# COUNTY OF LOS ANGELES
## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460



RECEIVED
MAY 26 1992
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION


May 19, 1992

2015

IN REPLY PLEASE REFER TO FILE: I-12987

Mr. Ray Ballenger
Kirkhill, Inc.
P. O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballenger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**CLOSURE PERMIT NO. 5999B**
**LOCATION: 12021 WOODRUFF AVENUE, DOWNEY**

The proposal to drill additional borings has been reviewed and approved. Borings must be drilled to 30 feet at the locations shown in the attached plot plan. If contamination is encountered at 30 feet borings must be drilled to five and 15 feet below the last detected contamination. Analyze all soil samples collected at every five feet using a State certified laboratory. Using the highest levels of total recoverable petroleum hydrocarbons by EPA 418.1 Method, analyze for naphthalene using EPA methods 8100 and 8020. As discussed at the meeting of April 6, 1992 based on the highest levels of contamination prepare a health-based risk assessment report demonstrating that the contaminants left in place will not cause a threat to human health and/or groundwater.

Use all necessary precautions and comply with all NIOSH requirements of Health and Safety for the protection of all personnel during the drilling operations.

Submit a Site Assessment Report and Risk Assessment Report on/before July 30, 1992.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted in duplicate to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Ofori Amoah at (818) 458-3573.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By _____
Ofori Amoah
UST Local Oversight Program
Waste Management Division

Reviewed _____
Pat Proano, P.E.
Supervising Civil Engineer II
Waste Management Division

OKA:rm
WP/12987

cc: California Regional Water Quality Control Board
Tank Protect Engineering

File No. 12987 **S I T E  S P E C I F I C  S T A T U S  S H E E T**

Project Manager: FSS  Inspector: DL  Local Oversight Status: I  Date of Printing: 08/06/92

| SITE NAME & ADDRESS: | RESPONSIBLE PARTY NAME & ADDRESS: | CONSULTANT NAME & ADDRESS: |
|---|---|---|
| Kirkhill, Inc. | Kirkhill, Inc. | T.P.E. Environmental |
| 12021 S. Woodruff Avenue | Raymond Ballanger | Tony Lizzi |
| Downey ,CA 90241 | P.O. Box 7012 | 1963 N. Main Street |
| | Downey CA 90241-0030 | Orange, CA 92665 |
| Additional RPs? N | (310) 803-3421 FAX: | (714) 282-5635 FAX: (714) 921-1832 |

| | | |
|---|---|---|
| SCAQMD Permit? | Soil Contamination? Yes | GW Contamination? No |
| Health & Safety Plan? Yes | Deepest Contamination: 35 ft | Gradient (ft/ft & dir): |
| Remedial Actions Taken: ED, EC | High Contam Level (ppm): 45714 | GW Contam Level (ppb) : |
| Predominate Soil Type: | | Depth to GW - actual : ft |
| Source of Release: | | - historic: ft |
| Probable Contaminants: diesel, petroleum distillate | | - regional: ft |
| | GW Depth Source: | |

| Date Corresp Sent/Recd | INCOMING Date on Letter | Rev By | Letter Number | OUTGOING Ltr By | Reply Recd | Summary of Correspondence I-12987 |
|---|---|---|---|---|---|---|
| 10/10/86 | | | | | | HMUSP #4735 applied fro by Gary A. Riopelle. |
| 09/22/87 | | | | * | | County letter sent by David Esfandi disapproving of the interim monitoring plan. |
| 10/29/87 | | | 8703831 | | | Request for interim monitoring received from Kirkhill, Inc. |
| 11/23/87 | | | | | | County letter sent by Dave Esfandi approving of the interim monitoring plan. |
| 11/24/87 | | | 8704367 | | | TIT's received from Kirkhill, Inc. |
| 08/09/89 | | | | | | Closure permit #5999B pulled fro 2-10,000 gal. diesel and 1-10,000 gal. cutting oil tank. Closure permit #6000B pulled fro 1-7500 gal. diesel tank. |
| 08/21/89 | | | | | | Three 10,000 gal. tanks removed (two diesel tanks and one cutting oil tank). |
| 08/24/89 | | | | | | County inspection report prepared by David Chow for the removal of three tanks (closure permit #5999B). |
| 12/11/89 | | FSS | 8906210 | | | Closure Report received from Tank Protect Engineering for closure permit #5999B. Contamination detected. |
| 02/28/90 | | OKA | 9001004 | | | TANK CLOSURE received from TPE for both closure permits (#599B and 6000B). Contam. detected. |
| 03/12/90 | | FSS | 9001373 | | | CLOSURE REPORT |
| 04/11/90 | | | | PAP | * | NOTICE TO RP |
| 05/17/90 | | | | OKA | Y | County letter sent by Ofori Amoah requesting cross-section(s) showing the plume definition and other information. • |
| 06/22/90 | | OKA | 9003148 | | | Remediation Report documenting excavation rec'd from TPE. |
| 07/30/90 | | FSS | PP000572 | | | DIAGRAMS (from TPE) |
| 08/07/90 | | FSS | PP000600 | | | TANK CLOSURE REPORT/ H & S Plan rec'd from TPE. |
| 09/17/90 | 08/30/90 | FSS | PP000778 | | | Additional Information (remedial excavation) rec'd from TPE> |
| 10/11/90 | | | | FSS | Y | REPORT REVIEW sent by Scott Small requesting additional information pertaining to the remedial excavation work. |
| 10/29/90 | | FSS | PP001048 | | | Addendum to Remedial Action Report rec'd from TPE. |
| 12/04/90 | | | | | | County geologic review prepared by Steve Lipshie. |
| 12/11/90 | | FSS | PP001304 | | | CALCULATION OF EXCAVATED SOIL VOLUMES rec'd from TPE. |
| 12/12/90 | | | | | | County inspection performed by Scott Small. |
| 01/15/91 | 01/09/91 | FSS | PP100116 | | | SITE ASSESSMENT PROPOSAL (by TPE) - verification |
| 02/14/91 | | | | FSS | Y | Report Review sent by Scott Small approving of the proposal. |
| 02/26/91 | | | | | | County inspection performed by Dave Lobato. |
| 04/18/91 | 04/15/91 | FSS | PP100925 | | | SITE ASSESSMENT REPORT (from TPE) - 4 borings drilled (deepest = 35). Contam. detected. |
| 05/09/91 | | | | FSS | Y | Report Review sent by Scott Small requiring site assessment. |
| 07/02/91 | 06/28/91 | FSS | PP101713 | | | SITE ASSESSMENT PROPOSAL (from TPE) - |
| 07/11/91 | 07/08/91 | FSS | PP101808 | | | ADDENDUM TO WORK PLAN |

| Date Corresp Sent/Recd | INCOMING Date on Letter | Rev By | Letter Number | OUTGOING Ltr By | Reply Recd | Summary of Correspondence | I-12987 |
|---|---|---|---|---|---|---|---|
| 07/22/91 | | | | FSS | Y | County letter sent approving of the SAP. | |
| 11/04/91 | 10/30/91 | FSS | PP103026 | | | SITE ASSESSMENT REPORT (from TPE) - 5 borings drilled (deepest = 49 ft.). Contam detected. | |
| 12/04/91 | | | | FSS | N | County letter sent by Scott Small requiring site assessment. | |
| 02/10/92 | 02/05/92 | FSS | PP200441 | | | WORKPLAN FOR CONFIRMATION BORING | |
| 02/10/92 | | | | | | Inadequate site assessment proposal (SAP) received from TPE. | |
| 03/09/92 | | | | FSS | N | County letter sent disapproving of the SAP. | |
| 04/27/92 | 02/21/92 | | PP201241 | | | WORKPLAN | |
| 08/05/92 | 05/12/92 | | | | | Final Confirmation Boring Report - two borings drilled to 30 feet, respectively. Petroleum distillate identified and no contamination found. | |
| __/__/__ | | | | | | | |
| __/__/__ | | | | | | | |
| __/__/__ | | | | | | | |
| __/__/__ | | | | | | | |

Comments:

UST LOCAL OVERSIGHT PROGRAM - SITE ADD SHEET
date of printing: 08/06/92

**** S I T E  I N F O R M A T I O N ****

Site ID: 12987  Site Name: Kirkhill, Inc.
Street: 12021 S. Woodruff Avenue
City: Downey ,CA 90241

Project Engineer: Small  Inspector: DL

**** Q U A R T E R L Y  R E P O R T  I N F O R M A T I O N ****

Funding (S/F): F  Federal Exempt? (Y/N): N  Petroleum? (Y/N): Y
Substance (code): 12034 Diesel  Date Reported (to county): 03/12/90
Case Type (U/S/G/D): S  Date Confirmed (into LOP): 03/15/90
LUFT Category (1/2/3): 2  Contract Status (1-9) : 7

| | | | |
|---|---|---|---|
| RP Search (S/I/R/N/_): S | Date Begin: 03/15/90 | Date End: 03/15/90 |
| Prelim Investigation (U/C): C | Date Begin: 08/24/89 | Date End: 09/26/89 |
| Site Assessment (U/C): C | Date Begin: 09/26/89 | Date End: 07/15/92 |
| Remedial Action (U/C): C | Date Begin: 10/17/89 | Date End: 07/15/92 |
| Post Rem. Monitor (Y/N/U/C): N | Date Begin: | Date End: |

Enforcement Act. Taken? (Y/N): Y  Type: 1  Case Closed? (R/Y/_): Y
Date Last Correspondence Received: 11/04/91  Date Case Closed : 08/06/92
Date Remedial Excavation Started : 08/24/89  Date Case Rejected :
Remedial Actions Taken (code) : ED, EC  Rejected to:(RB/UST/DHS):

**** R E S P O N S I B L E  P A R T Y  A D D R E S S ****

Multiple RPs? (Y/N): N
RP Contact Name: Raymond Ballanger  FAX:
RP Company Name: Kirkhill, Inc.  Phone: (310) 803-3421
Street: P.O. Box 7012
City: Downey  CA 90241-0030

Additional RPs:

August 6, 1992

TO: Dave Yamahara

FROM: Pat Proano

**CHRONOLOGICAL SUMMARY OF SITE ACTIVITIES**
**KIRKILL, INC.**
**12021 WOODRUFF AVENUE, DOWNEY**

The following represents a summary of the events that have taken place for File I-12987:

| | |
|---|---|
| 9/13/86 | Tank integrity tests by Cal Tank Testing (10,000 gallon (naphthenic) oil tank failed the test). |
| 10/10/86 | The Hazardous Materials Underground Storage Permit (HUMSP) No. 4735 was applied for which documented one 10,000 gallon (naphthenic) processing oil tank, two 10,000 gallon diesel tanks and one 7,500 gallon diesel tank. |
| 6/12/87 | The deadline for the leak detection proposal (LDP) and the tank monitoring proposal (TMP) was set for September 14, 1987. |
| 9/18/87 | A letter was received proposing LDP/TMP. A detailed proposal was not submitted. |
| 9/22/87 | A County letter was sent disapproving of the interim monitoring plan. |
| 10/23/87 | A formal interim monitoring plan was submitted by Kirkill, Inc. |
| 11/23/87 | A County letter was sent conditionally approving the interim monitoring plan. The deadline was set for an application for tank closure by August 1, 1989, or the deadline was set for the LDP/TMP by July 1, 1989. |
| 11/24/87 | Tank integrity tests were received from Kirkill, Inc. All the tanks passed the test. |
| 8/9/89 | Closure Permit No. 5999B was pulled for three 10,000 gallon tanks (tank removal). Closure Permit No. 6000B was pulled for the 7,500 gallon tank (closure in place). |

| | |
|---|---|
| 8/24/89 | A County Inspector's Report was prepared after the tank removal occurred. Visual evidence of contamination was noted. |
| 12/11/89 | An incomplete Tank Closure Report was received from Tank Protect Engineering (TPE). Remedial excavation work was performed without written permission from the County. |
| 2/28/90 | An additional Tank Closure Report was received from TPE. Treatment was performed on the excavated soil, and the soil was backfilled in the open holes without written approval from the County. The treatment method utilized (hydrogen peroxide) by TPE did not appear to be an accepted technology according to the technologies investigated by the State Department of Health Services, Alternative Technology Section. It was reported that approximately 72 cubic yards of soil was hauled off-site for disposal. |
| 4/11/90 | A County Notice of Responsibility for Reimbursement letter was sent to Kirkill, Inc. |
| 5/17/90 | A County letter was sent requesting additional information to aid in the review process. |
| 6/22/90 | A report was received from TPE addressing the issues raised in the County letter dated May 17, 1990. |
| 7/30/90 | Additional cross-sections and plot plans were received from TPE. |
| 8/7/90 | A Health and Safety Plan along with manifests were received from TPE. This information was requested in the County letter dated May 17, 1990. |
| 9/17/90 | Additional information was received from TPE. This submittal was in response to a meeting dated August 17, 1990. The requested information was originally stated in the County letter dated May 17, 1990. |

| | |
|---|---|
| 10/11/90 | A County letter was sent reiterating some of the requested information of the County letter dated May 17, 1990. |
| 10/29/90 | A submittal was received from TPE which addressed the items raised in the County letter dated October 11, 1990. |
| 12/3/90 | A County geologic review was prepared by Steve Lipshie recommending further site assessment work. |
| 12/11/90 | Calculations estimating the volume of excavated soil were received. |
| 12/12/90 | A County inspection was performed by Scott Small and Stephen Groner to evaluate the current site status. The excavations were backfilled and paved over. |
| 1/15/91 | A Site Assessment Proposal was received from TPE to drill four borings. |
| 2/14/91 | A County letter was sent conditionally approving of the Site Assessment Proposal. |
| 2/26/91 | A County inspection was performed by Dave Lobato who observed the drilling process. The drilling and sampling protocol appeared adequate. |
| 4/18/91 | A Site Assessment Report was received from TPE. The deepest boring was drilled 35 feet deep. Contamination was detected in boring CB-9 and CB-10 as deep as 35 feet. |
| 5/9/91 | A County letter was sent requiring additional site assessment work to define the extent of the detected contamination. |
| 7/2/91 | A Site Assessment Proposal was received from TPE. |
| 7/11/91 | A Site Assessment Proposal addendum was received from TPE. |
| 7/22/91 | A County letter was sent conditionally approving of the Site Assessment Proposal. |

8/15/91 A County inspection was performed by Dave Lobato who observed the drilling of CB-9A (one of five borings). The Inspection Report did not mention inadequate drilling or sampling protocol. Four borings had been drilled prior to Dave Lobato arriving at the site.

11/1/91 HMUSP No. 4735B was renewed.

11/4/91 A Site Assessment Report was received from TPE. The deepest boring was drilled 50 feet deep. Lesser amounts of contamination were detected in each boring (<100 ppm) as deep as 45 feet. Contamination as high as 315 ppm was detected in boring CB-11.

12/4/91 A County letter was sent requiring further site assessment work and a Remedial Action Proposal to mitigate the existing contamination.

2/10/92 An inadequate Site Assessment Proposal was received from TPE.

3/9/92 A County letter was sent disapproving of the Site Assessment Proposal to drill one boring. The proposed boring would not have adequately defined the extent of the contamination.

8/5/92 A Final Confirmation Boring Report was received from TPE. Two borings were drilled to 30 feet. A total of 12 soil samples were collected and analyzed for the two borings drilled. Sample FB2 at 25 feet showed a TRPH concentration of 91 ppm. BTEX and PAHs concentration were nondetectable. Boring FB1 was provided. Soil disposal manifest was not provided. A TRPH concentration of 852 ppm of petroleum distillate previously discovered will be left in place, based on leading potential analyses. Risk assessment was not conducted.

SS:ts
WP/12987.MEM

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


August 6, 1992

IN REPLY PLEASE REFER TO FILE: I-12987

FINAL
UST
CLOSURE

Mr. Gary A. Riopelle
President and C. E. O.
Kirkhill, Inc.
P. O. Box 7012
Downey, CA 90241-0030

Dear Mr. Riopelle:

**HAZARDOUS MATERIALS UNDERGROUND STORAGE**
**SITE ASSESSMENT/REMEDIAL ACTION PLAN CLOSURE CERTIFICATION**
**FACILITY LOCATION: 12021 WOODRUFF AVENUE, DOWNEY**
**CLOSURE PERMIT NUMBER: 5999B**

This office has reviewed the final report submitted on August 5, 1992. Based on the information submitted, this letter confirms the completion of site investigation and remedial action at the above site. With the provision that the information provided to this agency was accurate and representative of existing conditions, it is our position that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present or future operations at this site. Nor does it relieve you of the responsibility to clean up existing, additional or previously unidentified conditions at the site which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Additionally, be advised that changes in the present or proposed use of the site may require further site characterization and mitigation activity. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings or site usage.

Any questions regarding this matter should be directed to Ofori Amoah at (818) 458-3573.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

P. A. Proano

Pat A. Proano
Supervising Civil Engineer II
Waste Management Division

OKA:rm
WP/12987-1

cc: California Regional Water Quality Control Board
Tank Protect Engineering

# APPENDIX D:

# BORING LOGS

Geologist: Tim Hersch / Ethan Hersch | Page: 1 of 2

Client: Kirkhill, Inc. | Project No.: E4005 | Boring: PIC-1

Location: South of oil-water separator | Well/Boring: Boring | Date: 8/13/13

Drilling Co.: Strongarm | Driller: Frank / Walter | Rig: Geoprobe 6600

Auger/Casing Diam.: 2" | Filter Pack: N/A | $H_20$ Depth: 45+/-

No. of Samples: 8 | Total Depth: 50'

Perforations: N/A

| Description | Lithology | TPH (ppm) | Sample No. | Sample Interval | Comments |
|---|---|---|---|---|---|
| Concrete | | | | | |
| Light brown / gray silt and very fine grained sand, massive, unconsolidated, dry, no odor | SM | 0.0 | 1 | 9-10 | |
| Light brown fine grained sand, massive, unconsolidated, dry, no odor, no discoloration | SM | 0.0 | 2 | 19-20 | |
| Light brown fine grained sand, massive, unconsolidated, dry, no odor, no discoloration | SM | 0.0 | 3 | 24-25 | |
| Light brown fine to medium grained sand, massive, unconsolidated, dry, no odor, no discoloration | SW | 0.0 | 4 | 29-30 | |

Client: Kirkhill, Inc. Project No.: E4005 Boring: PIC-1

| | Description | Lithology | TPH (ppm) | Sample No. | Sample Interval | Comments |
|---|---|---|---|---|---|---|
| 35 | Light brown medium grained sand, massive, unconsolidated, moist, no odor or discoloration | SW | 0.0 | 5 | 34-35 | |
| 40 | Grey clayey silt, micaceous, massive, unconsolidated , moist, no odor, no discoloration | ML | 0.0 | 6 | 39-40 | |
| 45 | Grey clayey silt, micaceous, massive, unconsolidated , moist, no odor, no discoloration | ML | 0.0 | 7 | 44-45 | Perched aquifer at approximately 44-48 feet |
| 50 | Light brown medium grained sand, massive, cemented, dry, no odor, no discoloration | SW | 0.0 | 8 | 49-50 | |
| 55 | | | | | | |
| 60 | | | | | | |
| 65 | | | | | | |
| 70 | | | | | | |

Geologist: Tim Hersch / Ethan Hersch | Page: 1 of 2

Client: Kirkhill, Inc. | Project No.: E4005 | Boring: PIC-2

Location: Southwest of oil-water separator | Well/Boring: Boring | Date: 8/13/13

Drilling Co.: Strongarm | Driller: Frank / Walter | Rig: Geoprobe 6600

Auger/Casing Diam.: 2" | Filter Pack: N/A | $H_20$ Depth: 45+/-

No. of Samples: 8 | Total Depth: 50'

Perforations: N/A

| Description | Lithology | TPH (ppm) | Sample No. | Sample Interval | Comments |
|---|---|---|---|---|---|
| Concrete | | | | | |
| Light brown silt and very fine grained sand, massive, unconsolidated, dry, no odor | SM | 0.0 | 1 | 9-10 | |
| Light brown silt, clayey, massive, unconsolidated, dry, no odor, no discoloration | ML | 0.0 | 2 | 19-20 | |
| Light brown fine grained sand, massive, unconsolidated, dry, no odor, no discoloration | SM | 0.0 | 3 | 24-25 | |
| Light brown fine to medium grained sand, massive, unconsolidated, dry, no odor, no discoloration | SW | 0.0 | 4 | 29-30 | |

Client: Kirkhill, Inc. Project No.: E4005 Boring: PIC-2

| | Description | Lithology | TPH (ppm) | Sample No. | Sample Interval | Comments |
|---|---|---|---|---|---|---|
| 35 | Light brown medium grained sand, massive, unconsolidated, moist, no odor or discoloration | SW | 0.0 | 5 | 34-35 | |
| 40 | Grey clayey silt, micaceous, massive, unconsolidated , moist, no odor, no discoloration | ML | 0.0 | 6 | 39-40 | |
| 45 | Grey clayey silt, micaceous, massive, unconsolidated , moist, no odor, no discoloration | ML | 0.0 | 7 | 44-45 | Perched aquifer at approximately 44-48 feet |
| 50 | Light brown medium grained sand, massive, cemented, dry, no odor, no discoloration | SW | 0.0 | 8 | 49-50 | |
| 55 | | | | | | |
| 60 | | | | | | |
| 65 | | | | | | |
| 70 | | | | | | |

Geologist: Tim Hersch / Ethan Hersch | Page: 1 of 1

Client: Kirkhill, Inc. | Project No.: E4005 | Boring: PIC-3

Location: Courtyard Vault (North) | Well/Boring: Boring | Date: 8/13/13

Drilling Co.: Strongarm | Driller: Frank / Walter | Rig: Geoprobe 6600

Auger/Casing Diam.: 2" | Filter Pack: N/A | $H_20$ Depth: N/A

No. of Samples: 1 | Total Depth: 5'

Perforations: N/A

| Description | Lithology | TPH (ppm) | Sample No. | Sample Interval | Comments |
|---|---|---|---|---|---|
| Concrete | | | | | |
| Brown silt and very fine grained sand, massive, unconsolidated, dry, no odor, no discoloration | SM | 0.0 | 1 | 4-5 | |

5

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25

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Geologist: Tim Hersch / Ethan Hersch | Page: 1 of 1

Client: Kirkhill, Inc. | Project No.: E4005 | Boring: PIC-4

Location: Courtyard Vault | Well/Boring: Boring | Date: 8/13/13

Drilling Co.: Strongarm | Driller: Frank / Walter | Rig: Geoprobe 6600

Auger/Casing Diam.: 2" | Filter Pack: N/A | $H_20$ Depth: N/A

No. of Samples: 1 | Total Depth: 5'

Perforations: N/A

| Description | Lithology | TPH (ppm) | Sample No. | Sample Interval | Comments |
|---|---|---|---|---|---|
| Concrete | | | | | |
| Brown silt and very fine grained sand, massive, unconsolidated, dry, no odor, no discoloration | SM | 0.0 | 1 | 4-5 | |

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Geologist: Tim Hersch / Ethan Hersch | Page: 1 of 1

Client: Kirkhill, Inc. | Project No.: E4005 | Boring: PIC-5

Location: Courtyard Vault (West) | Well/Boring: Boring | Date: 8/13/13

Drilling Co.: Strongarm | Driller: Frank / Walter | Rig: Geoprobe 6600

Auger/Casing Diam.: 2" | Filter Pack: N/A | $H_20$ Depth: N/A

No. of Samples: 1 | Total Depth: 5'

Perforations: N/A

| Description | Lithology | TPH (ppm) | Sample No. | Sample Interval | Comments |
|---|---|---|---|---|---|
| Concrete | | | | | |
| Brown silt and very fine grained sand, massive, unconsolidated, dry, no odor, no discoloration | SM | 0.0 | 1 | 4-5 | |

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Geologist: Tim Hersch / Ethan Hersch | Page: 1 of 1

Client: Kirkhill, Inc. | Project No.: E4005 | Boring: PIC-6

Location: Equipment Storage (Southwest) | Well/Boring: Boring | Date: 8/13/13

Drilling Co.: Strongarm | Driller: Frank / Walter | Rig: Geoprobe 6600

Auger/Casing Diam.: 2" | Filter Pack: N/A | $H_20$ Depth: N/A

No. of Samples: 1 | Total Depth: 5'

Perforations: N/A

| Description | Lithology | TPH (ppm) | Sample No. | Sample Interval | Comments |
|---|---|---|---|---|---|
| Asphalt | | | | | |
| Brown silt and very fine grained sand, massive, unconsolidated, dry, no odor, no discoloration | SM | 0.0 | 1 | 4-5 | |

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Geologist: Tim Hersch / Ethan Hersch | Page: 1 of 1

Client: Kirkhill, Inc. | Project No.: E4005 | Boring: PIC-7

Location: Exterior (South) UST Area | Well/Boring: Boring | Date: 8/13/13

Drilling Co.: Strongarm | Driller: Frank / Walter | Rig: Geoprobe 6600

Auger/Casing Diam.: 2" | Filter Pack: N/A | $H_20$ Depth: N/A

No. of Samples: 3 | Total Depth: 30'

Perforations: N/A

| Description | Lithology | TPH (ppm) | Sample No. | Sample Interval | Comments |
|---|---|---|---|---|---|
| Asphalt | | | | | |
| Light brown / gray silt and very fine grained sand, massive, unconsolidated, dry, no odor | SM | 0.0 | 1 | 9-10 | |
| Light brown fine grained sand, massive, dry, no odor, no discoloration | SM | 0.0 | 2 | 14-15 | |
| Light brown fine grained sand, massive, dry, no odor, no discoloration | SM | 0.0 | 3 | 19-20 | |
| Light brown fine grained sand, massive, dry, no odor, no discoloration | SM | 0.0 | 4 | 24-25 | |
| Light brown fine grained sand, massive, dry, no odor, no discoloration | SW | 0.0 | 5 | 29-30 | |

# APPENDIX E:

# LABORATORY RESULTS

# CAL TECH Environmental Laboratories

6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789


E

## ANALYTICAL RESULTS*

**CTEL Project No:** CT165-1308050
**Client Name:** PIC Environmental Services
2619 Sierra Way
La Verne, CA 91750
**Phone:(909) 593-2427**
**Fax: (909) 593-2105**
**Attention:** J. Tim Hersch

**Project ID:** E4005
**Project Name:** Kirk Hill

**Date Sampled:** 08/13/13 @ 07:15 am
**Date Received:** 08/13/13 @ 13:10 p.m.
**Date Analyzed:** 08/14/13 – 08/15/13
**Matrix: Soil**

| **Laboratory ID:** | 1308-050-1 | 1308-050-2 | 1308-050-9 | **Method** | **Units:** | **Detection** |
|---|---|---|---|---|---|---|
| **Client Sample ID:** | PIC-1-10 | PIC-1-20 | PIC-2-10 | | | **Limit** |
| **Dilution** | 1 | 1 | 1 | | | |
| Dichlorodifluoromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Vinyl Chloride | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromomethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Trichlorofluoromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Iodomethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Acetone | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1-Dichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| t-Butyl Alcohol (TBA) | ND | ND | ND | EPA 8260B | mg/Kg | 0.020 |
| Methylene Chloride | ND | ND | ND | EPA 8260B | mg/Kg | 0.020 |
| Freon 113 | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Carbon disulfide | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Trans,1,2-Dichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Methyl-tert-butyl-ether(MtBE) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,1-Dichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Vinyl acetate | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Diisopropyl Ether (DIPE) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| Methyl Ethyl Ketone | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Cis,1,2-Dichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromochloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloroform | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2,2-Dichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethyl-t-butyl ether (ETBE) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,1,1-Trichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2-Dichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1-Dichloropropene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Carbon Tetrachloride | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Benzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| t-Amyl Methyl Ether (TAM) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,2-Dichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Trichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Dibromomethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromodichloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Chloroethylvinylether | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Cis, 1,3-Dichloropropene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 4-Methyl-2-pentanone(MI) | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Trans,1,3-Dichloropropene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Toluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| 1,1,2-Trichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |

**CTEL Project No:** CT165-1308050

**Project ID:** E4005
**Project Name:** Kirk Hill

| **Laboratory ID:** | 1308-050-1 | 1308-050-2 | 1308-050-9 | **Method** | **Units** | **Detection** |
|---|---|---|---|---|---|---|
| **Client Sample ID:** | PIC-1-10 | PIC-1-20 | PIC-2-10 | | | **Limit** |
| 1,2-Dibromoethane(EDB) | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3-Dichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Dibromochloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Hexanone | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Tetrachloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1,1,2-Tetrachloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| m.p-Xylene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| Bromoform | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Styrene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| o-Xylene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,3-Trichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Isopropylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Chlorotoluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| n-Propylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 4-Chlorotoluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3,5-Trimethylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Tert-Butylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,4-Trimethylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Sec-Butylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3-Dichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,4-Dichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| p-Isopropyltoluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2-Dichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| n-Butylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2 Dibromo-3-Chloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,4-Trichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Naphthalene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,3-Trichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Hexachlorobutadiene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethanol | ND | ND | ND | EPA 8260B | mg/Kg | 0.1 |
| Carbon Chain (C5~C12) | ND | ND | ND | LUFT | mg/Kg | 0.1 |
| Carbon Chain (C13~C24) | ND | ND | ND | LUFT | mg/Kg | 1 |
| Carbon Chain (C25~C40) | ND | ND | ND | LUFT | mg/Kg | 5 |

ND = Not Detected at the indicated Detection Limit

| *SURROGATE SPIKE* | % SURROGATE RECOVERY | | | Control Limit |
|---|---|---|---|---|
| Dibromofluoromethane | 103 | 109 | 105 | 70-130 |
| 1,2 Dichloromethaned4 | 98 | 99 | 98 | 70-130 |
| Toluene-d8 | 92 | 97 | 92 | 70-130 |
| Bromofluorobenzene | 90 | 96 | 93 | 70-130 |

**CTEL Project No:** CT165-1308050
**Client Name:** PIC Environmental Services
2619 Sierra Way
La Verne, CA 91750
**Phone:(909) 593-2427**
**Fax: (909) 593-2105**
**Attention:** J. Tim Hersch

**Project ID:** E4005
**Project Name:** Kirk Hill

**Date Sampled:** 08/13/13 @ 08:40 am
**Date Received:** 08/13/13 @ 13:10 p.m.
**Date Analyzed:** 08/14/13 – 08/15/13
**Matrix: Soil**

| **Laboratory ID:** | 1308-050-10 | 1308-050-17 | 1308-050-18 | **Method** | **Units:** | **Detection** |
|---|---|---|---|---|---|---|
| **Client Sample ID:** | PIC-2-20 | PIC-3-5 | PIC-4-5 | | | **Limit** |
| **Dilution** | 1 | 1 | 1 | | | |
| Dichlorodifluoromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Vinyl Chloride | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromomethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Trichlorofluoromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Iodomethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Acetone | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1-Dichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| t-Butyl Alcohol (TBA) | ND | ND | ND | EPA 8260B | mg/Kg | 0.020 |
| Methylene Chloride | ND | ND | ND | EPA 8260B | mg/Kg | 0.020 |
| Freon 113 | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Carbon disulfide | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Trans,1,2-Dichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Methyl-tert-butyl-ether(MtBE) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,1-Dichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Vinyl acetate | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Diisopropyl Ether (DIPE) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| Methyl Ethyl Ketone | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Cis,1,2-Dichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromochloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloroform | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2,2-Dichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethyl-t-butyl ether (ETBE) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,1,1-Trichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2-Dichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1-Dichloropropene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Carbon Tetrachloride | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Benzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| t-Amyl Methyl Ether (TAM) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,2-Dichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Trichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Dibromomethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromodichloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Chloroethylvinylether | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Cis, 1,3-Dichloropropene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 4-Methyl-2-pentanone(MI) | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Trans,1,3-Dichloropropene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Toluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| 1,1,2-Trichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |

**CTEL Project No:** CT165-1308050

**Project ID:** E4005
**Project Name:** Kirk Hill

| **Laboratory ID:** / **Client Sample ID:** | 1308-050-10 PIC-2-20 | 1308-050-17 PIC-3-5 | 1308-050-18 PIC-4-5 | **Method** | **Units** | **Detection Limit** |
|---|---|---|---|---|---|---|
| 1,2-Dibromoethane(EDB) | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3-Dichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Dibromochloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Hexanone | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Tetrachloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1,1,2-Tetrachloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| m.p-Xylene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| Bromoform | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Styrene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| o-Xylene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,3-Trichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Isopropylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Chlorotoluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| n-Propylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 4-Chlorotoluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3,5-Trimethylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Tert-Butylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,4-Trimethylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Sec-Butylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3-Dichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,4-Dichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| p-Isopropyltoluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2-Dichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| n-Butylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2 Dibromo-3-Chloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,4-Trichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Naphthalene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,3-Trichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Hexachlorobutadiene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethanol | ND | ND | ND | EPA 8260B | mg/Kg | 0.1 |
| Carbon Chain (C5~C12) | ND | ND | ND | LUFT | mg/Kg | 0.1 |
| Carbon Chain (C13~C24) | ND | ND | ND | LUFT | mg/Kg | 1 |
| Carbon Chain (C25~C40) | ND | ND | ND | LUFT | mg/Kg | 5 |

ND = Not Detected at the indicated Detection Limit

| *SURROGATE SPIKE* | % SURROGATE RECOVERY | | | Control Limit |
|---|---|---|---|---|
| Dibromofluoromethane | 101 | 105 | 104 | 70-130 |
| 1,2 Dichloromethaned4 | 95 | 101 | 98 | 70-130 |
| Toluene-d8 | 92 | 98 | 92 | 70-130 |
| Bromofluorobenzene | 93 | 97 | 95 | 70-130 |

**CTEL Project No:** CT165-1308050
**Client Name:** PIC Environmental Services
2619 Sierra Way
La Verne, CA 91750
**Phone:(909) 593-2427**
**Fax: (909) 593-2105**
**Attention:** J. Tim Hersch

**Project ID:** E4005
**Project Name:** Kirk Hill

**Date Sampled:** 08/13/13 @ 11:00 am
**Matrix: Soil**
**Date Received:** 08/13/13 @ 13:10 p.m.
**Date Analyzed:** 08/14/13 – 08/15/13

| **Laboratory ID:** | 1308-050-19 | 1308-050-20 | 1308-050-23 | **Method** | **Units:** | **Detection** |
|---|---|---|---|---|---|---|
| **Client Sample ID:** | PIC-5-5 | PIC-6-5 | PIC-7-20 | | | **Limit** |
| **Dilution** | 1 | 1 | 1 | | | |
| Dichlorodifluoromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Vinyl Chloride | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromomethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Trichlorofluoromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Iodomethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Acetone | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1-Dichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| t-Butyl Alcohol (TBA) | ND | ND | ND | EPA 8260B | mg/Kg | 0.020 |
| Methylene Chloride | ND | ND | ND | EPA 8260B | mg/Kg | 0.020 |
| Freon 113 | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Carbon disulfide | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Trans,1,2-Dichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Methyl-tert-butyl-ether(MtBE) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,1-Dichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Vinyl acetate | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Diisopropyl Ether (DIPE) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| Methyl Ethyl Ketone | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Cis,1,2-Dichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromochloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloroform | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2,2-Dichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethyl-t-butyl ether (ETBE) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,1,1-Trichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2-Dichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1-Dichloropropene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Carbon Tetrachloride | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Benzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| t-Amyl Methyl Ether (TAM) | ND | ND | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,2-Dichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Trichloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Dibromomethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromodichloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Chloroethylvinylether | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Cis, 1,3-Dichloropropene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 4-Methyl-2-pentanone(MI) | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Trans,1,3-Dichloropropene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Toluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| 1,1,2-Trichloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |

**CTEL Project No:** CT165-1308050

**Project ID:** E4005
**Project Name:** Kirk Hill

| **Laboratory ID:** / **Client Sample ID:** | 1308-050-19 PIC-5-5 | 1308-050-20 PIC-6-5 | 1308-050-23 PIC-7-20 | **Method** | **Units** | **Detection Limit** |
|---|---|---|---|---|---|---|
| 1,2-Dibromoethane(EDB) | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3-Dichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Dibromochloromethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Hexanone | ND | ND | ND | EPA 8260B | mg/Kg | 0.010 |
| Tetrachloroethene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Chlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1,1,2-Tetrachloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| m.p-Xylene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| Bromoform | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Styrene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| o-Xylene | ND | ND | ND | EPA 8260B | mg/Kg | 0.001 |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,3-Trichloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Isopropylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Chlorotoluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| n-Propylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 4-Chlorotoluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3,5-Trimethylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Tert-Butylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,4-Trimethylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Sec-Butylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3-Dichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,4-Dichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| p-Isopropyltoluene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2-Dichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| n-Butylbenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2 Dibromo-3-Chloropropane | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,4-Trichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Naphthalene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,3-Trichlorobenzene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Hexachlorobutadiene | ND | ND | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethanol | ND | ND | ND | EPA 8260B | mg/Kg | 0.1 |
| Carbon Chain (C5~C12) | ND | ND | ND | LUFT | mg/Kg | 0.1 |
| Carbon Chain (C13~C24) | ND | ND | ND | LUFT | mg/Kg | 1 |
| Carbon Chain (C25~C40) | ND | ND | ND | LUFT | mg/Kg | 5 |

ND = Not Detected at the indicated Detection Limit

| *SURROGATE SPIKE* | % SURROGATE RECOVERY | | | Control Limit |
|---|---|---|---|---|
| Dibromofluoromethane | 104 | 106 | 103 | 70-130 |
| 1,2 Dichloromethaned4 | 101 | 92 | 92 | 70-130 |
| Toluene-d8 | 91 | 91 | 87 | 70-130 |
| Bromofluorobenzene | 89 | 95 | 88 | 70-130 |

**CTEL Project No:** CT165-1308050
**Client Name:** PIC Environmental Services
2619 Sierra Way
La Verne, CA 91750
**Phone:(909) 593-2427**
**Fax: (909) 593-2105**
**Attention:** J. Tim Hersch

**Project ID:** E4005
**Project Name:** Kirk Hill

**Date Sampled:** 08/13/13 @ 07:15 am
**Date Received:** 08/13/13 @ 13:10 p.m.
**Date Analyzed:** 08/14/13 – 08/15/13
**Matrix: Soil**

| **Laboratory ID:** | 1308-050-25 | **Method** | **Units:** | **Detection Limit** |
|---|---|---|---|---|
| **Client Sample ID:** | PIC-7-30 | | | |
| **Dilution** | 1 | | | |
| Dichlorodifluoromethane | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloromethane | ND | EPA 8260B | mg/Kg | 0.005 |
| Vinyl Chloride | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromomethane | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloroethane | ND | EPA 8260B | mg/Kg | 0.005 |
| Trichlorofluoromethane | ND | EPA 8260B | mg/Kg | 0.005 |
| Iodomethane | ND | EPA 8260B | mg/Kg | 0.005 |
| Acetone | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1-Dichloroethene | ND | EPA 8260B | mg/Kg | 0.005 |
| t-Butyl Alcohol (TBA) | ND | EPA 8260B | mg/Kg | 0.020 |
| Methylene Chloride | ND | EPA 8260B | mg/Kg | 0.020 |
| Freon 113 | ND | EPA 8260B | mg/Kg | 0.010 |
| Carbon disulfide | ND | EPA 8260B | mg/Kg | 0.005 |
| Trans,1,2-Dichloroethene | ND | EPA 8260B | mg/Kg | 0.005 |
| Methyl-tert-butyl-ether(MtBE) | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,1-Dichloroethane | ND | EPA 8260B | mg/Kg | 0.005 |
| Vinyl acetate | ND | EPA 8260B | mg/Kg | 0.005 |
| Diisopropyl Ether (DIPE) | ND | EPA 8260B | mg/Kg | 0.002 |
| Methyl Ethyl Ketone | ND | EPA 8260B | mg/Kg | 0.010 |
| Cis,1,2-Dichloroethene | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromochloromethane | ND | EPA 8260B | mg/Kg | 0.005 |
| Chloroform | ND | EPA 8260B | mg/Kg | 0.005 |
| 2,2-Dichloropropane | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethyl-t-butyl ether (ETBE) | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,1,1-Trichloroethane | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2-Dichloroethane | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1-Dichloropropene | ND | EPA 8260B | mg/Kg | 0.005 |
| Carbon Tetrachloride | ND | EPA 8260B | mg/Kg | 0.005 |
| Benzene | ND | EPA 8260B | mg/Kg | 0.001 |
| t-Amyl Methyl Ether (TAM) | ND | EPA 8260B | mg/Kg | 0.002 |
| 1,2-Dichloropropane | ND | EPA 8260B | mg/Kg | 0.005 |
| Trichloroethene | ND | EPA 8260B | mg/Kg | 0.005 |
| Dibromomethane | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromodichloromethane | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Chloroethylvinylether | ND | EPA 8260B | mg/Kg | 0.005 |
| Cis, 1,3-Dichloropropene | ND | EPA 8260B | mg/Kg | 0.005 |
| 4-Methyl-2-pentanone(MI) | ND | EPA 8260B | mg/Kg | 0.010 |
| Trans,1,3-Dichloropropene | ND | EPA 8260B | mg/Kg | 0.005 |
| Toluene | ND | EPA 8260B | mg/Kg | 0.001 |
| 1,1,2-Trichloroethane | ND | EPA 8260B | mg/Kg | 0.005 |

**CTEL Project No:** CT165-1308050

**Project ID:** E4005
**Project Name:** Kirk Hill

| **Laboratory ID:** / **Client Sample ID:** | 1308-050-25 PIC-7-30 | **Method** | **Units** | **Detection Limit** |
|---|---|---|---|---|
| 1,2-Dibromoethane(EDB) | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3-Dichloropropane | ND | EPA 8260B | mg/Kg | 0.005 |
| Dibromochloromethane | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Hexanone | ND | EPA 8260B | mg/Kg | 0.010 |
| Tetrachloroethene | ND | EPA 8260B | mg/Kg | 0.005 |
| Chlorobenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,1,1,2-Tetrachloroethane | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethylbenzene | ND | EPA 8260B | mg/Kg | 0.001 |
| m.p-Xylene | ND | EPA 8260B | mg/Kg | 0.001 |
| Bromoform | ND | EPA 8260B | mg/Kg | 0.005 |
| Styrene | ND | EPA 8260B | mg/Kg | 0.005 |
| o-Xylene | ND | EPA 8260B | mg/Kg | 0.001 |
| 1,1,2,2-Tetrachloroethane | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,3-Trichloropropane | ND | EPA 8260B | mg/Kg | 0.005 |
| Isopropylbenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| Bromobenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| 2-Chlorotoluene | ND | EPA 8260B | mg/Kg | 0.005 |
| n-Propylbenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| 4-Chlorotoluene | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3,5-Trimethylbenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| Tert-Butylbenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,4-Trimethylbenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| Sec-Butylbenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,3-Dichlorobenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,4-Dichlorobenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| p-Isopropyltoluene | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2-Dichlorobenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| n-Butylbenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2 Dibromo-3-Chloropropane | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,4-Trichlorobenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| Naphthalene | ND | EPA 8260B | mg/Kg | 0.005 |
| 1,2,3-Trichlorobenzene | ND | EPA 8260B | mg/Kg | 0.005 |
| Hexachlorobutadiene | ND | EPA 8260B | mg/Kg | 0.005 |
| Ethanol | ND | EPA 8260B | mg/Kg | 0.1 |
| Carbon Chain (C5~C12) | ND | LUFT | mg/Kg | 0.1 |
| Carbon Chain (C13~C24) | ND | LUFT | mg/Kg | 1 |
| Carbon Chain (C25~C40) | ND | LUFT | mg/Kg | 5 |

ND = Not Detected at the indicated Detection Limit

| *SURROGATE SPIKE* | % SURROGATE RECOVERY | Control Limit |
|---|---|---|
| Dibromofluoromethane | 102 | 70-130 |
| 1,2 Dichloromethaned4 | 98 | 70-130 |
| Toluene-d8 | 92 | 70-130 |
| Bromofluorobenzene | 87 | 70-130 |

**CTEL Project No:** CT165-1308050
**Client Name:** PIC Environmental Services
2619 Sierra Way
La Verne, CA 91750
**Phone:(909) 593-2427**
**Fax: (909) 593-2105**
**Attention:** J. Tim Hersch

**Project ID:** E4005
**Project Name:** Kirk Hill

**Date Sampled:** 08/13/13 @ 07:30 am
**Matrix: Soil**
**Date Received:** 08/13/13 @ 13:10 p.m.
**Date Analyzed:** 08/14/13 – 08/15/13

| **Laboratory ID:** | 1308-050-3 | 1308-050-4 | 1308-050-5 | **Method** | **Units** | **Detection** |
|---|---|---|---|---|---|---|
| **Client Sample ID:** | PIC-1-25 | PIC-1-30 | PIC-1-35 | | | **Limit** |
| **Dilution** | 1 | 1 | 1 | | | |
| Carbon Chain (C5~C12) | ND | ND | ND | LUFT | mg/Kg | 0.1 |
| Carbon Chain (C13~C24) | ND | ND | ND | LUFT | mg/Kg | 1 |
| Carbon Chain (C25~C40) | ND | ND | ND | LUFT | mg/Kg | 5 |

ND = Not Detected at the indicated Detection Limit

**CTEL Project No:** CT165-1308050
**Client Name:** PIC Environmental Services
2619 Sierra Way
La Verne, CA 91750
**Phone:(909) 593-2427**
**Fax: (909) 593-2105**
**Attention:** J. Tim Hersch

**Project ID:** E4005
**Project Name:** Kirk Hill

**Date Sampled:** 08/13/13 @ 08:00 am
**Matrix: Soil**
**Date Received:** 08/13/13 @ 13:10 p.m.
**Date Analyzed:** 08/14/13 – 08/15/13

| **Laboratory ID:** | 1308-050-6 | 1308-050-7 | 1308-050-8 | **Method** | **Units** | **Detection** |
|---|---|---|---|---|---|---|
| **Client Sample ID:** | PIC-1-40 | PIC-1-45 | PIC-1-50 | | | **Limit** |
| **Dilution** | 1 | 1 | 1 | | | |
| Carbon Chain (C5~C12) | ND | ND | ND | LUFT | mg/Kg | 0.1 |
| Carbon Chain (C13~C24) | ND | ND | ND | LUFT | mg/Kg | 1 |
| Carbon Chain (C25~C40) | ND | ND | ND | LUFT | mg/Kg | 5 |

ND = Not Detected at the indicated Detection Limit

**CTEL Project No:** CT165-1308050
**Client Name:** PIC Environmental Services
2619 Sierra Way
La Verne, CA 91750
**Phone:(909) 593-2427**
**Fax: (909) 593-2105**
**Attention:** J. Tim Hersch

**Project ID:** E4005
**Project Name:** Kirk Hill

**Date Sampled:** 08/13/13 @ 09:00 am
**Matrix: Soil**
**Date Received:** 08/13/13 @ 13:10 p.m.
**Date Analyzed:** 08/14/13 – 08/15/13

| **Laboratory ID:** | 1308-050-12 | 1308-050-14 | 1308-050-15 | **Method** | **Units** | **Detection** |
|---|---|---|---|---|---|---|
| **Client Sample ID:** | PIC-2-30 | PIC-2-40 | PIC-2-45 | | | **Limit** |
| **Dilution** | 1 | 1 | 1 | | | |
| Carbon Chain (C5~C12) | ND | ND | ND | LUFT | mg/Kg | 0.1 |
| Carbon Chain (C13~C24) | ND | ND | ND | LUFT | mg/Kg | 1 |
| Carbon Chain (C25~C40) | ND | ND | ND | LUFT | mg/Kg | 5 |

ND = Not Detected at the indicated Detection Limit

**CTEL Project No:** CT165-1308050
**Client Name:** PIC Environmental Services
2619 Sierra Way
La Verne, CA 91750
**Phone:(909) 593-2427**
**Fax: (909) 593-2105**
**Attention:** J. Tim Hersch

**Project ID:** E4005
**Project Name:** Kirk Hill

**Date Sampled:** 08/13/13 @ 09:45 am
**Date Received:** 08/13/13 @ 13:10 p.m.
**Date Analyzed:** 08/14/13 – 08/15/13
**Matrix: Soil**

| **Laboratory ID:** | 1308-050-16 | 1308-050-21 | **Method** | **Units** | **Detection Limit** |
|---|---|---|---|---|---|
| **Client Sample ID:** | PIC-2-50 | PIC-7-10 | | | |
| **Dilution** | 1 | 1 | | | |
| Carbon Chain (C5~C12) | ND | ND | LUFT | mg/Kg | 0.1 |
| Carbon Chain (C13~C24) | ND | ND | LUFT | mg/Kg | 1 |
| Carbon Chain (C25~C40) | ND | ND | LUFT | mg/Kg | 5 |

ND = Not Detected at the indicated Detection Limit

**CTEL Project No:** CT165-1308050
**Client Name:** PIC Environmental Services
2619 Sierra Way
La Verne, CA 91750
**Phone:(909) 593-2427**
**Fax: (909) 593-2105**
**Attention:** J. Tim Hersch

**Project ID:** E4005
**Project Name:** Kirk Hill

**Date Sampled:** 08/13/13 @ 07:15 am
**Date Received:** 08/13/13 @ 13:10 p.m.
**Date Analyzed:** 08/15/13
**Matrix: Soil**

| **Laboratory ID:** / **Client Sample ID:** | 1308-050-1 PIC-1-10 | 1308-050-9 PIC-2-10 | 1308-050-17 PIC-3-5 | **Method** | **Units** | **Detection Limit** |
|---|---|---|---|---|---|---|
| **Title 22 Metals, Solid** | | | | | | |
| Antimony (Sb) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Arsenic (As) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Barium (Ba) | 190 | 140 | 110 | SW846 6010B | mg/Kg | 0.5 |
| Beryllium (Be) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Cadmium (Cd) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Chromium (Cr) | 15 | 18 | 11 | SW846 6010B | mg/Kg | 1 |
| Cobalt (Co) | 6.1 | 5.6 | 5.2 | SW846 6010B | mg/Kg | 1 |
| Copper (Cu) | 40 | 35 | 34 | SW846 6010B | mg/Kg | 1 |
| Lead (Pb) | 5.1 | 3.3 | 3.2 | SW846 6010B | mg/Kg | 1 |
| Mercury (Hg) | ND | ND | ND | SW846 7471 | mg/Kg | 0.05 |
| Molybdenum (Mo) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Nickel (Ni) | 13 | 13 | 9.1 | SW846 6010B | mg/Kg | 1 |
| Selenium (Se) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Silver (Ag) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Thallium (Tl) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Vanadium (V) | 35 | 30 | 32 | SW846 6010B | mg/Kg | 1 |
| Zinc (Zn) | 70 | 68 | 55 | SW846 6010B | mg/Kg | 1 |
| Acid, Extraction | 08/13/13 | 08/13/13 | 08/13/13 | SW846 3050 | Date | |

ND = Not Detected at the indicated Detection Limit

**CTEL Project No:** CT165-1308050
**Client Name:** PIC Environmental Services
2619 Sierra Way
La Verne, CA 91750
**Phone:(909) 593-2427**
**Fax: (909) 593-2105**
**Attention:** J. Tim Hersch

**Project ID:** E4005
**Project Name:** Kirk Hill

**Date Sampled:** 08/13/13 @ 10:20 am
**Date Received:** 08/13/13 @ 13:10 p.m.
**Date Analyzed:** 08/15/13
**Matrix: Soil**

| **Laboratory ID:** / **Client Sample ID:** | 1308-050-18 PIC-4-5 | 1308-050-19 PIC-5-5 | 1308-050-20 PIC-6-5 | **Method** | **Units** | **Detection Limit** |
|---|---|---|---|---|---|---|
| **Title 22 Metals, Solid** | | | | | | |
| Antimony (Sb) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Arsenic (As) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Barium (Ba) | 100 | 100 | 110 | SW846 6010B | mg/Kg | 0.5 |
| Beryllium (Be) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Cadmium (Cd) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Chromium (Cr) | 11 | 11 | 13 | SW846 6010B | mg/Kg | 1 |
| Cobalt (Co) | 5.1 | 5.5 | 5.6 | SW846 6010B | mg/Kg | 1 |
| Copper (Cu) | 33 | 30 | 41 | SW846 6010B | mg/Kg | 1 |
| Lead (Pb) | 2.6 | 2.2 | 3.2 | SW846 6010B | mg/Kg | 1 |
| Mercury (Hg) | ND | ND | ND | SW846 7471 | mg/Kg | 0.05 |
| Molybdenum (Mo) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Nickel (Ni) | 9.5 | 9.2 | 11 | SW846 6010B | mg/Kg | 1 |
| Selenium (Se) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Silver (Ag) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Thallium (Tl) | ND | ND | ND | SW846 6010B | mg/Kg | 1 |
| Vanadium (V) | 33 | 30 | 38 | SW846 6010B | mg/Kg | 1 |
| Zinc (Zn) | 57 | 47 | 52 | SW846 6010B | mg/Kg | 1 |
| Acid, Extraction | 08/13/13 | 08/13/13 | 08/13/13 | SW846 3050 | Date | |

ND = Not Detected at the indicated Detection Limit

Greg Tejirian
Laboratory Director

*The results are base upon the samples received. Samples are not homogeneous.

***Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424***

**CAL TECH Environmental Laboratories**
6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789

Lab Job No. 08-50 Page 1 of 3

# Chain of Custody Record

Client: PIC ENVIRONMENTAL
Contact: TIM HOSEK
Address: 2619 SIERRA WAY
LA VERNE CA 91750
Project: E4005 - KIRKHILL
Sampled By: ETHAN HOSEK
Name/Signature

Phone:
Fax:

Turn Around Time
Rush
Normal

Analyses Requested

| Lab ID Number | Field ID | Date/Time Sampled | Bottle Type | No. | Preserv. | Matrix | 5015-CC | 8260B | 6010 | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PIC-1-10 | 8/13/13 - 7:15 | SLEEVE | 1 | - | SOIL | X | X | X | | | | | | | |
| | PIC-1-20 | 7:20 | | | | | X | X | | | | | | | | |
| | PIC-1-25 | 7:30 | | | | | X | | | | | | | | | |
| | PIC-1-30 | 7:40 | | | | | X | | | | | | | | | |
| | PIC-1-35 | 7:50 | | | | | X | | | | | | | | | |
| | PIC-1-40 | 8:00 | | | | | X | | | | | | | | | |
| | PIC-1-45 | 8:10 | | | | | X | | | | | | | | | |
| | PIC-1-50 | 8:20 | | | | | X | | | | | | | | | |
| | PIC-2-10 | 8:30 | | | | | X | X | X | | | | | | | |
| | PIC-2-20 | 8:40 | | | | | X | X | | | | | | | | |

Relinquished: _____ Date / Time: _____ Received: _____

Dispatched : _____ Date / Time: _____ Carrier: _____

I hereby authorize the performance of the above indicated tests.

_____ Date / Time: 8/13/13 1:10 Received by lab: CTECH

CTELCCR.DOC

Custody seal(s) in tact upon receipt by lab? YES NO NONE

**CAL TECH Environmental Laboratories**
6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789

Lab Job No. 08_050 Page 2 of 3

# Chain of Custody Record

Client: PIC ENVIRONMENTAL
Contact: TIM HENSON
Address:

Project: E 4005 - KIRK HILL
Sampled By: TIM HENSON
Name/Signature

Phone:
Fax:

Turn Around Time
Rush
Normal

Analyses Requested

| Lab ID Number | Field ID | Date/Time Sampled | Bottle Type | No. | Preserv. | Matrix | 8015 - GC | 8260B | 6010 | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PIC-2-25 | 8/13/13 8:50 | SLEEVE | 1 | — | SOIL | | | | | | | | | HOLD |
| | PIC-2-30 | 9:00 | | | | | X | | | | | | | | |
| | PIC-2-35 | 9:10 | | | | | | | | | | | | | HOLD |
| | PIC-2-40 | 9:20 | | | | | X | | | | | | | | |
| | PIC-2-45 | 9:30 | | | | | X | | | | | | | | |
| | PIC-2-50 | 9:45 | | | | | X | | | | | | | | |
| | PIC-3-5 | 10:00 | | | | | X | X | X | | | | | | |
| | PIC-4-5 | 10:20 | | | | | X | X | X | | | | | | |
| | PIC-5-5 | 10:40 | | | | | X | X | X | | | | | | |
| | PIC-6-5 | 11:00 | | | | | X | X | X | | | | | | |

Relinquished: Date / Time: Received:

Dispatched : Date / Time: Carrier:

I hereby authorize the performance of the above indicated tests.

Date / Time: 8/13/13 1:10 Received by lab: CREST

CTELCCR.DOC

Custody seal(s) in tact upon receipt by lab? YES NO NONE

**CAL TECH Environmental Laboratories**
6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789

Lab Job No. 08-050 Page 3 of 3

# Chain of Custody Record

Client: PIC ENVIRONMENTAL
Contact: TIM HUDSON
Address:

Phone:
Fax:

Turn Around Time
Rush
Normal

Project: E4005 - KIRKHILL
Sampled By: ETHAN HUDSON / Name/Signature

Analyses Requested

| Lab ID Number | Field ID | Date/Time Sampled | Bottle Type | No. | Preserv. | Matrix | 8015 - CC | 8260B | 6010 | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PIC-7-10 | 8/13/13 11:25 | SLEEVE | 1 | ← | SOIL | X | | | | | | | | |
| | PIC-7-15 | 11:30 | | | | | | | | | | | | | HOLD |
| | PIC-7-20 | 11:35 | | | | | X | X | | | | | | | |
| | PIC-7-25 | 11:40 | | | | | | | | | | | | | HOLD |
| | PIC-7-30 | 11:45 | | | | | X | X | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Relinquished: Date / Time: Received:

Dispatched : Date / Time: Carrier:

I hereby authorize the performance of the above indicated tests.

Date / Time: 8/13/13 1:10 Received by lab: GREG T

CTELCCR.DOC

Custody seal(s) in tact upon receipt by lab? YES NO NONE

# APPENDIX F:

# HISTORIC TOPOGRAPHIC MAPS

F

**12021 - 12023 Woodruff Avenue**
12021 - 12023 Woodruff Avenue
Downey, CA 90242

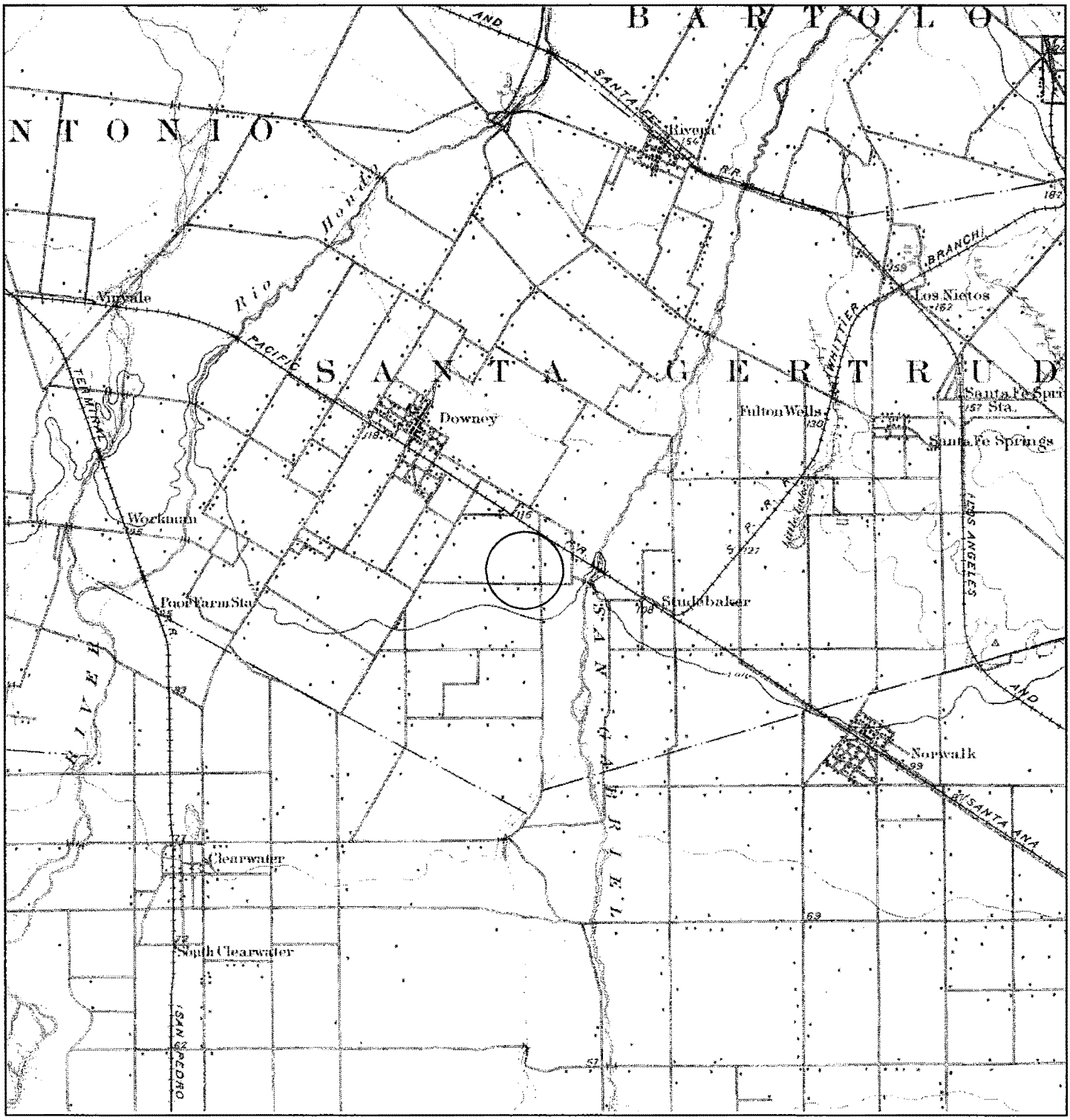
Inquiry Number: 3681216.4
July 31, 2013

# EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

# Historical Topographic Map



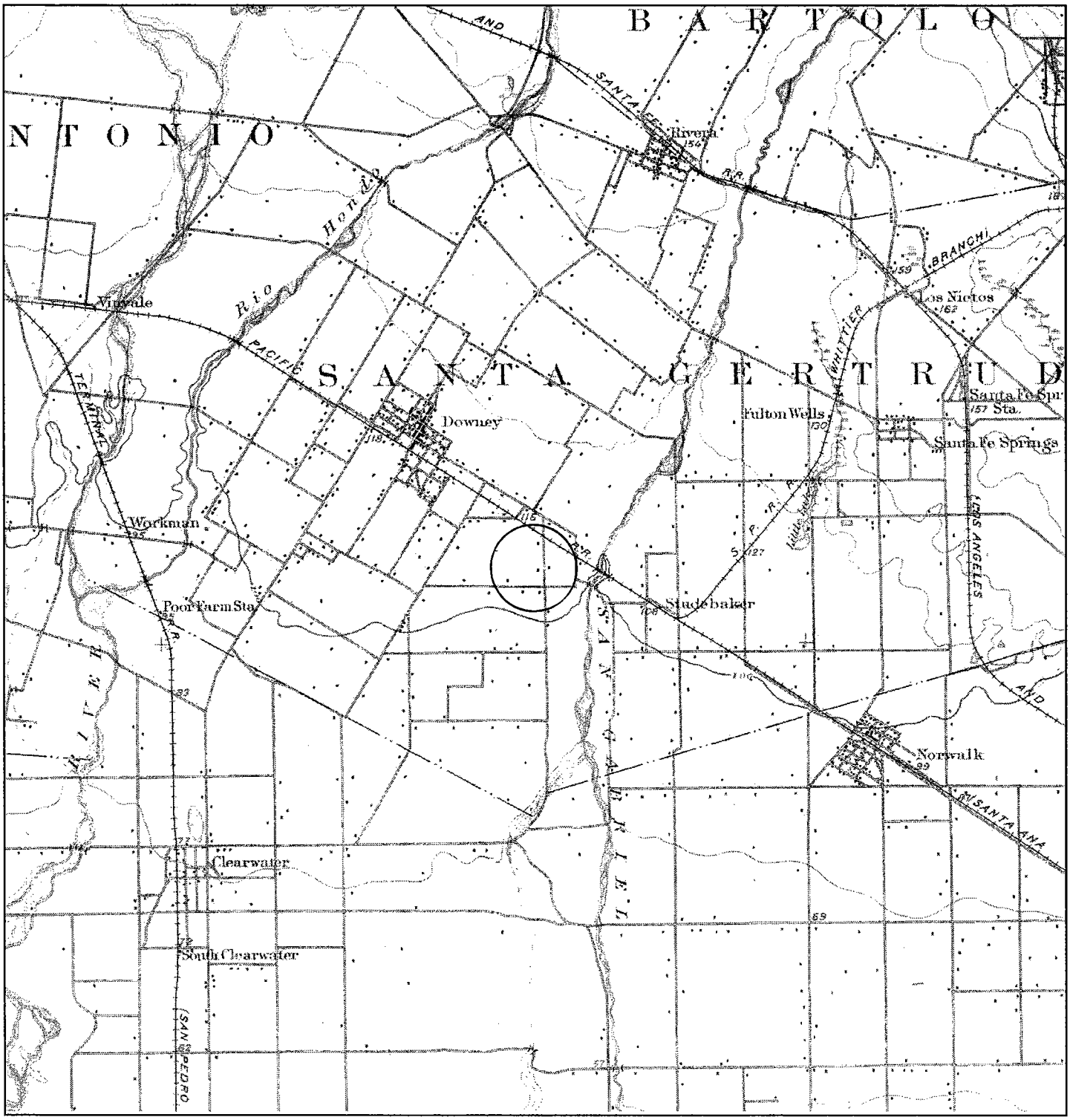

| N | TARGET QUAD<br>NAME: DOWNEY<br>MAP YEAR: 1896<br><br>SERIES: 15<br>SCALE: 1:62500 | SITE NAME: 12021 - 12023 Woodruff Avenue<br>ADDRESS: 12021 - 12023 Woodruff Avenue<br>Downey, CA 90242<br>LAT/LONG: 33.9253 / -118.118 | CLIENT: PIC Environmental Services<br>CONTACT: Tim Hersch<br>INQUIRY#: 3681216.4<br>RESEARCH DATE: 07/31/2013 |
|---|---|---|---|

# Historical Topographic Map



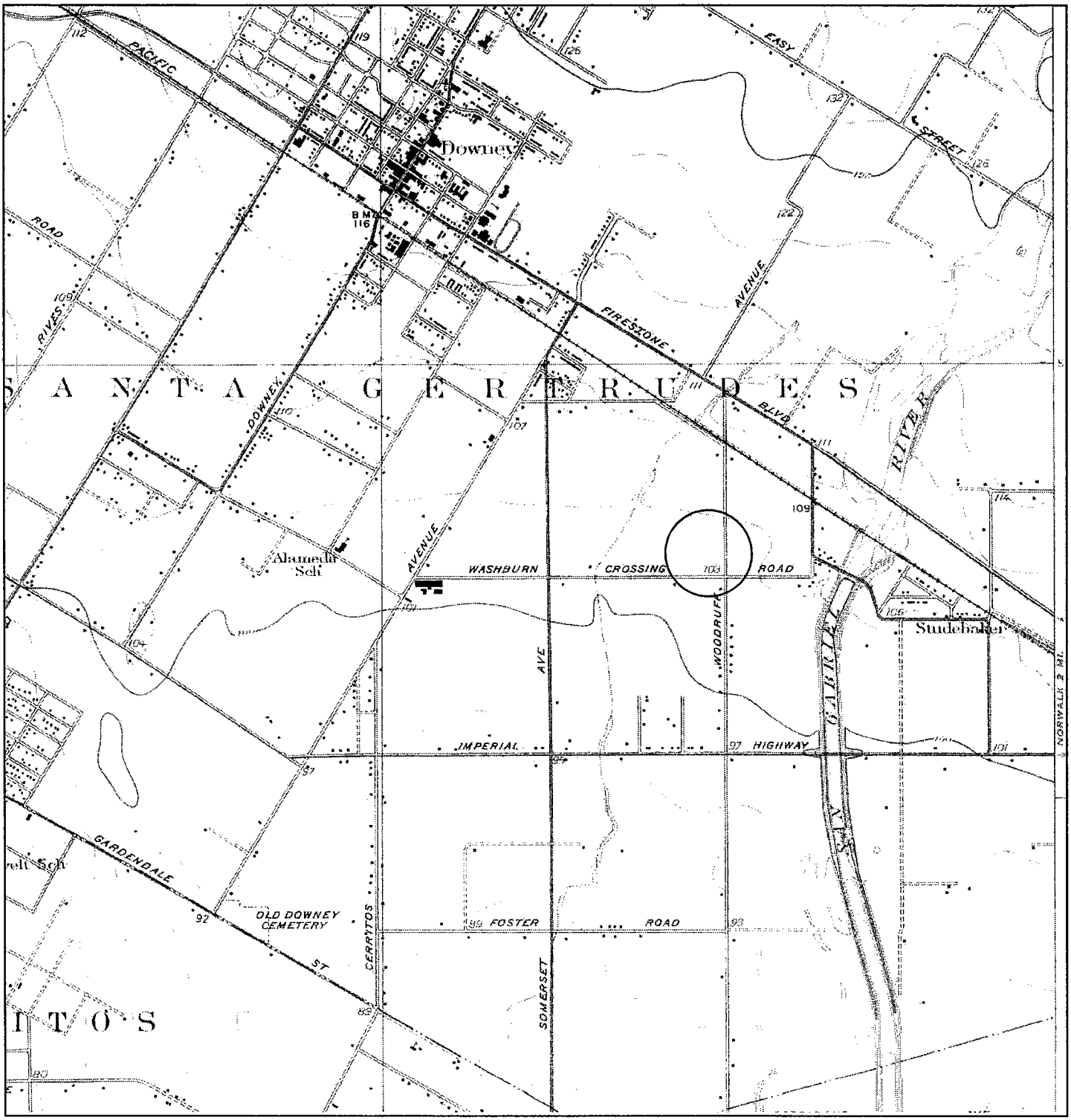

| N | | | |
|---|---|---|---|
| | TARGET QUAD<br>NAME: SOUTHERN CA SHEET 1<br>MAP YEAR: 1901<br><br>SERIES: 60<br>SCALE: 1:250000 | SITE NAME: 12021 - 12023 Woodruff Avenue<br>ADDRESS: 12021 - 12023 Woodruff Avenue<br>Downey, CA 90242<br>LAT/LONG: 33.9253 / -118.118 | CLIENT: PIC Environmental Services<br>CONTACT: Tim Hersch<br>INQUIRY#: 3681216.4<br>RESEARCH DATE: 07/31/2013 |

# Historical Topographic Map



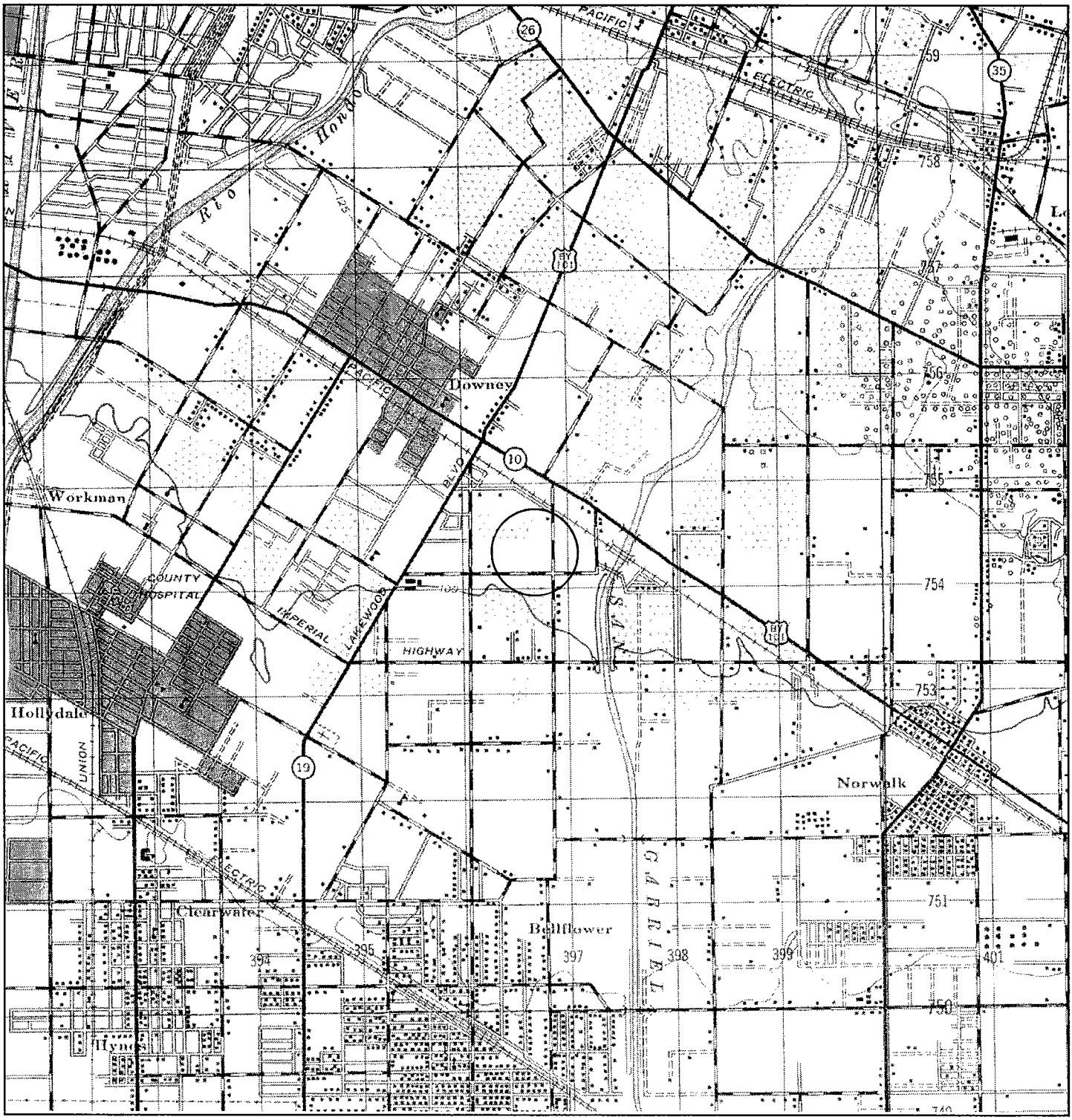

| N | TARGET QUAD | | SITE NAME: | 12021 - 12023 Woodruff Avenue | CLIENT: | PIC Environmental Services |
|---|---|---|---|---|---|---|
| | NAME: | DOWNEY | ADDRESS: | 12021 - 12023 Woodruff Avenue | CONTACT: | Tim Hersch |
| | MAP YEAR: | 1902 | | Downey, CA 90242 | INQUIRY#: | 3681216.4 |
| | | | LAT/LONG: | 33.9253 / -118.118 | RESEARCH DATE: | 07/31/2013 |
| | SERIES: | 15 | | | | |
| | SCALE: | 1:62500 | | | | |

# Historical Topographic Map



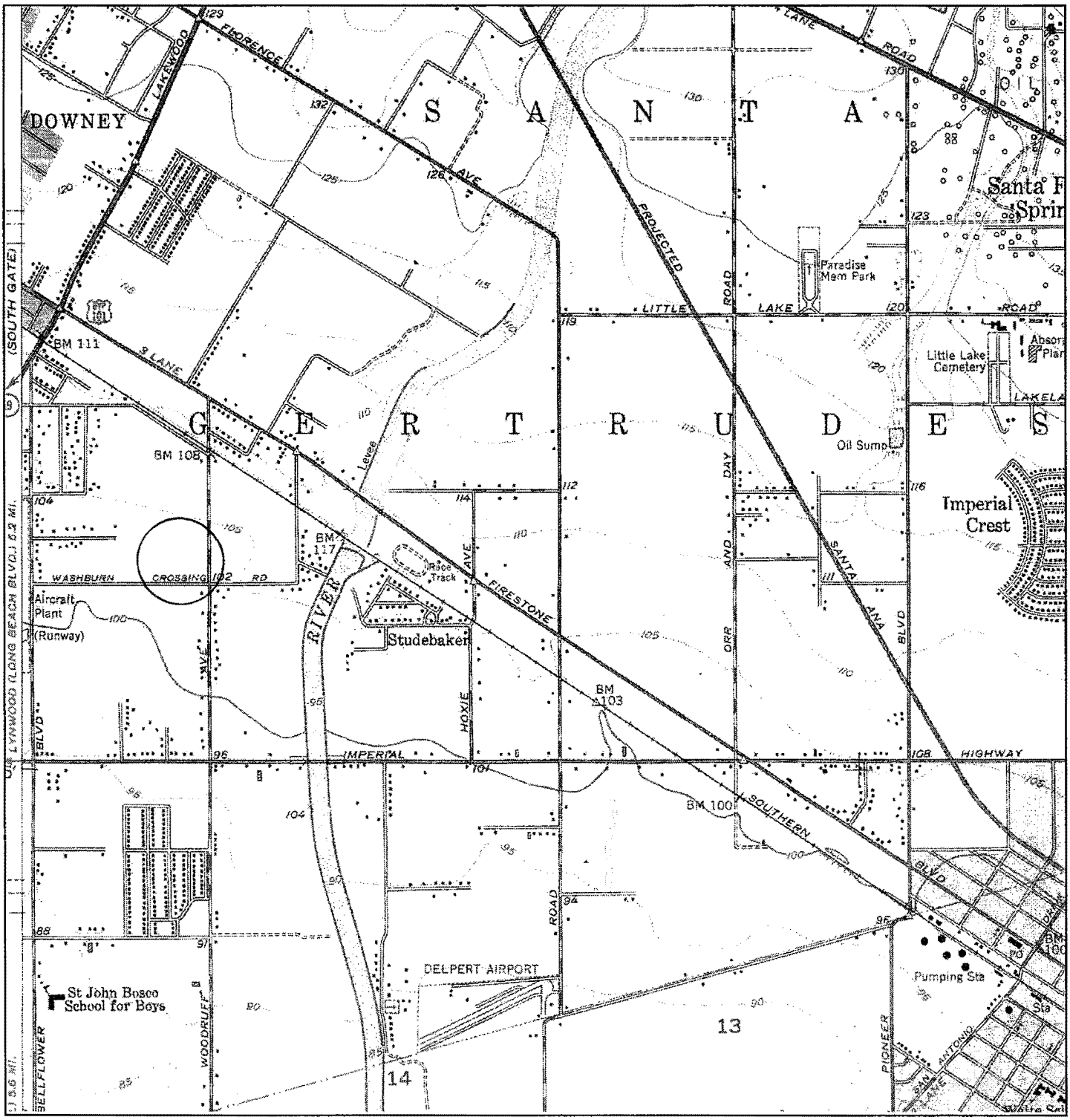

| N | TARGET QUAD | | SITE NAME: | 12021 - 12023 Woodruff Avenue | CLIENT: | PIC Environmental Services |
|---|---|---|---|---|---|---|
| | NAME: | BELL | ADDRESS: | 12021 - 12023 Woodruff Avenue | CONTACT: | Tim Hersch |
| | MAP YEAR: | 1936 | | Downey, CA 90242 | INQUIRY#: | 3681216.4 |
| | SERIES: | 6 | LAT/LONG: | 33.9253 / -118.118 | RESEARCH DATE: | 07/31/2013 |
| | SCALE: | 1:24000 | | | | |

# Historical Topographic Map



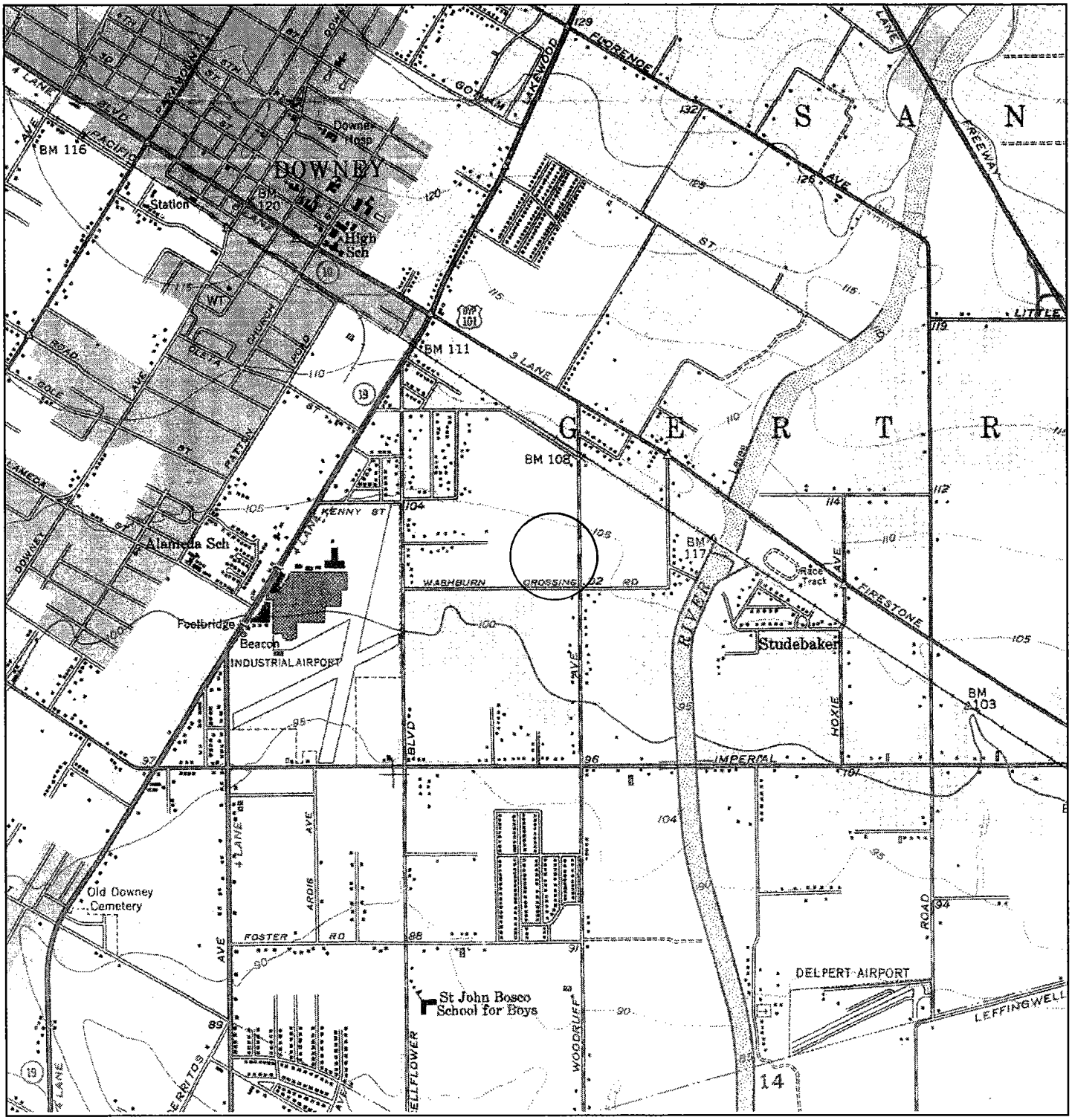

| N | | | |
|---|---|---|---|
| | TARGET QUAD<br>NAME: DOWNEY<br>MAP YEAR: 1947 ←<br><br>SERIES: 15<br>SCALE: 1:50000 | SITE NAME: 12021 - 12023 Woodruff Avenue<br>ADDRESS: 12021 - 12023 Woodruff Avenue<br>Downey, CA 90242<br>LAT/LONG: 33.9253 / -118.118 | CLIENT: PIC Environmental Services<br>CONTACT: Tim Hersch<br>INQUIRY#: 3681216.4<br>RESEARCH DATE: 07/31/2013 |

# Historical Topographic Map




| | | | |
|---|---|---|---|
| N ↑ | TARGET QUAD<br>NAME: WHITTIER<br>MAP YEAR: 1951 ←<br><br>SERIES: 7.5<br>SCALE: 1:24000 | SITE NAME: 12021 - 12023 Woodruff Avenue<br>ADDRESS: 12021 - 12023 Woodruff Avenue<br>Downey, CA 90242<br>LAT/LONG: 33.9253 / -118.118 | CLIENT: PIC Environmental Services<br>CONTACT: Tim Hersch<br>INQUIRY#: 3681216.4<br>RESEARCH DATE: 07/31/2013 |

# Historical Topographic Map




| | | | |
|---|---|---|---|
| N ↑ | TARGET QUAD<br>NAME: LOS ANGELES AND VICINITY EAST 1 OF 4<br>MAP YEAR: 1953 ←<br>SERIES: 7.5<br>SCALE: 1:24000 | SITE NAME: 12021 - 12023 Woodruff Avenue<br>ADDRESS: 12021 - 12023 Woodruff Avenue<br>Downey, CA 90242<br>LAT/LONG: 33.9253 / -118.118 | CLIENT: PIC Environmental Services<br>CONTACT: Tim Hersch<br>INQUIRY#: 3681216.4<br>RESEARCH DATE: 07/31/2013 |

## Historical Topographic Map



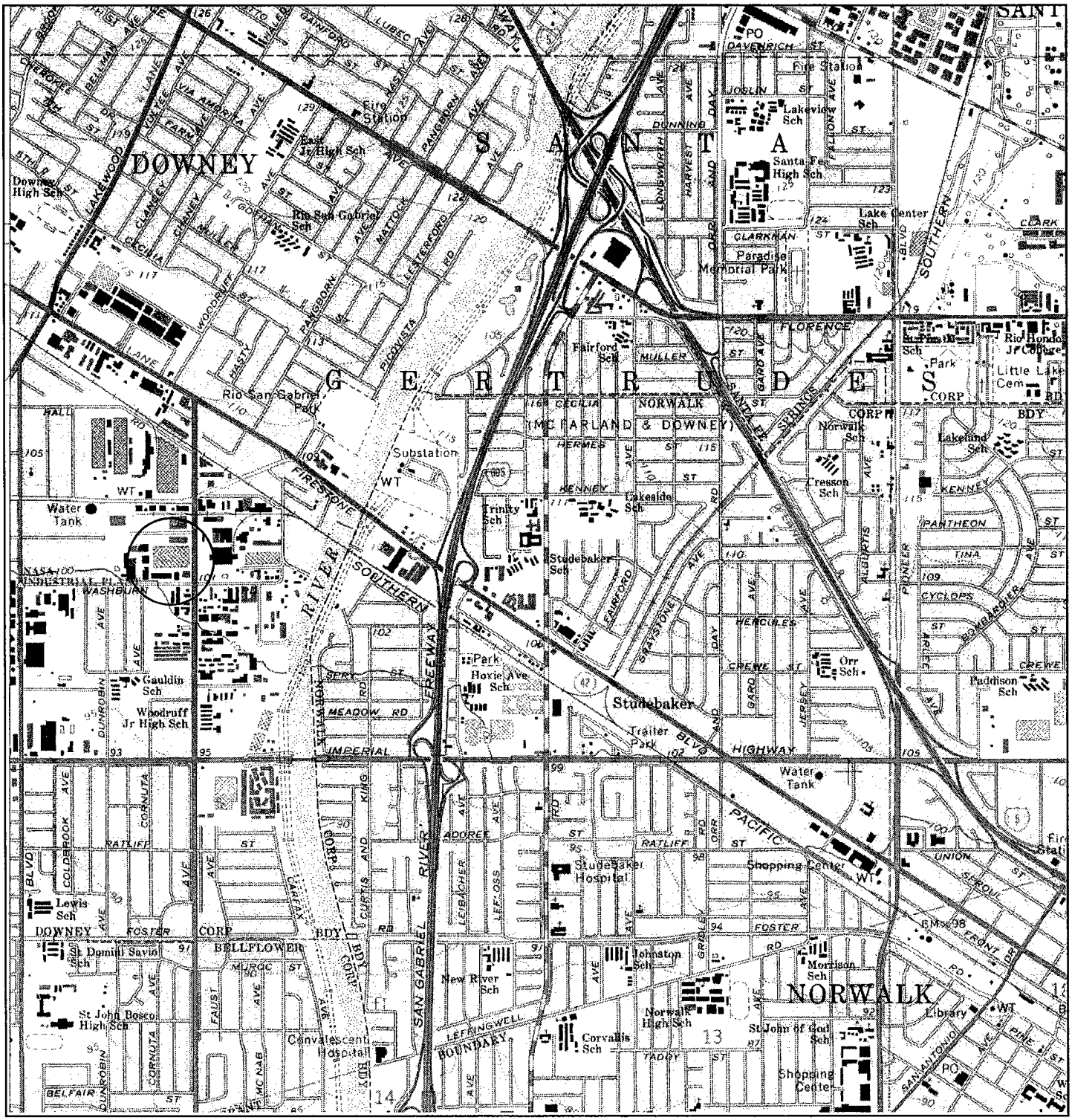

| | | | |
|---|---|---|---|
| N ↑ | TARGET QUAD<br>NAME: WHITTIER<br>MAP YEAR: 1965 ←<br><br>SERIES: 7.5<br>SCALE: 1:24000 | SITE NAME: 12021 - 12023 Woodruff Avenue<br>ADDRESS: 12021 - 12023 Woodruff Avenue<br>Downey, CA 90242<br>LAT/LONG: 33.9253 / -118.118 | CLIENT: PIC Environmental Services<br>CONTACT: Tim Hersch<br>INQUIRY#: 3681216.4<br>RESEARCH DATE: 07/31/2013 |

## Historical Topographic Map



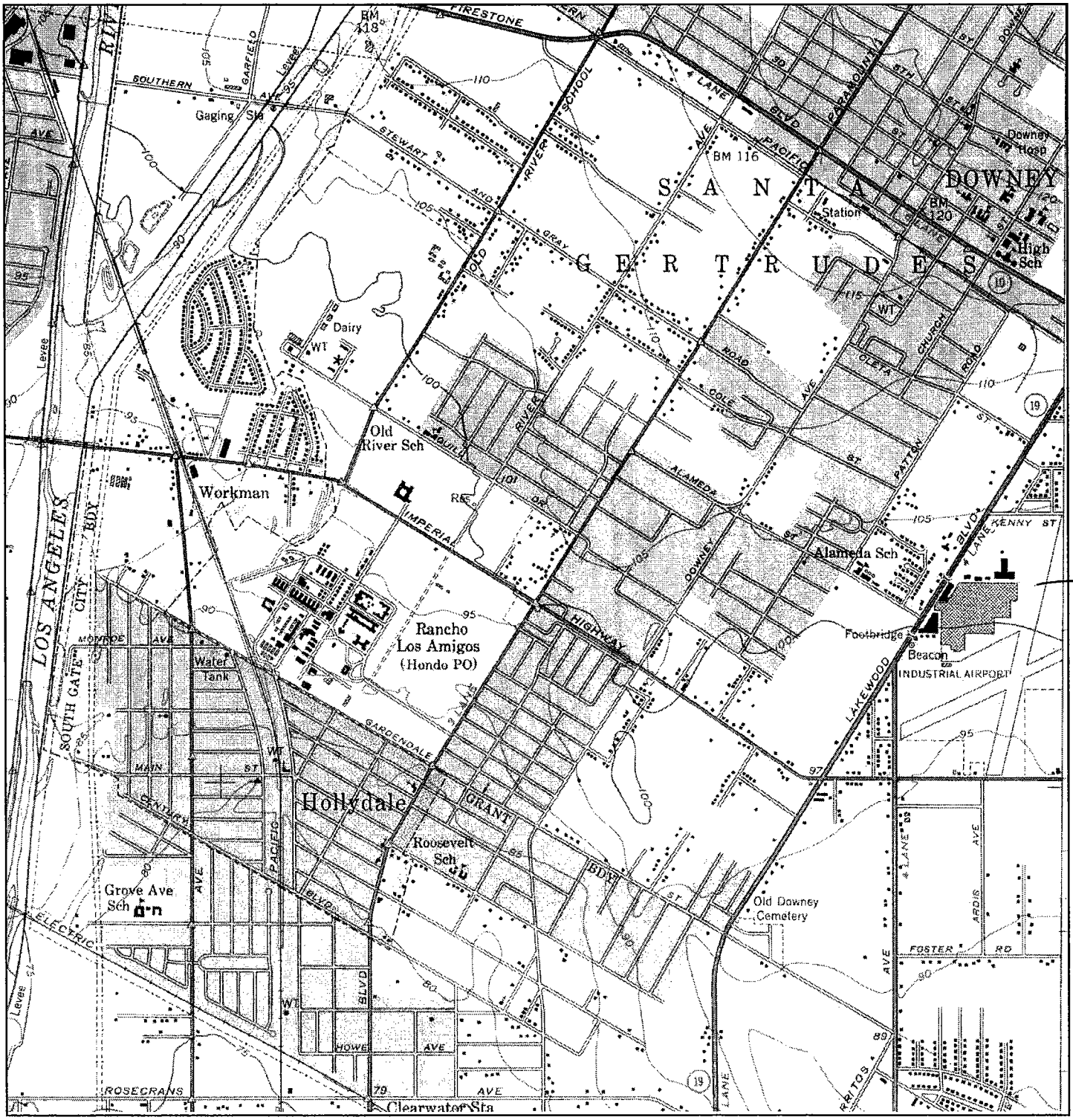

| | | | |
|---|---|---|---|
| N ↑ | TARGET QUAD<br>NAME: WHITTIER<br>MAP YEAR: 1972<br>PHOTOREVISED FROM :1965<br>SERIES: 7.5<br>SCALE: 1:24000 | SITE NAME: 12021 - 12023 Woodruff Avenue<br>ADDRESS: 12021 - 12023 Woodruff Avenue<br>Downey, CA 90242<br>LAT/LONG: 33.9253 / -118.118 | CLIENT: PIC Environmental Services<br>CONTACT: Tim Hersch<br>INQUIRY#: 3681216.4<br>RESEARCH DATE: 07/31/2013 |

# Historical Topographic Map



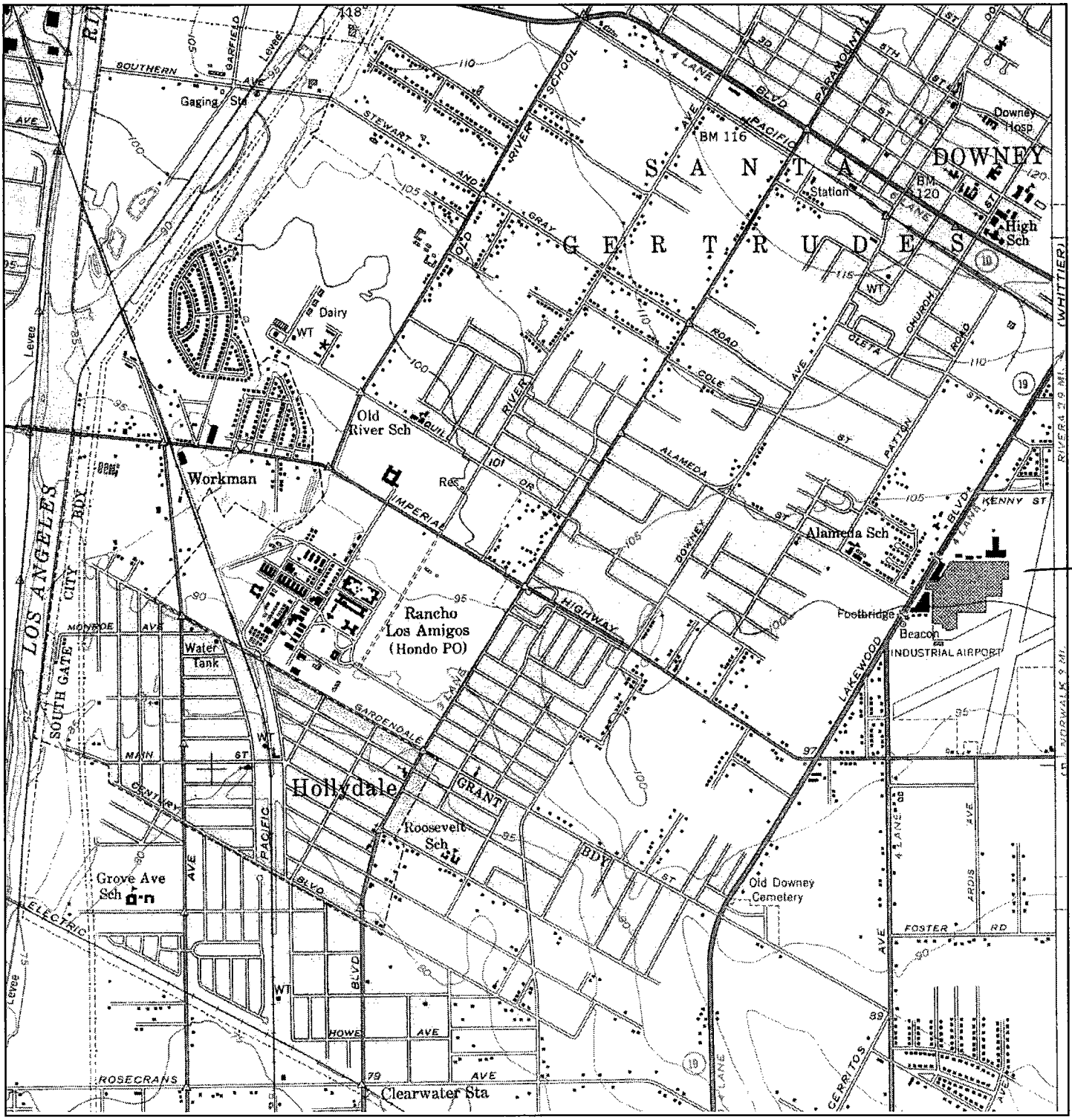

| N | | | |
|---|---|---|---|
| | TARGET QUAD<br>NAME: WHITTIER<br>MAP YEAR: 1981<br>PHOTOREVISED FROM :1965<br>SERIES: 7.5<br>SCALE: 1:24000 | SITE NAME: 12021 - 12023 Woodruff Avenue<br>ADDRESS: 12021 - 12023 Woodruff Avenue<br>Downey, CA 90242<br>LAT/LONG: 33.9253 / -118.118 | CLIENT: PIC Environmental Services<br>CONTACT: Tim Hersch<br>INQUIRY#: 3681216.4<br>RESEARCH DATE: 07/31/2013 |

# Historical Topographic Map



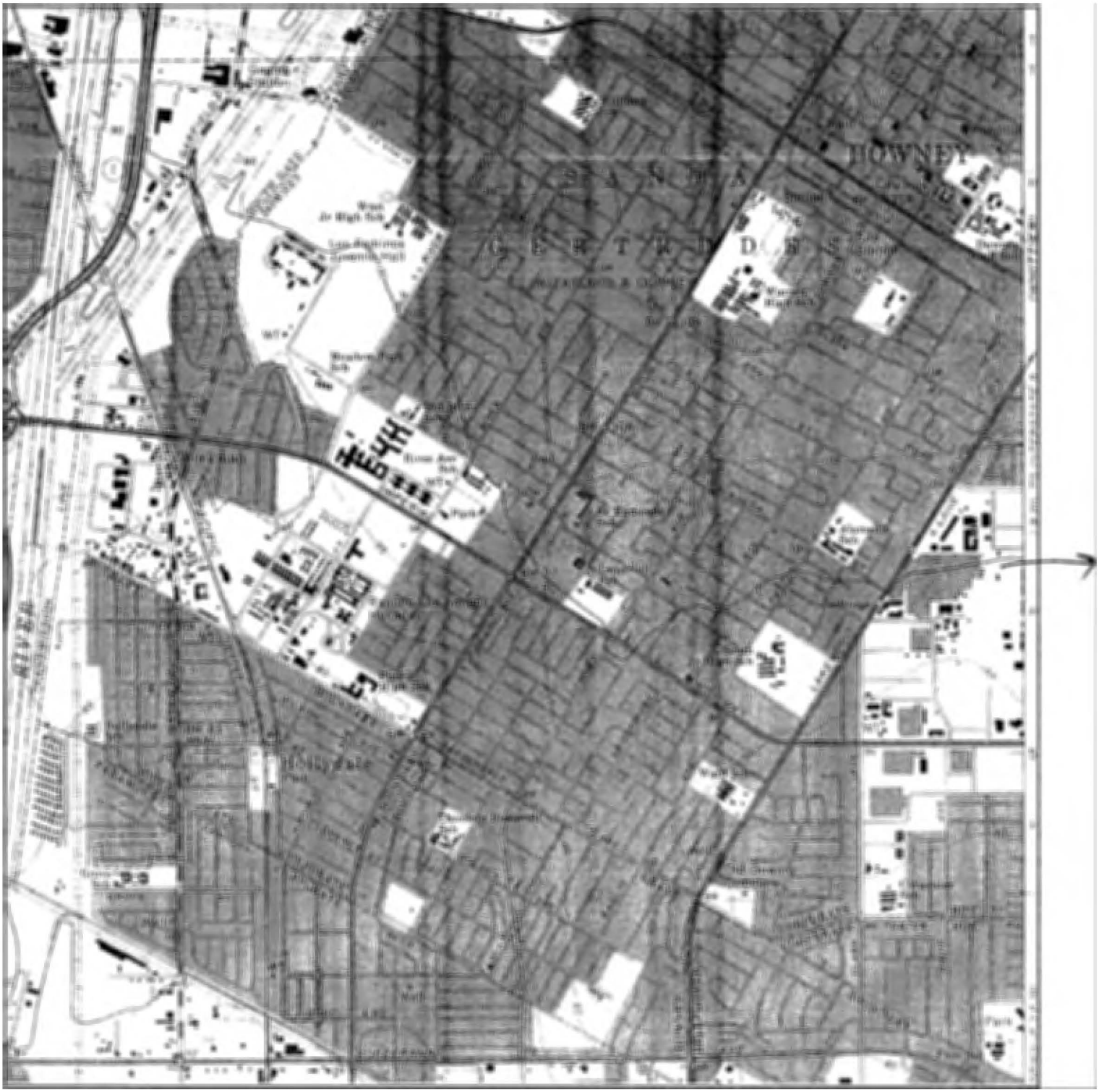

| | | | |
|---|---|---|---|
| N | ADJOINING QUAD ← | SITE NAME: 12021 - 12023 Woodruff Avenue | CLIENT: PIC Environmental Services |
| | NAME: SOUTH GATE | ADDRESS: 12021 - 12023 Woodruff Avenue | CONTACT: Tim Hersch |
| | MAP YEAR: 1949 ← | Downey, CA 90242 | INQUIRY#: 3681216.4 |
| | SERIES: 7.5 | LAT/LONG: 33.9253 / -118.118 | RESEARCH DATE: 07/31/2013 |
| | SCALE: 1:24000 | | |

# Historical Topographic Map



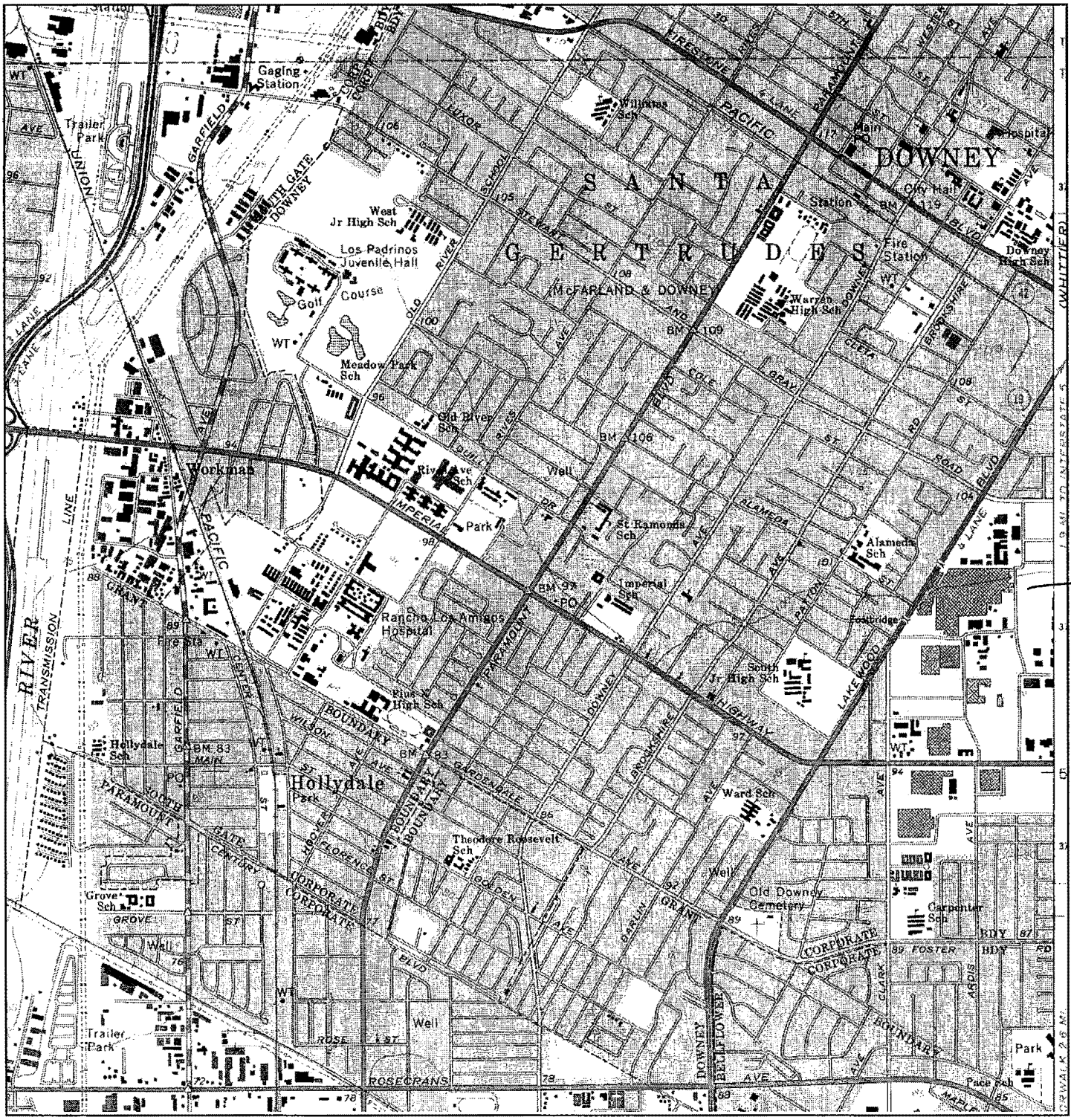

| N | ADJOINING QUAD ← | SITE NAME: 12021 - 12023 Woodruff Avenue | CLIENT: PIC Environmental Services |
|---|---|---|---|
| | NAME: SOUTH GATE | ADDRESS: 12021 - 12023 Woodruff Avenue | CONTACT: Tim Hersch |
| | MAP YEAR: 1952 ← | Downey, CA 90242 | INQUIRY#: 3681216.4 |
| | SERIES: 7.5 | LAT/LONG: 33.9253 / -118.118 | RESEARCH DATE: 07/31/2013 |
| | SCALE: 1:24000 | | |

## Historical Topographic Map




| | | | |
|---|---|---|---|
| N ↑ | ADJOINING QUAD ← | SITE NAME: 12021 - 12023 Woodruff Avenue | CLIENT: PIC Environmental Services |
| | NAME: SOUTH GATE | ADDRESS: 12021 - 12023 Woodruff Avenue | CONTACT: Tim Hersch |
| | MAP YEAR: 1964 ← | Downey, CA 90242 | INQUIRY#: 3681216.4 |
| | SERIES: 7.5 | LAT/LONG: 33.9253 / -118.118 | RESEARCH DATE: 07/31/2013 |
| | SCALE: 1:24000 | | |

# Historical Topographic Map


DOWNEY
S A N T A
G E R T R U D E S
Gaging Station
Trailer Park
Union
Garfield
South Gate
Downey
West Jr High Sch
Los Padrinos Juvenile Hall
Golf Course
Meadow Park Sch
Old River Sch
River Ave Sch
Workman
Imperial
Park
Well
Rancho Los Amigos Hospital
Pacific
Transmission Line
Gray
Paramount
Blue Jay High Sch
Hollydale Sch
Hollydale Park
Boundary
Wilson
Main
Florence
Corporate
Gate
Century
Grove Sch
Grove
Rose
Rosecrans
Trailer Park
Theodore Roosevelt Sch
Golden
Ward Sch
Old Downey Cemetery
Carpenter Sch
Foster
Corporate
Downey
Bellflower
Park
Pace Sch
Williams Sch
Pacific Electric R.R.
Firestone
Main St
Hospital
City Hall
Fire Station
Warren High Sch
Downey High Sch
Brookshire
McFarland & Downey
Gray
Alameda
Alameda Sch
St Ramonds Sch
Imperial Sch
Footbridge
South Jr High Sch
Lakewood
Highway
Paramount
Boundary
Gardendale
Ward
Well
Park
Trailer Park
Rosecrans
Bellflower
Foster
Clark
Arcis
Boundary
Park
Pace Sch
Main
Well
Old Downey Cemetery
Carpenter Sch
Foster
Corporate
Corporate
Boundary
Park
Pace Sch
Well
Rose
Rosecrans
Trailer Park
Well
Grove Sch
Grove
Well
Hollydale Park
Hollydale Sch
Main
Boundary
Boundary
Florence
Corporate
Corporate
Gate
Century
Paramount
Blue Jay High Sch
Wilson
Boundary
Gardendale
Ward Sch
Theodore Roosevelt Sch
Golden
Old Downey Cemetery
Carpenter Sch
Foster
Corporate
Corporate
Downey
Bellflower

## Historical Topographic Map




| | | | |
|---|---|---|---|
| N | ADJOINING QUAD ←<br>NAME: SOUTH GATE<br>MAP YEAR: 1981 ←<br>PHOTOREVISED FROM :1964<br>SERIES: 7.5<br>SCALE: 1:24000 | SITE NAME: 12021 - 12023 Woodruff Avenue<br>ADDRESS: 12021 - 12023 Woodruff Avenue<br>Downey, CA 90242<br>LAT/LONG: 33.9253 / -118.118 | CLIENT: PIC Environmental Services<br>CONTACT: Tim Hersch<br>INQUIRY#: 3681216.4<br>RESEARCH DATE: 07/31/2013 |

# APPENDIX G:

# HISTORIC AERIAL PHOTOGRAPHS

G

**12021 - 12023 Woodruff Avenue**
12021 - 12023 Woodruff Avenue
Downey, CA 90242

Inquiry Number: 3681216.5
August 02, 2013

# The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

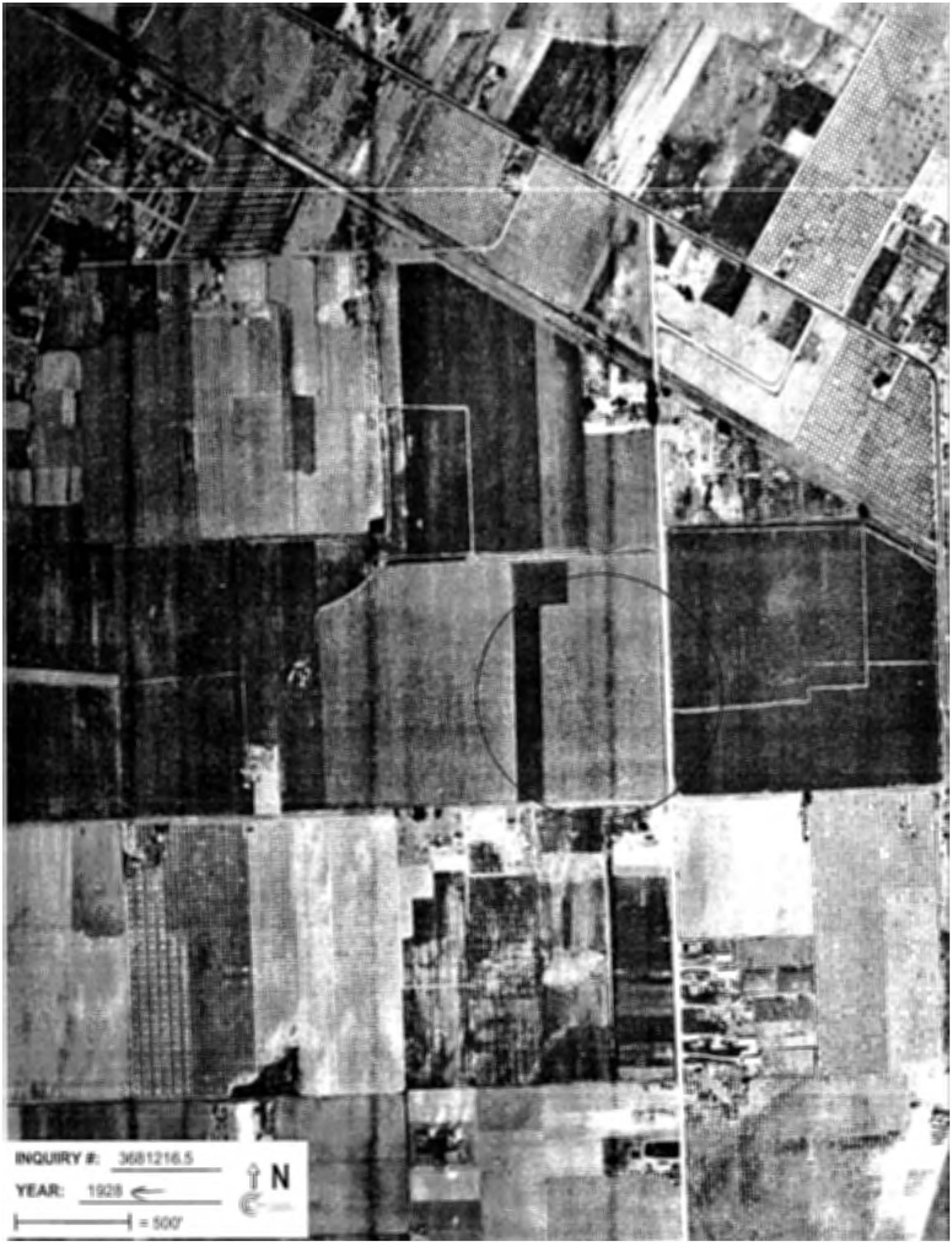
## Date EDR Searched Historical Sources:

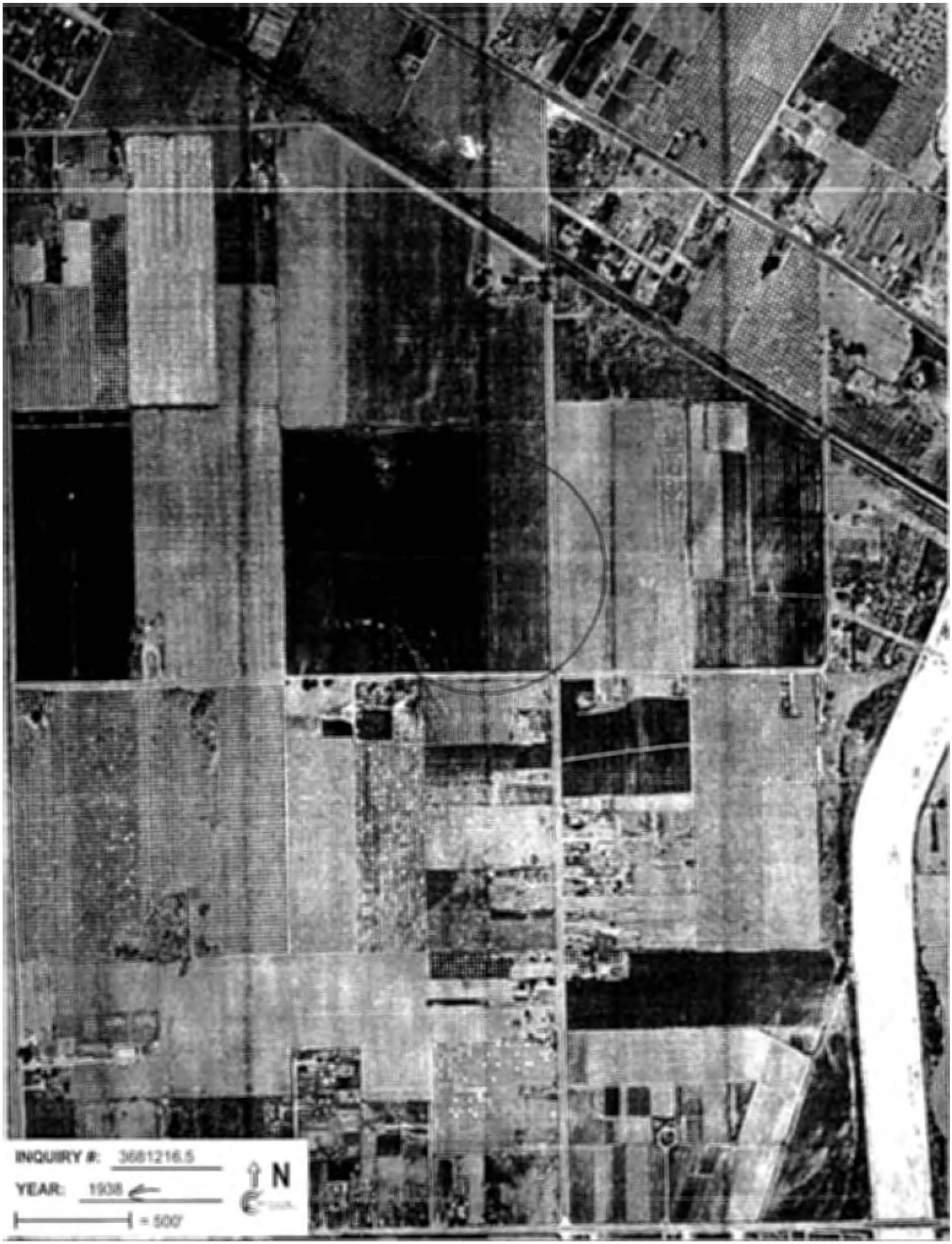
Aerial Photography August 02, 2013

## Target Property:

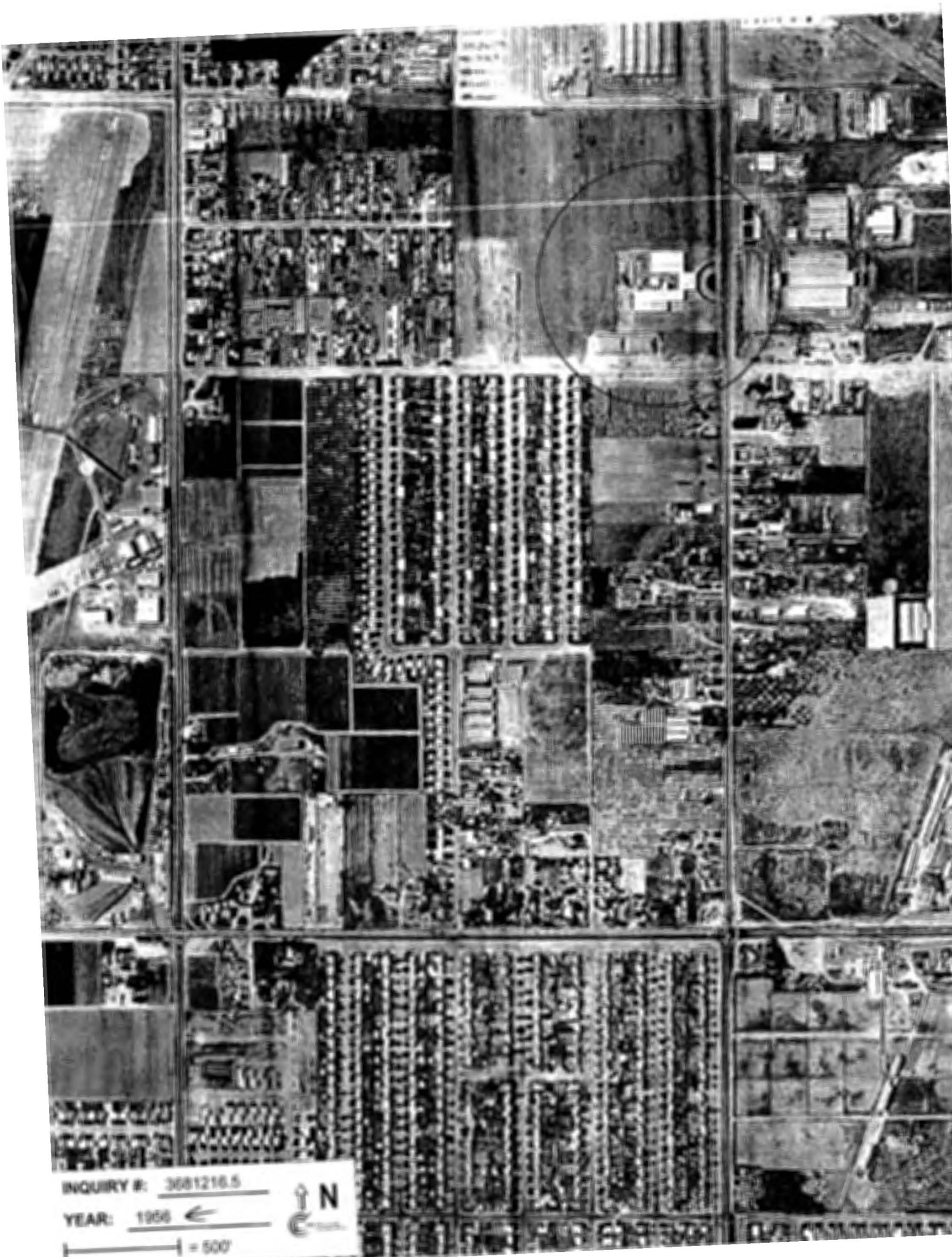
12021 - 12023 Woodruff Avenue
Downey, CA 90242

| *Year* | *Scale* | *Details* | *Source* |
|---|---|---|---|
| 1928 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1928 | Fairchild |
| 1938 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1938 | Laval |
| 1947 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1947 | Fairchild |
| 1956 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1956<br>Best Copy Available from original source | Fairchild |
| 1960 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1960 | Fairchild |
| 1968 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1968 | Teledyne |
| 1976 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1976 | Teledyne |
| 1989 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1989 | USGS |
| 1994 | Aerial Photograph. Scale: 1"=500' | /DOQQ - acquisition dates: 1994 | EDR |
| 2005 | Aerial Photograph. Scale: 1"=500' | Flight Year: 2005 | EDR |
| 2009 | Aerial Photograph. Scale: 1"=500' | Flight Year: 2009 | EDR |
| 2010 | Aerial Photograph. Scale: 1"=500' | Flight Year: 2010 | EDR |
| 2012 | Aerial Photograph. Scale: 1"=500' | Flight Year: 2012 | EDR |


INQUIRY #: 3681216.5
YEAR: 1928
N
= 500'


INQUIRY #: 3681216.5
YEAR: 1938
N
= 500'


WASHBURN
NQUIRY #: 3681216.5
EAR: 1947
N
= 500'

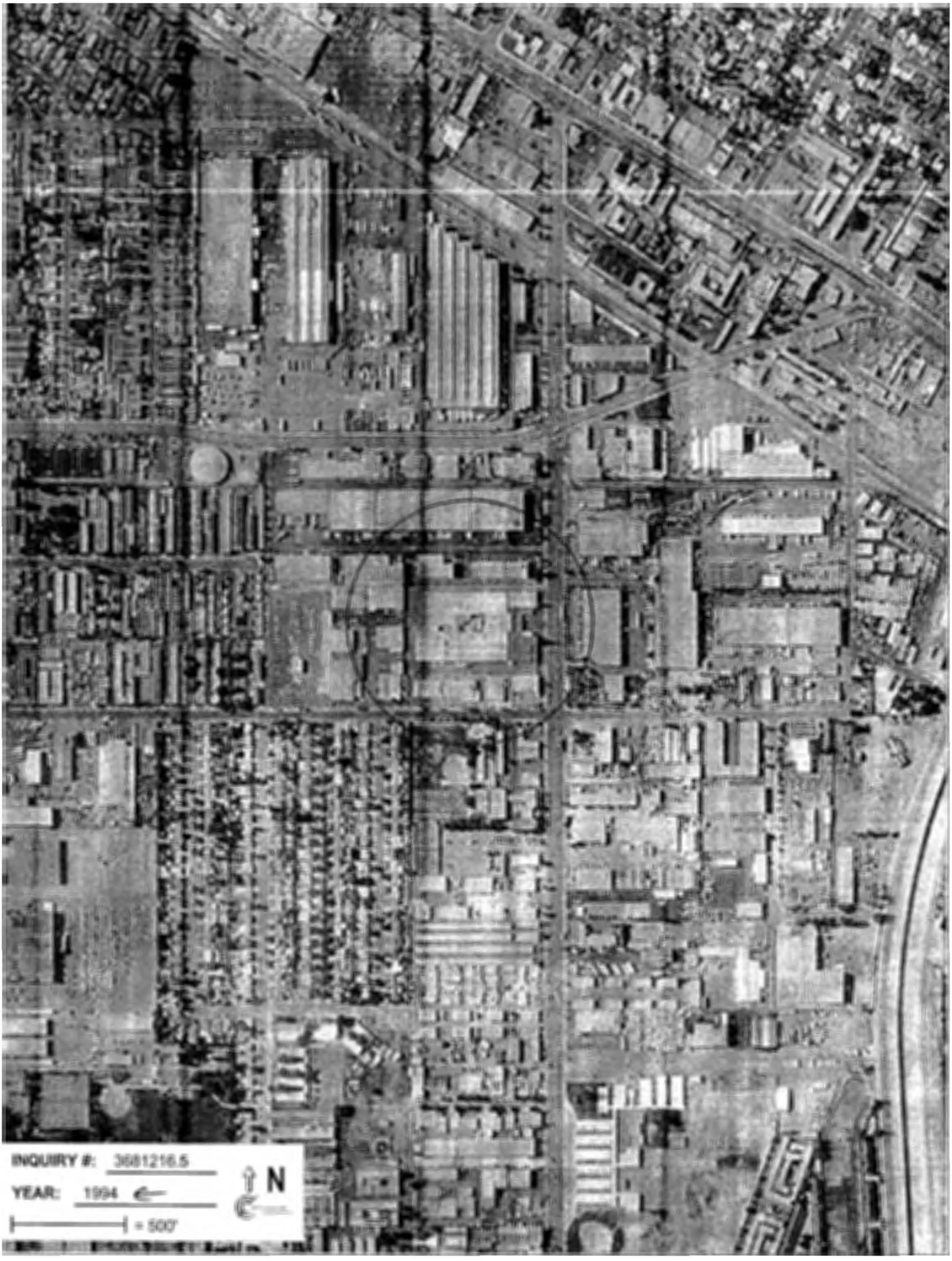

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YEAR: 1956
= 500'
N

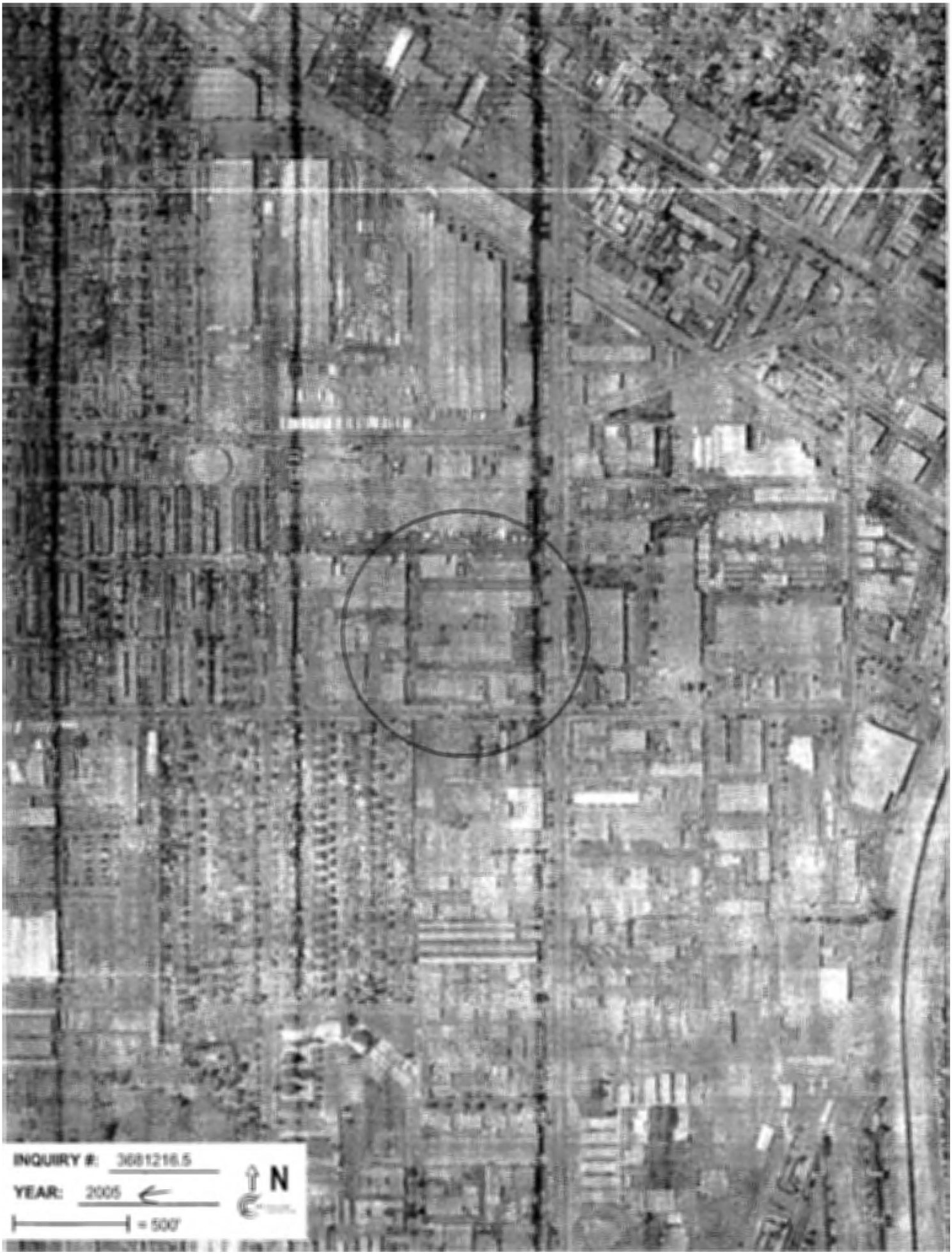

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YEAR: 1960
N
= 500'

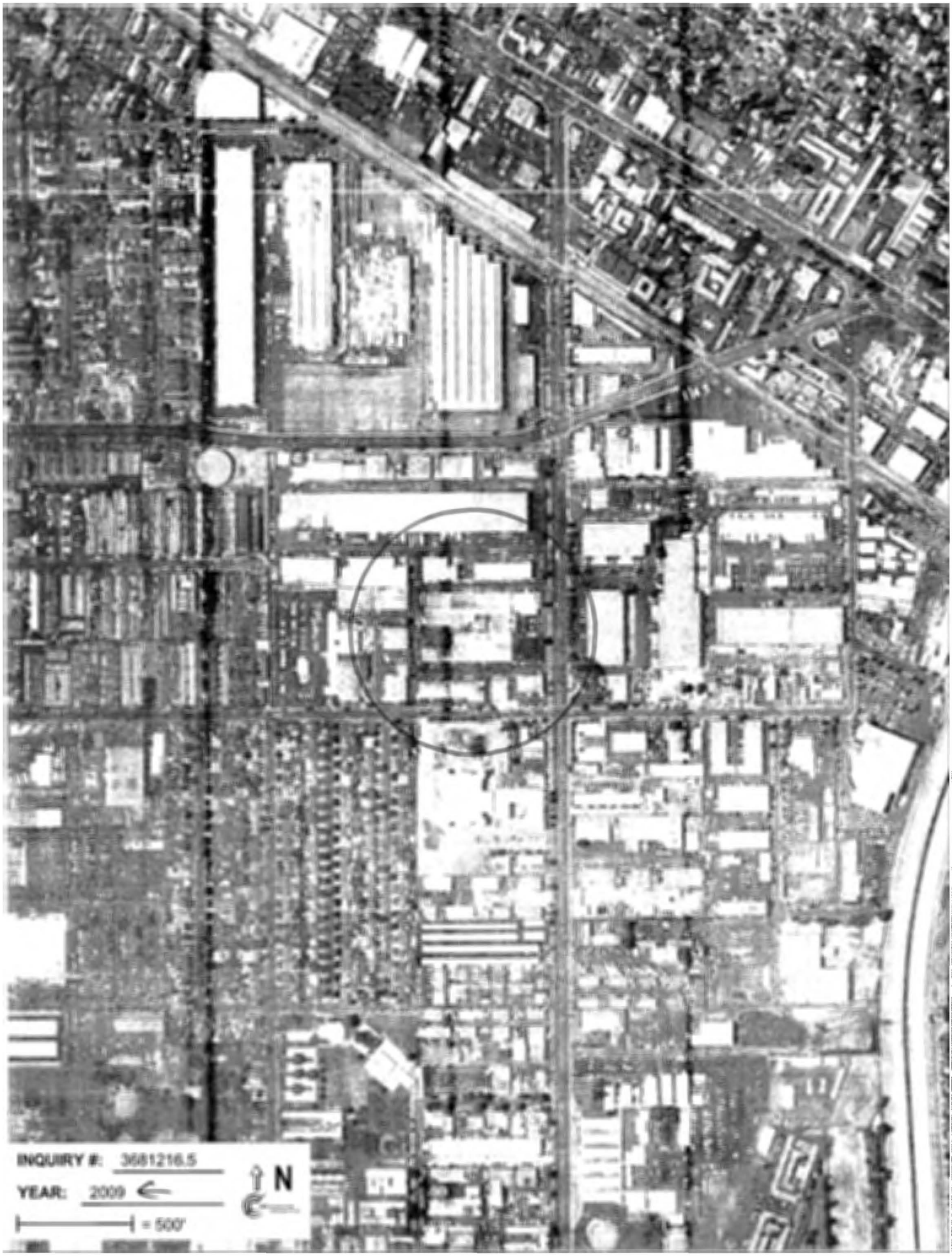

INQUIRY #: 3681216.5
YEAR: 1968
= 500'
N

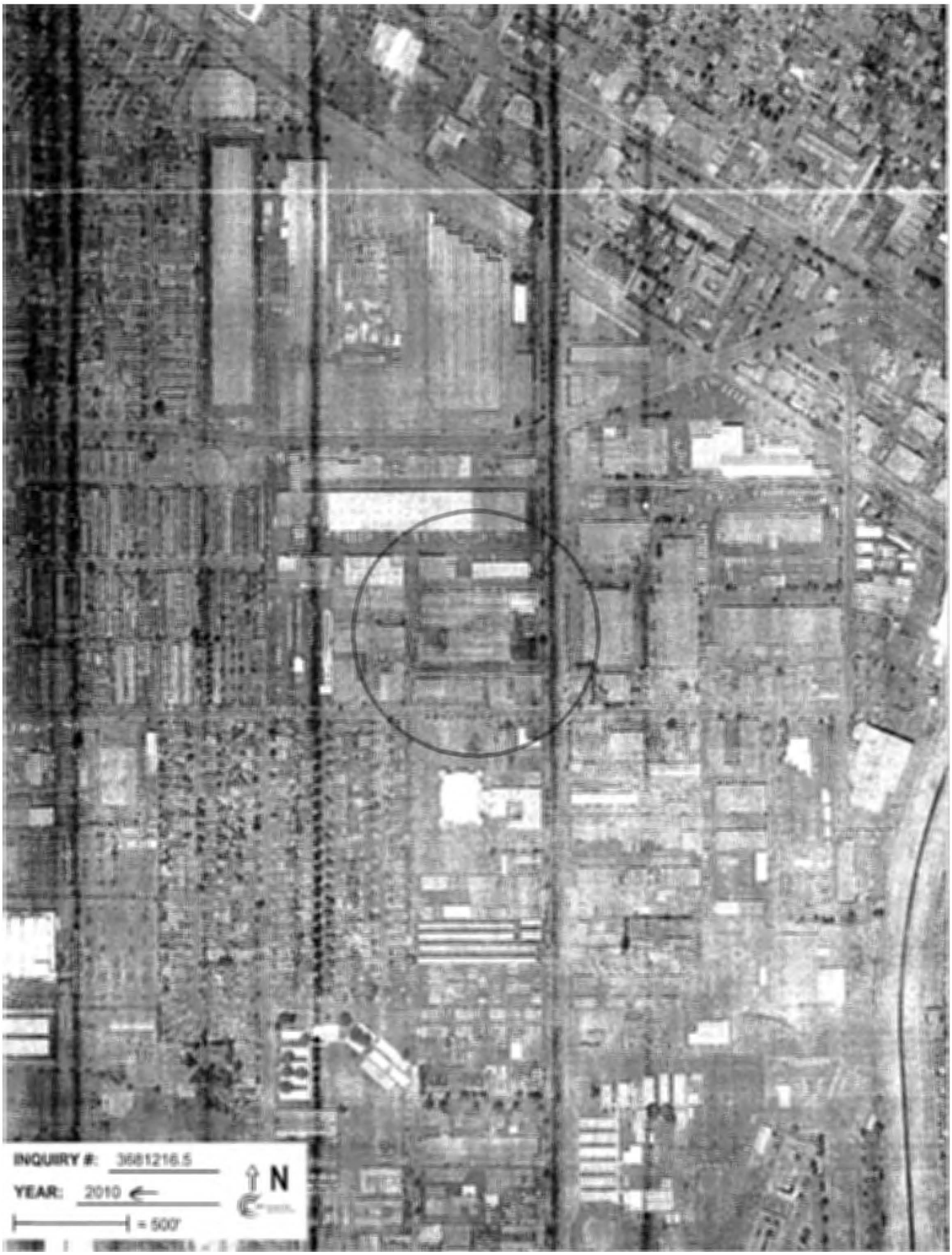

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YEAR: 1976
= 500'
N

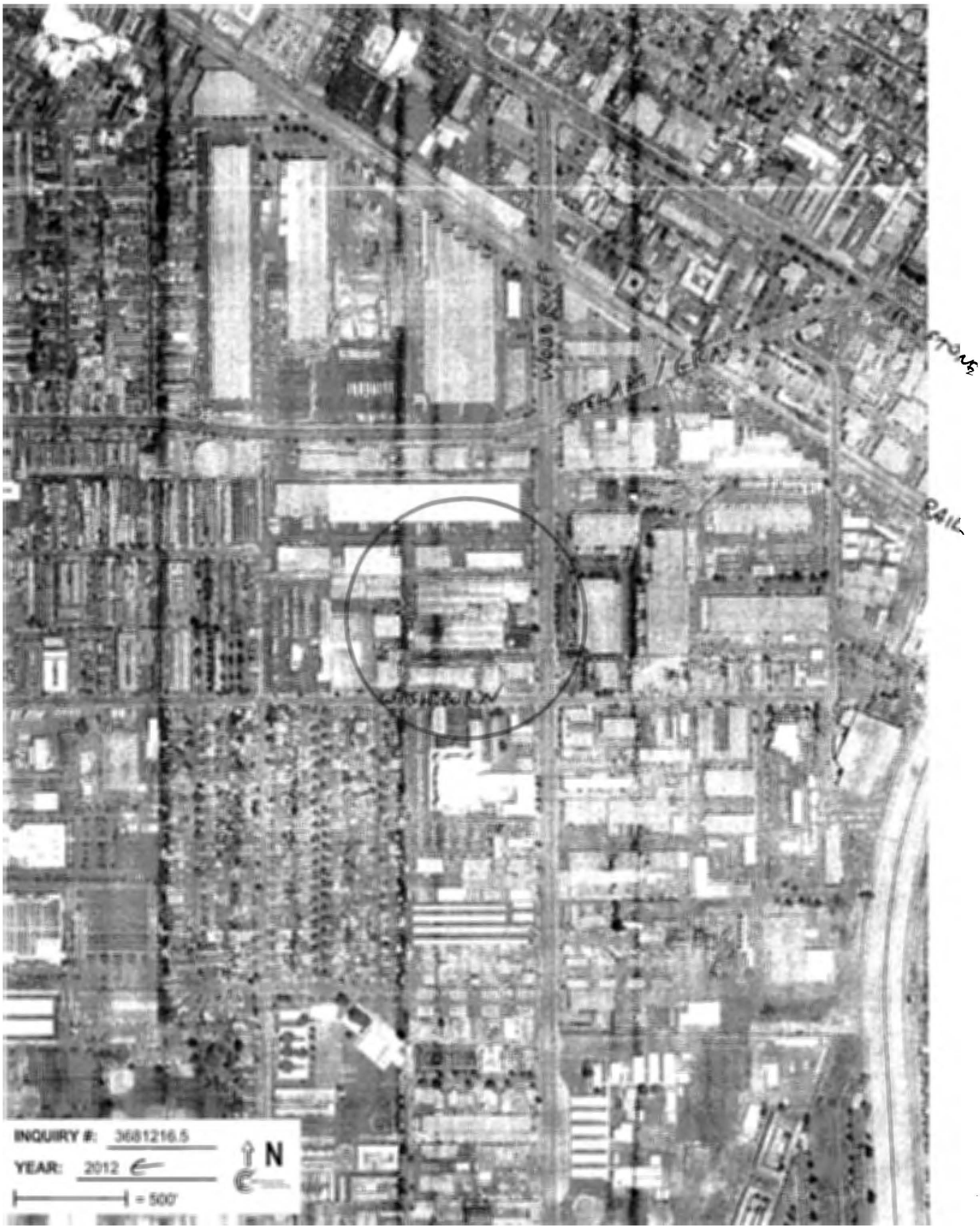

INQUIRY #: 3681216.5
YEAR: 1989
N
= 500'


INQUIRY #: 3681216.5
YEAR: 1994
= 500'
N


INQUIRY #: 3681216.5
YEAR: 2005
= 500'
N


INQUIRY #: 3681216.5
YEAR: 2009
= 500'
N


INQUIRY #: 3681216.5
YEAR: 2010
= 500'
N


INQUIRY #: 3681216.5
YEAR: 2012
= 500'
N

# APPENDIX H:

# CITY DIRECTORY REPORT

4

**12021 - 12023 Woodruff Avenue**
12021 - 12023 Woodruff Avenue
Downey, CA 90242

Inquiry Number: 3681216.6
August 07, 2013

# The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

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**Executive Summary**

**Findings**

**City Directory Images**

***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

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# EXECUTIVE SUMMARY

## DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

## RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

| Year | Target Street | Cross Street | Source |
|---|---|---|---|
| 2010 | ☑ | ☐ | Haines Criss-Cross Directory |
| 2005 | ☑ | ☐ | Haines Criss-Cross Directory |
| 2000 | ☑ | ☐ | Haines Criss-Cross Directory |
| 1995 | ☑ | ☐ | Haines Criss-Cross Directory |
| 1990 | ☑ | ☐ | Haines Criss-Cross Directory |
| 1985 | ☑ | ☐ | Haines Criss-Cross Directory |
| 1980 | ☑ | ☐ | Haines Criss-Cross Directory |
| 1975 | ☑ | ☐ | Haines Criss-Cross Directory |
| 1971 | ☑ | ☐ | Haines Criss-Cross Directory |

## RECORD SOURCES

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# FINDINGS

## TARGET PROPERTY STREET

12021 - 12023 Woodruff Avenue
Downey, CA 90242

| *Year* | *CD Image* | *Source* |
|---|---|---|
| **Woodruff Avenue** | | |
| 2010 | pg A1 | Haines Criss-Cross Directory |
| 2005 | pg A2 | Haines Criss-Cross Directory |
| 2000 | pg A3 | Haines Criss-Cross Directory |
| 2000 | pg A4 | Haines Criss-Cross Directory |
| 1995 | pg A5 | Haines Criss-Cross Directory |
| 1990 | pg A6 | Haines Criss-Cross Directory |
| 1985 | pg A7 | Haines Criss-Cross Directory |
| 1980 | pg A8 | Haines Criss-Cross Directory |
| 1975 | pg A9 | Haines Criss-Cross Directory |
| 1971 | pg A10 | Haines Criss-Cross Directory |

# FINDINGS

## CROSS STREETS

No Cross Streets Identified

# City Directory Images

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

# Woodruff Avenue 2010 ←

| | | | | |
|---|---|---|---|---|
| 12000 | ♣ ★ | B & K ELECTRIC WHOLESALE | 562-948-9400 | |
| | ♣ ★ | CENTURY TRADERS | 562-803-7879 | *0 |
| | ♣ ★ | EL AMIGO | 562-803-6800 | *0 |
| 12001 | C ★ | BOB ELY'S AUTO TOP SHOP | 562-869-2220 | 5 |
| | G ★ | CIRCA INFORMATION | 562-803-1594 | |
| | E ★ | STATEWIDE VENDING SERVICE | 562-803-6600 | 7 |
| | A ★ | WEST CST DOOR INC | 562-803-1165 | |
| 12003 | ★ | PRICE ENTERPRISES | 562-803-0763 | 3 |
| | ★ | VELOCITY EXPRESS SW-INC | 562-803-0700 | 3 |
| | ★ | VULCAN CASTERS | 562-803-9888 | 7 |
| 12007 | ★ | STOROPACK | 562-803-5582 | |
| 12010 | ♣ ★ | A & C ENGINEERING | 562-803-1210 | 8 |
| | C ★ | GLOBAL WIRES INC | 562-948-0050 | 3 |
| | A ★ | MAKAHA INDUSTRIES | 562-948-0721 | 4 |
| | ♣ ★ | NAPA PARTS WAREHOUSE | 562-803-3222 | 5 |
| | E ★ | SYSONIC ELECTRONICS INC | 562-803-6789 | 7 |
| 12020 | ♣ ★ | ARUVIL INTERNATL INC | 562-803-0362 | 6 |
| | ♣ ★ | CONTL SUPPLY CO | 562-803-1133 | 3 |
| | ♣ ★ | EURO WHEELS INC | 562-803-6700 | 8 |
| | ♣ ★ | GRALEN COMPANY | 562-803-6666 | 3 |
| | E ★ | HI-Q FASTENERS | 562-401-9300 | 3 |
| | D ★ | NAPA PARTS WAREHOUSE | 562-803-3222 | 8 |
| | G ★ | PRIME PAPER | 562-401-0140 | 6 |
| | C ★ | THATCHER COMPANY OF CALIFORNIA | 562-803-0563 | 8 |
| | D ★ | VERTILUX | 562-803-1704 | 6 |
| 12021 | ★ | CARNAVAL ACCESS | 562-803-3838 | *0 |
| | ★ | MORAN HECTOR | 562-803-4000 | 6 |
| | ★ | NOMAD TRADING | 562-803-8680 | *0 |
| | ★ | PTG INTERNATIONAL INC | 562-803-9106 | 8 |
| 12023 | ★ | KIRKHILL MANUFACTURING COMPANY | 562-803-1117 | |
| 12049 | ★ | ARC-SOUTHEAS LA CO STHST | 562-803-1556 | 9 |
| | ★ | SOUTHEAST EMPLY CT | 562-803-4606 | |
| 12050 | ★ | MR PETE'S BURGERS | 562-948-0700 | 9 |
| X | | WASHBURN RD | | |
| 12101 | ♣ ★ | ALLSTATE INSURANCE DOWNEY | 562-803-1919 | 8 |
| | C ★ | BROWN RICK CONCRETE CONTR | 562-803-4245 | |
| | A ★ | DUMANI PROPERTY LOANS | 562-803-9778 | 2 |
| | ♣ ★ | FARMERS INS DOWNEY OFFICES | 562-940-4244 | |
| | ♣ ★ | FARMERS INS STEWART JOYCE | 562-940-4246 | |
| | ♣ ★ | STATE FARM INS AGENT | 562-803-9777 | 2 |
| 12107 | ★ | MAJESTIC TROPHY CO | 562-803-3550 | |
| 12109 | | XXXX | OO | |
| 12111 | ★ | ARAUJO DEVELOPERS AND INVSTRS | 562-401-9400 | 8 |
| | ★ | EDUCATNL PROGRAMS | 562-803-3131 | 8 |
| | ★ | PROMOTIONAL IMAGE PRODUCTS | 562-803-3442 | |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

## Woodruff Avenue 2005

| | | | |
|---|---|---|---|
| 12001 | ★ CIRCA INFORMATION | 562-803-1594 | 8 |
| | ★ PINK ZEBRA | 562-803-0065 | +4 |
| | ★ WEST CST DOOR INC | 562-803-1185 | 8 |
| 12003 | ★ PRICE ENTERPRISES | 562-803-0763 | 3 |
| | ★ VELOCITY EXPRESS SW-INC | 562-803-0700 | +4 |
| 12005 | XXXX | OO | |
| 12007 | ★ STOROPACK | 562-803-5582 | 5 |
| 12010 | ★ BEF CORP | 562-803-9727 | 3 |
| | ★ GLOBAL WIRES INC | 562-940-0050 | 3 |
| | ★ LUIGI & SONS | 562-803-5304 | 3 |
| | ★ MORRIS COSTUME CO INC | 562-803-3374 | 7 |
| | ★ SARNAFIL INC | 562-401-4151 | 9 |
| 12020 | ★ CONTL SUPPLY CO | 562-803-1133 | +4 |
| | ★ GRALEN COMPANY | 562-803-6666 | 3 |
| | ★ GRALEN COMPANY | 562-401-0039 | +4 |
| | ★ Hi-Q FASTENERS | 562-401-9300 | +4 |
| | ★ INTERPARTS INDUSTRIES INC | 562-803-3377 | 0 |
| | ★ JOBBER'S WHOLESALE INC | 562-803-8865 | 3 |
| | ★ NAPA PARTS WAREHOUSE | 562-803-3222 | 9 |
| 12021 | ★ GRALEN COMPANY | 562-803-9099 | +4 |
| | ★ SOURCE ONE STAFFING | 562-803-6195 | 1 |
| 12023 | ★ KIRKHILL MANUFACTURING COMPANY | 562-803-1117 | 5 |
| 12049 | ★ ARC-SOUTHEAST LA CO | 562-803-4609 | 3 |
| | ★ SOUTHEAST EMPLY CT | 562-803-4005 | 5 |
| 12050 | ★ FRISCO BURGER | 562-803-9663 | |
| | ★ FRISCO BURGER | 562-803-6301 | 3 |

## X WASHBURN RD

| | | | |
|---|---|---|---|
| 12101 | ★ BROWN RICK CONCRETE CONTR | 562-803-4245 | 9 |
| | ★ CORDOVA ART INS | 562-803-1919 | 3 |
| | ★ DUMAHI PROPERTY LOANS | 562-803-9778 | 2 |
| | ★ EDDY DEBORAH INS | 562-940-4244 | 7 |
| | ★ FARMERS INS AGENT | 562-940-4244 | 7 |
| | ★ IO PERSONNEL | 562-803-1299 | +4 |
| | ★ ISBELL INSURANCE | 562-803-9077 | 3 |
| | ★ RBC COMPANY | 562-803-4245 | 9 |
| | ★ STATE FARM INS AGENT | 562-803-9777 | 2 |
| | ★ STEWART JOYCE | 562-940-4246 | 7 |
| 12107 | ★ MAJESTIC TROPHY CO | 562-803-3650 | 7 |
| 12109 | XXXX | OO | |
| 12111 | ★ EDUCATNL PROGRAMS | 562-803-3131 | 8 |
| | ★ PROMOTIONAL IMAGE PRODUCTS | 562-803-3442 | 9 |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

## Woodruff Avenue 2000

| | | | |
|---|---|---|---|
| 12001 | * CIRCA INFORMATION | 562-803-1594 | 8 |
| | * NAAZ INTERNATIONAL | 562-803-9876 | 9 |
| | * WEST CST DOOR INC | 562-803-1165 | 8 |
| 12003 | * PRICE ENTERPRISES | 562-803-8833 | 7 |
| 12005 | XXXX | CO | |
| 12007 | * STOROPACK | 562-803-5582 | 5 |
| 12010 | * HOFFMEYER COMPANY | 562-401-4171 | 7 |
| | * KUKA VALVE COMPANY | 562-401-3787 | 8 |
| | * LUGI & SONS | 562-803-5304 | 9 |
| | * MORRIS COSTUME CO INC | 562-803-3374 | 7 |
| | * SARNAFIL INC | 562-401-4151 | +0 |
| 12020 | * GRANDLITE INTERNATL CORP | 562-803-3365 | 7 |
| | * GREEN POWER JUICER | 562-940-4241 | 7 |
| | * INTERPARTS INDUSTRIES INC | 562-803-3377 | +0 |
| | * NAPA PARTS WAREHOUSE | 562-803-3222 | 9 |
| | * TRIBEST CORP | 562-940-4241 | 7 |
| 12021 | XXXX | CO | |
| 12023 | * KIRKHILL MANUFACTURING COMPANY | 562-803-1117 | 8 |
| | * MILLENNIUM DZIGNER TIRE DRZZRS | 562-803-9820 | +0 |
| 12049 | * A R CSTHST LS ANGLS CO | 562-803-4606 | 8 |
| | * SOUTHEAST EMPLY CT | 562-803-4606 | 5 |
| 12050 | * FRISCO'S CAR HOP DRIVEIN | 562-928-3663 | 2 |
| | * FRISCOS CAR HOP | 562-803-6301 | |
| | * STATHOULIS Tasos | CO | 9 |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

**Woodruff Avenue 2000**



X WASHBURN RD

| | | | |
|---|---|---|---|
| 12101 | * ALLSTATE INS CO SLS OFCS | 562-803-1919 | |
| | * BROWN RICK CONCRETE CONTR | 562-803-4245 | 9 |
| | * CIRCULAR MOTION PRODUCTS | 562-803-4141 | 8 |
| | * CITY FUND MORTGAGE | 562-401-3777 | +0 |
| | * CORDOVA ART INS | 562-803-1919 | 6 |
| | * DUMAS PROPERTY LOANS | 562-803-9779 | 9 |
| | * EDDY DEBORAH INS | 562-940-4244 | 7 |
| | * FARMERS INS AGENT | 562-940-4244 | 7 |
| | * FARMERS INS AGENT | 562-940-4246 | 7 |
| | GUCCIONE Chuck | 562-863-2780 | 6 |
| | * GUCCIONE SUSAN | 562-927-2551 | 7 |
| | * R B C COMPANY | 562-803-4245 | 9 |
| | * STATE FARM INS AGNT ARTESIA | 562-863-2780 | 6 |
| | * STATE FARM INS AGNT DOWNEY | 562-927-2551 | |
| | * STEWART JOYCE INS | 562-940-4246 | 7 |
| 12107 | * MAJESTIC TROPHY CO | 562-803-3550 | 7 |
| 12109 | XXXX | OO | |
| 12111 | * EDUCATNL PROGRAMS | 562-803-3131 | +0 |
| | * PROMOTIONAL IMAGE PRODUCTS | 562-803-3442 | +0 |
| 12112 | * JEHOVA'S WITNESS | 562-940-0730 | 8 |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

## Woodruff Avenue 1995

| | | |
|---|---|---|
| 12001 | ★MORRIS COSTUME | 803-3374 4 |
| | ★TEA CO | 803-5301 +5 |
| 12003 | ★WARD MANUFACTURING | 803-8833 3 |
| 12005 | ★INDSTRL PAPER DISTB | 803-3066 3 |
| 12007 | ★STOROPACK | 803-5582 +5 |
| 12010 | ★AMTECH SPORTS INC | 803-3880 4 |
| | ★EL CACIQUE | 803-4202 +5 |
| | ★FLUID HANDLING SYST | 803-4669 1 |
| | ★R C M TRUCKING | 803-0093 +5 |
| | ★STATE INDUSTRIES | 940-9301 +5 |
| | ★TRISTAR IND PRDCTS | 803-9522 +5 |
| 12020 | ★GIANT UNION CO INC | 803-3717 3 |
| | ★GRAEBEL VAN LINES | 803-6552 4 |
| | ★LUMEX INC HOSP EQP | 803-4634 3 |
| 12021 | ★KIRKHILL INC RUBBR | 803-3421 |
| 12049 | ★ASSOCTN RTRDD CTZNS | 803-4606 |
| | ★SOUTHEAST EMPLY CT | 803-4606 +5 |
| 12050 | ★FRISCOS CAR HOP | 803-6301 0 |
| | ★FRISCOS CAR HOP | 928-3063 2 |
| 12101 | ★ADVANCE TOOL CO | 803-4641 9 |
| | ★ALLSTATE INS CO SLS | 803-1919 9 |
| | ★BARNETT PAULA INS | 803-1919 +5 |
| | ★CRODOVA ART INS | 803-1919 +5 |
| | ★DANGERFIELD SUSAN | 927-2551 8 |
| | ★EVENING LIGHTS | 803-3025 +5 |
| | ★LIBERTY REALTORS | 862-1107 9 |
| | ★MAJESTIC TROPHY CO | 803-3550 +5 |
| | ★PLAGMAN ROBERT INS | 803-1919 +5 |
| | ★STATE FARM INS AGNT | 927-2551 0 |
| 12107 | ★KENTUCKY FRIED CHKN | 803-4656 |
| | ★PIZZA PLUS CHICKEN | 803-6665 +5 |
| 12109 | XXXX | 00 |
| 12111 | XXXX | 00 |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

## Woodruff Avenue 1990

| | | | |
|---|---|---|---|
| 12000 | ★DOWNEY SERV&PRFRMNC | 803-4300 | 9 |
| | ★LINEAR SPORTING GDS | 803-1238 | +0 |
| | ★METCO INC DIV | 803-1060 | +0 |
| | ★RAY ENGINEERING | 803-4300 | +0 |
| | ★ZOO SHOES INC | 803-8711 | +0 |
| 12001 | ★HAMPTON DON BLOWERS | 866-8453 | 2 |
| | ★HOUSE OF HUMOR NVTY | 803-3374 | 3 |
| | ★P R PRODUCTIONS | 803-5714 | 8 |
| 12003 | ★LUMEX INC | 803-4634 | 3 |
| 12005 | ★INDSTRL PAPER DSTBS | 803-3066 | +0 |
| 12007 | ★STOROPACK | 803-1584 | 7 |
| 12019 | ★CLAYTON METALS INC | 803-5746 | +0 |
| | ★HSIN RONG IMPORTS | 803-5838 | +0 |
| | ★SUPREME EQUIP&SYSTS | 803-8923 | +0 |
| | ★TRI STAR IND$ PROCT | 803-9522 | +0 |
| 12021 | ★GRAEBEL VAN LINES | 803-6552 | +0 |
| | ★KIRKHILL INC | 803-3421 | 3 |
| 12049 | ★ASSOCTN RETARDED | 803-4606 | 3 |
| 12050 | ★FRISCOS CAR HOP | 928-3563 | 7 |
| | ★FRISCOS CAR HOP | 803-6301 | +0 |
| 12101 | ★ADVANCE TOOL CO | 803-4541 | 9 |
| | ★ALLSTATE INS SALES | 803-1919 | 9 |
| | ★DANGERFIELD SUSAN | 927-2551 | 8 |
| | ★DOWNEY TYPEWORKS | 803-4866 | 9 |
| | ★GOOD NEWS PRINTG CT | 803-3110 | 8 |
| | ★LIBERTY REALTORS | 882-1107 | 9 |
| | ★STATE FARM INS AGNT | 927-2551 | +0 |
| F | ★MAJESTIC TROPHY CO | 803-3550 | 8 |
| 12107 | ★KENTUCKY FRIED CHKN | 803-4656 | 3 |
| 12111 | XXXX | 00 | |
| 12112 | ★LLOYDS COFFEE SHOP | 803-3591 | 9 |
| | ★LOYDS CATERING SERV | 803-3591 | |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

## Woodruff Avenue 1985

| | | | |
|---|---|---|---|
| 11937 | CA STOCK TAB | 803-1411 | 3 |
| 11939 | METALSOURCE | 803-3311 | 3 |
| 11941 | INCO EXPRESS INC | 803-3366 | 3 |
| 12000 | DARNELL CORP LTD | 823-8373 | +5 |
| 12001 | CHART MASTERS PRINT | 803-4663 | 3 |
| | HAMPTON DON BLOWERS | 366-8453 | 2 |
| | HOUSE OF HUMOR NVTY | 803-3374 | 3 |
| | HOUSE OF HUMOR NVTY | 803-3500 | 3 |
| | HRS INC | 803-5315 | +5 |
| | JAJ SHOWERS PANS | 803-1205 | 4 |
| | MAINLAND PRODUCTS | 803-1963 | 4 |
| 12003 | LUMEX INC | 803-4834 | 3 |
| 12021 | KIRKHILL INC | 803-3421 | 3 |
| 12049 | ASSOCTN RETARDED | 803-4806 | 3 |
| 12060 | TASSOS DRIVE IN | 803-1513 | 3 |
| 12101 | RAFFAELE SV CO | 803-1940 | 3 |
| 12107 | KENTUCKY FRIED CHKN | 803-4856 | 3 |
| 12109 | XXXX | 00 | |
| 12111 | XXXX | 00 | |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

## Woodruff Avenue 1980

| | | | |
|---|---|---|---|
| 11916 | * | B&F INDUSTRIES | 860-3309 +0 |
| 11929 | * | SIDEX FURNTIURE | 862-9806 +0 |
| 11939 | * | METALSOURCE | 861-8871 +0 |
| 11941 | * | INCO EXPRESS INC | 861-0985 +0 |
| 12000 | * | DARNELL CORP LTD | 923-9373 9 |
| 12001 | * | BEST TANK | 862-9874 +0 |
| | * | DOWNEY TEXACO | 923-5486 +0 |
| | * | HOUSE OF HMR OFC | 862-4400 +0 |
| | * | HOUSE OF HMR WRHSE | 862-1184 +0 |
| | * | MOBILE ELECTRONICS | 923-5486 +0 |
| 12021 | * | KIRKHILL INC | 862-1941 8 |
| 12049 | * | UNITED DRILL BUSHNG | 923-9701 9 |
| 12050 | * | TASSOS DRIVE IN | 861-8223 |
| 12101 | * | CALS EXXON SERVICE | 923-7049 8 |
| | * | CASHS CAR CORNER | 923-7049 4 |
| | * | EXXON PRODUCTS | 923-7049 4 |
| 12107 | * | COLONEL SANDRS CHKN | 861-2213 |
| | * | KENTUCKY FRIED CHKN | 861-2213 8 |
| 12109 | | XXXX | 00 |
| 12111 | | XXXX | 00 |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

## Woodruff Avenue 1975

11904 *A&A GRINDING 862-7415
11906 *RETECO BROACH CO 869-1524 2
11908 *HOUSE HUMOR NOVLTY 862-1164 4
11911 *ROYAL H M INC 861-0371
11916 *RASMUSSEN SCRW PROT 869-0717
12000 XXXX 00
12021 *KIRKHILL INC 862-1141
12049 *UNITED DRILL BUSHNG 923-9701
12050 *TASSOS DRIVE IN 861-8223
12101 *ROBS EXXON PROD SV 923-7049 4
*CASHS CAR CORNER 923-7049 4
*EXXON PRODUCTS 923-7049 4
12107 *COL SANDERS KY CHKN 861-2213
12109 *CATTANI SALES CTR 923-7914 *5
12111 *CERRITOS PET CENTER 869-5902 *5
A *S P C PEDIGREE SV 869-5902 *5
A *STONEWOOD PET CNTR 869-5902 *5

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Haines Criss-Cross Directory |

## Woodruff Avenue 1971

| | | |
|---|---|---|
| 11902 | *NITTMAN SHETT METAL | 869-7212 |
| 11904 | *A&A GRINDING | 862-7415 |
| 11908 | *RETECO BROACH CO | 869-1524 |
| 11911 | *ROYAL H M INC | 861-0371 |
| 11916 | *RASMUSSEN SCRW PROT | 869-0717 |
| 12000 | *DARNELL CORP LTD | 862-2121 |
| 12021 | *KIRKHILL INC | 862-1141 |
| 12049 | *UNITED DRILL BUSHNG | 923-9701 |
| 12050 | *TASSOS DRIVE IN | 861-8223 |
| 12101 | *BOBS ENCO PRODS STN | 923-7049 |
| | *ENCO PRODUCTS | 923-7049 |
| 12107 | *COL SANDERS KY CHKN | 861-2213 |
| | *KENTUCKY FRD CHICKN | 861-2213 |
| 12111 | *LYLE WOOD&ASSOC INC | 869-3328 |
| | *WOOD LYLE&ASSOC INC | 869-3328 |
| 12112 | *LLOYDS SMORGASBORD | 923-9100 |
| | *LOYDS SMORGASBOARD | 923-9100 |

# APPENDIX J:

# TETRA TECH "ENVIRONMENTAL AUDIT REPORT" DATED FEBRUARY, 1990

TC-8028-01

FEBRUARY 1990

1990

# ENVIRONMENTAL AUDIT REPORT
# KIRKHILL, INC.
# 12021 WOODRUFF AVENUE
# DOWNEY, CALIFORNIA 90241

PREPARED FOR

KIRKHILL, INC.
DOWNEY, CALIFORNIA

PREPARED BY

TETRA TECH, INC.
PASADENA, CALIFORNIA

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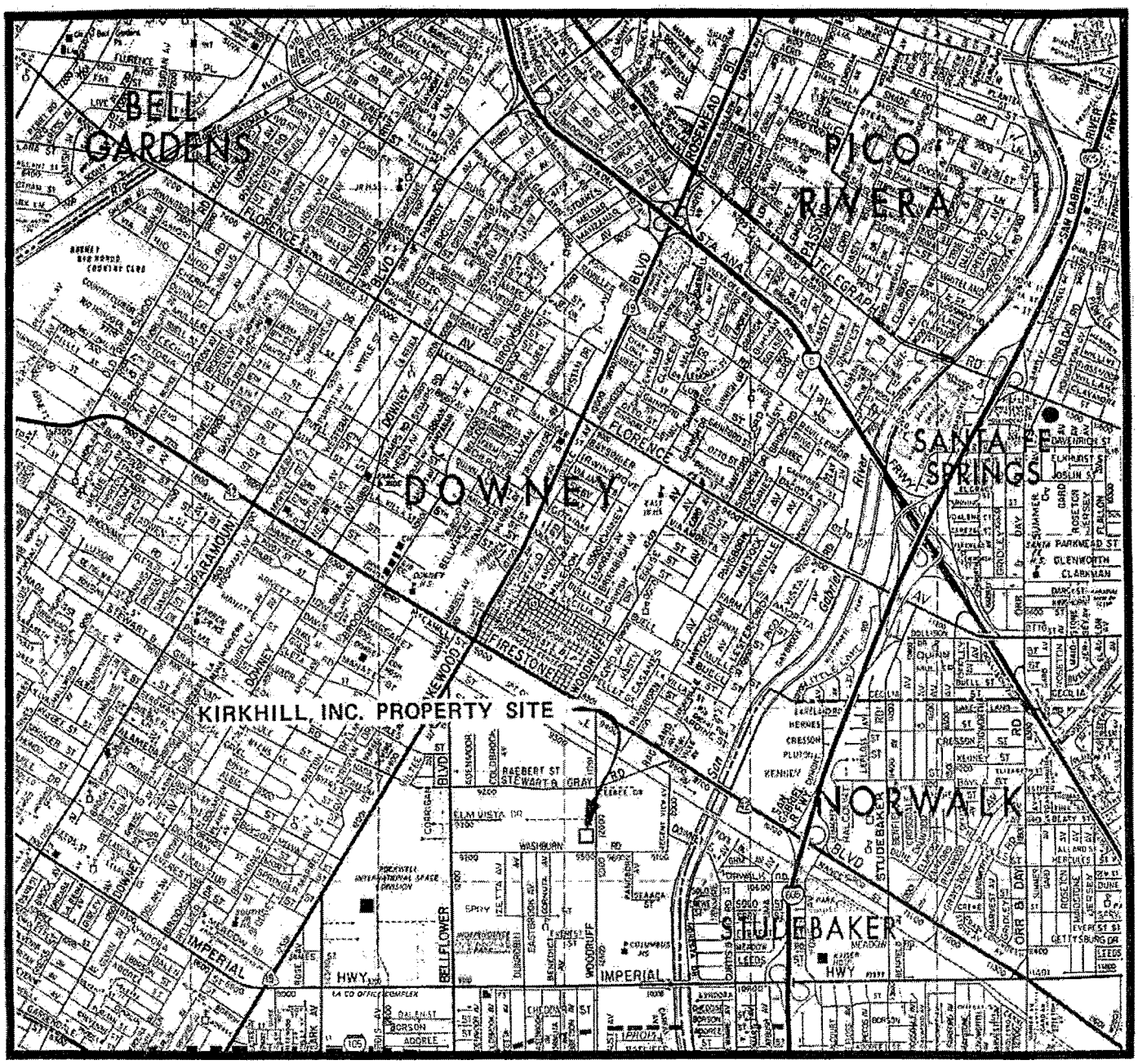
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BELL GARDENS
PICO RIVERA
DOWNEY
SANTA FE SPRINGS
NORWALK
KIRKHILL, INC. PROPERTY SITE
FLORENCE
FIRESTONE
IMPERIAL
HWY
STUDEBAKER
BELLFLOWER
PARAMOUNT
SLAUSON
WASHBURN
ELM VISTA DR
RAEBERT ST
STEWART & GRAY
WOODRUFF
LAKEWOOD BLVD
ORR & DAY
GARFIELD
SAN GABRIEL RIVER FWY
RIVER FWY
SAN GABRIEL
RIVERA RD
TELEGRAPH
STA ANA
ROSEMEAD BLVD
PASSONS
GARDENDALE
GARDENDALE ST
SUVA
PARROT
BROOKSHIRE
DOWNEY
GARFIELD
ALAMEDA
DOWNEY
STEWART & GRAY
ROSECRANS
ROSECRANS AV
ROSECRANS
CORREGIDOR
COLDBROOK
ELM VISTA DR
WASHBURN
SPRY
ESTTA AV
EASTBURN AV
CONNETA AV
BENEDICT
ERNEST ST
COLUMBUS
IMPERIAL
HWY
LA CO OFFICE COMPLEX
RAILROAD
BORSON
ADORLE
LEEDS
MEADOW
MEADOW RD
NORWALK BLVD
STUDEBAKER
ORR & DAY
GETTYSBURG DR
SLAUSON
HERMES
CRESSON
PLUTON
KENNEY
QUINN
DOLLISON
LAKELAND
LAKELAND RD
ROSETON
JERSEY
FLALON
GLENWORTH
CLARMAN
DAVENRICH ST
JOSLIN ST
SANTA FE SPRINGS
SANTA FE SPRINGS RD
SUMMER
GARD
DAVENRICH
DUNE
EVERETT
GETTYSBURG
ALLARD
HERCULES
MAGNOLIA
ROSETON
JERSEY
DUNE
EVERETT ST
GETTYSBURG DR
ALLARD ST
HERCULES
SLEARY ST
BAYS
KENNEY ST
CRESSON RD
HERMES
CRESSON
PLUTON
KENNEY
LAKELAND
LAKELAND RD
QUINN
DOLLISON
ROSETON
CECILIA
BULL ST
LAKELAND
LAKELAND RD
SANTA FE SPRINGS
SANTA FE SPRINGS RD
SUMMER
GARD
DAVENRICH ST
JOSLIN ST
ROSETON
JERSEY
FLALON
GLENWORTH
CLARMAN

## 1.0 INTRODUCTION

Pursuant to the contract of January 9, 1990 between Tetra Tech, Inc. and Kirkhill, Inc, the following is an environmental property audit report of the site located at 12021 Woodruff Avenue, Downey, California, as shown on Figure 1. The property is owned by Kirkhill, Inc. and is operated as a plumbing rubber goods manufacturing plant.

The site covers an area of approximately 6.33 acres, with one major building of approximately 161,000 square feet. Five major operations are conducted in this building as follows:

- Office
- Warehouse/Storage
- Manufacturing
- Packaging
- Printing

The building is located in the center of the property with the remaining area mostly paved with asphalt concrete for parking. There is some landscaping along Woodruff Avenue. The building was initially constructed in 1952, but has undergone major additions and modifications since then.

## 2.0 PURPOSE AND SCOPE

Tetra Tech conducted the following investigations concerning the subject property:

- Site inspection of the property on January 23, 1990, for the purpose of detecting any presence of hazardous materials or any activities which may produce them;

- Review of available historical aerial photographs of the site to obtain evidence of past activities and land use which may have involved hazardous materials on the site;

- Search of ownership or property records on file at the Los Angeles County Records Office to determine if any previous owners or businesses conducted activities on the site which had the potential to use or produce hazardous substances;

- Examination of state and federal records and lists to obtain information whether any hazardous waste sites bordering the property or if there has been any hazardous waste released on or near the site; and

- Review of other appropriate files concerning the property to establish past land use and activities.

The results of each of these investigations and Tetra Tech's conclusions are described in the following sections.

## 3.0 SITE BACKGROUND

### 3.1 SITE DESCRIPTION

The property is located at 12021 Woodruff Avenue in an area historically utilized for commercial and light manufacturing purposes. The property is approximately 4,000 feet west of the intersection of Firestone Boulevard and San Gabriel River, (605) Freeway, as shown on Figure 1. The site is bordered by various small to medium-sized warehouses, wholesale distributors and manufacturers. The area in general is highly industrialized.

Basically, the site terrain is level. The majority of the area not occupied by the existing building is paved and used for parking. Some of the property adjacent to Woodruff is landscaped and is well maintained. Property surface water runoff generally drains east to Woodruff Avenue.

There were three 10,000-gallon underground storage tanks on site (2 diesel and one oil). These tanks were located just south of the building in the parking lot area. These three tanks were removed during August of 1989 by Tank Protect Engineering (TPE), Orange, California. A copy of the report prepared by TPE is included in Appendix A. A fourth 7,500-gallon diesel tank located in the courtyard was abandoned in place.

Contaminated soil was encountered during the site investigation and soil sampling activities. During the investigation, six exploratory soil borings, down to 40 feet depth, were made. Groundwater was not encountered. It was estimated that groundwater is 80 to 90 feet below the ground surface in this area. The report indicates that the contaminated soil was excavated and disposed of. The excavation was backfilled with clean imported soil material and the area paved over.

Water service for the site is provided by the local water company. No wells are on the property. The building is connected to the local sewer system.

## 3.2 SITE OPERATIONS AND HISTORY

Company operations at this site basically include the following:

- The manufacturing of rubber goods related to typical plumbing activities;
- The labeling and packaging of their manufactured rubber goods and other outside items;
- The storage and warehousing of the packaged goods; and
- The wholesale distribution of the plumbing-related rubber goods to retail outlets.

Chemicals and hazardous substances used or stored on site include oils, inks, lubricants, solvents, paints, and rubber type substances. The business has been issued EPA I.D. No. CAD008255648. A list of these chemicals and their annual consumption are included in Appendix B. Copies of the Material Safety Data Sheets (MSDS) information are included in Appendix C.

# 4.0 SITE ASSESSMENT RESULTS

## 4.1 SITE INSPECTION

On January 23, 1990, Mr. Javier Weckmann of Tetra Tech conducted an inspection of the site. Mr. Weckmann was accompanied by Mr. Ray Bellanger, Plant Manager, throughout the site inspection. The purpose of the inspection was to verify the on-site business operations, observe for visual evidence of uncontrolled hazardous waste or material, visual signs of underground tanks, contamination or any situation that would establish the potential release of hazardous substances into the environment. The inspection consisted of a walk-through of the building area and a drive by of the surrounding neighborhood. An inspection audit checklist was prepared which is included in Appendix D. Photographs taken during the site inspection are included in Appendix E.

The building has approximately 161,000 square feet and is utilized as an office, manufacturing, packaging and warehouse of plumbing-related rubber goods. An estimated 10,000 square feet is office space and 54,500 square feet is manufacturing space, with the remainder utilized primarily as warehouse space. An open area/courtyard is located in the center of the building (see Figure 2). There are approximately 112 factory and warehouse personnel, and 30 to 40 office personnel.

Chemicals stored on site are aboveground and generally kept in their original factory container. These are mostly 55-gallon drums for liquids or 60-lb sacks on wooden pallets for dry bulk chemicals. There is one aboveground 750-gallon storage tank which contains Edgeflex CX100 oil. This tank does not have any secondary containment. Some minor spills were noticed near the chemical drum storage area in the courtyard, near the air compressors, and adjacent to the high pressure machinery. These spills were being contained and cleaned-up by using standard absorbent-type material. Disposal of this absorbent material is done by the hazardous waste hauler Cosby-Overton. The amount disposed of is generally limited to one or two 55-gallon barrels every year. The floor of the building is concrete and shows

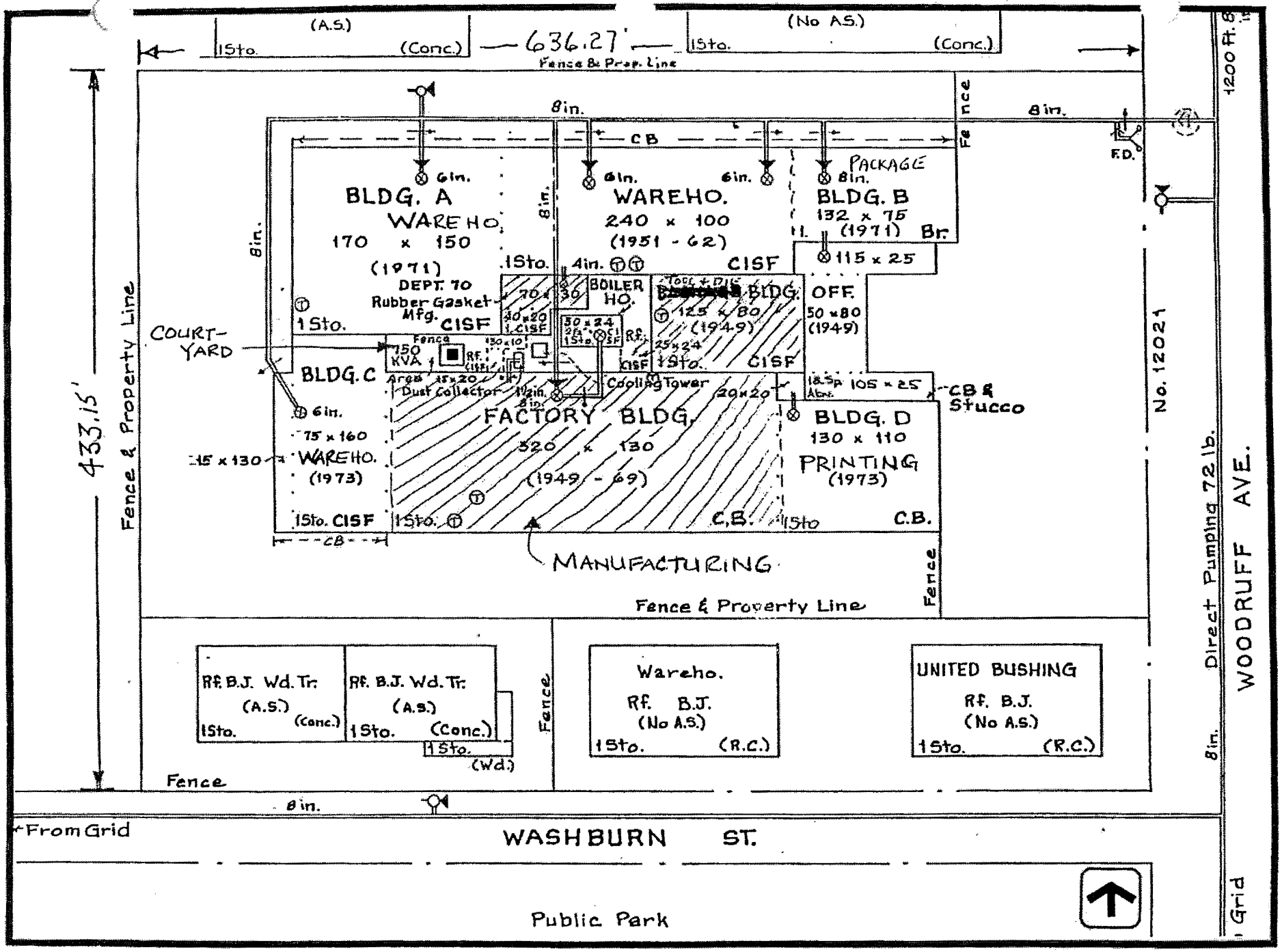



FIGURE 2 PROPERTY SITE PLAN

little or no staining. The tool and die machinery have their own oil sumps and recirculation system. Minor staining of the floor near the tool and die equipment was also observed.

The electrical station and transformers on site were replaced in 1974 and do not contain any PCB's.

There are two boilers, four rubber rolling mills and a basic dry filter baghouse (to remove air particulates) on site; these are used in the manufacturing process. Permits from South Coast Air Quality Management District to operate these equipment are included in Appendix F. Permits to operate several air pressure tank are also included in Appendix F.

During the site inspections several items and materials were noticed that potentially contain asbestos. These were the acoustic ceilings in the office area, the insulation around the cooling tower and the autoclave in the courtyard. Since no documentation exists concerning these materials, samples of these materials were taken and analyzed for asbestos content. Results documentation and discussion of the sampling is included in Appendix G.

## 4.2 OWNERSHIP REVIEW

The ownership review indicated that Kirkhill, Inc. has been the primary owner of the subject property since the commercial development of the land. Prior to Kirkhill the land was used exclusively for agricultural and farming purposes. This was evident in the aerial photo review discussed in the next section.

## 4.3 AERIAL PHOTO REVIEW

Tetra Tech reviewed several historical aerial photographs to determine apparent past uses of the property and surrounding land. The photographs reviewed were part of the Fairchild Photo Collection, maintained at the Whittier College's Department of Geology. Copies of the photos could not be obtained, but were analyzed at the collection center. Photographs

taken during the years 1927, 1928, December 21, 1944, June 18, 1947, September 30, 1949, April 11, 1950, July 15, 1953, September 8, 1958 and November 30, 1962 were available and reviewed.

The aerial review indicated the property was an open field and probably used as farmland up to 1950. From 1953 to 1958 the aerial photos show three buildings on the site with no immediate development to the north or west. The 1962 photo indicated four buildings on the site, creating the existing courtyard area. No development was evident immediately to the north.

## 4.4 REGULATORY AND FILE REVIEW

A search of government records and databases was performed to determine if any government-listed sites are located within a 1-mile radius of the subject property. The search was conducted by Environmental Information Systems, Inc., of Glendale, California and the report is included in Appendix H. The list of records searched is shown in Table 4.1. The results of the search are summarized below.

CERCLIS - Since 1982, U.S. EPA has developed and maintained lists of contaminated properties under the federal Superfund program pursuant to the Comprehensive Environmental Response Conservation and Liability Act of 1980 (CERCLA), 42 U.S.C. Section 9601 (1985). U.S. EPA discovers these sites from citizen reports, routine inspection of hazardous waste generators, treatment, storage and disposal facilities, and reporting requirements. This database tracks approximately 2300 sites of environmental concern in California.

There is one site on CERCLIS which is 0.5 mile away from the subject property. This site is Peacock Engineering located at 10670 East Firestone Boulevard. The CERCLIS indicates that this site is in the preliminary assessment stage as of October 13, 1989.

**TABLE 4.1**

**LIST OF RECORDS SEARCHED**

| DATABASE | TYPE OF RECORDS | AGENCY |
|---|---|---|
| CERCLIS | Federal Superfund Sites | U.S. EPA |
| NPL | National Priority List Sites | U.S. EPA |
| CORTESE | Hazardous Waste and Substances Site List | California Governor's Office of Planning & Research |
| BEP | Sites Authorized for Cleanup under the California Bond Expenditure Plan | CAL-DHS |
| HWP | Sites designated as Hazardous Waste Properties and Border Zone Properties | CAL-DHS |
| ASPIS | Abandoned Site Program | CAL-DHS |
| HWIS | Hazardous Waste Generators, Treatment, Storage & Disposal Facilities | CAL-DHS |
| SWIS | Active & Inactive Sanitary Landfills and Disposal Facilities | CAL-Waste Management Board |
| LUST | Leaking Underground Storage Tanks | CAL Regional Water Resources Control Boards |
| COUNTY DATA | Landfills & Waste Disposal Facilities | County Health Departments Health |

NPL - U.S. EPA maintains this list under the Comprehensive Environmental Response Conservation and Liability Act of 1980 (CERCLA) 42 U.S.C. Section 9601 (1985). Once sites have been designated on the CERCLIS List, U.S. EPA uses its Hazard Ranking System (HRS) to determine potential risks to human health and the environment. Only those CERCLIS sites which present the greatest risk are added to the NPL, which qualifies the sites to receive CERCLA remedial funding. EPA currently lists over 85 NPL sites in the State of California.

As of September 22, 1989, there are no sites listed in this database within a 1-mile radius of the subject property.

CORTESE - The California Governor's Office of Planning and Research annually publishes a listing of potential and confirmed hazardous waste sites throughout the State of California under Government Code Section 2. 65962.5. This database currently contains approximately 6,000 entries in the state of California. This list is based on input from the following agencies and sources:

1) The Toxic Substance Control Division of the Department of Health Services;
2) The Environmental Health Division of the Department of Health Services;
3) Section 23356 of the Health and Safety Code;
4) Water Resources Control Board records; and
5) California Waste Management Board records.

There are four sites on CORTESE list located within a 1-mile radius of the subject property. The nearest site is well No. 24, which belongs to the City of Downey. This well is located approximately 600 feet southeast of the subject property.

BOND EXPENDITURE PLAN - The 1989 Bond Expenditure Plan (BEP) contains a listing of all verified hazardous waste sites that are or will be targeted for abatement by the California Department of Health Services (Department) under the Hazardous Substance

Cleanup Bond Act of 1984 (Health and Safety Code Section 25356) and the Hazardous Substance Account (HSA). Hazardous waste sites may be discovered by the Department directly or referred to the Department for confirmation and follow up action by another government agency, such as a local health department, are Regional Water Quality Control Board, a responsible party or a concerned citizen. New sites are added to this database as they are verified and the "Preliminary Assessment, Site Investigation and Hazard Ranking System" processes are completed. This database is updated once annually after approval of the California state legislature and contains approximately 450 sites in the State of California.

As of January 31, 1989, there are no sites listed in this database located within a 1-mile radius of the subject property.

ASPIS - This list was developed under Section 25359.6 of the Health and Safety Code California Department of Health Services (DHS). This database contains a listing of potential hazardous waste sites identified by the historical Abandoned Site Survey Program and the current Rural Site Evaluation Program. DHS staff has interviewed officials from county health agencies, local fire departments, county agricultural commissioners, and other local agencies that could reasonably be expected to have information regarding potential waste sites. The records of the Regional Water Quality Boards, Department of Fish and Game and other state environmental regulatory agencies are also researched. DHS staff also review historical land use data sources to generate lists of potential sites . Information concerning most of the sites on ASPIS should be considered preliminary although most confirmed sites from this data base are merged into the BEP database once they have been priority ranked. This database currently contains more than 25,000 sites in the State of California. Many of these sites are currently identified as requiring no further action based on DHS determination that no release had occurred or if a release may have occurred, it did not represent a significant threat to the public or the environment.

Over 110 sites are listed in this database that are within a 1-mile radius of the subject property. Kirkhill, Inc. is also listed on ASPIS list. The majority of the sites including

Kirkhill, Inc. require no further action, and only four sites require preliminary assessments or additional study. The site with the highest priority is the Downey Dump located at 11014 Panghorn, Downey, approximately 0.5 miles northeast of the subject property.

HAZARDOUS WASTE INFORMATION SYSTEMS (HWS) - The California Department of Health Services, Toxic Substances Control Division, has developed and maintained lists of hazardous waste generators and hazardous waste treatment storage and disposal facilities in the State of California, pursuant to the Hazardous Waste Control Law (Health and Safety Code Section 25179.1 et seq). In addition, this law requires all counties to prepare and submit hazardous waste management plans. To assist the counties, the Toxic Substances Control Division maintains lists containing generation and disposal data within each county. This information has been assembled by the Toxic Substances Control Division from manifest reports required form hazardous waste generators. This database currently lists over 50,000 sites in the State of California.

Kirkhill, Inc. is not on the HWS in this database as of January 30, 1989. Eleven other sites are within a 1-mile radius.

SOLID WASTE INFORMATION SYSTEM - The California Waste Management Board maintains an inventory list of open as well as closed and inactive solid waste disposal facilities and transfer stations pursuant to the Solid Waste Management and Resource Recovery Act of 1972, Government Code Section 2.66790(b). Generally, the California Waste Management Board learns of locations of disposal facilities through permit applications and from local enforcement agencies. Since 1977, the SWIS system has grown to track approximately 1000 solid waste disposal facilities and transfer stations in the State of California.

As of September 29, 1989, there are no sites listed in this database located within a 1-mile radius of the subject property.

LEAKING UNDERGROUND STORAGE TANKS (LUST) - The California Water Resources Control Board, in cooperation with the Office of Emergency Services, compiles lists of all leaks of hazardous substances from underground storage tanks in the State of California pursuant to Section 25295 (b) of the Health and Safety Code. The nine regional boards maintain information on all reported leak cases within their jurisdiction, both for those where the regional board and where other local agencies take the lead in overseeing investigations and remedial actions. Although the data reported here represent sites where at least one leak is known to have occurred, it is not uncommon for more than one tank to have leaked at a given site or cleanup case. The total number of cases reported statewide is over 5,900.

There are 3 sites with reported leaky underground storage tanks located within a 1-mile radius of the subject property. However, none are within 0.5 mile.

COUNTY ENVIRONMENTAL HEALTH DEPARTMENT DATA - Each county in the State of California maintains an environmental health department responsible for local monitoring and enforcement of various environmental laws. Los Angeles County has provided the following specific information for inclusion in this report:

- Active Landfill listing updated to 11/20/89;
- Inactive landfill listing updated to 11/20/89; and
- Site Mitigation Log updated to 01/02/90.

There are 3 sites in this database located within a one-mile radius of the subject property.

The County of Los Angeles, Department of Health Services, Public Health Programs and Services, Public Health Investigation Department was contacted in regards to information on the subject property. The records search revealed no records or violations under the name of Kirkhill, Inc.

CITY OF DOWNEY FIRE DEPARTMENT - The City of Downey Fire Department was contacted for information regarding Kirkhill, Inc. Personal communication with Mr Bob Rowe of the City Fire Department indicates that Kirkhill does have a Hazardous Materials Business plan on file, as required by law. A copy is not included in this report, but may be requested from Kirkhill, Inc. The Fire Department will not release a complete copy of the business plan.

## 5.0 CONCLUSIONS

Through this environmental audit, Tetra Tech is not aware of any activities presently conducted on-site which may be a source of significant soil, groundwater or surface contamination. Some minor surface contamination was evident near the chemical drum storage area, the air compressors and the high pressure machinery. Good housekeeping practices and prompt cleanup of any spills should minimize any impact to local environment. Secondary containment in these areas should be constructed. The remaining area is generally kept in an organized manner and is considered clean.

In reviewing the available documentation for the removal of the three 10,000-gallon tanks and the abandonment of the 7,500-gallon tank, no official closure or certification of completed remediation from the County of Los Angeles has been received to date. The progress reports by Tank Protect Engineering have been submitted and the soil remediation work and laboratory results are being reviewed by the County. The final tank closure report is to be completed by February 14, 1990. Therefore, it should not be assumed that the tank closure is complete until it is officially approved by the County of Los Angeles, Department of Public Works. This matter should be followed up closely to assure the closure permit is issued expeditiously and no unforseen problems arise.

The asbestos sampling uncovered two asbestos containing materials on-site, the cooling tower wallboard and the office acoustical ceiling. These materials were assigned a "high" degree of hazard due to their condition and location as discussed in Appendix G. Therefore, interim controls and a maintenance program should be implemented, and the material should be removed when practical. The amount of acoustical ceiling to be removed is approximately 1,360 square feet and the amount of wallboard is unknown at this time. Notification should be posted as to the presence of asbestos containing materials at this location. This notice should include potential health hazards associated with exposure to asbestos, and should warn against sanding or cutting the material. If the acoustical ceiling or wallboard are physically disturbed, appropriate regulations should be adhered to. These regulations include CFR

1910.1001, CFR 1926.58 and Title 8 of the California Code of Regulations, General Industry Safety Orders 5208.

Tetra Tech identified over 100 sites within a one-mile radius of the subject property that were investigated, plan to be investigated, or are listed as contaminant sites in various government lists and reports. This was not surprising since the general neighborhood is highly industrialized. The subject property was listed in the ASPIS records, but had a status of "no further action required." A preliminary evaluation of these sites indicated that they should have no direct impact on the subject property.

Tetra Tech's investigation of the subject property did not include any soil or groundwater sampling or analyses and provides no analytical data or other proof of the presence or absence of contamination.

## 6.0 DISCLAIMER

This report was compiled based partially on information supplied to Tetra Tech from outside sources and other information which is in the public domain. The conclusions and recommendations herein are based solely on the information Tetra Tech obtained in compiling the report. Documentation for the statements made in the report is on file at Tetra Tech's Pasadena, California office. Tetra Tech makes no warranty as to the accuracy of statements made by others which may be contained in the report, nor are any other warranties or guarantees, expressed or implied, included or intended by the report except that it has been prepared in accordance with the current generally accepted practices and standards consistent with the level of care and skill exercised under similar circumstances by other professional consultants or firms performing the same or similar services.

None of the work performed hereunder shall constitute or be represented as a legal opinion of any kind or nature, but shall be a representation of findings of fact from records examined.

Respectfully submitted,

TETRA TECH, INC.

Javier Weckmann, P.E.
Principal Engineer

Salar Niku, REA
Project Manager

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

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ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

August 6, 1992

IN REPLY PLEASE REFER TO FILE I-12987

Mr. Gary A. Riopelle
President and C. E. O.
Kirkhill, Inc.
P. O. Box 7012
Downey, CA 90241-0030

Dear Mr. Riopelle:

**HAZARDOUS MATERIALS UNDERGROUND STORAGE**
**SITE ASSESSMENT/REMEDIAL ACTION PLAN CLOSURE CERTIFICATION**
**FACILITY LOCATION: 12021 WOODRUFF AVENUE, DOWNEY**
**CLOSURE PERMIT NUMBER: 5999B**

This office has reviewed the final report submitted on August 5, 1992. Based on the information submitted, this letter confirms the completion of site investigation and remedial action at the above site. With the provision that the information provided to this agency was accurate and representative of existing conditions, it is our position that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present or future operations at this site. Nor does it relieve you of the responsibility to clean up existing, additional or previously unidentified conditions at the site which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Additionally, be advised that changes in the present or proposed use of the site may require further site characterization and mitigation activity. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings or site usage.

Any questions regarding this matter should be directed to Ofori Amoah at (818) 458-3573.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

P. A. Proano

Pat A. Proano
Supervising Civil Engineer II
Waste Management Division

OKA:rm
WP/12987-1

cc: California Regional Water Quality Control Board
Tank Protect Engineering

**TANK PROTECT ENGINEERING**

1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
TEL: (714) 549-9009 (213) 592-4771
FAX: (714) 549-0739

County of Los Angeles
Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331

RECEIVED
DEC 08 1989
KIRKHILL, INC.

**Subject:** Work Progress Report
Closure Permit No. 5999
File No. 2987 R/C 1f
TPE File KIRKHILL.ET

**Property Location:** Kirkhill Inc.
12021 Woodruff
Downey, CA 90241

December 5, 1989

Dear Sir:

We submitted the subject report for the work done at the above mentioned site to your office.

Please feel free to contact us if there are any questions regarding this progress report.

Sincerely,

Eric Taubin
Hydrogeological Manager

enclosure

cc: Kirkhill Inc

**Stephen M. Lankford**
**California State Registered Geologist # 4283**
**2734 Johnson Drive, Suite 201**
**Ventura, Ca 93003**
**(805) 644 - 9916**

Tank Protect Engineering
1963 North Main Street
Orange, Ca 92665

Attn: Cyrus Namini

November 13, 1989

Subject: Work Progress Report

Property: Kirkhill Inc.

Location: 12021 Woodruff.
Downey, Ca 90241.
Permit 5999
File 2987 R/C 1F

TPE File KIRKHILL.ET

Gentlemen:

This report summarizes the work done on the above said site by Tank Protect Engineering, regarding removal of two diesel 10,000 gallon tanks, one oil 10,000 - gallon tank, site investigation and additional excavation activities to determine lateral and vertical extend of contamination.

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## TANKS PULL - UP ACTIVITIES

On August 24, 1989 one 10,000 gallon gas tank which contained naphthenic type oil and two 10,000 gallon diesel tanks were removed from the subject site. The tanks were removed in accordance with local city and state regulations (i.e. drained, uncovered, washed, triple rinsed, decontaminated, purged with dry ice, and removed when L.E.L. readings were below the allowable level). The tanks were disposed of by delivery to American Metal Recycling Inc., at their facility located at 2202 S. Millken, Ontario, Ca 91761 for destruction. The liquid waste from triple rinse were shipped to De Menno/Kerdoon, at their location at 2000 N. Alameda St. Compton, Ca 90222 for disposal. Copy of liquid manifest and certificate of tank disposal attached.

## ON-SITE INVESTIGATION

After removal, a total of seven soil samples were taken on August 24, 1989 using a backhoe, from approximately 3 feet below the each end of the three underground storage tanks (sample points K-1, K-2, K-3, K-4, K-5 and K-6; see Figure 1) and one soil sample from Spoil pile (sample points K-7). All the soil samples obtained were immediately packed overflowing into brass jars, capped with a polyethylene lid, sealed with duct tape, labeled and immediately placed into a refrigerated ice chest. The samples were then transported by a company vehicle to a state certified laboratory (Ensotech Inc) accompanied by a chain-of-custody form. The chain-of-custody and history of events for the soil samples and analysis are documented in the attached enclosures. Originally liquid contents of the tank # 1 and the tank # 3 were mistakenly identified as diesel and oil respectively. An additional investigation of historical events indicates correct contents of the tank # 1 was naphthenic type oil and the tank # 3 was diesel.

As indicated from the laboratory test results, soil sample taken from under east end of oil tank #1 (sample point K-5) and soil sample from spoil pile (sample point K-7) showed high levels of total petroleum hydrocarbon (TPH) of 45,714 mg/kg and 5,030 mg/kg of total hydrocarbons respectively. Less than maximum allowable levels of hydrocarbon contamination were found in the soil samples K-1, K-2, K-3, K-4 and K-6. The contaminated soil was removed. The contamination was identified by color and odor.

## EXPLORATORY WELL DRILLING

Based upon the laboratory test results obtained and our site observation, it was recommended that a total of six exploratory borings be made in order to approximate the limits of vertical and lateral contamination.

Four borings (B-1, B-2, B-3 and B-4) were drilled on September 26 and two more (B-5 and B-6) on September 27, 1989 at locations shown on Figure 2 - Plot Plan to determined a vertical extent of hydrocarbon contaminations. A Drill-Line Mobile E-53, 3-inch-dimeter hollow stem auger drilling rig was utilized for

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this borings. Soil samples were collected at 5 feet intervals using a california split sampler. The borings were drilled to a total depth of 40 feet. The lithologies of the samples were classified in accordance with the Unified Soil Classification System (Plate A-2). The lithologic logs of drilled well are enclosed. Upon completion of drilling, the borings were backfilled with soil.

## SOIL SAMPLING

Soil samples were monitored using Organic Vapor Analysis (OVA) for analyses of the emission of Volatile Organic Compounds (VOC) from soil per SCAQMD requirement. OVA reading were conducted continuously. A GasTechtor Hydrocarbon Surveyor Model 1314 was used to detect and indicate in parts per million (PPM) concentrations of hydrocarbons vapor from soil samples. The instrument has been properly calibrated by Allied Industrial Distributors.

The on-site observation and OVA reading were utilized to select a soil sample for laboratory analysis. A total of twelve soil samples from depths between 15 feet to 40 feet of six borings were considered to be most representative of the contamination. The selected soil samples were immediately end wrapped, capped, sealed by tape, labeled, placed into an ice chest and submitted for Hydrocarbon 418.1 analysis to Associated Laboratories and Ensotech Inc. Both laboratories are state-certified laboratories and chain of custody forms are attached. Copies of the laboratory test results on soil samples are enclosed.

Soil samples B-3/20 and B-6/20 indicated slight levels of hydrocarbon contamination. Laboratory results of soil samples taken at the depth of 20 feet (samples B-3 and B-6) showed 285 mg/kg and 158 mg/kg of TPH respectively. Test results of soil samples B-1/15, B-2/20, B-3/20, B-4/20, B-4/30, B-5/20 and B-6/20 are well within the acceptable limits of hydrocarbon content. Based on the above mentioned laboratory test results (see Appendix) contaminated soil zones are located in the vicinity of the removed oil tank pit #1 (Figure 2).

## GROUNDWATER

Groundwater was not encountered during the excavation. The depth of water table is reported to be at 89 feet below the surface of the ground at water well #1587, which located approximately .2 mile to the east from the site of investigation, as measured in April, 1989. (Data obtained from Flood Control District, ph: (818) 458-6120.

## EXCAVATION ACTION

Based on the data presented herein, it is evident that high levels of hydrocarbon contamination of the soil existed in the oil tank pit. Based on the lithological data presented and typical alluvial basin setting, the soil texture ranges from clay to sand. Based on lithology in conjunction with analytical data

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for a number of leaks that have been investigated in the area, we assume hydrocarbon contamination is contained within clayey formation under the leak location.

On October 31, 1989 additional excavation of oil and diesel contaminated soil from removed tank pits down to 23 feet using a 235 Ecco excavator was performed. OVA monitoring and visual observation was utilized to determine the extent of contamination. A total of eight verification samples were collected using the excavator. All soil samples were immediately end wrapped, capped, sealed by tape, labeled, placed into ice chest and immediately delivered to state certified laboratory - Associated Laboratories, for Hydrocarbon 418.1 analysis with 24-hour turnaround. Chain of custody forms are attached as are copies of laboratory test results.

Six samples were analyze to characterize the soil contamination profile. As shown from the laboratory test results, soil samples taken from west end of oil tank pit#1 (sample point VS-6) indicated high level of hydrocarbon of 27,100 mg/kg. Non detectable level of hydrocarbon reported in the soil samples VS-1, VS-2, VS-3, VS-5 and VS-7. Additional excavation down to 25 feet was conducted on November 6, 1989 in the south west corner of the oil tank pit # 1. The contaminated soil was removed and piled separately. Soil sample VS-8 was collected from the west end of the oil tank pit#1, as was analyzed within 24-hours by Associated laboratories. The laboratory result indicated 55 mg/kg of hydrocarbon.

## REMEDIAL ACTION PROPOSAL

Based on the procedure and analysis discussed above, it was concluded that all contaminated soil has been removed from tank pits area. We propose to slurry in place the diesel tank # 4. The non-treatable naphthenic oil contaminated soil and the clumps to be hauled to the state approved waste dump landfill. The Tank Protect Engineering soil remediation process will be performed to abate the level of hydrocarbon contamination in piles, utilizing a special silica catalyst and hydrogen peroxide.

Hydrogen peroxide is adsorbed onto the the silica catalyst resulting in a slow release over time, enabling the treatment process to continue for several hours after application. A unique characteristic of silica catalyst is its catalytic surface which makes it several times more reactive and brings about rapid and complete oxidation of all hydrocarbons and other organics. Hydrogen peroxide also reacts with organic tetraethyl lead, cyanides, sulfides, and mercaptans. Hydrogen peroxide spontaneously decomposes to oxygen and water over time, so excessive peroxide during the treatment will not leave a hazardous residue. Nor is hydrogen peroxide toxic. When the soil is sprayed with hydrogen peroxide, an aerosol of hydrogen peroxide stays on top of the soil surface. This aerosol "blanket" prevents the escape of volatiles during mixing, thus no odors are produced. It is also in this aerosol space that photochemical oxidation of the hydrocarbons takes place. The

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retained peroxide acts as a source of oxygen in the soil. Oxygen promotes aerobic bacterial growth, which further decompose any remaining organic residue.

Laboratory analysis will be performed of soil samples collected at three inches under the surface of the treated soil and continuing until a non-detectable level of hydrocarbon is reached. All soil samples will be analyzed by EPA Method 418.1.

After complete final verification soil sampling process the excavation site will be backfilled and compacted, using the clean decontaminated soil.

We trust that this proposal provides the required information for investigated site and we are looking forward to working with you on this project. Should you have any questions or suggestions regarding this remediation proposal, please contact Tank Protect Engineering office.

Very Truly Yours,

REGISTERED GEOLOGIST
STEPHEN M. LANKFORD
No. 4283
STATE OF CALIFORNIA

Stephen M. Lankford.....California State
Registered Geologist # 4283

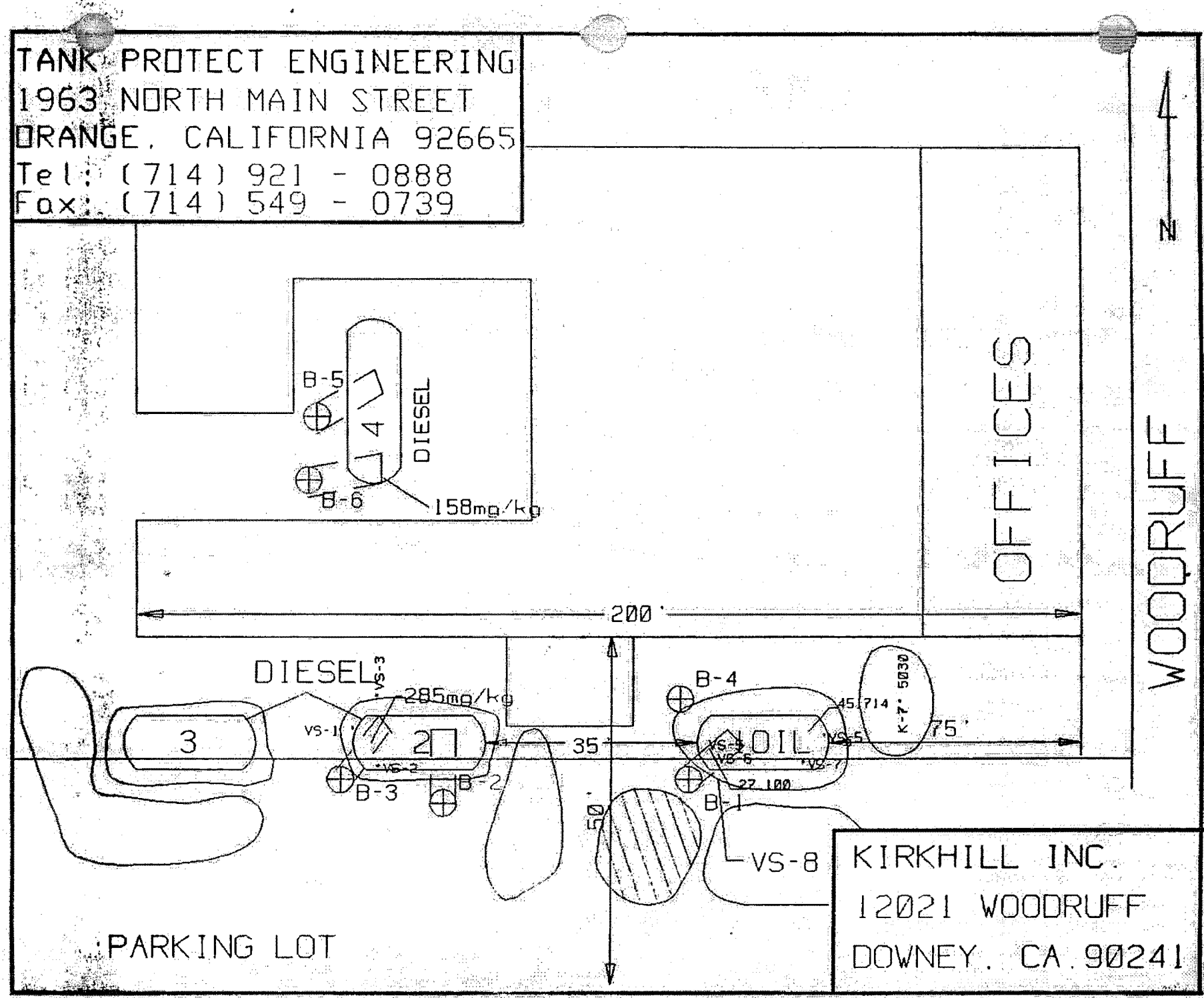
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# A P P E N D I X

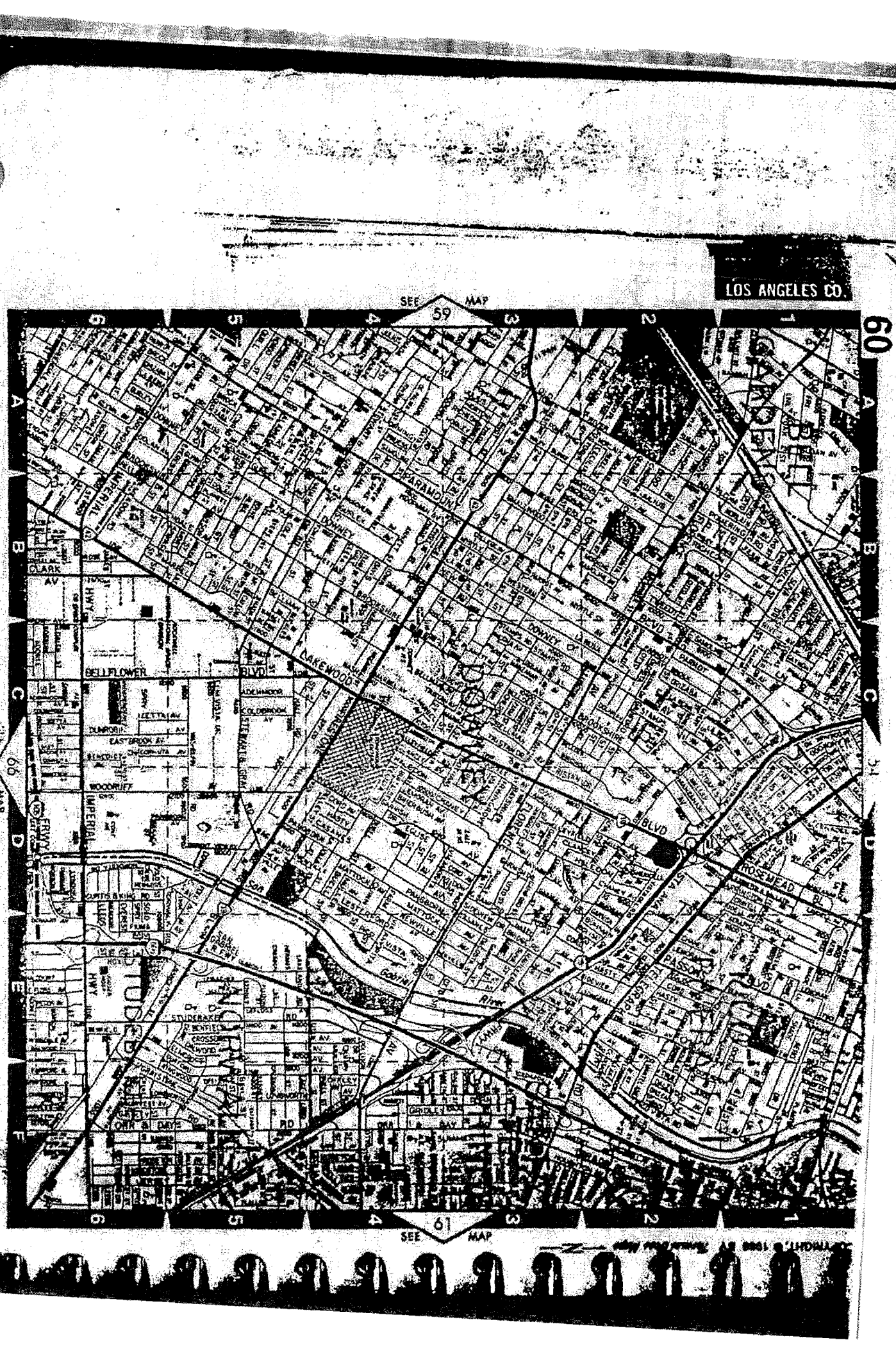
## SUMMARY SAMPLES REPORT

| FILE | SAMPLE No. | DATE | DEPTH | TPH DIESEL mg/kg | TRPH mg/kg | ETHYL BENZENE mg/kg | TOLUENE mg/kg | TOTAL XYLENE mg/kg |
|---|---|---|---|---|---|---|---|---|
| | | 1989 | | | | | | |
| F-404 | K-1 | 08/24 | 3' | ND<20 | 52 | | | |
| F-405 | K-2 | 08/24 | 3' | ND<20 | 32 | | | |
| F-406 | K-3 | 08/24 | 3' | | 32 | | | |
| F-407 | K-4 | 08/24 | 3' | | 325 | | | |
| F-408 | K-5 | 08/24 | 3' | | 45,714 | | | |
| F-409 | K-6 | 08/24 | 3' | | 1 | | | |
| F-410 | K-7 | 08/24 | 3' | | 5,030 | | | |
| F-912 | B-1 | 09/26 | 15' | | 10 | | | |
| F-913 | B-2 | 09/26 | 20' | | ND<10 | | | |
| F-914 | B-3 | 09/26 | 20' | | 285 | | | |
| F-915 | B-4 | 09/26 | 20' | | 12 | | | |
| F-916 | B-4 | 09/26 | 30' | | 14 | | | |
| | B-5 | 09/27 | 20' | | 27 | | | |
| | B-6 | 09/27 | 20' | | 158 | | | |
| G-112 | B-6 | 10/17 | 15' | ND<10 | | | | |
| G-113 | B-6 | 10/17 | 30' | ND<10 | | | | |
| G-114 | B-6 | 10/17 | 40' | ND<10 | | | | |
| G-115 | B-5 | 10/17 | 15' | ND<10 | | | | |
| G-116 | B-5 | 10/17 | 30' | ND<10 | | | | |
| | VS-1 | 10/31 | 23' | ND<10 | | | | |
| | VS-2 | 10/31 | 22' | ND<10 | | | | |
| | VS-3 | 10/31 | 23' | ND<10 | | | | |
| | VS-5 | 10/31 | 21' | ND<10 | | | | |
| | VS-6 | 10/31 | 23' | 27,100 | | | | |
| | VS-7 | 10/31 | 23' | ND<10 | | | | |
| | VS-8 | 11/06 | 25' | 55 | | | | |

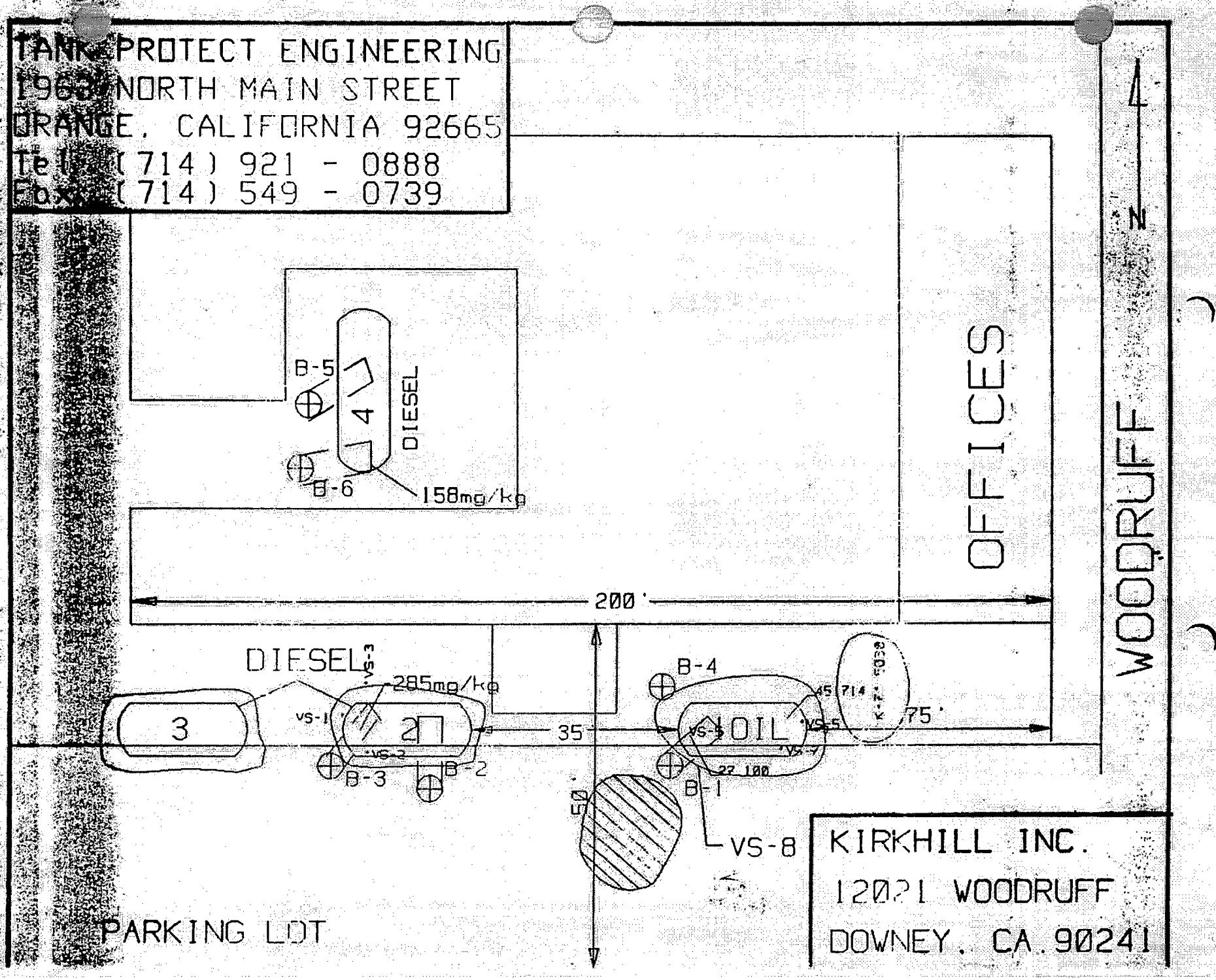
TANK PROTECT ENGINEERING
1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
Tel: (714) 921 - 0888
Fax: (714) 549 - 0739




KIRKHILL INC.
12021 WOODRUFF
DOWNEY, CA. 90241


LOS ANGELES CO.
60
SEE MAP 59
SEE MAP 61
SEE MAP 66
PARAMOUNT
DOWNEY
LAKEWOOD
BELLFLOWER BLVD
CLARK AV
WOODRUFF
IMPERIAL HWY
FRWY
ROSEMEAD BLVD
PASSONS BLVD
STUDEBAKER
1 2 3 4 5 6
A B C D E F

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Fax: (714) 549 - 0739




KIRKHILL INC.
12021 WOODRUFF
DOWNEY, CA. 90241

| MAJOR DIVISIONS | | | | | TYPICAL NAMES |
|---|---|---|---|---|---|
| COARSE-GRAINED SOILS (More than half is larger than No. 200 sieve) | GRAVELS (More than half coarse fraction is larger than No. 4 sieve size) | Clean gravels with little or no fines | GW |  | WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES |
| | | | GP |  | POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES |
| | | Gravels with over 12% fines | GM |  | SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES |
| | | | GC |  | CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES |
| | SANDS (More than half coarse fraction is smaller than No. 4 sieve size) | Clean sands with little or no fines | SW |  | WELL-GRADED SANDS, GRAVELLY SANDS |
| | | | SP |  | POORLY GRADED SANDS, GRAVELLY SANDS |
| | | Sands with over 12% fines | SM |  | SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES |
| | | | SC |  | CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES |
| FINE-GRAINED SOILS (More than half is smaller than No. 200 sieve) | SILTS AND CLAYS Liquid limit 50% or less | | ML |  | INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY |
| | | | CL |  | INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS |
| | | | OL |  | ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY |
| | SILTS AND CLAYS Liquid limit greater than 50% | | MH |  | INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS |
| | | | CH |  | INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS |
| | | | OH |  | ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS |
| HIGHLY ORGANIC SOILS | | | Pt |  | PEAT AND OTHER HIGHLY ORGANIC SOILS |

■ – "Undisturbed" S&H or Shelby tube sample

▨ – Bulk or classification sample

▨ – Standard Penetration Test sample

▩ – No sample recovered

I – Core sample

Blows/ft – Blows required to drive sampler 12 inches with a 140-pound hammer falling 30 inches. Blow counts for S&H samplers are converted to approximate "equivalent" SPT N values (N = 0.5 X S&H blows per foot)

HC Odor – Hydrocarbon Odor
- No – No Odor
- Lo – Slight Odor
- Md – Moderate Odor
- Sg – Strong Odor

PID – Photoionization Detector reading (10.2-electron-volt lamp, calibrated using a benzene standard)

OVA – Organic Vapor Analyzer (flame ionization detector) calibrated using a methane standard

* – Sample submitted for chemical analysis

** – Based on HLA Temporary Bench Mark (TBM) shown on Plate 2. Assumed elevation = 100.00'.

KEY TO BORING LOG

Tank Protect Engineering
Environmental Management

SOIL CLASSIFICATION CHART & KEY TO BORING LOG

PLATE 2

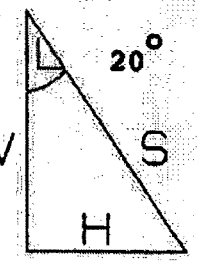
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| HK | 19233,001.11 | CS | 5/89 | | |

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B - 1

V=S( cosL )

H=S( sinL )




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft. | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay, Plastic (CL) | No | | | 4-10-12 |
| 20 * | No Recovery Twice | | | | 4-12-20 |
| 25 * | Yellow Sand (SP)<br>Medium-grained | No | | | 22-45-50 |
| 30 * | SP<br>Medium-grained | No | | | 12-32-45 |
| 35 * | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

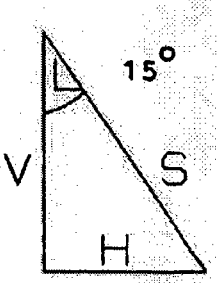
DRILLING DATE: 09/26/89

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B- 2

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay (CL) | No | | | 5-11-20 |
| 20 * | Brown Clay (CL) | No | | | 6-10-13 |
| 25 * | Yellow Sand (SO) Fine-grained | No | | | 10-33-40 |
| 30 * | SP | No | | | 13-21-50 |
| 35 | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

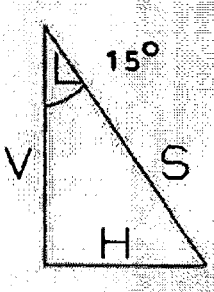
DRILLING DATE:

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B- 3

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay, Moist (CL) | No | | | 5-11-15 |
| 20 * | CL, Moist | No | | | 12-20-35 |
| 25 * | Yellow Sand (SP) Fine-grained | No | | | 5-17-20 |
| 30 | | | | | |
| 35 | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

PROJECT: **Kirkhill**

LOCATION: **12021 Woodruff**
**Downey, CA 90242**

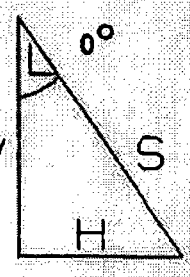
DRILLING DATE:

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B- 4

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| | 3" Asphaltic Concrete | | | | |
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay (CL) | No | | | 4-6-9 |
| 20 * | Brown Clay (CL) | No | | | 7-9-16 |
| 25 | | | | | |
| 30 * | Yellow Sand (SP) Fine Grained | No | | | 13-23-35 |
| 35 | | | | | |
| 40 * | Silts (ML) Dense, Moist, Fine-grained | No | | | 5-11-13 |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

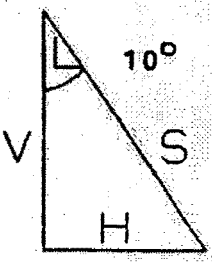
DRILLING DATE: 09/26/89

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B - 5

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft. | BLOWS COUNT |
|---|---|---|---|---|---|---|
| | | 3" Asphaltic Concrete | | | | |
| 5 | | | | | | |
| 10 | * | Brown Silty Clay (CL) | No | | | 6-12-13 |
| 15 | * | CL | No | | | 4-8-12 |
| 20 | * | Brown Sandy Clay (CL) | Lo 15 | | | 5-15-25 |
| 25 | * | Silty Sand (SM) | No | | | 6-7-23 |
| 30 | * | SM | Lo | | | 5-12-35 |
| 35 | * | Sand (SP) | No | | | 6-10-32 |
| 40 | * | Silts (ML) Moist | No | | | 12-18-22 |
| 45 | | | | | | |
| 50 | | | | | | |
| 55 | | | | | | |
| 60 | | | | | | |

PROJECT: Kirkhill
LOCATION: 12021 Woodruff
Downey, CA 90242

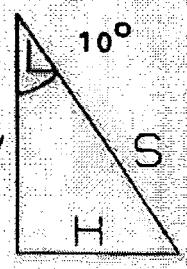
DRILLING DATE: 09/27/89
DRILL HOLD NO: B-5

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B - 6

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| | 3" Asphalt Concrete<br>Brown Silty Clay (CL) | | | | |
| 5 | | | | | |
| 10 * | Brown Silty Clay (CL) | No | | | 3-6-10 |
| 15 * | CL | No | | | 6-15-18 |
| 20 * | Poorly Graded Sands (SP) | No | | | 4-15-25 |
| 25 | | | | | |
| 30 * | Brown Sandy Clays (CL) | No | | | 12-35-50 |
| 35 | | | | | |
| 40 * | Silty Soils (ML)<br>Moist | No | | | 12-15-20 |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

DRILLING DATE: 09/27/89

DRILL HOLD NO: B-6

Chemicals Used by Kirkhill, Inc.

**PUNCH OPERATION**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Red Sheet | Styrene butadiene coplymer | 29,000/year | 1 |
| SM2140 | Silicone Emulsion | | 2 |
| Shell TURBO Oil 320 | Lubricating Oil | 10 gal/year | 1 |

**MILL OPERATION**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Walnut Shell Flour | Walnut Shell | 52,000 lbs/year | 2 |
| Baking Soda | Sodium Bicarbonate | 3124 lbs/year | 1 |
| Ground Rubber | Mixture of Natural & Synthetic Rubbers, Carbon Black, Filters & Oils | 68,852 lbs/year | Possible Carcinogen, 2 |
| CELOGEN OT | p,p'-oxybis (benzene-sulfonyl hydrazide) | 474 lbs/year | Flammable |
| EDGIFLEX CX100 Process Oil | Severely Solvent Treated Oil | 30,000 gal/year | 2 |
| GK 990; 995 | Kaolin Clay #1332-58-7 | 519,994 lbs/year | 1 |
| GENTRO | Styrene Butadiene Rubber | 93,518 lbs/year | 1 |

**MILL OPERATION (continued)**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| GENTRO | Styrene Butadiene Rubber with Severely Treated Naphthenic Petroleum Oil | 112,966 lbs/year | 2 |
| Mineralite Mica 3X | Potassium Aluminosilicate | 300 lbs/year | 1 |
| Davison Kaolin Clay | Hydrated Aluminum Silicate | 81,950 lbs/year | 1 |
| Nuslip | | 1740 lbs/year | 1 |
| Omyacarb 15 | | 176,228 lbs/year | 1 |
| PARACRIL SPECIAL | Acrylonitrile butadiene copolymer | 34,044 lbs/year | 1 |
| PARACRIL | Acrylonitrile butadiene copolymer | 4510 lbs/year | 1 |
| PEPITIZER 932 | Paraffinic Oil-Organic Sulfonate | 2200 gal/year | 2 |
| Yellow Protopet 2A | Petrolatum NF | 9638 lbs/year | 1 |
| RS Compounds | Uncured Rubber Blend | 900 lbs/year | 2 |
| RS Compounds | Uncured Rubber Blend | 15,920 lbs/year | 2 |
| RS Compounds | Uncured Rubber Blend | 3760 lbs/year | 2 |

**MILL OPERATION (continued)**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| ROYALENE | Ethylene-Propylene "diene" rubber | 916 lbs/year | 1 |
| ROY-CAL-L<br>ROY-CAL-X | Calcium Carbonate | 8186 lbs/year | 1 |
| Rubberol Compound | Semi-solid Fatty acid | 7634 lbs/year | 1 |
| SMR | Polyisoprene Rubber, Natural | 140,344 lbs/year | Slightly Flammable, 2 |
| POLYSAR SS 255 | High Styrene Rubber | 10,816 lbs/year | 2 |
| SBR | Styrene Butadiene Rubber | 44,652 lbs/year | 2 |
| TAKTENE 220 221, 1203 G1 | Butadiene Rubber | 10,440 lbs/year | 2 |
| Ultramarine Blue | CI Pigment Blue 29 | 338 lbs/year | 1 |
| ZEOLEX | Sodium Alumino-silicate | 45,348 lbs/year | 1 |
| Ze-O-Sil 35 | Hydrated Silicon Dioxide | 19,506 lbs/year | 2 |
| Ze-O-Sil 125 MP | Hydrated Silicon Dioxide | 39,600 lbs/year | 2 |
| Zinc Sterate | Zinc Sterate | 260 lbs/year | 2 |
| Sulfur | Sulfur | 8272 lbs/year | Dust Ignitable in Air |

**MILL OPERATION (continued)**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Pasco Zinc Oxide | Zinc Oxide | 21,120 lbs/year | 2 |
| Q-559 Stearic Acid | Stearic Acid | 5574 lbs/year | 1 |
| Emery 400 Stearic Acid | Commercial Stearic Acid | | 1 |
| Vulkacit NZ/ EG-C | N-Tert-Butyl-2-Benzothiazyl sulphenamide coated with mineral oil | 5538 lbs/year | 2 |
| ETHYL TUEX | Tetraethyl thiuram disulfide | 1210 lbs/year | 1 |
| BUTAZATE | Zinc dibutyldithio carbamate | 2496 lbs/year | 1 |
| NAUGEX MBTS Pellets | 2,2'-dibenzo thiazolyl disulfide with a binder system of 2.0% napthenic oil and 0.5% poly-vinyl alcohol | 1590 lbs/year | 1 |
| Rhenogram MBT-80 | 2-Mercapto-Benzothiazole/ Polymer Binder | 238 lbs/year | 2 |
| OXAF | Zinc-2-mercap tobenzothiazole | 1086 lbs/year | 1 |
| OCTAMINE | Octylated diphenylamine | 5352 lbs/year | 1 |
| NAUGARD SP | Styrenated Phenol | 1210 lbs/year | 1 |
| Ethanox 702 Antioxidant | 4,4-methylene -bis-(2,6-di-tert-butylphenol) | 656 lbs/year | 2 |

**MILL OPERATION (continued)**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Carboxwax Sentry Polyethylene Glycol 3350 | Polyethylene Glycol | 1844 lbs/year | 2 |
| Magnesium Oxide and all Elastomag MgO's | Magnesium Oxide | 170 lbs/year | 1 |
| FLEXZONE 6H<br>dust- | N-phenyl-N'-cyclohexyl p-phenylene diamine | 220 lbs/year | May form explosive air mixtures |
| MONEX | tetramethyl thiuram mono sulfide | 1382 lbs/year | 2 |
| Epolene Waxes | Polyolefin | 2150 lbs/year | 2 |
| SP-6601 | Phenolic Resin | 12,140 lbs/year | 2 |
| SUNPROOF WAXES | Blend of selected hydocarbon waxes | 3762 lbs/year | 1 |
| Aristowax 125 | Petroleum Hydrocarbon | 2654 lbs/year | 2 |
| Tiona W.D.B. & V.C. | Anatase Titanium Dioxide Pigment | 17,364 lbs/year | 2 |
| CRYSTEX | Insoluble Sulfur (Oil-Treated) | 3756 lbs/year | Dust Ignitable in Air |
| Akrosperse 544 Red EPMB | Dispersion of pigment red | 38 lbs/year | 2 |

**MILL OPERATION (continued)**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Stan-Tone 40MB08 Blue | Pthalocyanine Blue Master batch Dispersion | 502 lbs/year | 1 |
| Stan-Tone 12MB01 Yellow & 12MB06 Yellow | Titanium Dioxide Calcium Carbonate | 386 lbs/year | 2 |
| Stan-Tone 15MB03 Orange | Dianisidine Orange Masterbatch Dispersion | 26 lbs/year | 2 |
| Green/545 | Propriety Information | Discontinued | |
| Disco 503 Red M/B | Pyrazolone Red Pigment | 126 lbs/year | 2 |
| Rhenogran FE Red 80 | Iron Oxide Polymer Binder | 2426 lbs/year | 1 |

**MAINTENANCE**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Acetylene | Acetylene | Stock 5 cylinders | 2 |
| Aide | Alkyl Dimethyl Benzyl Ammonium Chloride | 30 gal/year | 2 |
| Anderol 500 Oil | Mixture Esters | 20 gal/year | 1 |
| TSP | Sodium Phosphate Tribasic | constantly used | 1 |
| DSP | Disodium Phosphate | constantly used | 1 |

**MAINTENANCE (continued)**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| STPP | Sodium Tripoly phosphate | constantly used | 1 |
| Caustic Soda Solution 50% | Sodium Hydroxide Water | constantly used | 2 |
| Soda Ash | Sodium Carbonate Anyhydrous | constantly used | 2 |
| Sodium Sulfite, Anhydrous | Sodium Sulfite Anhydrous | constantly used | 2 |
| Glassy Sodium Phosphate | Sodium Hexameta-phosphate | constantly used | 2 |
| Kirkhill Safety Solvent | N/A | 100 gal/year | 2 |
| Kirkhill Soap | Dishwashing Liquid | 200 gal/year | 1 |
| Mobil Hydraulic oil AW 68 | Petroleum Hydrocarbons and Additives | 700 gal/year | 2 |
| Mobilmet S 122 | Petroleum Hydrocarbons and Additives | 200 gal/year | 2 |
| Mobiltac MM | Petroleum Hydrocarbons and Additives | 50 gal/year | 2 |
| Mobil Delvac 1210 | Petroleum Hydrocarbons and Additives | 15 gal/year | 2 |

**MAINTENANCE (continued)**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Mobilgear 632 | Petroleum Hydrocarbons and Additives | 100 gal/year | 2 |
| Mobilgear 630 | Petroleum Hydrocarbons and Additives | 15 gal/year | 2 |
| Mobil 600 W Cylinder Oil | Petroleum Hydrocarbons and Additives | 150 gal/year | 1 |
| Mobile DTE Oil Light | Petroleum Hydrocarbons and Additives | 20 gal/year | 2 |
| Mobile DTE Oil Extra Heavy | Petroleum Hydrcarbons and Additives | 15 gal/year | 1 |
| Mobil Vactra Oil No. 2 | Petroleum Hydrocarbons and Additives | 5 gal/year | 2 |
| MPG-2 | Grease | 500 lbs/year | 2 |
| Nitrogen | Nitrogen | Stock 3 cylinders | 1 |
| Oxygen | Oxygen | Stock 5 cylinders | 1 |
| PIG absorbent sock | Magnesium Alumino-silicate | 160 pkgs/year | 2 |
| Sodium Bisulfate Globular | Sodium Bisulfate | constantly used | 2 |
| Blue Vitriol | Copper sulfate | constantly used | 2 |
| HTH Dry Chlorinator | Hypochlorite | constantly used | 2 |

**MAINTENANCE (continued)**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Glassy Sodium Phosphate | Sodium Phosphate | constantly used | 2 |
| Withrow 792 Solvent | Petroleum Solvent | 100 gal/year | 2 |
| Zim-Sorb | Mixed Aluminous Magnesium silicates | 3 Tons/year | 2 |
| Castrol Kleen 3400 | Petroleum Solvent | 50 gal/year | 2 |
| Super-Tex 1 | Titania | 100 lbs/year | 2 |
| Meehanite Gray Iron, Ductile, Nodular Iron Castings | Metal Oxides | 10 lbs/year | 2 |

**PRINT OPERATION**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Methyl Ethyl Ketone | Methyl Ethyl Ketone | 35 gal/year | Flammable Liquid, 2 |
| Heidelburg Ink | Oil Base Letterpress | 90 lbs/year | 2 |
| Model 375 Permanent Care Black Paste Ink | Mixed Glycols | 1 lb/year | 2 |

**PRESSING OPERATION**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Outrite 130 | Freon 113 | 192 (14 1/2 oz) cans/year | 2 |
| 00216 Silicone Mold | Methylene Chloride Freon | 600 (20 oz) cans/year | 2 |
| SM2140 | Silicone Emulsion | 900 lbs/year | 2 |

**MOLD ROOM**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Alkaline Rust Remover | Sodium Hydroxide Kerosene | 1500 lbs/year | 2 |
| Turco W.O. #1 | Phosphoric Acid 2-Butoxy ethanol | 28 gal/year | 2 |

**EXTRUSION OPERATION**

| Trade Name | Chemical Name | Annual Consumption | Comments |
|---|---|---|---|
| Lapping Vehicle #3 | Low Viscosity Hydrocarbons | 25 gal/year | 2 |
| Glycerized Sanilube | | 50 gal/year | 1 |
| Ink | Industrial Marking Ink | 2 gal/year | 2 |
| Isopropyl Alcohol 99.7% | 2-Propanol | 2 gal/year | Flammable Liquids, 2 |
| Crystolon | Silicon Carbide | 25 lbs/year | 2 |

Comments: 1 -- Nonhazardous Material
2 -- See Materials Safety Data Sheet (MSDS) for Hazardous Health Information

# APPENDIX K:

# ORSWELL AND KASMAN "PHASE I SITE ASSESSMENT REPORT" DATED AUGUST 10, 2005

# PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

| | |
|---|---|
| SUBJECT PROPERTY: | INDUSTRIAL BUILDINGS<br>12021-12023 WOODRUFF AVENUE<br>DOWNEY, CALIFORNIA 90241 |
| REPORT DATE: | AUGUST 10, 2005 |
| CLIENT: | MR. TOM OLSEN<br>OLSEN FAMILY TRUST<br>1242 NORTH KENNYMEAD STREET<br>ORANGE, CALIFORNIA 92869 |
| PREPARED FOR: | MR. TOM OLSEN<br>OLSEN FAMILY TRUST |

WRITTEN AND REVIEWED BY:

JOHN E. ORSWELL
REGISTERED ENVIRONMENTAL ASSESSOR

REGISTERED ENVIRONMENTAL ASSESSOR
JOHN E. ORSWELL
No. 1259
Expires: 6/30/06
STATE OF CALIFORNIA

P05260

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Prepared by
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**ORSWELL & KASMAN, INC.**
**PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT**

INDUSTRIAL BUILDINGS
12021-12023 WOODRUFF AVENUE
DOWNEY, CALIFORNIA 90241

## 1.0 SUMMARY

Based on a review of regulatory records, historical site information, and a visual inspection of the subject property and surrounding area, this assessment has revealed no *recognized environmental conditions* or *historical recognized environmental conditions* in connection with the Property, except as follows:

1) According to the records of the State of California Regional Water Quality Control Board (RWQCB), in March 1990, the subject property reported an unauthorized release of diesel fuel from a leaking underground storage tank. The tank and the impacted soil was removed from the site, and the file was closed in August 1992;

2) An inspection of the subject property determined there were visible stains of oil on the paved surface and on the exterior wall near the aboveground process oil storage tank on the south side of the building. In addition, water-soluble oil was observed on the paved surface near the cooling system in the open area near the center of the building; and

3) In addition, three offsite locations have been identified as potential risks or threats to the subject property. According to the data, the sites are not located in the near vicinity, and there is no indication that contaminants from these sites have migrated onto the subject property.

Based on the results of this assessment, it is recommended samples be obtained in the area of the process oil storage tank and in the area of the water-soluble oil cooling system, to determine if the soil has been impacted from the spilled materials. In addition, the company needs to institute better housekeeping procedures to prevent spilled materials in the outdoor storage areas from being washed into the local stormwater runoff system.

## 2.0 INTRODUCTION

### 2.1 Purpose

The purpose of this Phase I Environmental Site Assessment is to determine if any *recognized environmental conditions* or *historical recognized environmental conditions* exist on or near the subject property. As defined by the ASTM Standard, a *recognized environmental condition* is the presence or likely presence of any hazardous substances or petroleum products on a property

under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The ASTM Standard defines a *historical recognized environmental condition* as a condition which in the past would have been considered a *recognized environmental condition*, but which may or may not be considered a *recognized environmental condition* currently. If a past release of any hazardous substance or petroleum products has occurred in connection with the property and has been remediated, with such remediation accepted by the responsible regulatory agency, this condition shall be considered a *historical recognized environmental condition.*

2.2 Detailed Scope of Services

This report is based on a preliminary study into the past and current uses of the subject property and the surrounding area. The report includes a visual inspection of the property and adjacent sites, and a review of regulatory agency records, aerial photographs, and other historic record sources. Also included in this report are maps, diagrams, and photographs pertaining to this site.

2.3 Significant Assumptions

The information in this report is furnished in good faith and was obtained from sources and databases considered to be reliable; however, nothing in this report should be construed as a promise or guarantee that the subject property is free of environmental hazards. In many instances, this report relies on regulatory database information provided by federal, state and local governmental agencies. Although the database information used in this report consists of the most recently released records, it may not reflect the actual current status of the case.

2.4 Limitations and Exceptions

This report was prepared in conformance to meet or exceed the scope and practice as set forth by the American Society for Testing & Materials (ASTM) Standard Practice E 1527-00, "Standard Practice of Environmental Site Assessments: Phase I Environmental Site Assessment Process." No tests were conducted, and no samples of air, water, soil or building materials were taken.

2.5 Special Terms and Conditions

No special terms or conditions have been incorporated into the preparation of this report. There were also no limiting physical conditions such as rain or lack of electrical power, that had a limiting effect on the site inspection.

2.6 User Reliance

This report is prepared for the express use of the client, and its contents are considered to be privileged and confidential. Acceptance of this report constitutes an agreement by the client to assume full liability for information contained herein. This report is for the sole use and interpretation of the client, and it is not be reproduced or distributed to outside parties.

## 3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The subject property, 12021-12023 Woodruff Avenue, Downey, California, is located on the west side of Woodruff Avenue, north of Washburn Road. The property is described as Los Angeles County Tax Assessor's Parcel Number (APN) 6284-025-018.

3.2 Site and Vicinity General Characteristics

The site consists of a large, single-story industrial building, with paved parking and storage areas, located in a light industrial area of Downey, California (see site plan). The site and surrounding area are fairly level, and the subject property is connected to the municipal water and sewage systems.

3.3 Current Use of Property

The subject property is currently occupied by Kong Pet Toys, a distributor of chewable pet toys, and the Kirkhill Manufacturing Company, a manufacturer of rubber products.

3.4 Descriptions of Structures, Roads, Other Improvements On Site

In the center of the subject property is a large industrial building, which is divided into offices, a manufacturing area, warehouses and storage areas. On the north, west, and south sides of the site are paved parking and storage areas.

3.5 Current Uses of the Adjoining Properties

North of the subject property is a multi-tenant industrial building. To the east is Woodruff Avenue, and further east is a multi-tenant industrial building. South of the subject property are several smaller industrial buildings. To the west are several smaller industrial buildings.

## 4.0 USER PROVIDED INFORMATION

4.1 Title Records

No recorded land title records were provided by the client for review.

4.2 Environmental Liens or Activity and Use Limitations

The client has not provided any information concerning environmental liens or activity and use limitations.

4.3 Specialized Knowledge

No specialized knowledge of *recognized environmental conditions* or *historical recognized environmental conditions* in connection with the subject property has been provided by the client.

4.4 Valuation Reduction for Environmental Issues

No information has been provided which indicates the subject property is being sold or purchased at a significantly reduced price due to outstanding environmental issues.

4.5 Owner, Property Manager, and Occupant Information

Information provided by the owner, property manager, and/or occupants of the site are included in this report under Section 7.0, Interviews.

4.6 Reasons for Performing Phase I Environmental Site Assessment

The reasons for performing this Phase I Environmental Site Assessment is to satisfy commercial real estate lending requirements, or provide due diligence information concerning the historical uses and current condition of the site.

4.7 Other User Provided Information

No other information concerning the subject property has been provided by the client.

## 5.0 RECORDS REVIEW

5.1 Standard Environmental Records Sources

### FEDERAL AGENCY RECORDS

**United States Environmental Protection Agency (USEPA)**
**National Priorities List**

The National Priorities List (NPL) identifies abandoned or uncontrolled hazardous waste sites which have been identified as possibly representing a long-term threat to the public health or environment. These sites have been identified as being highly contaminated with hazardous substances and represent the USEPA's target enforcement and cleanup efforts. Studies of individual sites are conducted by the USEPA to determine level of contamination, and the sites are then compared and ranked to other sites on the NPL.

*A review of the USEPA National Priorities List dated May 2005 indicates there are no proposed or final sites within one mile of the subject property.*

**United States Environmental Protection Agency (USEPA)**
**Federal Superfund Liens List**

The USEPA maintains a list of Superfund Lien sites that have been issued on properties throughout the United States. These sites have been remediated through the expenditures of Superfund monies; the purpose of the lien is to prevent the property owner from gaining a financial benefit from the federal government's cleanup and restoration activities.

*A review of the July 1993 Federal Superfund List revealed there are no Superfund Liens on or adjacent to the site.*

**United States Environmental Protection Agency (USEPA)**
**Comprehensive Environmental Response, Compensation**
**and Liability Information System (CERCLIS)**

The USEPA has developed a database known as CERCLIS which contains information on potential hazardous waste sites located throughout the United States. There are over 33,000 sites

on the CERCLIS inventory. All sites are subjected to a preliminary assessment and thereafter are either placed on the National Priority List (NPL) or are placed in a category for those sites requiring no further Federal Superfund action.

*A review of the May 2005 CERCLIS report indicates there is one CERCLIS site within a ½ mile radius of the subject property:*

Boeing North American, Inc. (#1 on map)
12214 Lakewood Boulevard
Downey, CA 90242

According to the records, this site was discovered in November 1998, and no further remedial action has been reported for this site.

*There are no listed "No Further Remedial Action Planned" (NFRAP) sites on or adjacent to the subject property.*

**United States Environmental Protection Agency (USEPA)**
**Resource Conservation and Recovery Act (RCRA)**
**Treatment, Storage or Disposal Facilities (TSDF)**

The USEPA maintains a list of facilities which have been authorized to receive hazardous waste. These facilities have permits to treat, store, or dispose of the waste, as determined by the RCRA regulations. In addition, the USEPA publishes a list of those facilities who are subject to a corrective action, based on the facilities waste handling and storage procedures. The facilities which are subject to a corrective action are identified as CORRACTS sites.

*A review of the November 2004 RCRA TSDF list determined there are no CORRACTS facilities within a one mile radius of the subject property. In addition, there are no non-CORRACTS TSD facilities listed within a one mile radius.*

**United States Environmental Protection Agency (USEPA)**
**Resource Conservation and Recovery Act (RCRA)**
**Hazardous Waste Generators**

The USEPA maintains a list of facilities which are identified as generators of large and small quantities of hazardous waste. These facilities have permits to generate, store and dispose of the waste, as determined by the RCRA regulations.

*A review of the November 2004 RCRA Hazardous Waste Generators list determined the subject*

*property (Kirkhill Inc., 12021 Woodruff Avenue) is identified as small quantity hazardous waste generator. According to the records, there are small quantity hazardous waste generators identified on the adjacent properties to the east (Fuji Photo Film USA Inc., 12010 Woodruff Avenue, Suite A) and to the west (Classic Graphix, 9459 Washburn Road and Stud Welding Products Inc., 9455 Washburn Road).*

**United States Environmental Protection Agency (USEPA)**
**Office of Emergency and Remedial Response**
**Emergency Response Notification System (ERNS)**

The USEPA maintains a list of locations which have reported a release of oil or hazardous substances to the federal government. Most of the data in this system is based on information that was received during the initial notification.

*A review of the ERNS list for 1999 determined there are no reported incidents on the subject property.*

**United States Department of Transportation**
**United States Coast Guard**
**National Response Center (NRC)**

The NRC is the national point of contact for reporting all oil, chemical, radiological, biological and etiological discharges into the environment anywhere in the United States and its territories. In addition to gathering and distributing spill data for Federal On-Scene Coordinators and serving as the communications and operations center for the National Response Team, the NRC maintains agreements with a variety of federal entities to make additional notifications regarding incidents meeting established trigger criteria.

*A review of the NRC list for 2004 determined there are no reported incidents on the subject property.*

## STATE AGENCY RECORDS

**State of California**
**Environmental Protection Agency (CAL-EPA)**
**Department of Toxic Substances Control (DTSC)**

CAL-EPA is responsible for the regulation and enforcement of environmental health laws within the state of California, as set forth by the California Health and Safety Code. CAL-EPA is also designated by the USEPA to assist in enforcing federal environmental laws. CAL-EPA regulates

companies involved in the generation, transportation, storage and disposal of hazardous substances. CAL-EPA records include the "CalSites" database, which is a listing of 7,800 known active, inactive and abandoned hazardous waste sites. These sites have previously been reported in the Abandoned Site Program Information System (ASPIS), Bond Expenditure Plan (BEP), and Cortese databases. CAL-EPA records also include an October 1990 listing of registered underground tanks and the California Integrated Waste Management Board's "Active" and "Closed and Inactive" landfills database.

*A review of the June 2005 CAL-EPA records determined there is one listed "CalSite" facility within one mile of the subject property:*

NASA Industrial Plant - Kaiser (#1 on map)
12214 Lakewood Boulevard
Downey, CA 90241

The business has completed a Voluntary Cleanup Program with DTSC.

*There are historical records of a registered underground storage tank on the subject property (Kirkhill Inc., 12021 Woodruff Avenue) and on the adjacent property to the east (Darnell Corp., 12000 Woodruff Avenue). There are also historical and current records of a registered underground storage tank on the adjacent property to the north (Inco Express Inc., 11941 Woodruff Avenue). In addition, there is one landfill site listed within a ½ mile radius of the subject property:*

Downey Dump (#2 on map)
9612 Ardine Street
Downey, CA 90241

This site is identified as a closed, solid waste disposal site.

**State of California**
**Water Resources Control Board**
**Regional Water Quality Control Board (RWQCB)**

The RWQCB is responsible for monitoring the quality and flow of the groundwater, and compiles lists of known leaking underground storage tanks. In addition, the RWQCB addresses other potential threats to the groundwater from surface spills and leaks. The RWQCB monitors the contamination problem, the investigation and any remedial action.

*A review of the May 2005 leaking underground storage tank records of the RWQCB determined*

*the subject property is not currently listed as the source of a known leaking storage tank. In March 1990, the subject property reported an unauthorized release of diesel fuel from a leaking underground storage tank. The tank and the impacted soil was removed from the site, and the file was closed in August 1992. According to the records, there is one known leaking underground tank site within a ½ mile radius of the subject property:*

Calsan, Inc. (#3 on map)
9821 Downey & Norwalk Road
Downey, CA 90241

This site was first reported in September 2000. According to the records, a leak is suspected at the site, and the responsible party is conducting an inspection of the tanks and plumbing system to verify the existence of a leak.

*The subject property or adjacent sites were not identified on the RWQCB Spills, Leaks, Investigations and Cleanups (SLIC) list.*

5.2 Additional Environmental Sources

**State of California**
**Department of Conservation**
**Division of Mines and Geology (CDMG)**

The CDMG conducts studies, publishes maps, and provides information concerning the geological formations throughout the state of California. CDMG research information is combined with information from the United States Geological Survey and the ensuing geologic maps of the state are prepared. These geologic maps also illustrate the approximate locations of known earthquake faults.

*A review of the area map published by CDMG indicates the geologic area surrounding the subject property consists of Recent alluvium, which includes alluvial fan, flood-plain, and streambed deposits. The client may wish to refer to the enclosed geologic map.*

**State of California**
**Department of Conservation**
**Division of Oil and Gas (CDOG)**

The CDOG regulates the drilling, operation and abandonment of gas and oil wells throughout the state of California. If an active, idle or abandoned well is located on or adjacent to a proposed construction site, CDOG requires a site plan review prior to issuing a building permit.

Abandoned oil wells must meet standards established in 1984.

*A review of the area map published by CDOG indicates there are no producing, idle or abandoned oil wells on or adjacent to the subject property. The client may wish to review the enclosed map.*

**South Coast Air Quality**
**Management District (AQMD)**

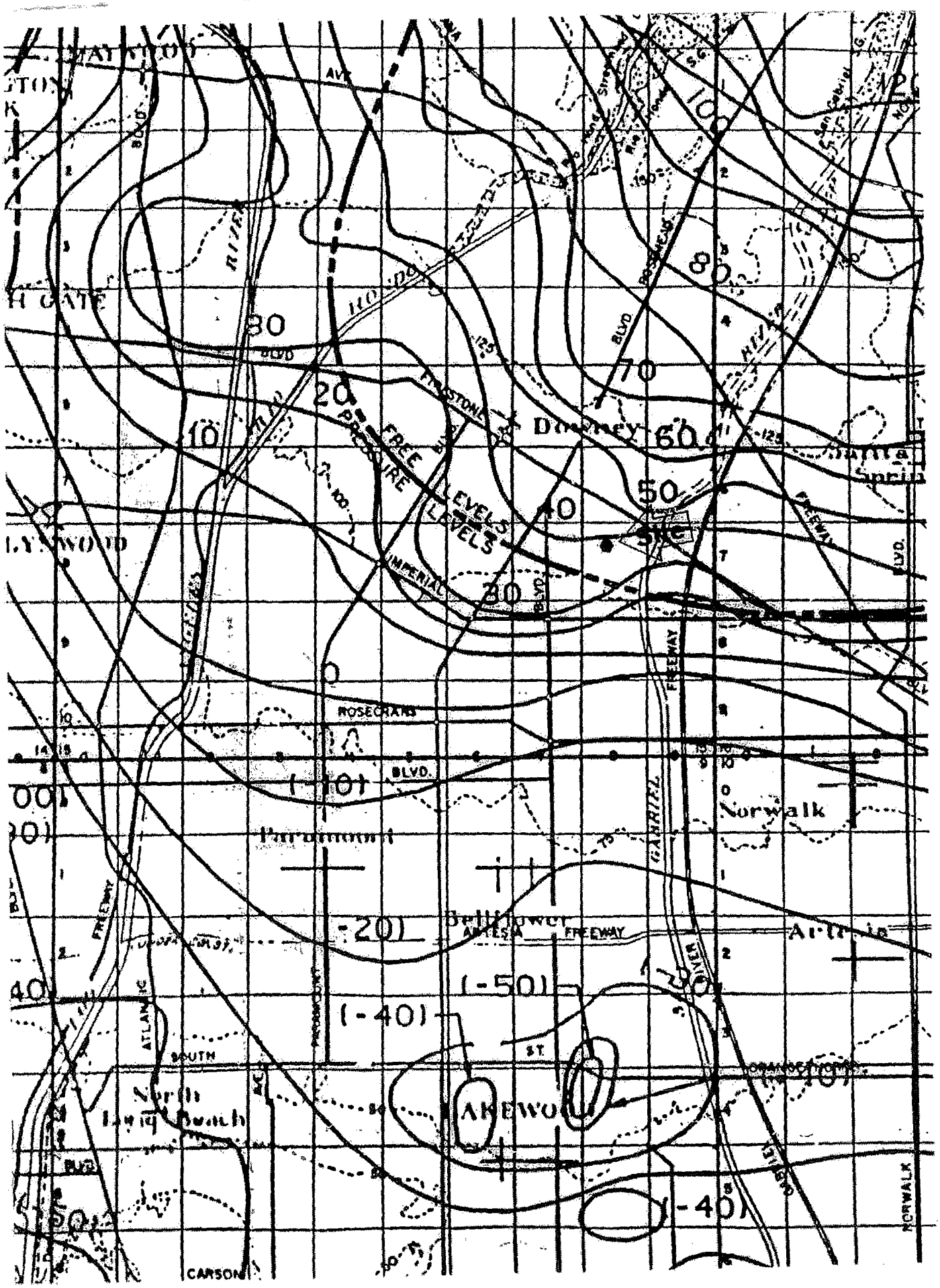
The AQMD is responsible for the development and enforcement of regulations concerning air emissions and airborne hazards from stationary sources in the South Coast Air Basin. AQMD maintains a "Hot Spot" list of facilities whose air emissions pose as a risk to the surrounding community.

*A review of the AQMD records determined there are no "Hot Spot" facilities on or adjacent to the subject property.*

**Los Angeles County**
**Fire Department (LACOFD)**
**Health Hazardous Materials Division**

LACOFD maintains inspection and inventory records of companies involved in the storage and use of hazardous materials, petrochemicals, or hazardous waste. LACOFD attempts to maintain a current record of the types of hazardous substances that are utilized or stored at a particular site, and conducts periodic inspections for safety and compliance. In addition, LACOFD maintains records concerning hazardous material sites in Los Angeles County, which are reported to LACOFD by various regulatory agencies. Upon receiving the report, LACOFD monitors the cleanup process on the contaminated site.

*According to the LACOFD files, the subject property (Kirkhill Inc., 12021 Woodruff Avenue) is identified as a hazardous material handler. There are records of a hazardous waste generator and hazardous waste handler on the adjacent property to the north (Storopack Inc., 12007 South Woodruff Avenue). The records also identified a registered underground storage tank and hazardous material handler on the adjacent property to the north (Inco Express, Inc., 11941 Woodruff Avenue). A review of the Active Mitigation Complaint Control Logs determined there are no listed sites on or adjacent to the subject property.*


FREE PRESSURE LEVELS
FREE PRESSURE LEVELS
Downey
Norwalk
Lakewood
Long Beach
Artesia
Bellflower
Paramount
Compton
Carson
Rosecrans
Imperial
Firestone
Alondra
Del Amo
Gardena
Hawthorne
Lynwood
South Gate
Santa Fe Springs
Whittier
Los Cerritos
Los Alamitos
Seal Beach
Cypress
Stanton
Garden Grove
Orange
Fullerton
Buena Park
La Habra
Brea
Placentia
Yorba Linda
Anaheim
Fountain Valley
Huntington Beach
Westminster
Santa Ana
Tustin
Irvine
Laguna Beach
Laguna Niguel
Mission Viejo
Rancho Santa Margarita
Lake Forest
Aliso Viejo
Laguna Hills
Laguna Woods
Dana Point
San Juan Capistrano
San Clemente
Capistrano Beach
Trabuco Canyon
Coto de Caza
Ladera Ranch
Las Flores
Rancho Mission Viejo
Foothill Ranch
Silverado
Modjeska Canyon
Santiago Canyon
Irvine Lake
Villa Park
Orange Park Acres
Rossmoor
Los Alamitos Army Air Field
Joint Forces Training Base
Naval Weapons Station
Naval Reserve Center
Naval Air Station
Naval Hospital
Naval Ammunition Depot
Naval Weapons Industrial Reserve Plant
Naval Reserve Readiness Command
Naval Reserve Training Center
Naval Reserve Readiness Command Region
Naval Reserve Readiness Command Region Headquarters
Naval Reserve Readiness Command Region Training Center
Naval Reserve Readiness Command Region Training Center Annex
Naval Reserve Readiness Command Region Training Center Annex Building
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Naval Reserve Readiness Command Region Training Center Annex Building Number Two Hundred One

Matt
(310) 2075425

**Los Angeles County**
**Department of Public Works**
**Waste Management Division (DPW/WMD)**

DPW/WMD maintains maps showing the locations of active, inactive or future solid waste landfill sites in Los Angeles County.

*A review of DPW's major waste systems map determined there are no active, inactive or future landfill sites within a ½ mile radius of the subject property.*

**Los Angeles County**
**Department of Public Works**
**Hydraulic/Water Conservation Division (DPW/HWC)**

DPW/HWC maintains contour maps and data of the groundwater levels in the Los Angeles County area. The map shows the depth to the aquifer, as well as the approximate flow direction.

*A review of this data revealed the site is located at an elevation of approximately 100 feet above sea level. According to well data, the groundwater level in the area is approximately 40 feet above sea level, or about 60 feet below the ground surface. The groundwater contour lines in the area of the subject property indicate the groundwater flows in a southerly direction. The client may wish to review the enclosed map.*

**Los Angeles County**
**Department of Public Works**
**Underground Tank Division (DPW/UGT)**

DPW/UGT maintains records and permits on businesses which store hazardous materials in underground tanks, and issues permits to remove abandoned underground tanks.

*A review of the DPW/UGT records determined an underground tank was removed from the subject property (Kirkhill Rubber Inc., 12021 South Woodruff Avenue) and on the adjacent property to the north (Inco Express Inc., 11941 South Woodruff Avenue).*

5.3 Physical Setting Sources

A United States Geological Survey (USGS) 7.5 Minute Topographical map of the subject property and surrounding area is included in the appendices of the report. The map shows the locations of the identified offsite environmental risks or threats described in the report.

5.4 Historical Use Information on the Property

**City of Downey**
**Division of Building and Safety**

A review of the building records for the subject property revealed the following:

| Date | Activity | Owner |
|---|---|---|
| | 12021 Woodruff Avenue | |
| 2/55 | Building addition | Kirkhill, Inc. |
| 2/56 | Building addition | Kirkhill, Inc. |
| 7/56 | Building addition | Kirkhill, Inc. |
| 5/59 | Add warehouse | Kirkhill, Inc. |
| 9/59 | Add fire sprinklers | Kirkhill, Inc. |
| 1/60 | Repair fire damage | Kirkhill, Inc. |
| 3/66 | Repave parking lot | Kirkhill, Inc. |
| 6/66 | Add offices and factory | Kirkhill, Inc. |
| 6/66 | Add fire sprinklers | Kirkhill, Inc. |
| 1/68 | Add manufacturing area | Kirkhill, Inc. |
| 9/68 | Alter offices | Kirkhill, Inc. |
| 2/69 | Add fire sprinklers | Kirkhill, Inc. |
| 12/69 | Install office air conditioning | Kirkhill, Inc. |
| 12/69 | Add warehouse | Kirkhill, Inc. |
| 7/81 | Add partitions | Kirkhill, Inc. |
| 9/81 | Add fire sprinklers | Kirkhill, Inc. |
| 7/88 | Add offices and bathroom | Kirkhill, Inc. |
| 1/90 | Reroof building | Kirkhill, Inc. |
| 10/90 | Reroof building | Kirkhill, Inc. |
| 10/92 | Add handicapped ramp | Kirkhill Corp. |
| 1/99 | Add demising walls | IDC Corp |
| | 12023 Woodruff Avenue | |
| 5/99 | Add partitions | Kirkhill Manufacturing |
| 6/99 | Install new loading dock | IDC/Meyers |
| 10/04 | Install new foundation for equipment | Ed Reker |
| 3/05 | Raise existing roof | KMC |

No other building or demolition permits were on file for the subject property.

**Historical Aerial Photographs**

A review of historical aerial photographs of the subject property determined the following information:

| Date of Photo | Description |
|---|---|
| May 1938 | The subject property is vacant, agricultural land, with no visible buildings or structures on the site. |
| October 1953 | A large industrial building is now on the subject property. The west side of the site is vacant land. |
| February 1963 | The subject property appears to be about the same as the 1953 photograph. |
| October 1972 | A large industrial building is on the subject property. A paved storage yard is on the west side of the site. |
| March 1980 | The existing industrial building and storage areas are now on the subject property. |
| August 1989 | The subject property appears to be about the same as the 1980 photograph. |
| May 1994 | The existing industrial building and storage areas are on the subject property. |
| June 2002 | The subject property appears to be about the same as the 1994 photograph. |

**Historic Sanborn Fire Insurance Maps**

Sanborn Fire Insurance Maps provide information on commercial and industrial properties, based on risk data gathered for the fire insurance companies. The maps show the number of buildings located on the property, and the type of construction. The maps also describe the various businesses located nearby, and show the locations of tanks, boilers, and other potential hazards.

*A review of the Sanborn Fire Insurance Map collections from 1867-1970, did not locate any maps for the subject property.*

A review of building permit records and historical aerial photographs determined an industrial building was originally constructed on the site over 50 years ago, and expanded into its existing size in the 1960s. The subject property was part of a large agricultural field in the 1930s.

5.5 Historical Use Information on the Adjoining Properties

**Historical Aerial Photographs**

A review of historical aerial photographs of the adjoining properties determined the following information:

| Date of Photo | Description |
|---|---|
| May 1938 | The area surrounding the subject property is vacant agricultural land, with no visible buildings or structures. To the east is Woodruff Avenue. |
| October 1953 | North and west of the subject property is vacant agricultural land. To the east is Woodruff Avenue, and further east is a parking lot. To the south are two industrial buildings and vacant land. |
| February 1963 | North of the subject property is vacant agricultural land. To the east is Woodruff Avenue, and further east is a parking lot. South of the subject property are three industrial buildings and vacant land. To the west are three industrial buildings. |
| October 1972 | North of the subject property is vacant agricultural land. To the east is Woodruff Avenue, and further east is a parking lot. South of the subject property are four industrial buildings. To the west are three industrial buildings. |
| March 1980 | North of the subject property is an industrial building and vacant land. To the east is Woodruff Avenue, and further east is vacant land. South of the subject property are four industrial buildings. To the west are three industrial buildings. |
| August 1989 | North of the subject property are two industrial buildings. To the east is Woodruff Avenue, and further east is an industrial building. South of the subject property are four industrial buildings. To the west are three industrial buildings. |
| May 1994 | The area surrounding the subject property appears to be about the same as the 1989 photograph. |

| Date of Photo | Description |
|---|---|
| June 2002 | North of the subject property are two industrial buildings. To the east is Woodruff Avenue, and further east is an industrial building. South of the subject property are four industrial buildings. To the west are three industrial buildings. |

**Historic Sanborn Fire Insurance Maps**

Sanborn Fire Insurance Maps provide information on commercial and industrial properties, based on risk data gathered for the fire insurance companies. The maps show the number of buildings located on the property, and the type of construction. The maps also describe the various businesses located nearby, and show the locations of tanks, boilers, and other potential hazards.

*A review of the Sanborn Fire Insurance Map collections from 1867-1970, did not locate any maps for the area surrounding the subject property.*

A review of historical aerial photographs and Sanborn fire insurance maps determined the industrial buildings to the north were constructed about 20-25 years ago. The industrial building east of Woodruff Avenue was constructed about 20-25 years ago. The industrial buildings to the south were constructed 30-50 years ago. The industrial buildings west of the subject property were constructed 40-45 years ago. The area surrounding the subject property was vacant agricultural land in the 1930s.

## 6.0 SITE RECONNAISSANCE

### 6.1 Methodology and Limiting Conditions

The site reconnaissance consisted of a walk through the entire property, and visually observing the structures, storage areas, and parking lots. No inspection was conducted under floors, above ceilings, or behind walls.

### 6.2 General Site Setting

The site consists of a large, single-story industrial building, with paved parking and storage areas, located in a light industrial area of Downey, California (see site plan). The site and surrounding area are fairly level, and the subject property is connected to the municipal water and sewage systems.

6.3 Subject Property Observations

On August 1, 2005, an inspection of the site and surrounding area was conducted by Registered Environmental Assessor Jack Orswell. The single-story, concrete block industrial building (see photo #1) is divided into two areas, and described as follows:

12021 Woodruff Avenue

The north side of the industrial building is occupied by Kong Pet Toys, a distributor of chewable pet toys. Inside, on the east side of the building, are the business and sales offices. The office ceilings are covered with suspended-grid acoustical tile or sprayed with a white acoustical materials, which is painted and in good condition. The office floors are carpeted or covered with vinyl or terrazzo tile. An additional office area, which is currently vacant and empty, is located on the east side of the building. This area was previously occupied by a temporary employment services agency. The heating, ventilation and cooling (HVAC) system appears to be mounted on the roof of the building.

On the west side of the building is the packaging and warehouse area (see photos #2 and #3). The warehouse has an open wood beam ceiling, and an exposed concrete floor. The company packages and distributes chewable pet toys, and no manufacturing activities take place on the site. No large quantities of hazardous materials were observed being stored or used inside the building, and no hazardous wastes are generated from the business operations.

12023 Woodruff Avenue

The south side of the industrial building is occupied by the Kirkhill Manufacturing Company, a manufacturer of rubber products and gaskets. Inside, in the southeast corner, are the business and sales offices (see photo #4). The office ceilings are covered with suspended-grid acoustical tile, and the floors are covered with vinyl tile. The heating, ventilation and cooling (HVAC) system appears to be mounted on the roof of the building.

Along the southern side of the building is the manufacturing area and a warehouse for materials and finished goods (see photos #5 and #6). The company uses process oil and mixes the material with rubber, various additives and color pigments to blend the product material. The material is then placed into a pressurized mold, and the final product is formed. Liquid nitrogen stored in portable tanks (see photo #7) and cooling water is used to cool the equipment. Water-soluble oil is used to pressurize the molding process.

The process oil is stored in a large aboveground storage tank (see photo #8), which is located on the south side of the building. There were visible stains of oil on the paved surface (see photo

#9) and on the exterior wall (see photo #10) near the aboveground process oil storage tank on the south side of the building. On the west side of the warehouse is a shipping and receiving area (see photo #11) and a materials storage area (see photo #12). In the center of the building is an open yard (see photo #13), with an electrical transformer, a water evaporation and cooling system (see photo #14), and water-soluble oil cooling system (see photo #15). Water-soluble oil was observed on the paved surface (see photo #16) near the cooling system in the open area near the center of the building. Waste oil and lubricants are stored in 55-gallon drums with secondary spill containment under a covered area in the center yard.

Outside, on the north side of the building, is a paved parking lot and driveway (see photo #17). There is also a paved parking lot and storage yard on the south side of the site (see photo #18). The west side of the subject property is used to store materials, off-spec products, trash, wooden pallets, and old equipment (see photos #19 and #20). Large amounts of spilled powdered materials were observed on the west and south sides of the storage areas, and the company did not appear to have any containment in place to prevent these materials from being washed into the local stormwater runoff system. Commercial trash bins are located throughout the site, and no signs of improper solid waste disposal were observed in or near the trash bins. The company stores and uses large quantities of hazardous materials such as process oil, rubber additives, and solvents, and generates waste oil, lubricants, and solvents. All of the waste products appeared to be properly stored and managed. No evidence of waste water clarifiers, sumps, pits, septic tanks, or underground storage tanks was observed on the site. The electrical power in the area is supplied by overhead utility lines located along the west site of the property, and there were no nearby transformers with signs indicating the presence of polychlorinated biphenyls (PCBs).

6.4 Adjoining Property Observations

Northern Border

North of the subject property is a multi-tenant industrial building (see photo #21). There were no visible signs of spills or contamination on the adjacent property.

Eastern Border

East of the subject property is Woodruff Avenue, and further east is a multi-tenant industrial building (see photo #22). There were no visible signs of spills or contamination on the adjacent property.

Southern Border

South of the subject property are several smaller industrial buildings (see photo #23). There were

no visible signs of spills or contamination on the adjacent properties.

Western Border

West of the subject property are several smaller industrial buildings (see photo #24). There were no visible signs of spills or contamination on the adjacent properties.

## 7.0 INTERVIEWS

7.1 Interview with Owner

No interview with the property owner was conducted.

7.2 Interview with Site Manager

Mike Kilroy, the marketing and sales manager of the Kirkhill Manufacturing Company, stated the company has operated on the site for over 50 years, and they manufacture various rubber products and gaskets. He stated they sublease the northern portion of the building to Kong Pet Toys, and his company manufactures about 50% of the products for Kong Pet Toys. Mr. Kilroy advised they store and use large quantities of hazardous materials, including process oil, rubber additives, solvents, and lubricants. He stated the manufacturing process generates waste lubricants and solvents, which are stored in a secure area in the center of the building.

Mr. Kilroy stated an underground storage tank was removed from the site over ten years ago, and there are currently no underground storage tanks, waste water clarifiers, or septic tanks on the property. He advised the company is coming out of bankruptcy, and they are in the process of moving and replacing equipment, and changing the warehouse and materials storage areas. Mr. Kilroy stated he is not aware of any chemical spills or contamination problems with the site.

7.3 Interviews with Occupants

No interviews with the other occupants were conducted.

7.4 Interviews with Local Government Officials

No interviews with local government officials were conducted.

7.5 Interview with Others

No interviews with other people were conducted concerning the subject property.

## 8.0 FINDINGS

### 8.1 Recognized Environmental Conditions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E 1527-00 on the industrial buildings located at 12021-12023 Woodruff Avenue, Downey, California, the Property. Any exceptions to, or deletions from the Standard Practice are described in Section 2.4 of this report. This assessment has revealed no evidence of *recognized environmental conditions* in connection with the Property, except as follows:

1) An inspection of the subject property determined there were visible stains of oil on the paved surface and on the exterior wall near the aboveground process oil storage tank on the south side of the building. In addition, water-soluble oil was observed on the paved surface near the cooling system in the open area near the center of the building; and

2) In addition, three offsite locations have been identified as potential risks or threats to the subject property. According to the data, the sites are not located in the near vicinity, and there is no indication that contaminants from these sites have migrated onto the subject property.

### 8.2 Historical Recognized Environmental Conditions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E 1527-00 on the industrial buildings located at 12021-12023 Woodruff Avenue, Downey, California, the Property. Any exceptions to, or deletions from the Standard Practice are described in Section 2.4 of this report. This assessment has revealed no evidence of *historical recognized environmental conditions* in connection with the Property, except as follows:

According to the records of the State of California Regional Water Quality Control Board (RWQCB), in March 1990, the subject property reported an unauthorized release of diesel fuel from a leaking underground storage tank. The tank and the impacted soil was removed from the site, and the file was closed in August 1992.

## 9.0 OPINION

Based on a review of regulatory and historical records, an interview with the property manager, and a visual inspection of the site and surrounding area, this assessment has found evidence of *recognized environmental conditions* which may have impacted the subject property.

## 10.0 CONCLUSIONS

Based on the results of this assessment, it is recommended samples be obtained in the area of the process oil storage tank and in the area of the water-soluble oil cooling system, to determine if the soil has been impacted from the spilled materials. In addition, the company needs to institute better housekeeping procedures to prevent spilled materials in the outdoor storage areas from being washed into the local stormwater runoff system.

## 11.0 DEVIATIONS

This report was prepared in conformance to meet or exceed the scope and practice as set forth by the American Society for Testing & Materials (ASTM) Standard Practice E 1527-00, "Standard Practice of Environmental Site Assessments: Phase I Environmental Site Assessment Process." No significant deviations or deletions were made from this practice.

## 12.0 ADDITIONAL SERVICES

No additional services including a broader scope of services, liability/risk evaluations, or remedial activities are included in this report.

## 13.0 REFERENCES

All government records and maps were obtained directly from the regulatory agencies identified in this report. The fire insurance map information was obtained from Digital Sanborn Maps, 1867-1970, Ann Arbor, Michigan. The aerial photographs were obtained from Rupp Aerial Photography, Corona, California; the United States Geological Survey, Menlo Park, California; or the United States Department of Agriculture, Salt Lake City, Utah.

## 14.0 APPENDICES

### 14.1 Qualifications of the Environmental Professionals

Attached to this report are the résumés of Jack Orswell and Marty Kasman, who conducted the site inspection, the records review, and prepared the report.

### 14.2 Site and Vicinity Map

A United States Geological Survey (USGS) 7.5 Minute Topographical map of the subject property and surrounding area is included in the appendices of the report. The map shows the locations of the identified offsite environmental risks or threats described in the report.

14.3 Site Plan

A site plan of the subject property is included in the appendices of the report. The site plan shows the general location of the structures on the property, and other items of interest which were identified in the description of the site.

14.4 Site and Vicinity Photographs

Photographs of the subject property and surrounding neighborhood are attached to this report. These photographs were taken at the time of the site inspection.

14.5 Historical Research Documentation

Building permit records were obtained directly from the regulatory agency identified in this report. The aerial photographs summarized in this report were obtained from Rupp Aerial Photography, Corona, California; the United States Geological Survey, Menlo Park, California; or the United States Department of Agriculture, Salt Lake City, Utah. The Sanborn Fire Insurance Map information was obtained from Digital Sanborn Maps, 1867-1970, Ann Arbor, Michigan.

14.6 Regulatory Records Documentation

All government records were obtained directly from the regulatory agencies identified in this report.

14.7 Interview and Research Documentation

All of the field notes and supporting information obtained from interviews and research concerning the subject property are maintained in the report file at the offices of Orswell & Kasman, Inc.

14.8 Special Contractual Conditions between User and Environmental Professional

No special contractual conditions or agreements exist between the client and any of the employees of Orswell & Kasman, Inc., and Orswell & Kasman, Inc. does not have any financial interest in the subject property.

# APPENDIX

# JACK ORSWELL

Jack Orswell, a principal of the company, is a Registered Environmental Assessor (#1263) and a licensed Private Investigator (#PI 14366) with the State of California. He is also a USEPA/AHERA accredited Asbestos Management Planner and California Certified Asbestos Consultant (#92-0869). He received his Bachelor of Science degree in Business Administration from the University of Southern California, and spent 15 years as a Special Agent with the Federal Bureau of Investigation in the Denver, San Francisco and Los Angeles offices. Mr. Orswell received specialized training from the United States Environmental Protection Agency (EPA), and he was one of the first FBI Agents to work with the EPA in investigating federal environmental crimes.

While with the FBI, Mr. Orswell worked with the EPA's National Enforcement Investigations Center (NEIC) in Denver, Colorado, and helped establish evidence control procedures for their laboratory personnel. As coordinator of environmental investigations for the FBI's Los Angeles office, Mr. Orswell gained extensive training and experience working with the California Department of Health Services and the Los Angeles County Sheriff's Department.

For the past 15 years, Mr. Orswell has been in private industry, conducting environmental assessments for several financial institutions, real estate companies and law firms. Mr. Orswell has conducted environmental investigations throughout the United States, locating and interviewing witnesses to determine how hazardous materials were handled in various manufacturing operations, and documenting the long term effects of improper disposal.

Mr. Orswell's extensive background in criminal environmental enforcement and civil litigation support make him uniquely qualified as an environmental assessor and investigator. He is a member of the California Hazardous Materials Investigators Association, the Society of Former Special Agents of the Federal Bureau of Investigation, the National Association of Environmental Professionals, the National Association of Government Guarantee Lenders, and the American Society for Testing of Materials (ASTM).

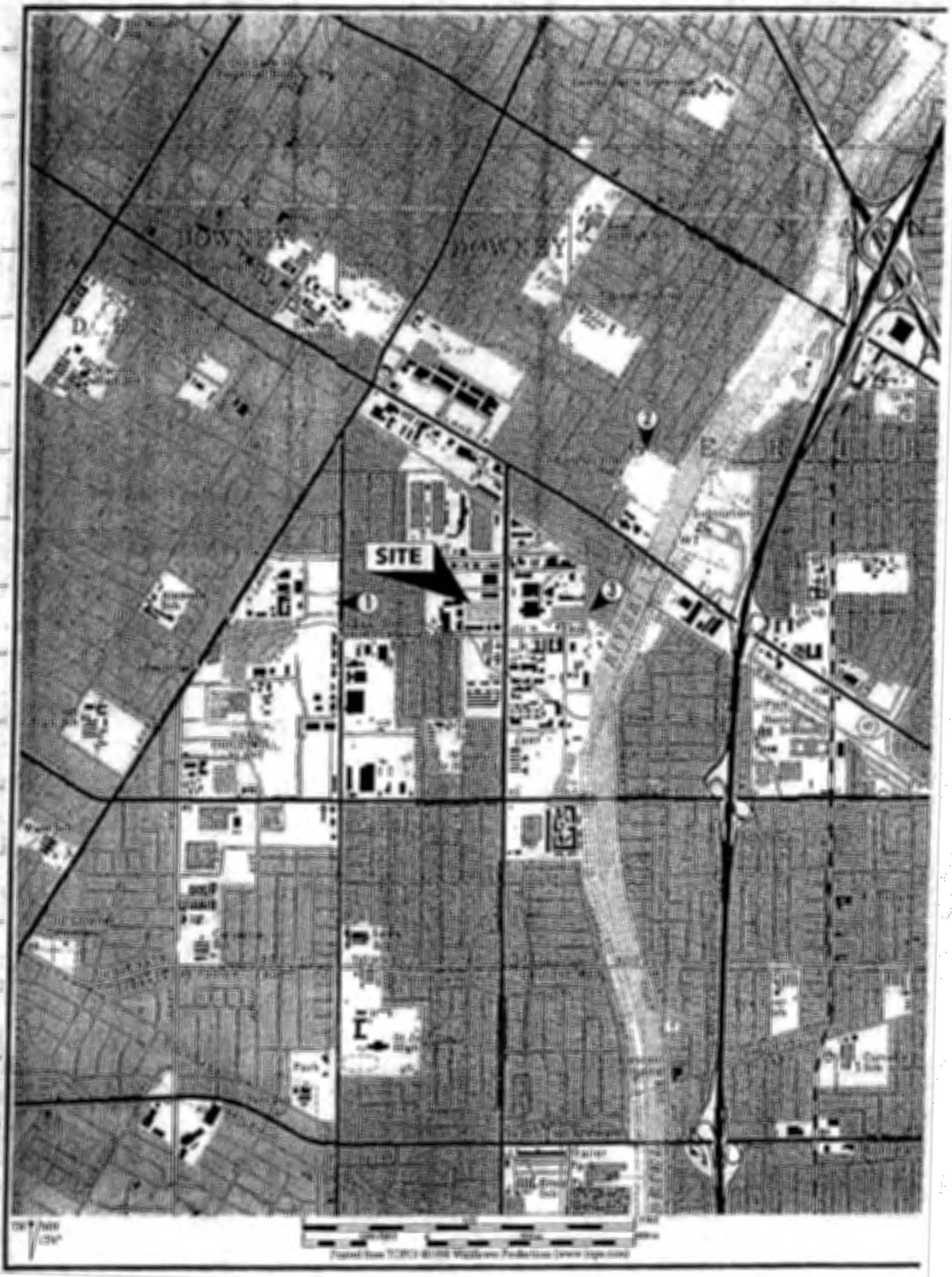
# MARTY KASMAN

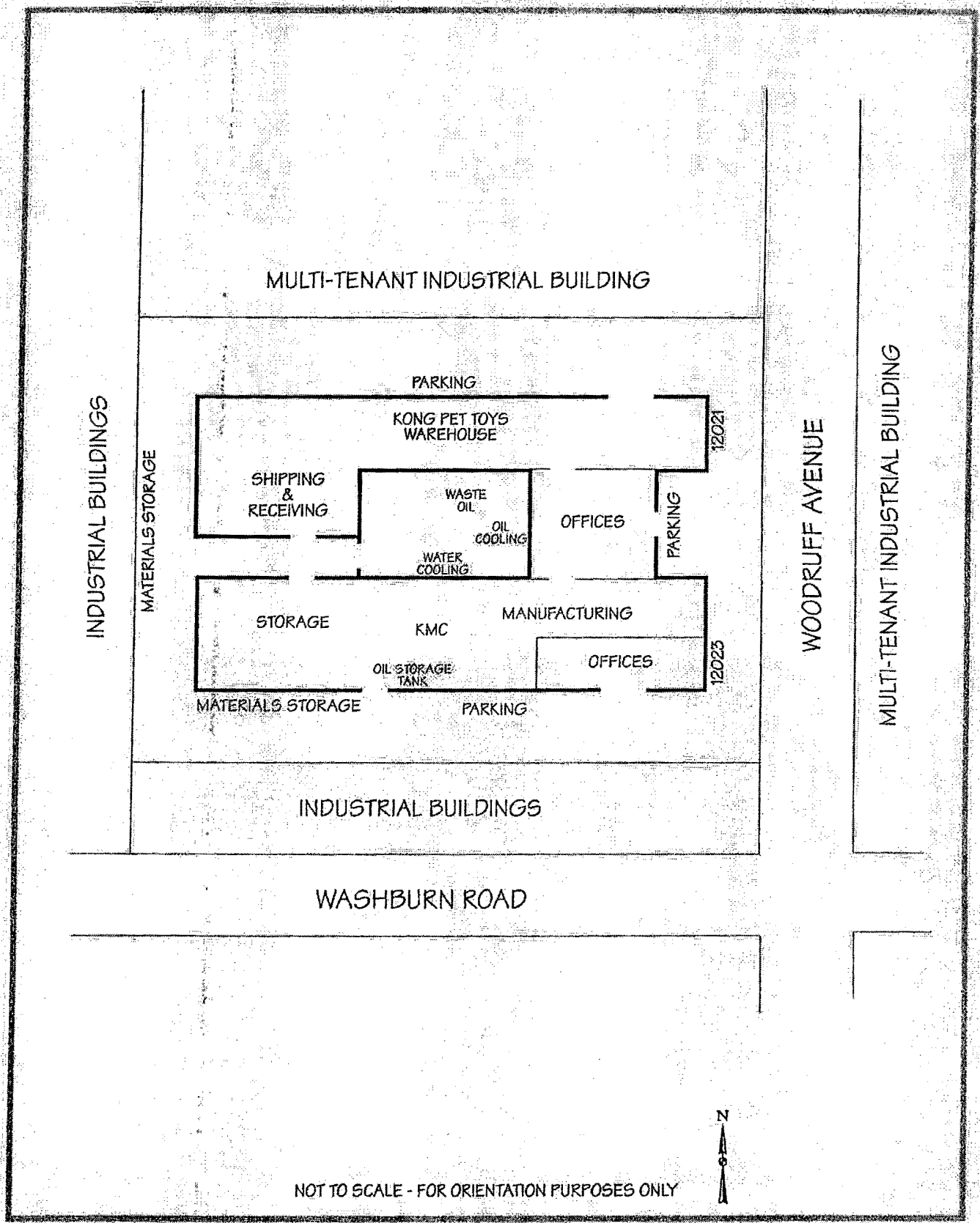
Marty Kasman, a principal of the company, is a Registered Environmental Health Specialist (#4927) and a Registered Environmental Assessor (#4022) with the State of California. He is also a USEPA/AHERA accredited Asbestos Management Planner and California Certified Asbestos Consultant (#99-2553). He received his Bachelor of Science and Master of Science degrees in Environmental and Occupational Health Science from California State University at Northridge. He also has a Certificate in Hazardous Materials Management from the University of California at Los Angeles (UCLA). In addition, Mr. Kasman also received specialized hazardous materials training at the Federal Law Enforcement Training Center in Georgia.

Mr. Kasman served 14 years with the Los Angeles County Fire Department, as a Supervising Hazardous Material Specialist and Deputy Health Officer. His responsibilities included field and laboratory work in hazardous materials management, conducting inspections of industrial plant operations, and monitoring cleanup activities. In addition, Mr. Kasman has investigated hundreds of abandoned waste sites and other cases involving the illegal dumping of hazardous materials throughout Los Angeles County.

Mr. Kasman currently serves as an environmental consultant to industry management in the proper handling of hazardous materials and waste. He has taught courses in hazardous materials regulatory compliance and waste management at UCLA, California State University at Northridge, and the California Specialized Training Institute at San Luis Obispo. Mr. Kasman is also serving on the State of California Local Unified Program Implementation Committee (LUPIC) to develop a standardized hazardous materials contingency plan.

Mr. Kasman's extensive education, training, and experience in hazardous materials management make him fully qualified to conduct environmental assessments and investigations. He is the former president and director of the California Hazardous Materials Investigators Association. He is also a former director of the Local Environmental Enforcement Officers Association, and the Los Angeles County Association of Environmental Health Specialists. He is a member of California and National Environmental Health Associations, and the National Association of Government Guarantee Lenders.


SITE


MULTI-TENANT INDUSTRIAL BUILDING
INDUSTRIAL BUILDINGS
MATERIALS STORAGE
PARKING
KONG PET TOYS WAREHOUSE
12021
SHIPPING & RECEIVING
WASTE OIL
OIL COOLING
WATER COOLING
OFFICES
PARKING
STORAGE
KMC
MANUFACTURING
OIL STORAGE TANK
OFFICES
12023
MATERIALS STORAGE
PARKING
WOODRUFF AVENUE
MULTI-TENANT INDUSTRIAL BUILDING
INDUSTRIAL BUILDINGS
WASHBURN ROAD
N
NOT TO SCALE - FOR ORIENTATION PURPOSES ONLY

Phase I Environmental Site Assessment
12021-12023 Woodruff Avenue
August 10, 2005

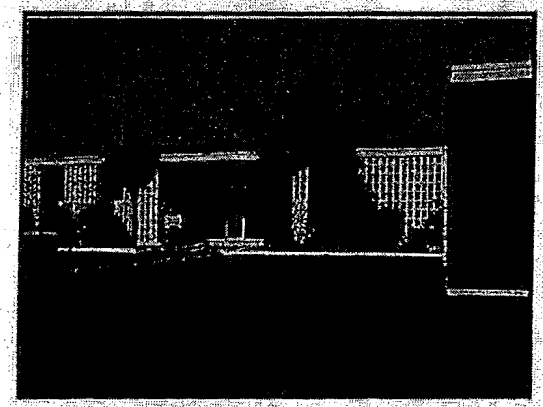


Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6

Phase I Environmental Site Assessment
12021-12023 Woodruff Avenue
August 10, 2005



Photo 7

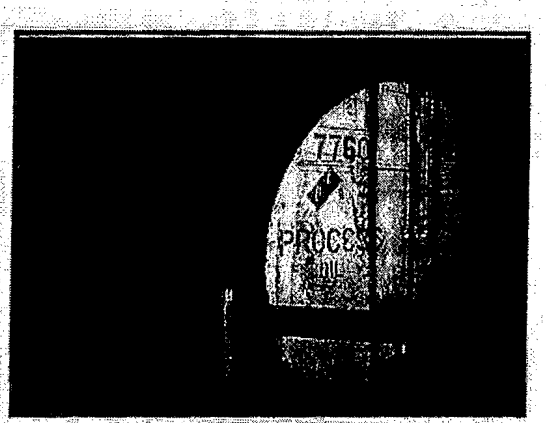



Photo 8



Photo 9



Photo 10



Photo 11

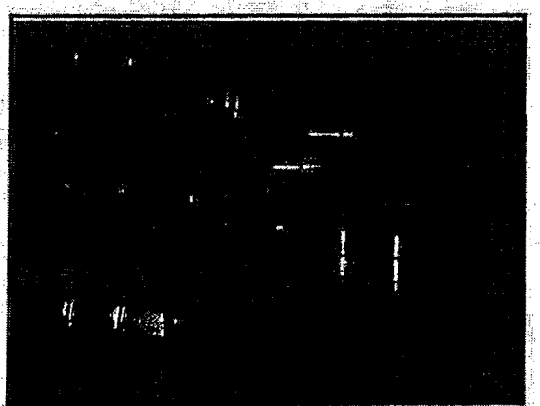


Photo 12



Photo 13



Photo 14

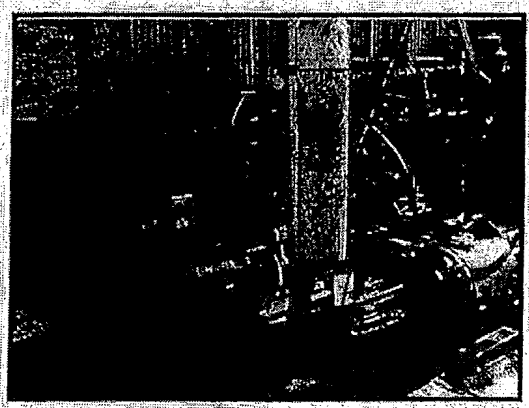


Photo 15



Photo 16

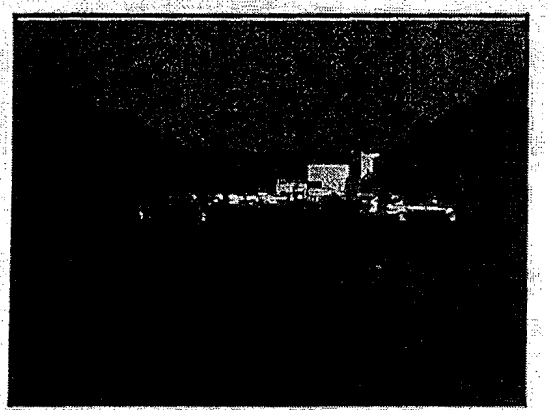


Photo 17

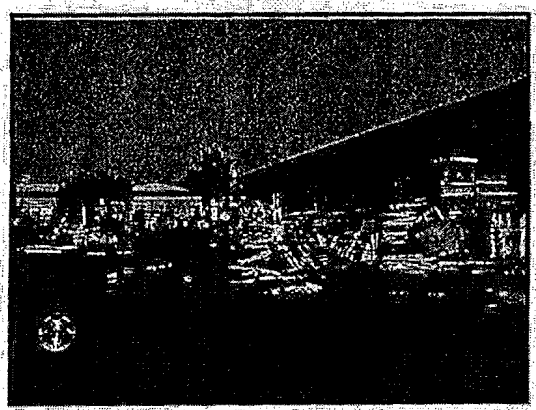


Photo 18

Phase I Environmental Site Assessment
12021-12023 Woodruff Avenue
August 10, 2005



Photo 19



Photo 20



Photo 21



Photo 22

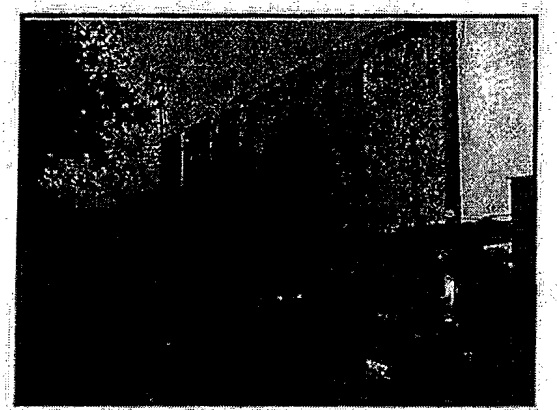


Photo 23

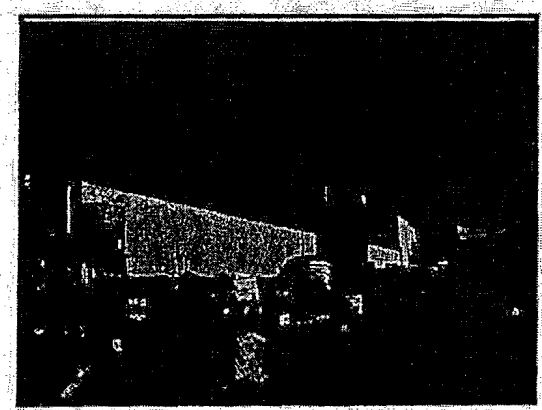
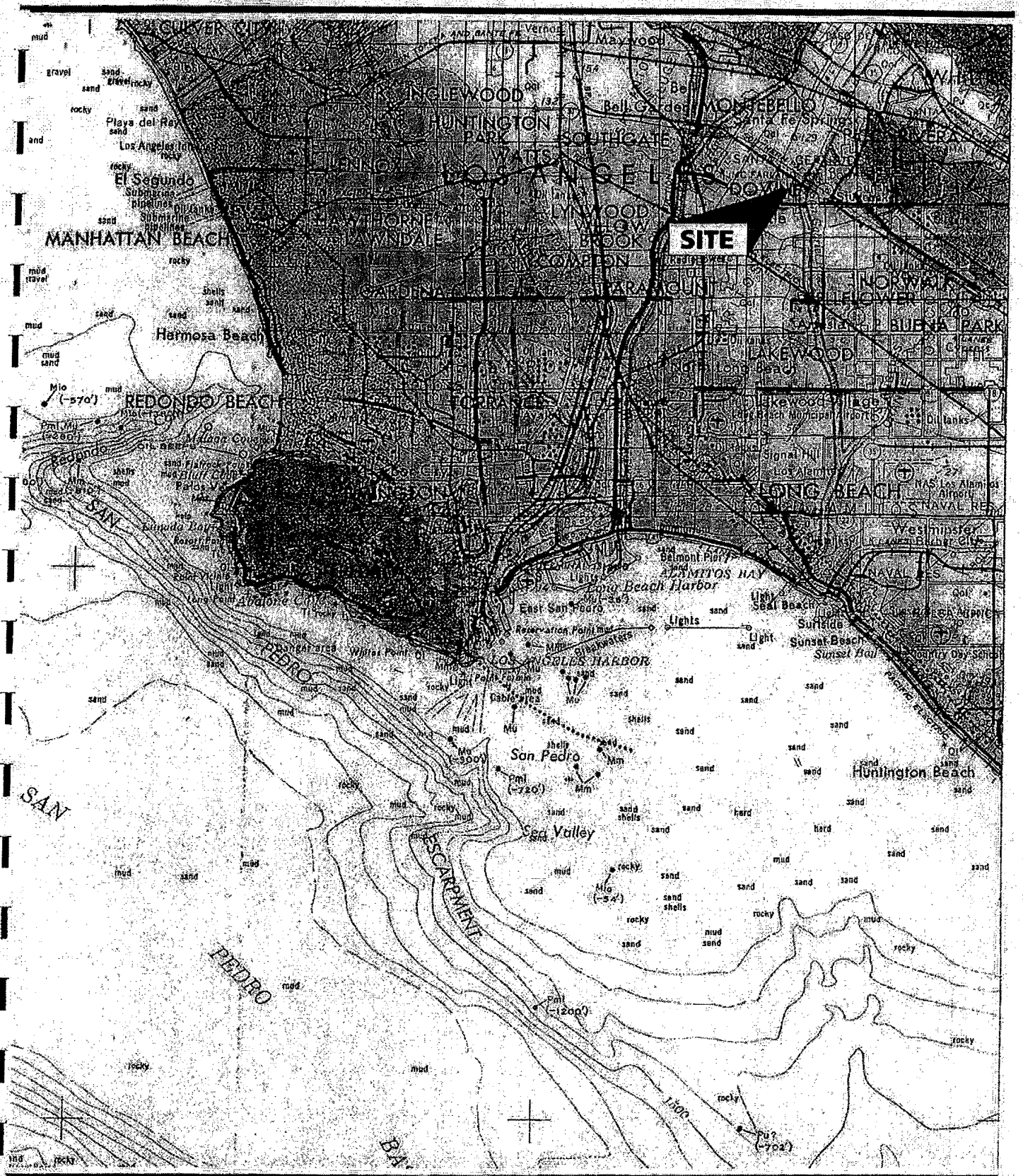


Photo24




Scale 1:250,000

N

5 0 5 10 15 20 Statute Miles

5 0 5 10 15 20 25 30 Kilometers

CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS

# GEOLOGIC MAP OF CALIFORNIA

# EXPLANATION

## SEDIMENTARY AND METASEDIMENTARY ROCKS

CENOZOIC

QUATERNARY

Recent

- Qs — Dune sand
- Qal — Alluvium
- Qsc — Stream channel deposits
- Qf — Fan deposits
- Qb — Basin deposits

GREAT VALLEY

- Qs — Salt deposits
- Ql — Quaternary lake deposits
- Qg — Glacial deposits

Pleistocene

- Qt — Quaternary nonmarine terrace deposits
- Qm — Pleistocene marine and marine terrace deposits
- Qc — Pleistocene nonmarine
- Qf — Plio-Pleistocene nonmarine

TERTIARY

Pliocene

- Pc — Undivided Pliocene nonmarine
- Pu — Upper Pliocene nonmarine
- Pm — Upper Pliocene marine
- Pm/Mc — Middle and/or lower Pliocene nonmarine
- Pm/Mm — Middle and/or lower Pliocene marine

Miocene

- Mc — Undivided Miocene nonmarine
- Mu — Upper Miocene nonmarine
- Mm — Upper Miocene marine
- Mc — Middle Miocene nonmarine
- Mm — Middle Miocene marine
- Ml — Lower Miocene marine

Oligocene

- Oc — Oligocene nonmarine
- O — Oligocene marine

Eocene

- Ec — Eocene nonmarine
- E — Eocene marine

Paleocene

- Pc — Paleocene nonmarine
- P — Paleocene marine

## IGNEOUS AND META-IGNEOUS ROCKS

- Qv — Recent volcanic: $Q_{rv}^{r}$ —rhyolite; $Q_{rv}^{a}$ —andesite; $Q_{rv}^{b}$ —basalt; $Q_{rv}^{p}$ —pyroclastic rocks
- Qpv — Pleistocene volcanic: $Q_{pv}^{r}$ —rhyolite; $Q_{pv}^{a}$—andesite; $Q_{pv}^{b}$ —basalt; $Q_{pv}^{p}$ —pyroclastic rocks
- Quaternary and/or Pliocene cinder cones
- Pv — Pliocene volcanic: $P_{v}^{r}$ —rhyolite; $P_{v}^{a}$—andesite; $P_{v}^{b}$ —basalt; $P_{v}^{p}$ —pyroclastic rocks
- Mv — Miocene volcanic: $M_{v}^{r}$ —rhyolite; $M_{v}^{a}$ —andesite; $M_{v}^{b}$—basalt; $M_{v}^{p}$—pyroclastic rocks
- Ov — Oligocene volcanic: $\Phi_{v}^{r}$—rhyolite; $\Phi_{v}^{a}$ —andesite; $\Phi_{v}^{b}$—basalt; $\Phi_{v}^{p}$—pyroclastic rocks
- Ev — Eocene volcanic: $E_{v}^{r}$ —rhyolite; $E_{v}^{a}$—andesite; $E_{v}^{b}$ —basalt; $E_{v}^{p}$—pyroclastic rocks

# REGIONAL
# WILDCAT MAP
## SHOWING WELLS NOT ON
## DIVISION OF OIL & GAS FIELD MAPS
## STATE OF CALIFORNIA
## DEPARTMENT OF CONSERVATION
## DIVISION OF OIL & GAS

SCALE IN FEET

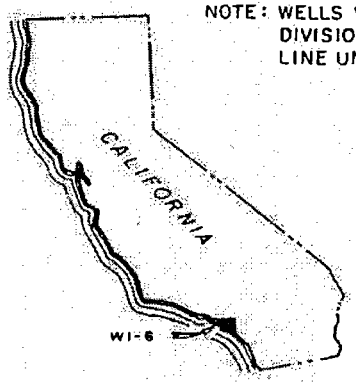
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JULY 7, 1990

### LEGEND

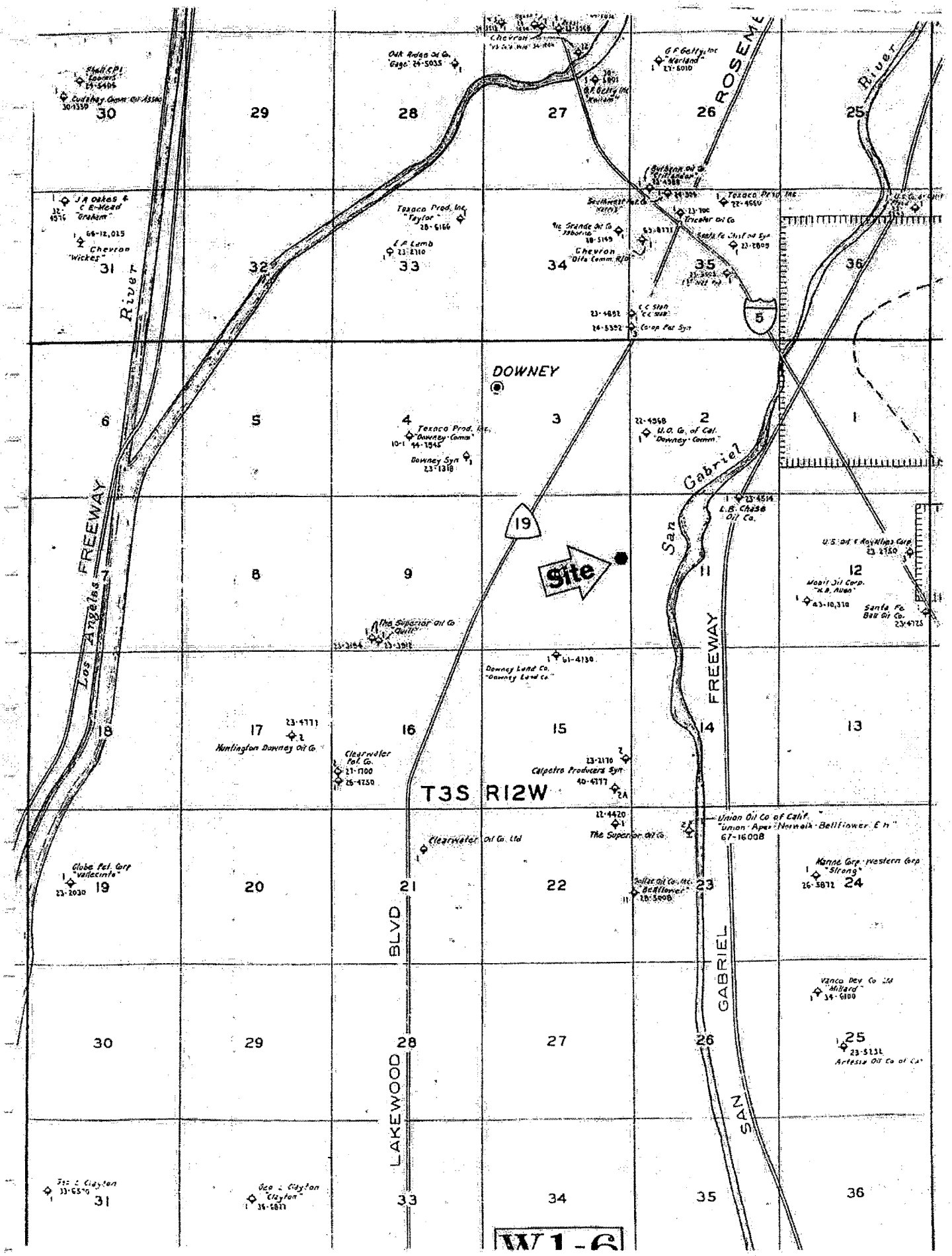
- DRILLING
- DRILLING - IDLE
- 67-6789 PLUGGED AND ABANDONED - DRY HOLE (Showing year drilled and total depth)
- PRODUCING - OIL
- IDLE - OIL
- PLUGGED AND ABANDONED - OIL
- PRODUCING - GAS
- IDLE - GAS
- PLUGGED AND ABANDONED - GAS
- WATER SOURCE
- GAS INJECTION
- WATER FLOOD
- WATER DISPOSAL
- STEAM FLOOD
- BOUNDARY OF FIELD MAP COVERAGE
- FIELD BOUNDARY
- BURIED IDLE
- OBSERVATION

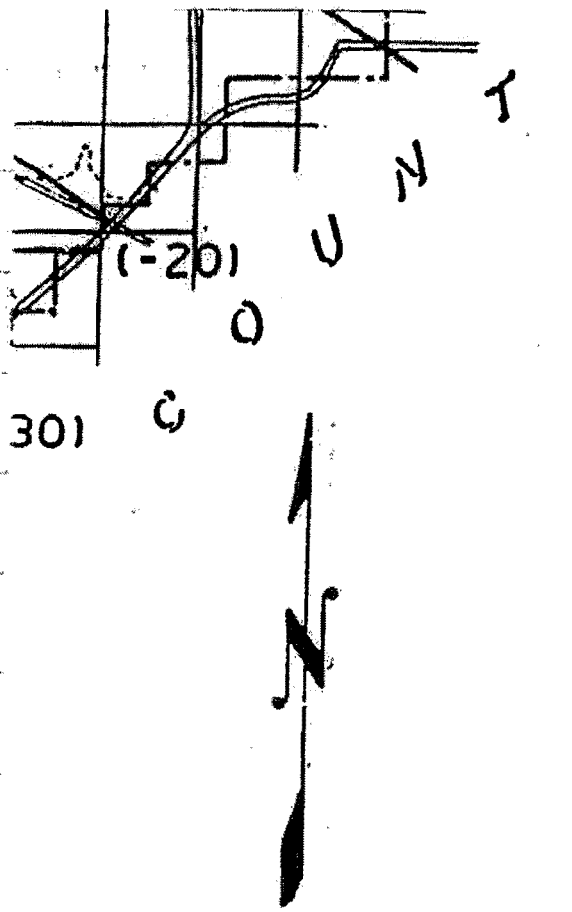
DIVISION OF OIL & GAS
1416 9th STREET
SACRAMENTO, CALIF 95814




NOTE: WELLS WITH DIRECTIONAL SURVEYS DIVISION OF OIL AND GAS ARE INDIC LINE UNDER THE WELL SYMBOL.

# W1-6 LOS ANGELES & ORANGE COUNTIES SOUTHERN LOS ANGELES


DOWNEY
Site
T3S R12W
Los Angeles River
FREEWAY
San Gabriel River
FREEWAY
ROSEMEAD BLVD
LAKEWOOD BLVD
SAN GABRIEL
Chevron "Wickes"
Texaco Prod. Inc. "Taylor"
Chevron "Dita Comm. R/D"
Texaco Prod. Inc. "Downey Comm"
Downey Syn
U.O.C. of Cal. "Downey Comm."
L.B. Chase Oil Co.
Mobil Oil Corp. "H.B. Allen"
Santa Fe Bass Oil Co.
The Superior Oil Co "Quill"
Downey Land Co. "Downey Land Co"
Huntington Downey Oil Co
Clearwater Pet. Co.
Calpetro Producers Syn
Clearwater Oil Co. Ltd
The Superior Oil Co.
Union Oil Co of Calif. "Union Apex-Norwalk-Bellflower E h"
Globe Pet. Corp "Vallecinto"
Texaco Prod. Inc. "Strong"
Vanco Dev Co Ltd "Millard"
Artesia Oil Co of Cal
W1-6







## EXPLANATION

——— LINES OF EQUAL PRESSURE ELEVATIONS - PRINCIPAL AQUIFER (INTERPOLATED BETWEEN WELLS)

— — — SAME AS ABOVE, LOCATION APPROXIMATE.

— — RESTRICTIONS OR BARRIERS TO GROUNDWATER MOVEMENT, (GEOLOGIC AND/OR HYDROLOGIC)

— · — · — LINE APPROXIMATELY MARKING TRANSITION FROM FREE GROUNDWATER LEVELS TO PRESSURE LEVELS. (CENTRAL COASTAL PLAIN 1933, D.W.R. BULL. NO. 45.)

PROJECT

| SIONS | COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS | |
|---|---|---|
| DESCRIPTION | # COASTAL PLAIN<br>DEEP AQUIFER<br>GROUNDWATER CONTOUR MAP<br>FOR<br>FALL 1994 | |
| WN BY / PROJECT ENGINEER | RECOMMENDED BY | DATE / SCALE |

# ORSWELL & KASMAN, INC.

## ENVIRONMENTAL RECORDS RESEARCH REPORT

*Property Information:*

**Industrial Buildings**
**12021-12023 Woodruff Avenue**
**Downey, CA 90241**

*OKI Report #:*

**P05260**

*Report Date:*

**August 10, 2005**

*Prepared For:*

**Tom Olsen**
**Olsen Family Trust**




*Prepared by:*

**Orswell & Kasman, Inc.**
**316 West Foothill Boulevard**
**Monrovia, CA 91016**
**(626) 932 - 1800 * FAX (626) 932 - 1807**
*www.orswell-kasman.com*

*The information provided herein is based upon research of public records listed on the "Reference to the Regulatory Agency Database" page of this report and not on a physical inspection of the property. By requesting this report, the client accepts the terms and conditions described on the "Response Notification Sheet" of this report. The client may want to obtain detailed subject property information from a qualified consultant or specialist to determine if any potential hazards exist on the property.*

# RESPONSE NOTIFICATION SHEET

*This report is in conformance with the ASTM standard for a Phase I Environmental Site Assessment governemnment records check*

| | No Sites Within Specified Radius | Property & Adjacent | ¼ Mile Radius | ½ Mile Radius | 1 Mile Radius |
|---|---|---|---|---|---|
| National Priority List (NPL) | ✓ | | | | |
| RCRA CORRACTS Facilities* | ✓ | | | | |
| CERCLIS | | | | ✓ | |
| CALSITES** | | | | ✓ | |
| Leaking Underground Storage Tanks (LUSTIS)* | | | | ✓ | |
| Active / Inactive Landfills | | | | ✓ | |
| Treatment, Storage & Disposal (TSD) | ✓ | | | | |
| Emergency Response Notification System (ERNS) | ✓ | | | | |
| Generators (HWG) | | ✓ | | | |
| Registered Underground Tanks | | ✓ | | | |
| Superfund Leins | ✓ | | | | |
| CERCLIS NFRAP | ✓ | | | | |

Sites reported as "Case Closed"* or "NFA - No Further Action"** may not be listed in this report

*OKI Report #:* **P05260**
*Completion Date:* **8/10/05**

*Property Information:*
**Industrial Buildings**
**12021-12023 Woodruff Avenue**
**Downey, CA 90241**

**John E. Orswell**
**Registered Environmental Assessor**

REGISTERED ENVIRONMENTAL ASSESSOR
JOHN E. ORSWELL
No. 1263
Expires: 6/30/06
STATE OF CALIFORNIA

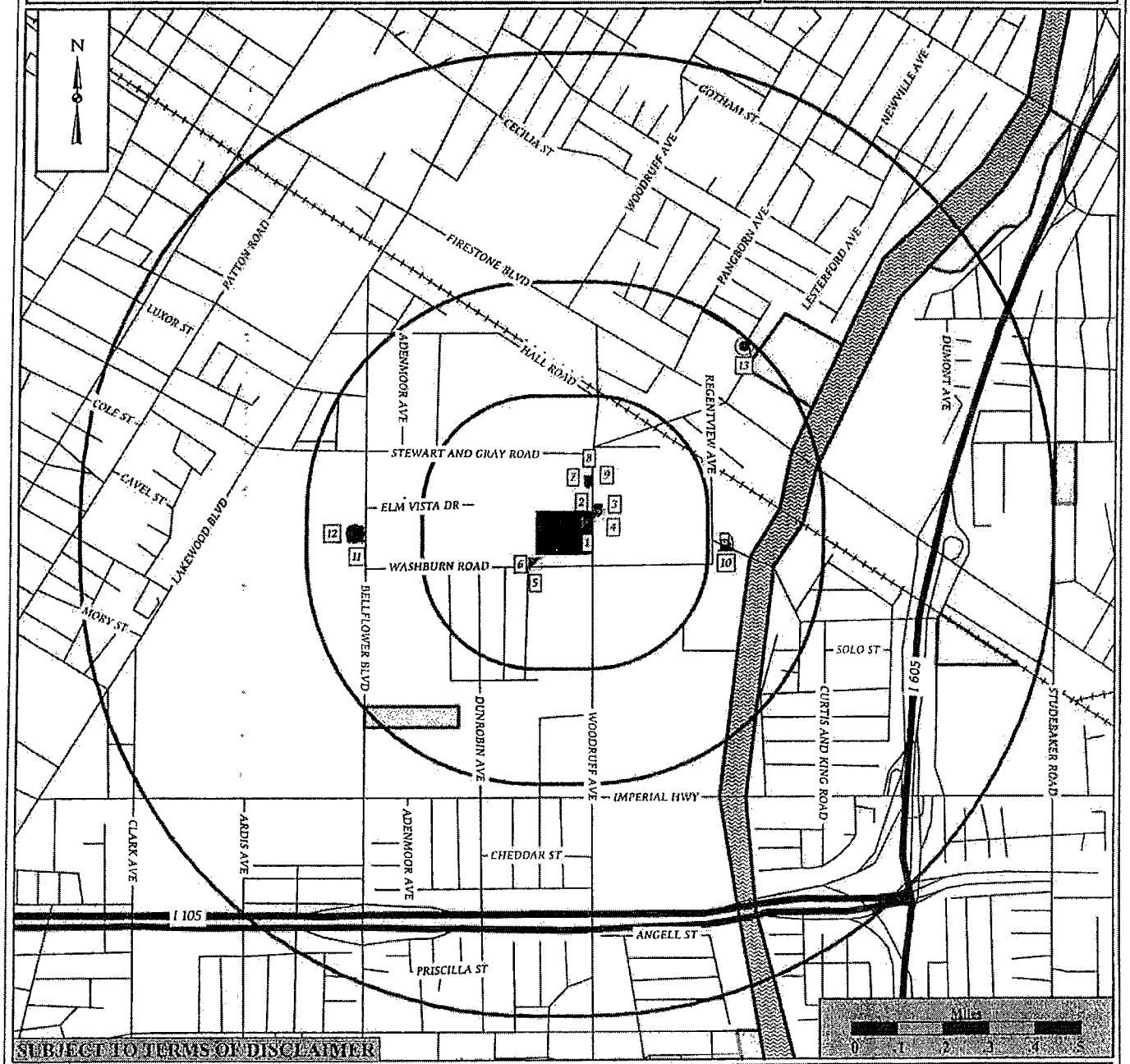
*The information contained in this report is obtained from federal, state and other public sources. Orswell & Kasman, Inc. (OKI) does not make any guarantees, warranties or representations, whether expressed or implied, regarding the accuracy of such information, and shall not be held responsible in the event that any such inaccuracies are present. All liability for damages of any nature arising from any inaccuracy in the facts stated herein must be assumed by the client. Orswell & Kasman, Inc. (OKI) also advises the client that this report and information contained herein is intended solely for the use of the client or assignee with whom Orswell & Kasman, Inc. (OKI) has a contractual relationship. Orswell & Kasman, Inc. (OKI) makes no other warranty, express or implied, as to the conclusions and professional advice included in this report, and is not responsible for the independent conclusions, opinions or recommendations made by any other party or entity based whole or in part on the information provided in this records review.*

**Orswell & Kasman, Inc.**
**316 West Foothill Boulevard**
**Monrovia, CA 91016**
**(626) 932 - 1800 * Fax (626) 932 - 1807**
*www.orswell-kasman.com*

# Orswell & Kasman, Inc.

**Environmental**
**Assessments & Consulting**

Subject Property Location:
12021-12023 Woodruff Avenue
Downey, CA 90241




SUBJECT TO TERMS OF DISCLAIMER

## MAP LEGEND

- One Mile Radius
- Half Mile Radius
- Quarter Mile Radius
- Property Area
- Airports
- Parks & Golf Courses
- Waterways
- Railroads
- Roads
- Highways

## HAZARDOUS SITE SYMBOLS

- National Priority List
- RCRA Corracts
- CERCLIS
- CalSites
- Leaking Underground Storage Tanks
- Active / Inactive Landfills
- Treatment, Storage, & Disposal Facilities
- Emergency Response Notification System
- Generators
- Registered Underground Tanks
- Superfund Liens
- CERCLIS No Further Remedial Action Planned

For more information please contact us at (626) 844-4150 or www.orswell-kasman.com

# Site Summary List

Please note that certain sites may appear on multiple databases
For more information on these sites, please see the accompanying pages

**Subject Property Information:**
**Industrial Buildings**
**12021-12023 Woodruff Avenue**
**Downey, CA 90241**

| | | |
|---|---|---|
| ***Site # 1*** | Case # 19012766 | Source Database |
| *0.0561 miles from the subject property* | Site **KIRKHILL INC**<br>**12021 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | **UTANK** |
| ***Site # 2*** | Case # CAD008255648 | Source Database |
| *0.0562 miles from the subject property* | Site **KIRKHILL INC**<br>**12021 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | **GEN** |
| ***Site # 3*** | Case # CAR000129742 | Source Database |
| *0.0837 miles from the subject property* | Site **FUJI PHOTO FILM U S A INC**<br>**12010 WOODRUFF AVE STE A**<br>**DOWNEY, CA 90241** | **GEN** |
| ***Site # 4*** | Case # 19016288 | Source Database |
| *0.0897 miles from the subject property* | Site **DARNELL CORP**<br>**12000 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | **UTANK** |
| ***Site # 5*** | Case # CAR000012781 | Source Database |
| *0.0916 miles from the subject property* | Site **CLASSIC GRAPHIX**<br>**9459 WASHBURN RD**<br>**DOWNEY, CA 90242** | **GEN** |
| ***Site # 6*** | Case # CAD983585290 | Source Database |
| *0.094 miles from the subject property* | Site **STUD WELDING PRODUCTS INC**<br>**9455 WASHBURN RD**<br>**DOWNEY, CA 90242** | **GEN** |
| ***Site # 7*** | Case # 12833 | Source Database |
| *0.1223 miles from the subject property* | Site **INCO EXPRESS INC**<br>**11941 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | **UTANK** |
| ***Site # 8*** | Case # 19017888 | Source Database |
| *0.1223 miles from the subject property* | Site **INCO EXPRESS INC**<br>**11941 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | **UTANK** |
| ***Site # 9*** | Case # 012833 | Source Database |
| *0.1223 miles from the subject property* | Site **INCO EXPRESS INC**<br>**11941 WOODRUFF AVE**<br>**DOWNEY, CA 90241** | **UTANK** |
| ***Site # 10*** | Case # R-09296 | Source Database |
| *0.3489 miles from the subject property* | Site **CALSAN, INC.**<br>**9821 DOWNEY & NORWALK RD**<br>**DOWNEY, CA 90241** | **LUSTIS** |
| ***Site # 11*** | Case # CA7800019419 | Source Database |
| *0.4547 miles from the subject property* | Site **BOEING NORTH AMERICAN, INC.**<br>**12214 LAKEWOOD BOULEVARD**<br>**DOWNEY, CA 90242** | **CERCLIS** |
| ***Site # 12*** | Case # 19370366 | Source Database |
| *0.4564 miles from the subject property* | Site **NASA INDUSTRIAL PLANT- KAISER**<br>**12214 LAKEWOOD BLVD.**<br>**DOWNEY, CA 90241** | **CALST** |

# Site Summary List

Please note that certain sites may appear on multiple databases
For more information on these sites, please see the accompanying pages

**Subject Property Information:**
**Industrial Buildings**
**12021-12023 Woodruff Avenue**
**Downey, CA 90241**

| | | |
|---|---|---|
| ***Site # 13*** | Case # 19-AA-5382 | Source Database |
| *0.5597 miles from the subject property* | Site **Downey Dump**<br>**9612 Ardine Street**<br>**Downey, CA 90241** | SWIS |

# Underground Storage Tanks

Case Number: **19012766**

Site: **KIRKHILL INC**
**12021 WOODRUFF AVE**
**DOWNEY CA 90241**

Status: **Historical**

*Site # 1* *0.0561 miles from the Subject Property*

Case Number: **19016288**

Site: **DARNELL CORP**
**12000 WOODRUFF AVE**
**DOWNEY CA 90241**

Status: **Historical**

*Site # 4* *0.0897 miles from the Subject Property*

Case Number: **12833**

Site: **INCO EXPRESS INC**
**11941 WOODRUFF AVE**
**DOWNEY CA 90241**

Status: **Historical**

*Site # 7* *0.1223 miles from the Subject Property*

Case Number: **19017888**

Site: **INCO EXPRESS INC**
**11941 WOODRUFF AVE**
**DOWNEY CA 90241**

Status: **Historical**

*Site # 8* *0.1223 miles from the Subject Property*

Case Number: **012833**

Site: **INCO EXPRESS INC**
**11941 WOODRUFF AVE**
**DOWNEY CA 90241**

Status: **Current**

*Site # 9* *0.1223 miles from the Subject Property*

# GENERATORS

Case Number: **CAD008255648**

Site: **KIRKHILL INC**
**12021 WOODRUFF AVE**
**DOWNEY CA 90241**

Generator Type SQG
**Small Quantity Hazardous Waste Generator**

*Site # 2* *0.0562 miles from the Subject Property*

**Handler IS NOT a Transporter**

Case Number: **CAR000129742**

Site: **FUJI PHOTO FILM U S A INC**
**12010 WOODRUFF AVE STE A**
**DOWNEY CA 90241**

Generator Type SQG
**Small Quantity Hazardous Waste Generator**

*Site # 3* *0.0837 miles from the Subject Property*

**Handler IS NOT a Transporter**

Case Number: **CAR000012781**

Site: **CLASSIC GRAPHIX**
**9459 WASHBURN RD**
**DOWNEY CA 90242**

Generator Type SQG
**Small Quantity Hazardous Waste Generator**

*Site # 5* *0.0916 miles from the Subject Property*

**Handler IS NOT a Transporter**

Case Number: **CAD983585290**

Site: **STUD WELDING PRODUCTS INC**
**9455 WASHBURN RD**
**DOWNEY CA 90242**

Generator Type SQG
**Small Quantity Hazardous Waste Generator**

*Site # 6* *0.094 miles from the Subject Property*

**Handler IS NOT a Transporter**

# CERCLIS

*CERCLIS -*

Case Number: **CA7800019419**

Site: **BOEING NORTH AMERICAN, INC.**
**12214 LAKEWOOD BOULEVARD**
**DOWNEY CA 90242**

NPL Status: Not on the NPL

Federal Facility Yes

*Site # 11 0.4547 miles from the Subject Propert*

| Event: DS001 | Status: | Start Date |
|---|---|---|
| DISCOVERY | Funding: EPA Fund Financed | Completion Date 11/23/1998 |

# REFERENCE GUIDE TO THE REGULATORY AGENCY DATABASES

| SOURCE | DESCRIPTION |
|---|---|
| **NPL:**<br>*1 mile search radius*<br>*Date: May 2005* | The Natonal Priority List (NPL) identifies abandoned or uncontrolled hazardous waste sites, which have been identified as possibly representing a long-term threat to the public health or environment. These sites have been identified as being highly contaminated with hazardous substances and represent the USEPA's target enforcement and cleanup efforts. Studies of individual sites are conducted by the USEPA to determine the level of contamination, and the sites are then compared and ranked to other sites on the NPL. |
| **CORRACTS:**<br>*1 mile search radius*<br>*Date: November2004* | The USEPA maintains a list of facilities which have been authorized to receive hazardous waste. These facilities have permits to treat, store or dispose of the waste as determined by the RCRA regulations. In addition, the USEPA publishes a list of those facilities who are subject to a corrective action based on the facilities waste handling and storage procedures. The facilities, which are subject to a corrective action, are identified as CORRACTS sites. |
| **CERCLIS:**<br>*½ mile search radius*<br>*Date: May 2005* | The USEPA has developed a database known as the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), which contains information on potential hazardous waste sites located throughout the United States. There are over 33,000 sites on the CERCLIS inventory. All sites are subjected to a preliminary assessment and thereafter are either placed on the National Priority List (NPL) or are placed in a category for those sites requiring no further Federal Superfund action. |
| **CALST:**<br>*½ mile search radius*<br>*Date: June 2005* | The State of California Environmental Protection Agency maintains the "CalSite" database, which is a listing of 7,800 known active, inactive and abandoned hazardous sites. These sites have previously been reported in the Abandoned Site Program Information System (ASPIS), Bond Ependiture Plan (BEP) and Cortese database. |
| **LUSTIS:**<br>*½ mile search radius*<br>*Date: May 2005* | The State of California Water Resources Control Board is responsible for monitoring the quality of flow of the groundwater and compiles lists of known leaking undergound storage tanks. The list is maintained as the Leaking Underground Storage Tank Information System (LUSTIS). The local Regional Water Quality Control Board (RWQCB) monitors the contamination problem, the investigation and any remedial activities. |
| **SWIS:**<br>*½ mile search radius*<br>*Date: December 2003* | The State of California Integrated Waste Management Board maintains a list of active and inactive landfill sites within California and provides information concerning the ownership and types of wastes brought to the landfills. |
| **TSD:**<br>*½ mile search radius*<br>*Date: November 2004* | Treatment, Storage or Disposal Facilities (TSDF) is a federal listing of facilities, which have been authorized to receive hazardous waste. These facilities have permits to treat, store or dispose of waste as determined by the RCRA regulations. |
| **ERNS:**<br>*Property & adjacent*<br>*Date: January 2004* | The Emergency Response Notification System (ERNS) is a list of locations which have reported a release of oil or hazardous substances to the USEPA Office of Emergency and Remedial Response. Most of the data in this system is based on information that was received during the initial notification. |
| **HWG:**<br>*Property & adjacent*<br>*Date: November 2004* | The United States Environmental Protection Agency maintains a list of known hazardous waste generators in the nation. A company on the list generates reportable quantities of hazardous waste, and the disposal and transportation of the waste is monitored through the use of a hazardous waste manifest. |
| **UTANK:**<br>*Property & adjacent*<br>*Date: May 2005* | The location and identy of registered underground tanks is maintained by the State of California Water Resources Control Board in the Hazardous Substance Storage Container Database. The list was compiled in 1991 and there are currently no plans to update the database at the present time. |
| **SFL:**<br>*Property & adjacent*<br>*Date: July 1993* | The USEPA maintains a list of Superfund Leins that have been issued on properties throughout the United States. These sites have been remediated through the expenditures of Superfund monies. The purpose of the lein is to prevent the property owner from gaining a financial benefit from the federal government's cleanup and restoration activities. |

# APPENDIX L:

# GEOSCIENCE ANALYTICAL "SUPPLEMENTAL PHASE II REPORT" DATED SEPTEMBER 14, 2005

GeoScience Analytical, Inc. "established March 1981"

608 HAILEY COURT SIMI VALLEY, CA 93065 (805) 526-6532 FAX 526-3570 EMAIL GEOSCI10@AOL.COM

2005

14 September 2005

Mr. Paul Minoo (323) 583-3898
6270 S. Boyle Avenue
Vernon, CA 90058

**RE: Supplemental Phase II Environmental Audit at 12021-12023 Woodruff Avenue, Downey, CA 90241**

Dear Mr. Minoo:

We have reviewed the following documents that have been prepared as part of the environmental review of the above referenced property:

- Phase I Environmental Site Assessment Report prepared August 10, 2005: Industrial Buildings 12021-12023 Woodruff Avenue, Downey, CA 90241 prepared by Orswell & Kasman, Inc.
- Letter Report for Limited Soil Sampling prepared August 31, 2005: 12021-12023 Woodruff Avenue, Downey, CA prepared by Converse Consultants

The Phase I report identified the follow areas of environmental concern:

- A release of diesel fuel from a leaking underground storage tank in 1990. The tank and the impacted soil were removed from the site.
- Visible stains of oil on the paved surface and on the exterior wall near the aboveground process oil storage tank on the south side of the building. Water-soluble oil was observed on the paved surface near the cooling system in the open area near the center of the building.

The Phase II report provided the following analytical data:

- Soils in the vicinity of the above ground storage tanks were void of contaminants above regulatory levels.

- Soils in the vicinity of the oil-water separator in a cooling water processing area contained elevated concentrations of arsenic in one soil sample at a depth 2.0' with deeper soils void of these elevated levels.
- Soils in the vicinity of the rubber presses were void of contaminants above regulatory levels.
- Soils in the vicinity of the west property line adjacent to a drainage swale were void of contaminants above regulatory levels.

The Phase II report identified total arsenic at a concentration of 79.2 mg/kg at a depth of 2.0 ft. (bg) with soil boring GW-4. This concentration was significantly below the regulatory level threshold of 500.0 mg/kg. Soluble (STLC) arsenic was identified at a concentration of 5.28 mg/L. This concentration was slightly above the regulatory level threshold of 5.0 mg/L; however the Total Characteristic Leaching Potential (TCLP) at this location was 0.65 mg/L significantly below the regulatory limit of 5.0 mg/L. At deeper depths at this location, arsenic was significantly below regulatory levels at both 4.0 ft. and 8.0 ft.

In order to further define the arsenic anomaly at the location of GW-4, GSA advanced four (4) soil borings to depths of 6.0 ft. in soils surrounding this location as shown in Figure 1, attached. Soils from depths of 2.0 ft. and 6.0 ft. (bg) were analyzed for total arsenic (TTLC). Arsenic concentrations ranged from <0.5 – 90.0 mg/kg. Maximum arsenic concentrations were identified at GSA-3 and GSA-4 at the 2.0 ft. depth interval at both locations with TTLC arsenic concentrations of 33.0 and 90.0 mg/kg, respectively. All TTLC arsenic concentrations were significantly below regulatory thresholds in all cases.

Additional characterization of soil at GSA-4 at a depth of 2.0 ft. was advanced with the analysis of soluble arsenic (STLC). Analytical results identified soluble arsenic at a concentration of 7.3 mg/L. This concentration is slightly above the regulatory levels threshold of 5.0 mg/L and in close agreement with the concentration observed at GW-4 reported previously.

Arsenic concentration isopleths have been contoured in Figure 2. Based on the available analytical data, maximum volume of soil potentially containing arsenic in excess of STLC concentrations for disposal purposes is estimated to be 3 – 6 cu.yds.

In summary, the subject site contains total arsenic within allowable limits. Within a small area of the site and in the immediate vicinity of the oil-water separator, soluble arsenic is present at a concentration slightly above threshold limits. Based on the low concentration of arsenic present under a capped surface, no remediation is recommended.

**Please call us at your opportunity in the event we can provide you with any additional review.**

Sincerely yours,

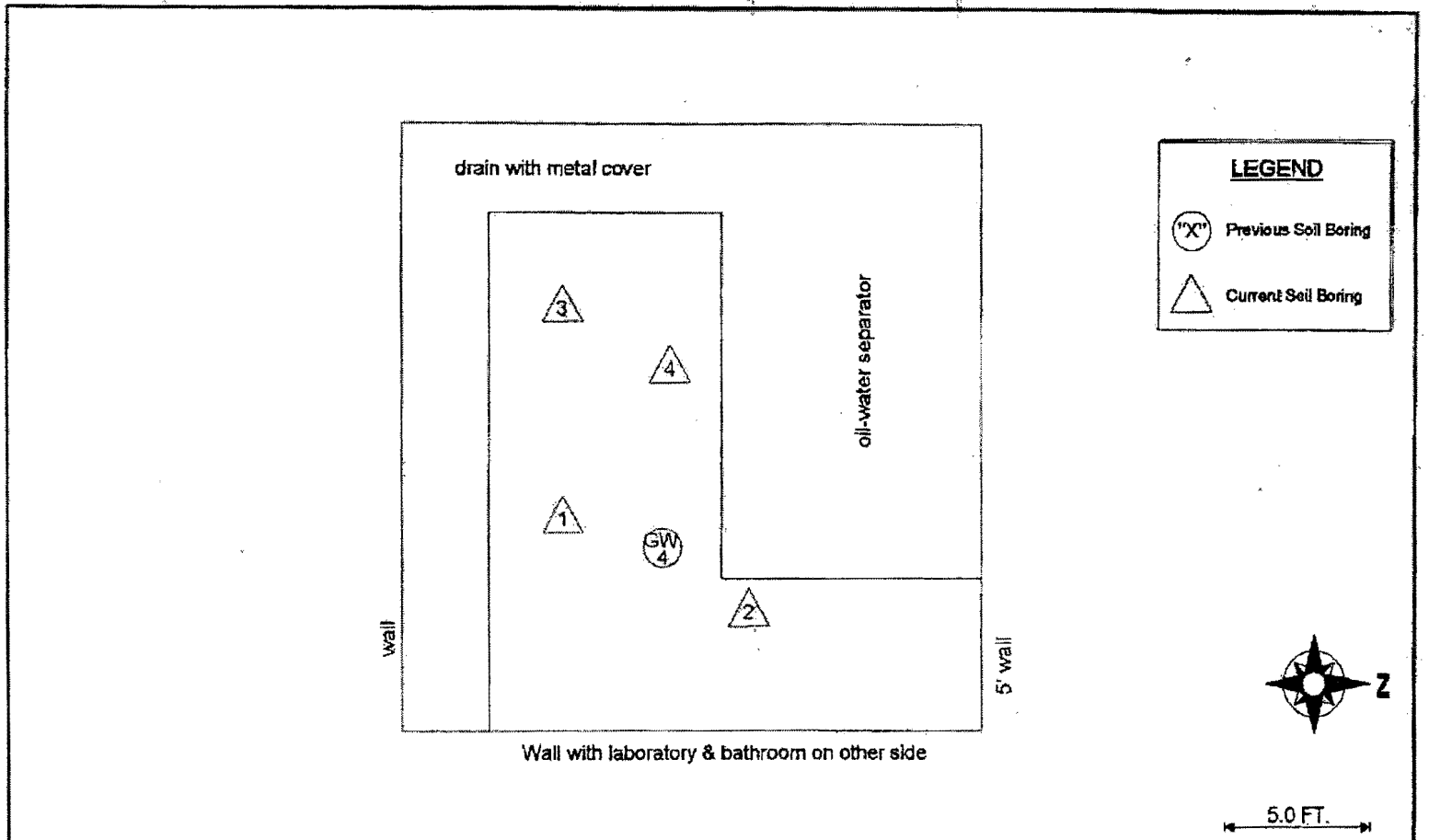
Louis J. Pandolfi
President

Rollie D. Berry
Reg. Engineer (Civil)
CA No. 17223

REGISTERED PROFESSIONAL ENGINEER
ROLLIE D. BERRY
No. 17223
EXP. 6/30/07
CIVIL
STATE OF CALIFORNIA

ReMINQ012224

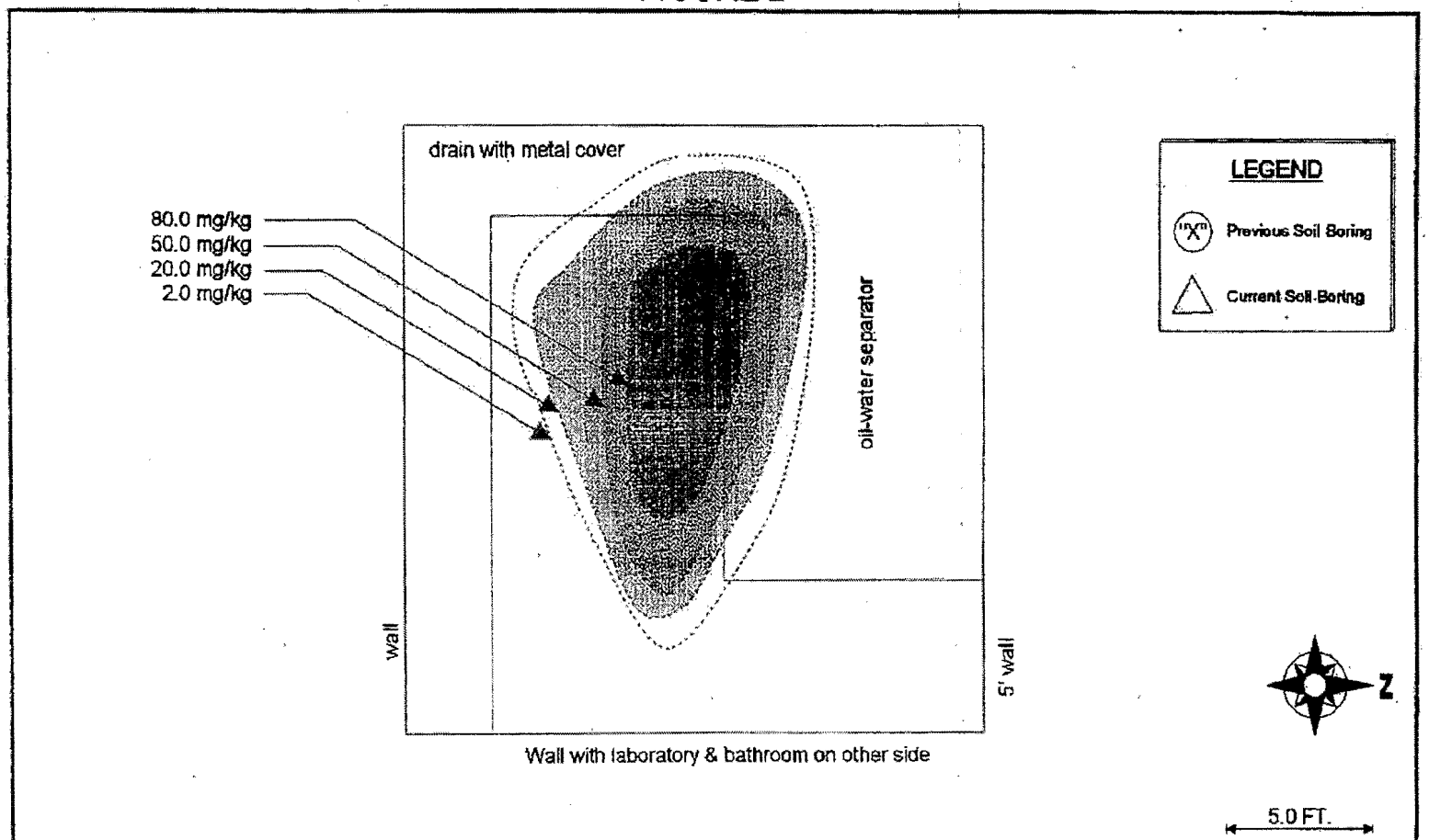
# FIGURE 1




| | | | |
|---|---|---|---|
| **GEOSCIENCE ANALYTICAL, INC.**<br>608 Hailey Court<br>Simi Valley, CA 93065<br>TEL (805) 526-6532 FAX: 526-3570 | SHEET TITLE: SITE PLAN | JOB NO. | 3221 |
| | PROJECT: | DWN. BY: | LJP |
| | 12021 - 12023 WOODRUFF AVENUE | CHKD BY: | FER |
| | DOWNEY, CA | DATE: | 09/13/05 |
| | | DWG. NO: | minoo09135 |

Jul 14 2006 11:03AM HP LASERJET 3330 P.5

# FIGURE 2




| | | | |
|---|---|---|---|
| **GEOSCIENCE ANALYTICAL, INC.**<br>606 Hailey Court<br>Simi Valley, CA 93065<br>TEL (805) 526-6532 FAX: 526-3570 | SHEET TITLE: ARSENIC (TTLC) CONCENTRATION ISOPLETHS | JOB NO. | 3221 |
| | PROJECT: | DWN. BY: | LJP |
| | 12021 - 12023 WOODRUFF AVENUE | CHKD BY: | FER |
| | DOWNEY, CA | DATE: | 09/13/05 |
| | | DWG. NO: | minoo09135 |

Jul 14 2006 11:03AM HP LASERJET 3330

# TABLE 1: ARSENIC IN SOIL

| Soil Boring No./Depth & Arsenic Concentration | | | |
|---|---|---|---|
| Soil Boring No. | Depth of Sampling (ft.) | Arsenic TTLC (mg/kg) | Arsenic STLC (mg/kg) |
| | | | |
| GSA-1 | 2.0 | 0.64 | n/a |
| GSA-1 | 6.0 | <0.5 | n/a |
| GSA-2 | 2.0 | 2.4 | n/a |
| GSA-2 | 6.0 | 1.2 | n/a |
| GSA-3 | 2.0 | 33 | n/a |
| GSA-3 | 6.0 | 0.7 | n/a |
| GSA-4 | 2.0 | 90 | 7.3 |
| GSA-4 | 6.0 | <0.5 | n/a |
| GW-4 | 2.0 | 79.2 | 5.28 |
| | 4.0 | 1.34 | 0.13 |
| GW-4 | 8.0 | 7.69 | 0.31 |

APPENDIX I

# ANALYTICAL DATA

## LABORATORY ANALYSIS RESULTS



**Client:** Geoscience Analytical, Inc.
**Project No.:** NA
**Project Name:** Kirkhill Plastics
**Sample Matrix:** Soil
**Method:** EPA 6010B (Total Arsenic)

**AA Project No.:** A22912
**Date Received:** 09/06/05
**Date Reported:** 09/07/05
**Units:** mg/Kg

| AA I.D. No. | Client I.D. No. | Date Sampled | Date Analyzed | DF | Results | MRL |
|---|---|---|---|---|---|---|
| 192465 | B1-2' | 09/06/05 | 09/07/05 | 1.0 | **0.64** | 0.5 |
| 192466 | B1-6' | 09/06/05 | 09/07/05 | 1.0 | <0.5 | 0.5 |
| 192467 | B2-2' | 09/06/05 | 09/07/05 | 1.0 | **2.4** | 0.5 |
| 192468 | B2-6' | 09/06/05 | 09/07/05 | 1.0 | **1.2** | 0.5 |
| 192469 | B3-2' | 09/06/05 | 09/07/05 | 1.0 | **33** | 0.5 |
| 192470 | B3-6' | 09/06/05 | 09/07/05 | 1.0 | **0.70** | 0.5 |
| 192471 | B4-2' | 09/06/05 | 09/07/05 | 1.0 | **90** | 0.5 |
| 192472 | B4-6' | 09/06/05 | 09/07/05 | 1.0 | <0.5 | 0.5 |

MRL: Method Reporting Limit J: Estimated Value DF: Dilution Factor

Allen Aminian
**Project Manager**

American Analytics • 9765 Eton Avenue, Chatsworth, California 91311
Tel: (818) 998 - 5547 • • Fax: (818) 998 - 7258

## LABORATORY ANALYSIS RESULTS



**Client:** Geoscience Analytical, Inc.
**Project No.:** NA
**Project Name:** Kirkhill Plastics
**Sample Matrix:** Soil
**Method:** STLC Arsenic

**AA Project No.:** A22912
**Date Received:** 09/06/05
**Date Reported:** 09/09/05
**Units:** mg/L

| AA I.D. No. | Client I.D. No. | Date Extracted | Date Sampled | Date Analyzed | DF | Results | MRL |
|---|---|---|---|---|---|---|---|
| 192471 | B4-2' | 09/07/05 | 09/06/05 | 09/09/05 | 1.0 | 7.3 | 0.005 |

MRL: Method Reporting Limit J: Estimated Value DF: Dilution Factor

Allen Aminian
Project Manager

American Analytics • 9765 Eton Avenue, Chatsworth, California 91311
Tel: (818) 998 - 5547 • • Fax: (818) 998 - 7258

## LABORATORY QA/QC REPORT



**Client:** Geoscience Analytical, Inc.
**Project Name:** Kirkhill Plastics
**Method:** EPA 6010B (Total Arsenic)
**Sample ID:** Reagent Blank

**Project No.:** NA
**AA Project No.:** A22912
**Date Analyzed:** 09/07/05
**Date Reported:** 09/07/05

| Compounds | Results mg/Kg | MRL |
|---|---|---|
| Arsenic | <0.5 | 0.5 |

MRL: Method Reporting Limit

Allen Aminlan
Project Manager

American Analytics • 9765 Eton Avenue, Chatsworth, California 91311
Tel: (818) 998 - 5547 • • Fax: (818) 998 - 7258

## LABORATORY QA/QC REPORT



**Client:** Geoscience Analytical, Inc.
**Project Name:** Kirkhill Plastics
**Method:** EPA 6010B (Total Arsenic)
**Sample ID:** Laboratory Control Standard
**Concentration:** 50 mg/Kg

**Project No.:** NA
**AA Project No.** A22912
**Date Analyzed:** 09/07/05
**Date Reported:** 09/07/05

| Compounds | Recovered Amount (mg/Kg) | Recovery (%) | Acceptable Range (%) |
|---|---|---|---|
| Arsenic | 52 | 104 | 75 - 125 |

Allen Aminian
Project Manager

American Analytics • 9765 Eton Avenue, Chatsworth, California 91311
Tel: (818) 998 - 5547 • • Fax: (818) 998 - 7258

## LABORATORY QA/QC REPORT



**Client:** Geoscience Analytical, Inc.
**Project Name:** Kirkhill Plastics
**Method:** EPA 6010B (Total Arsenic)
**Sample ID:** Matrix Spike
**Concentration:** 50 mg/Kg

**AA ID No:** 192465
**Project No.:** NA
**AA Project No.** A22912
**Date Analyzed:** 09/07/05
**Date Reported:** 09/07/05

| Compounds | Result (mg/Kg) | Spike Recovery (%) | Dup. Result (mg/Kg) | Spike/Dup. Recovery (%) | RPD (%) | Accept. Rec. Range (%) |
|---|---|---|---|---|---|---|
| Arsenic | 50.56 | 101 | 50.66 | 101 | 0 | 50 - 150 |

Allen Aminian
Project Manager

# AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 FAX: 818-998-7258

№ 308335
DATE: 9/6/05
PAGE 1 OF 1

| | | | |
|---|---|---|---|
| AA Client: GeoScience Analytical, Inc | Phone: 805 526 6532 | Sampler's Name (Print): Fleet Rust | |
| Project Manager: F. Rust | P.O. No. | Sampler's Signature: Fleet Rust | |
| Project Name: Arsenic | Client's Project No. | Project Manager's Signature: Fleet Rust | |
| Job Name and Address: Kirkhill Plastics Downey | | | |

ANALYSIS REQUIRED (Test Name): As Arsenic

Client's Comment Special Test Requirements / Comments (i.e., - Turnaround Time, Detection Limits, Data Package...)

| Client's I.D. | AA I.D.# | Date | Time | Sample Type | Number of Containers | Comments |
|---|---|---|---|---|---|---|
| B1-2' | 192465 | 9/6 | | Soil | 1 | 2 HR RUSH |
| B1-6' | 192466 | | | | | |
| B2-2' | 192467 | | | | | |
| B2-6' | 192468 | | | | | |
| B3-2' | 192469 | | | | | |
| B3-6' | 192470 | | | | | |
| B4-2' | 192471 | | | | | |
| B4-6' | 192472 | | | | | |

05 SEP 6 PM 4:27

LAB COMMENTS

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| Fleet Rust | 9/6/05 | 4:30 PM | |
| Relinquished by: | Date | Time | Received by: |
| Relinquished by: | Date | Time | Received by: |
| Relinquished by: | Date | Time | Received by: |

Approved as Work Order by: Print Name: Allen Aailan Signature: Date/Time: 9/6/05 9:32 AM
AA Project No. A19912

DISTRIBUTION: Page 1, White - Laboratory Page 2, Yellow - Laboratory Page 3, Pink - Account Executive Page 4, Gold - Client

Jul 14 2006 11:05AM HP LASERJET 3330 P.14

# APPENDIX M:

# S&S ENVIRONMENTAL "PHASE II REPORT" DATED NOVEMBER 9, 2005

**S&S COMMERCIAL ENVIRONMENTAL SERVICES, INC.**

# PHASE II ENVIRONMENTAL ASSESSMENT
# 'REPORT OF FINDINGS'

AT:

**Industrial Property**
12021-12023 Woodruff
Downey, CA 90241

PREPARED FOR:

**Mr. Joe Cecala, Executive V.P.**
**& Chief Credit Officer**
Foothill Independent Bank
510 S. Grand Avenue
Suite 203
Glendora, CA 91741

PROJECT CONDUCTED & REPORT PREPARED BY:

REGISTERED GEOLOGIST
WILLIAM C. LACHMAR
No. 6168
STATE OF CALIFORNIA

William C. Lachmar, R.G. # 6168

**November 9, 2005**

2005

12960 Central Ave. • Suite E • Chino, CA 91710 • PH. 949-650-4994 • FX. 949-650-4275

# EXECUTIVE SUMMARY

S&S Commercial Environmental Services (S&S), Inc. was contracted by Foothill Independent Bank to conduct a Phase II Soil Investigation to better qualify the findings from two previous Phase II Investigations. The previous investigations found arsenic at concentrations above California State Hazardous levels, however the impacted soil was extremely limited in total extent (i.e., between 3-6 $yds^3$ impacted).

The additional Phase II Investigation conducted by S&S found nothing to indicate any greater arsenic contamination to exist, than what had previously been identified in the two prior Phase II Soil Investigations.

However, within the immediate area of the oil/water separator, elevated concentrations of oil impacted soil as high as 54,100 parts per million were identified, with quantifiable oil impacted soil concentrations found to 20-feet below grade. The impacted soil first appeared directly beneath the bottom (i.e., 5-feet down) of the oil/water separator discharge conveyance system, which appears to be more-or-less an open, concrete, gravity flow culvert type system.

Ultimately S&S identified a 25-foot "Clean Earth" interval between the last identified impacted soil depth interval of 20-feet and 45-feet beneath ground surface (bgs). Having met the 25-foot clean earth interval and knowing the contaminant in question is one of the lowest rated regulated compounds by the State, S&S believes no significant threat to the immediate environment, or human health risk upon physical contact exists as a result of the TPH impacted soil found during this project.

Based on S&S findings, it is our opinion that nothing further needs to be conducted with reference to the immediate area around the oil/water separator, however if future plans require disturbance of the soil in this area, then the soil must be properly handled and taken to a Cal-EPA certified recycler.

Based on boring locations and sample results, it is the opinion of S&S that if the entire site were leveled, a conservative cost estimate (in 2005 dollars) of $90,000 would be necessary to properly remediate the impacted soil, so that a "no further action" letter could be issued by the Los Angeles County, Department of Public Works – Environmental Programs Division.

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## FIGURES


Figure 1 Site Location Map
Figure 2 Site Sketch Map Showing Investigative Boring Locations
Figure 3 Oil/Water Separator Boring Map with posted Arsenic Conc.
Figure 4 Oil/Water Separator Boring Map with posted Oil Conc.
Figure 5 Photographic Plate Showing Field Operations
Plate 1 Bulletin 104 Cross Section B-B' with Posted Site Location


## APPENDICES


Appendix I Soil Chemical Analyses Results with QA/QC Statement
Appendix II Soil Boring Logs

Phase 1

# 1.0 INTRODUCTION

S&S was contracted by Foothill Independent Bank to confirm the recommendations of GeoScience Analytical's September 14, 2005 Phase II Environmental Investigation at a commercial property located at 12021-12023 Woodruff Ave., Downey, CA (Site). The additional Phase II Investigation was conducted in response to an initial Phase II Investigation conducted by Converse Consultants in August 2005 and an additional Phase II Investigation conducted by GeoScience Analytical, Inc. on September 6, 2005. The initial Phase II Investigation was conducted throughout the entire site beneath areas of concern. The additional Phase II Investigation conducted by GeoScience Analytical was conducted specifically near the oil-water separator, where Converse Consultants found an Arsenic concentration above Cal-Hazardous levels. The additional Phase II Investigation by GeoScience Analytical concluded the Arsenic contamination to be no more than 3-6 $yds^3$ and of no immediate concern.

# 2.0 SOIL INVESTIGATIVE METHODS

## 2.1 Boring Location Determination

The boring locations were determined based on the two prior Phase II Investigations conducted by Converse Consultants and GeoScience Analytical. Ultimately a total of 14 soil borings were drilled during this project with a maximum total penetrated depth of 45-feet being investigated in boring SS5-Alt

## 2.2 Geo Probe 2400 Direct-Push Rig Soil Investigation

On September 28, 2005, S&S advanced eight (8) exploratory borings to a total depth of 5-feet below ground surface (bgs). The borings were drilled using a Geo Probe, model 2420 confined space, hydraulic punch drill rig. On October 5, 2005 S&S conducted an additional soil characterization which comprised of drilling four additional borings near the previous four borings drilled by S&S by the oil/water separator, but drilling to greater depths. Finally an additional field investigation was conducted by S&S on October 10, 2005, which consisted of drilling boring SS5-Alt to a total depth of 30-feet to 45-feet below grade.

Undisturbed soil samples were collected at ½, 1, 2 and 5-feet bgs in each boring from the September 28th investigation, at 5-foot intervals beginning at 10-feet below grade to total boring depth (varying between 15 to 30-feet below grade) in the October 5th investigation and at 35, 40 and 45-feet below grade in boring SS5-Alt in the October 10th investigation. All samples collected during this project were collected by driving a 2-inch diameter by 2-foot long spoon sampler containing four 1½" diameter by six-inch long brass sample sleeves in advance of the bore-hole, using the hydraulic drill hammer. The "lead" sample

sleeve from each sampling interval was secured with Parafilm™ lined plastic end caps. Soil from the second sleeve was evacuated into one Encore™ 25-gram Teflon sampler. The evacuation was conducted by manually driving the Encore sampler into the brass sample sleeve using the Encore twist-loc sample handle. All soil samples were collected and logged per EPA method 5035 guidelines, by William C. Lachmar, R.G. # 6168.

The lead brass sample sleeve and 25-gram Encore sample was then clearly marked as to boring number and sample depth interval, then placed in a zip-loc bag that was also clearly labeled. The bagged sample was then placed in a chilled ice chest for temporary storage pending transport to the laboratory.

The remaining soil from the second brass sample sleeve was placed in zip-loc bags, marked as to boring location and sample depth and placed on S&S's vehicle to heat in the sun. After approximately 10-minutes to warm and equilibrate, the probe from a Micro Rae model PGM-7600, Photo Ionization Detector (PID) was placed approximately ½ the headspace width inside the zip-loc bag. The soil was then "turned" by hand and readings from the OVA posted on boring logs, along with the soil description. All soil borings were logged using the Unified Soil Classification System (USCS) and included a description of the soil matrix, with reference to classification, color, grain-size, sorting, plasticity/hardness, transition zones, moisture, field reading and any odors or signs of staining (discoloration).

## 2.3 Soil Sampling Methods

The collected soil samples were submitted to Southland Technical Services (STS), Inc., located in Montebello, CA. Based on field observations selected samples were submitted for testing of total petroleum hydrocarbons (TPH), by EPA method 8015m Arsenic by EPA method 7060A and total chromium by EPA method 7190 (for outside chiller). In addition the most elevated TPH sample (SS5-5') was further tested for Volatile Organic Compounds (VOC's) by EPA method 8260B and Semi-Volatile Organic Compounds by EPA method 8270C. A summary of the soil chemical analyses results is provided in Table 1 below. The certified laboratory chemical analyses results, with QA/QC data is provided in Appendix I.

**TABLE 1:**
**SUMMARY OF SOIL ANALYTICAL RESULTS**
**In Parts Per Million (mg/kg)**
**Sampling Date: September 28, 2005**

| Sample ID | TPH C8-C12 | TPH C13-C23 | TPH C24-C40 | VOC's | Semi-VOC's | As | Cr |
|---|---|---|---|---|---|---|---|
| SS1-½ | --- | --- | --- | --- | --- | 19.2 | 13.2 |
| SS1-1 | --- | --- | --- | --- | --- | 5.4 | 11.6 |
| SS1-2 | --- | --- | --- | --- | --- | 3.5 | 13.4 |
| SS2-½ | --- | --- | --- | --- | --- | 7.7 | 11.0 |
| SS2-1 | --- | --- | --- | --- | --- | 4.2 | 17.8 |
| SS2-2 | --- | --- | --- | --- | --- | 5.7 | 9.9 |
| SS3-½ | --- | --- | --- | --- | --- | 10.9 | 15.6 |
| SS3-1 | --- | --- | --- | --- | --- | 5.7 | 11.4 |
| SS3-2 | --- | --- | --- | --- | --- | 7.0 | 16.8 |
| SS4-½ | --- | --- | --- | --- | --- | 32.7 | --- |
| SS4-1 | --- | --- | --- | --- | --- | 5.7 | --- |
| SS4-2 | --- | --- | --- | --- | --- | 22.2 | --- |
| SS5-½ | --- | --- | --- | --- | --- | 71.3 | --- |
| SS5-1 | --- | --- | --- | --- | --- | 70.0 | --- |
| SS5-2 | --- | --- | --- | --- | | 31.4 | --- |
| SS5-5 | ND | 54,100 | 26,100 | ND | ND-NS | --- | --- |
| SS6-½ | --- | --- | --- | --- | --- | 10.4 | --- |
| SS6-1 | --- | --- | --- | --- | --- | 4.2 | --- |
| SS6-2 | --- | --- | --- | --- | --- | 5.4 | --- |
| SS7-½ | --- | --- | --- | --- | --- | 7.4 | --- |
| SS7-1 | --- | --- | --- | --- | --- | 6.2 | --- |
| SS7-2 | --- | --- | --- | --- | --- | 4.7 | --- |
| SS8-½ | --- | --- | --- | --- | --- | 5.6 | --- |
| SS8-1 | --- | --- | --- | --- | --- | 6.1 | --- |
| SS8-2 | --- | --- | --- | --- | --- | 4.4 | --- |
| Detect Limits | 5.0 | 5.0 | 50.0 | 0.005 | 0.33 | 2.5 | 2.5 |

**TABLE 2:**
**SUMMARY OF SOIL ANALYTICAL RESULTS**
**In Parts Per Million (mg/kg)**
**Sampling Dates: October 5 & 10, 2005**

| Sample ID | TPH C8-C12 | TPH C13-C23 | TPH (C24-C40) |
|---|---|---|---|
| SS5-5' * | ND | 54,100 | 26,100 |
| SS5-Alt-10' | ND | 6,820 | 2,750 |
| SS5-Alt-15' | ND | 185 | 65 |
| SS5-Alt-20' | 5.6 | 21,300 | 8,540 |
| SS5-Alt-25' | ND | ND | ND |
| SS5-Alt-30' | ND | ND | ND |
| SS5-Alt-35' | ND | ND | ND |
| SS5-Alt-40' | ND | ND | ND |
| SS5-Alt-45' | ND | ND | ND |
| SS10-5' | ND | ND | ND |
| SS10-10' | ND | ND | ND |
| SS10-20' | ND | ND | ND |
| SS11-5' | ND | 38,300 | 8,320 |
| SS12-5' | ND | 21,200 | 11,100 |
| SS12-10' | ND | 1,470 | 1,410 |
| SS12-15' | ND | 73 | ND |
| SS12-20' | ND | ND | ND |
| SS13-10' | 80 | 29,200 | 15,100 |
| SS13-15' | ND | 309 | 195 |
| SS14-10' | ND | ND | ND |
| Detect Limits | 5.0 | 5.0 | 50.0 |

* Sample taken 9-28-05

### 2.4 Soil Sample Results

Results of the laboratory soil analyses testing found nothing in the soil to warrant further investigation. No organic compounds specified for analyses through EPA method 418.1, 8260B, 8270C, or 335.2 testing were found to exist, while the metals results found nothing above what can be considered normal soil background levels.

## 3.0 GEOLOGY / HYDROGEOLOGY

### 3.1 Regional

The site lies within the Montebello Forebay Area of the Central Basin of the Los Angeles Coastal Plain. The Central Basin is one of four identified groundwater basins within the Los Angeles Coastal Plain and its southeast boundary coincides with the Los Angeles-Orange County line. The Coastal Plain consists mainly of unconsolidated sediments or alluvium, which is underlain and bounded on the north and east, by essentially bedrock. The recent alluvium contains parts of the Gaspur and Gage aquifers.

The Central Basin is overlain by the Montebello and Downey Plains. The freshwater bearing sediments vary in age from recent, to early Pleistocene and extend to a maximum depth of approximately 900-feet below average mean sea level (AMSL). The aquifers to note within the Montebello Forebay area consist of the Lynwood and Silverado aquifers. The Lynwood and Silverado aquifers lie entirely within the San Pedro Formation[1].

### 3.2 Local

Referencing the 1989 Seismicity Map of the Los Angeles Region, published by the State of California, Division of Mines and Geology, the general site area lies to the interpreted most westerly extension of the Whittier Fault.

Referencing Cross Section B-B' from Bulletin 104, posts the Gaspur Aquifer at approximately 70-feet beneath the site. The more significant Lynwood and Silverado aquifers are shown to be approximately 290 and 410-feet beneath the site, with an estimated thickness of 80-feet and 220-feet respectively.

[1] State of California, Department of Water Resources, Bulletin 104

### 3.3 Site Specific

Shallow soil types encountered while drilling consisted mainly of a moist silt and silty-sand and fine-medium sand (please reference the soil boring logs in Appendix II). A nearby Los Angeles County water monitor well #1587Y, is located approximately 100 yards south of the site, at the intersection of Woodruff Avenue and Washburn Road. Depth to water as last recorded on March 31, 2005 was 74.3-feet bgs, with a measured surface elevation of 107.0-feet AMSL.

## 4.0 CONCLUSIONS

Based on all environmental information collected to date, S&S Commercial Environmental Services concludes the following:

- Nothing was found in this additional soil characterization that would alter the general conclusions presented in GeoScience Analytical, Inc.'s September 14, 2005 report, with reference to Arsenic contamination. GeoScience concluded a total of 3-6 cubic yards of soil exists on-site with Arsenic concentrations slightly above Cal-Hazardous levels. The impacted soil depth does not appear to continue beyond 3-feet below grade.

- Elevated oil concentrations as high as 54,100 parts per million (ppm) and quantifiable oil impacted soil concentrations to 20-feet below grade were found to exist during this project. The impacted soil first appeared directly beneath the bottom (i.e., 5-feet down) of the oil/water separator discharge conveyance system, which appears to be more-or-less an open, concrete, gravity flow culvert type system.

- S&S did identify a 25-foot "Clean Earth" interval between the last identified oil impacted soil depth interval of 20-feet and 45-feet beneath ground surface (bgs).

- The general site area is located approximately 70-feet above the first recognized commercially producible aquifer (Gage Aquifer).

- The general soil types found during this investigation was generally a moist silt and silty-fine sand to 20-feet, followed by a fine-medium sand to 45-feet below grade.

- Depth to groundwater is estimated at approximately 70-feet beneath this site.

## 5.0 RECOMMENDATIONS

Based on the soil chemical analyses results, recognized 25-foot "Clean Earth" interval for the oil impacted soil, the fact the Cal-Hazardous Arsenic soil is beneath a capped area and all Arsenic concentrations were found below the Cal-Hazardous Total Threshold Limit Concentration (TTLC) and only failed when tested for soluble Arsenic, no remediation is recommended at this time. Furthermore, it is the opinion of S&S Commercial Environmental Services, Inc. that no significant threat to the immediate environment, or human health risk upon physical contact exists as a result of the oil impacted soil found to exist during this project.

## 6.0 REPORT LIMITATIONS

The conclusions and recommendations presented above are based upon the agreed scope of work as approved by the client. S&S makes no guarantees as to the accuracy or completeness of information obtained from others. It is possible that additional soil and/or water data exists beyond what was presented or cited in this report.

The services performed by S&S have been conducted in a manner consistent with the level of care ordinarily exercised by members of our profession currently practicing under similar conditions.

This report is not a legal opinion, but may under certain circumstances be prepared at the direction of counsel, may be in anticipation of litigation, and may be classified as an attorney client communication, or as an attorney-work product.

The findings in this report are based on field observations, and on the analytical data provided by an independent laboratory. Interpretations of the subsurface conditions at the site were made from a limited number of data points provided by the four investigative borings. Subsurface conditions may vary from these data points.

Furthermore, results of this investigation represent conditions at the time and specific locations where samples were collected and does not fully characterize the site for products not specified for analyses, or for other areas/structures not investigated.

All laboratory work cited in this report was prepared under the direction of Southland Technical Services, Inc., who is solely responsible for the contents and conclusions of the chemical analyses data.

If there are any questions regarding soil sample collection or soil analysis, please contact Mr. William C. Lachmar, Project Manager: at (714) 508-9794.

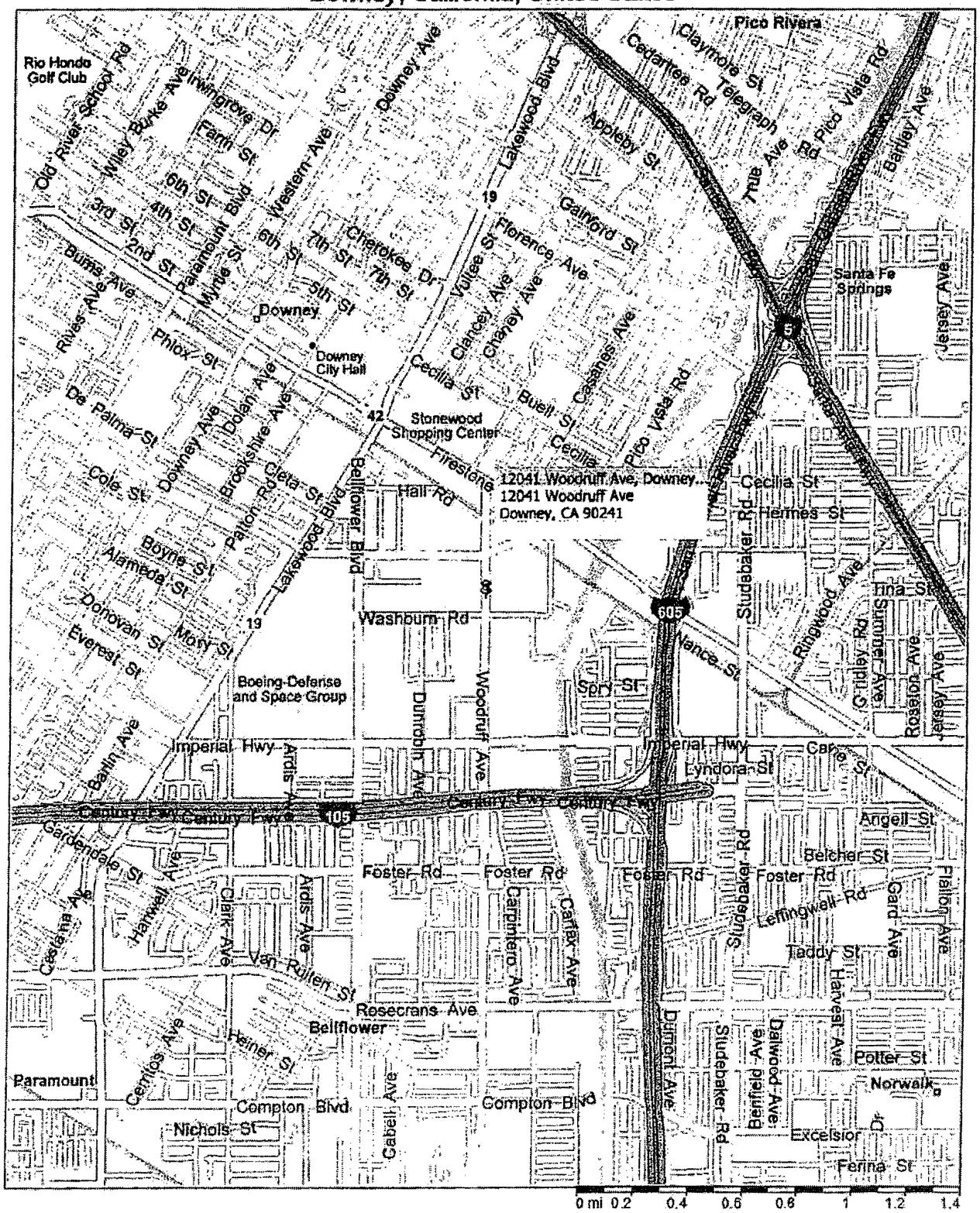
Respectfully,

*S&S Commercial Environmental Services, Inc.*

# FIGURES

Figure 1: Site Location Map
Figure 2: Site Map Showing Boring Locations
Figure 3: Oil/Water Separator Boring Map with posted Arsenic Concentrations
Figure 4: Oil/Water Separator Boring Map with posted Oil Concentrations
Figure 5: Photographic Plate of Field Operations
Plate 1: Bulletin 104 Cross-Section B-B' with Posted Site Location

# Downey, California, United States




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© Copyright 2001 by Geographic Data Technology, Inc. All rights reserved. © 2001 Navigation Technologies. All rights reserved. This data includes information taken with permission from Canadian authorities © Her Majesty the Queen in Right of Canada.

NORTH

## SITE LOCATION MAP

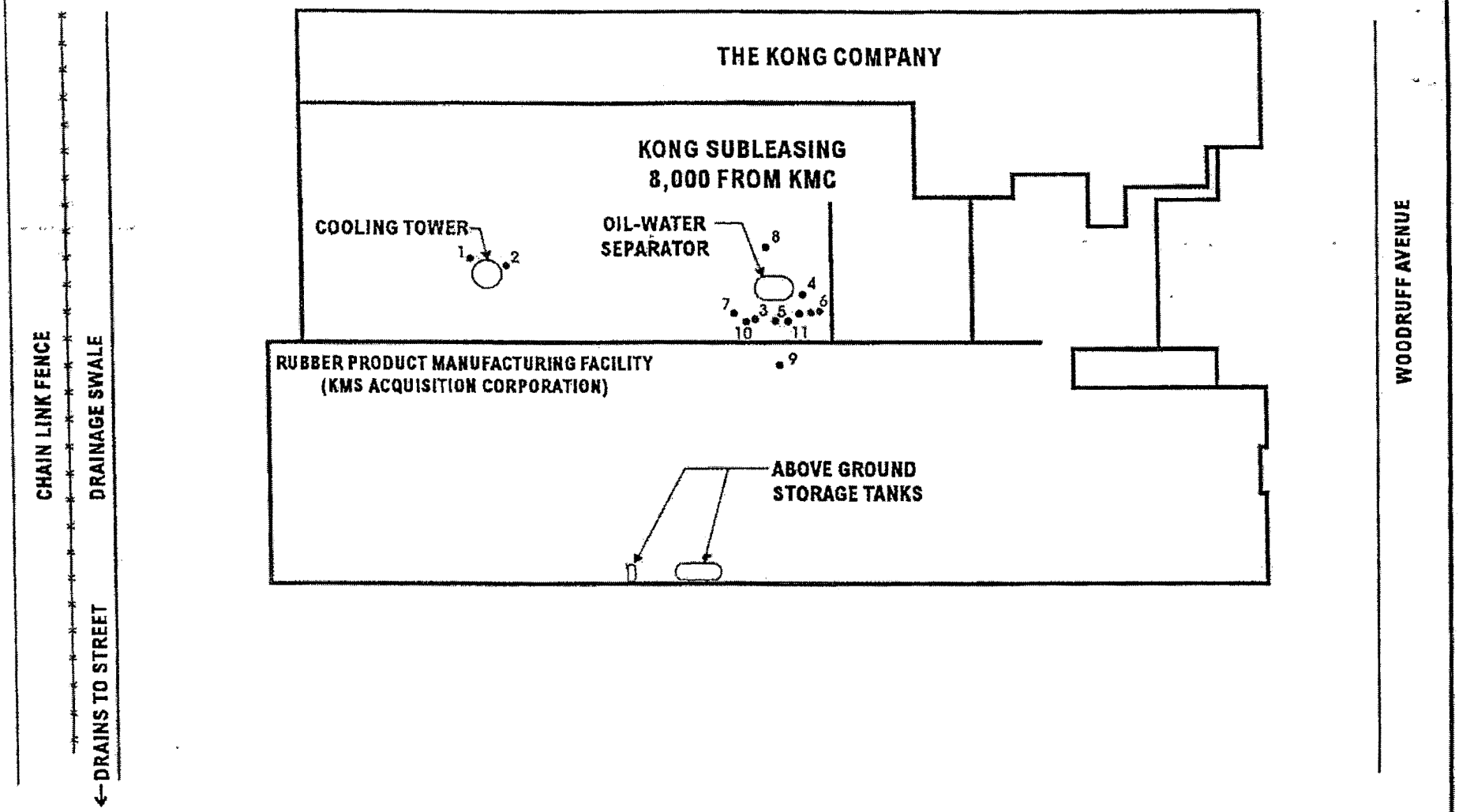
**SITE: SMK Rubber**

12021 Woodruff Ave.
Downey, CA 90241

S&S COMMERCIAL Environmental Services

| | | |
|---|---|---|
| PROJECT # 5928 | DRAFTED BY: | WCL |
| | DATE: | 10/05 |

FIG 1




***LEGEND:***

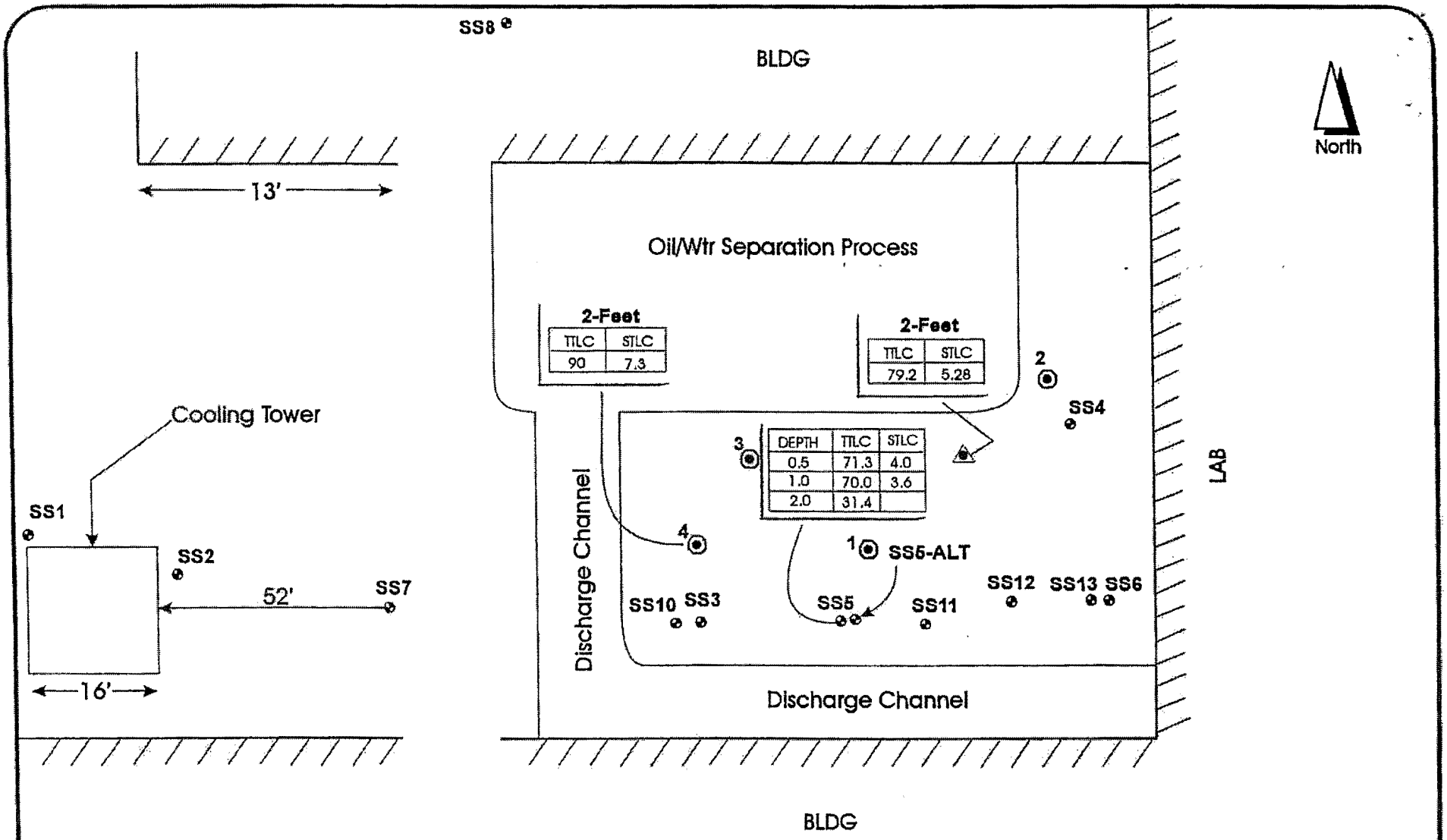
- • — **Boring Drilled by S&S 9-28-05, 10-05 & 10-10-05**

**SITE SKETCH MAP**
SHOWING GENERAL SITE OUTLINE & BORING LOCS.
**SITE: KMS Rubber**
12021 Woodruff Avenue
Downey, CA

S&S COMMERCIAL Environmental Services

PROJECT # 5928 | DRAFTED BY: | DATE: 10/05

FIG 2




***LEGEND:***

- ◉ — Borings Drilled By GeoScience Analytical 9-6-05
- ▲ — Boring Drilled by Converse Consultants 8-05
- ⊕ — Boring Drilled by S&S 9-28-05, 10-05 & 10-10-05

**SITE SKETCH MAP**

SHOWING BORING LOCATIONS / ARSENIC CONC.

**SITE: KMS Rubber**

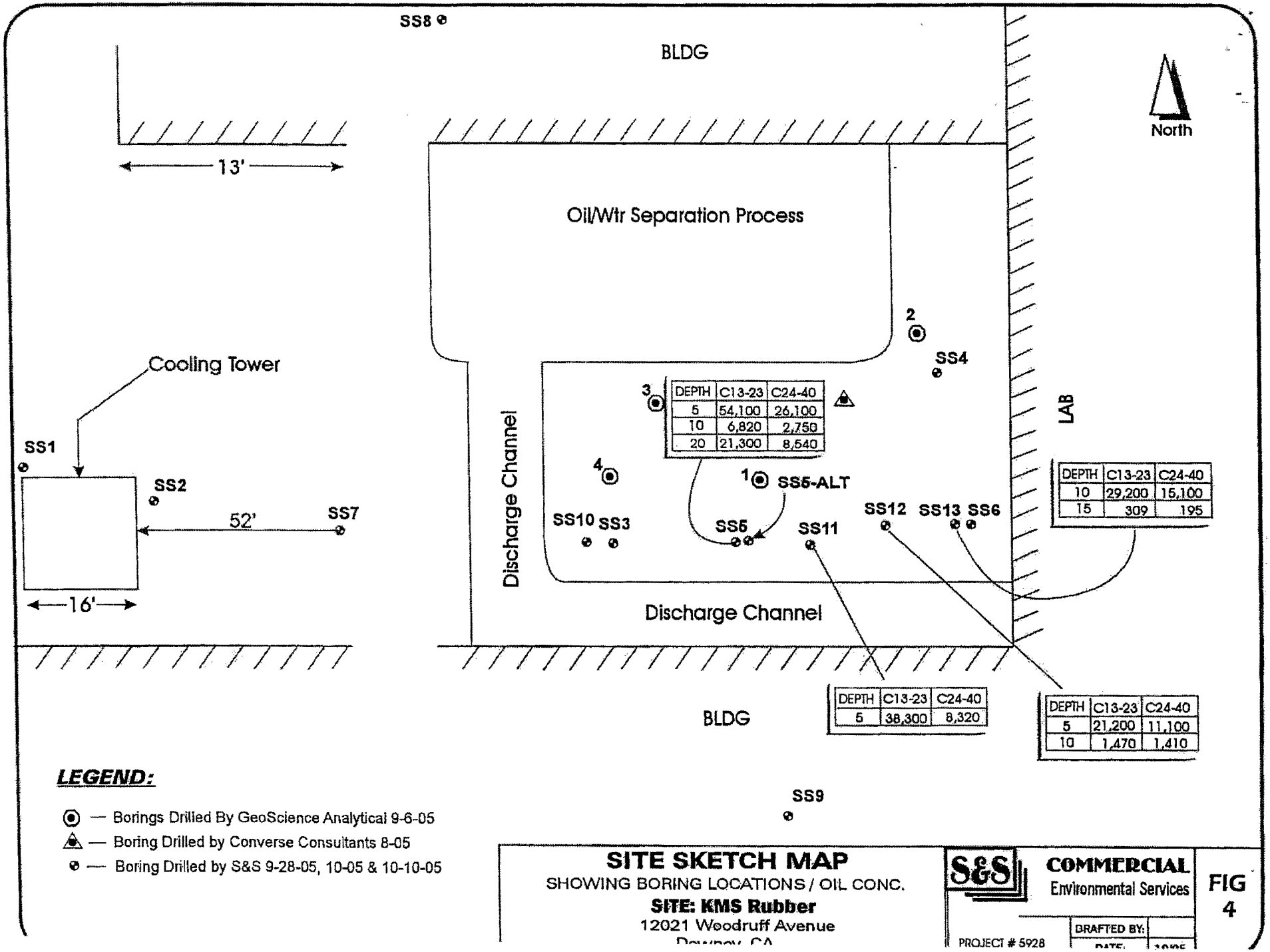
12021 Woodruff Avenue

S&S COMMERCIAL Environmental Services

DRAFTED BY:

PROJECT # 5028

FIG 3




***LEGEND:***

- ◉ — Borings Drilled By GeoScience Analytical 9-6-05
- ▲ — Boring Drilled by Converse Consultants 8-05
- ⊕ — Boring Drilled by S&S 9-28-05, 10-05 & 10-10-05

**SITE SKETCH MAP**

SHOWING BORING LOCATIONS / OIL CONC.

**SITE: KMS Rubber**

12021 Woodruff Avenue

Downey, CA

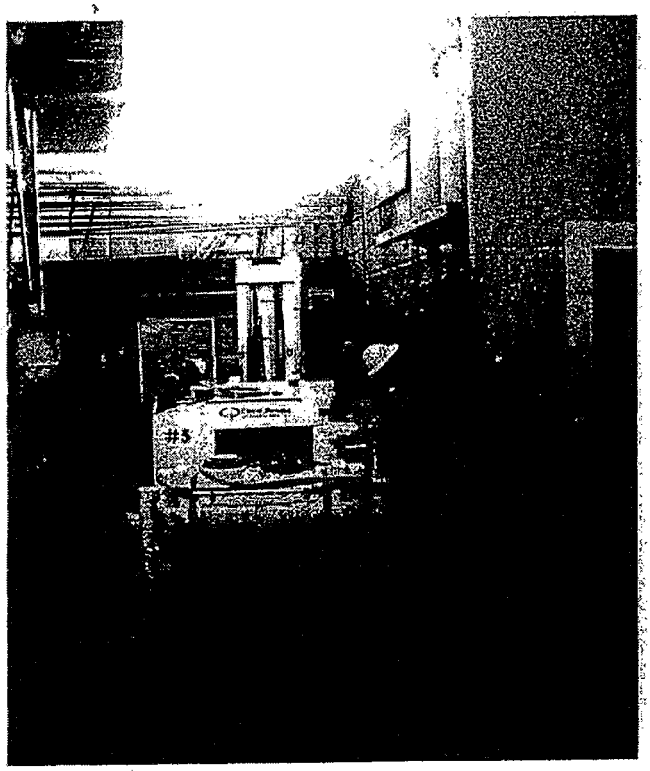
S&S COMMERCIAL Environmental Services

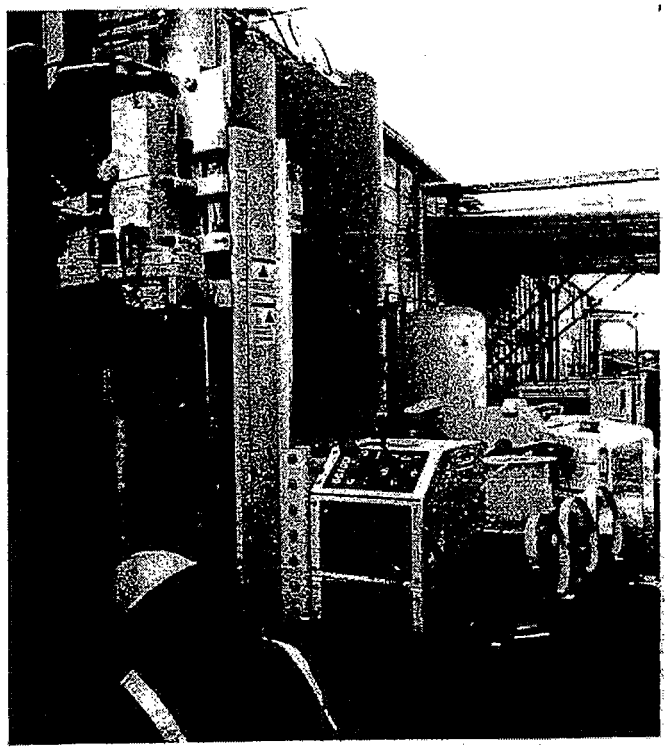
PROJECT # 5928

DRAFTED BY:

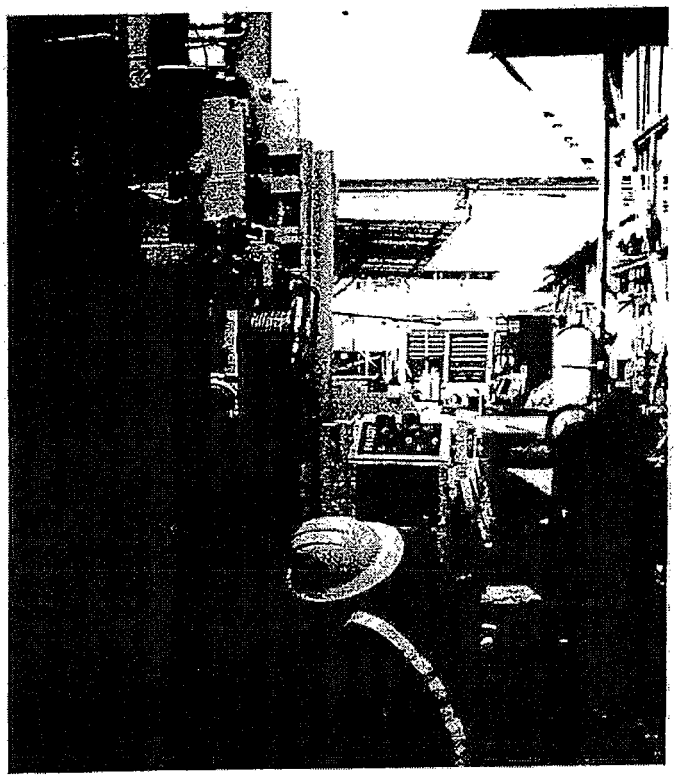
DATE:

FIG 4





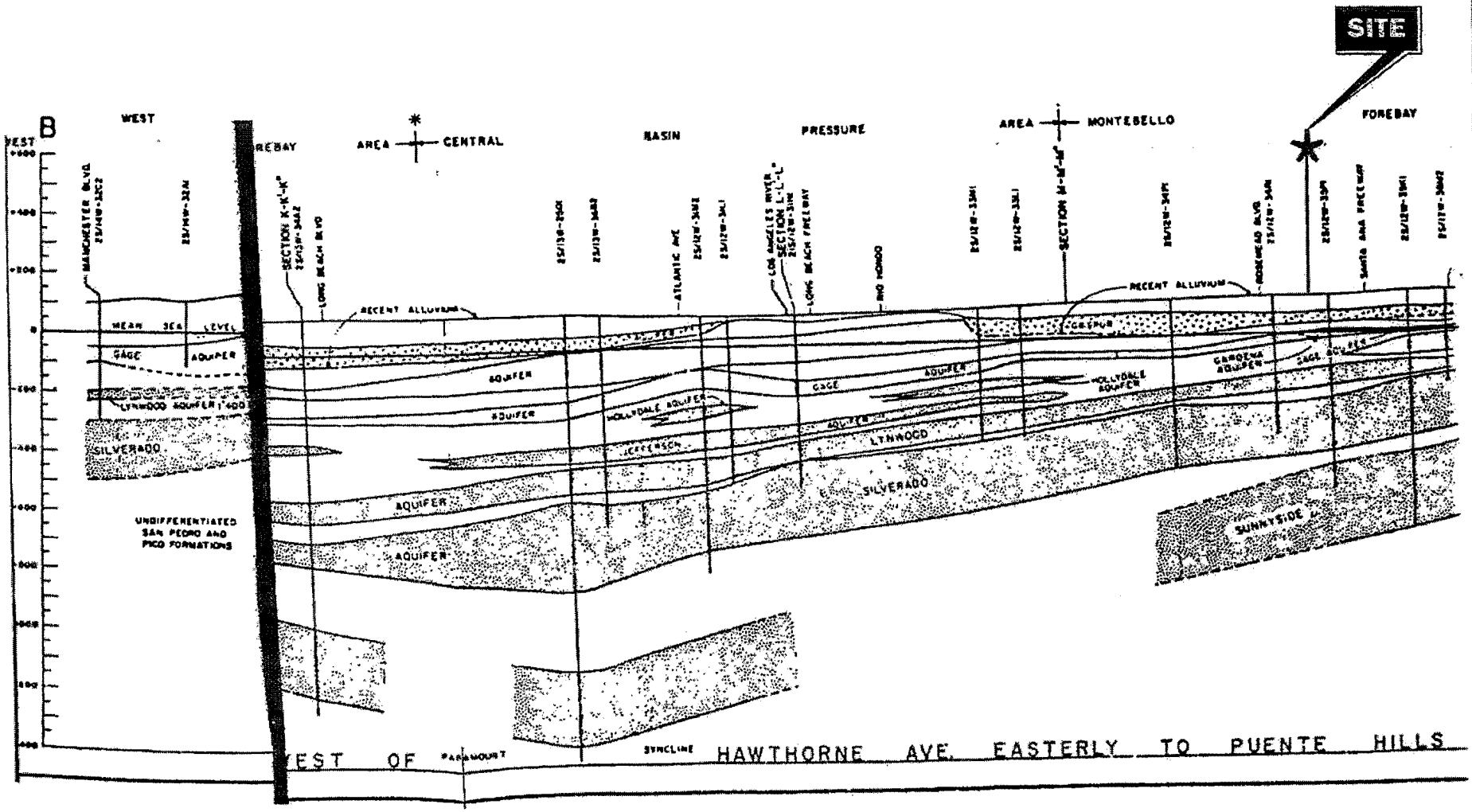




*PHOTOGRAPHIC PLATE*

Showing Field Operations

**FIG:**




N

**BULLETIN 104 B-B' CROSS-SECTION**

**SITE: SMK Rubber**

12021 Woodruff Ave.

S&S COMMERCIAL Environmental Services

DRAFTED BY: WCL

PLATE 1

# APPENDIX I

Cal-EPA Certified Laboratory Chemical Analyses Results

**Southland Technical Services, Inc.**
Environmental Laboratories

09-30-20

Mr. Bill Lachmar
S & S Commercial Environmental Services
13520 Amber Road
Chino, CA 91710

Project: 5928
Project Site: KMS-12021-23 Woodruff Ave., Downey, CA
Date Sampled: 09-28-2005
Lab Job No.: Z509167

Dear Mr. Lachmar:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 09-28-20 and analyzed by the following EPA methods:

EPA 8015M (Total Petroleum Hydrocarbons)
EPA 8260B (VOCs & Oxygenates)
EPA 7060A (Arsenic, TTLC )
EPA 7190 (Chromium, TTLC)
EPA 8270C (SVOCs by GC/MS)

All analyses have met the QA/QC criteria of this laboratory.

The sample arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by CA DHS (Certificate Number 1986). Thank you for giving us t opportunity to serve you. Please feel free to call me at (323) 888-0728 if oB1-5ur laboratory can be of further servi to you.

Sincerely,

Roger Wang, Ph.D.
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 09-28-2005 |
| Matrix: | Soil | Date Received: | 09-28-2005 |
| Batch No.: | EI28-DS1 | Date Analyzed: | 09-28-2005 |
| | | Date Reported: | 09-30-2005 |

**EPA 8015M (Total Petroleum Hydrocarbons)**
**Reporting Unit: mg/kg (ppm)**

| Sample ID | Lab ID | C8-C12 | C13-C23 (Diesel Range) | C24-C40 (Oil Range) |
|---|---|---|---|---|
| Reporting Limit | | 5 | 5 | 50 |
| Method Blank | | ND | ND | ND |
| SS5-5 | Z509167-16 | ND | 54,100 | 26,100 |
| | | | | |

ND: Not Detected (at the specified limit).

**Southland Technical Services, Inc.**
Environmental Laboratories

Client: S & S Commercial Environmental Services | Lab Job No.: Z509167 | Date Reported: 09-30-2005
Project: 5928 | Matrix: Soil | Date Sampled: 09-28-2005

**EPA 8260B (VOCs by GC/MS, Page 1 of 2)** Reporting Unit: µg/kg(ppb)

| DATE ANALYZED | | 09-28 | 09-28-05 | | | | |
|---|---|---|---|---|---|---|---|
| DILUTION FACTOR | | 1 | 1 | | | | |
| LAB SAMPLE I.D. | | | Z509167-16 | | | | |
| CLIENT SAMPLE I.D. | | | SS5-5 | | | | |
| COMPOUND | MDL | MB | | | | | |
| Dichlorodifluoromethane | 5 | ND | ND | | | | |
| Chloromethane | 5 | ND | ND | | | | |
| Vinyl Chloride | 5 | ND | ND | | | | |
| Bromomethane | 5 | ND | ND | | | | |
| Chloroethane | 5 | ND | ND | | | | |
| Trichlorofluoromethane | 5 | ND | ND | | | | |
| 1,1-Dichloroethene | 5 | ND | ND | | | | |
| Iodomethane | 5 | ND | ND | | | | |
| Methylene Chloride | 5 | ND | ND | | | | |
| trans-1,2-Dichloroethene | 5 | ND | ND | | | | |
| 1,1-Dichloroethane | 5 | ND | ND | | | | |
| 2,2-Dichloropropane | 5 | ND | ND | | | | |
| cis-1,2-Dichloroethene | 5 | ND | ND | | | | |
| Bromochloromethane | 5 | ND | ND | | | | |
| Chloroform | 5 | ND | ND | | | | |
| 1,2-Dichloroethane | 5 | ND | ND | | | | |
| 1,1,1-Trichloroethane | 5 | ND | ND | | | | |
| Carbon tetrachloride | 5 | ND | ND | | | | |
| 1,1-Dichloropropene | 5 | ND | ND | | | | |
| Benzene | 2 | ND | ND | | | | |
| Trichloroethene | 5 | ND | ND | | | | |
| 1,2-Dichloropropane | 5 | ND | ND | | | | |
| Bromodichloromethane | 5 | ND | ND | | | | |
| Dibromomethane | 5 | ND | ND | | | | |
| Trans-1,3-Dichloropropene | 5 | ND | ND | | | | |
| cis-1,3-Dichloropropene | 5 | ND | ND | | | | |
| 1,1,2-Trichloroethane | 5 | ND | ND | | | | |
| 1,3-Dichloropropane | 5 | ND | ND | | | | |
| Dibromochloromethane | 5 | ND | ND | | | | |
| 2-Chloroethylvinyl ether | 5 | ND | ND | | | | |
| Bromoform | 5 | ND | ND | | | | |
| Isopropylbenzene | 5 | ND | ND | | | | |
| Bromobenzene | 5 | ND | ND | | | | |

Client: S & S Commercial Environmental Services
Project: 5928

Lab Job No.: Z509167
Matrix: Soil

Date Reported: 09-30-2005
Date Sampled: 09-28-2005

**EPA 8260B (VOCs by GC/MS, Page 2 of 2)** Reporting Unit: ppb

| COMPOUND | MDL | MB | SS5-5 | | | | |
|---|---|---|---|---|---|---|---|
| Toluene | 2 | ND | ND | | | | |
| Tetrachloroethene | 5 | ND | ND | | | | |
| 1,2-Dibromoethane(EDB) | 5 | ND | ND | | | | |
| Chlorobenzene | 5 | ND | ND | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | ND | ND | | | | |
| Ethylbenzene | 2 | ND | ND | | | | |
| Total Xylenes | 4 | ND | ND | | | | |
| Styrene | 5 | ND | ND | | | | |
| 1,1,2,2-Tetrachloroethane | 5 | ND | ND | | | | |
| 1,2,3-Trichloropropane | 5 | ND | ND | | | | |
| n-Propylbenzene | 5 | ND | ND | | | | |
| 2-Chlorotoluene | 5 | ND | ND | | | | |
| 4-Chlorotoluene | 5 | ND | ND | | | | |
| 1,3,5-Trimethylbenzene | 5 | ND | ND | | | | |
| tert-Butylbenzene | 5 | ND | ND | | | | |
| 1,2,4-Trimethylbenzene | 5 | ND | ND | | | | |
| Sec-Butylbenzene | 5 | ND | ND | | | | |
| 1,3-Dichlorobenzene | 5 | ND | ND | | | | |
| p-Isopropyltoluene | 5 | ND | ND | | | | |
| 1,4-Dichlorobenzene | 5 | ND | ND | | | | |
| 1,2-Dichlorobenzene | 5 | ND | ND | | | | |
| n-Butylbenzene | 5 | ND | ND | | | | |
| 1,2,4-Trichlorobenzene | 5 | ND | ND | | | | |
| 1,2-Dibromo-3-Chloropropane | 5 | ND | ND | | | | |
| Hexachlorobutadiene | 5 | ND | ND | | | | |
| Naphthalene | 5 | ND | ND | | | | |
| 1,2,3-Trichlorobenzene | 5 | ND | ND | | | | |
| Acetone | 50 | ND | ND | | | | |
| 2-Butanone (MEK) | 50 | ND | ND | | | | |
| Carbon disulfide | 50 | ND | ND | | | | |
| 4-Methyl-2-pentanone (MIBK) | 50 | ND | ND | | | | |
| 2-Hexanone | 50 | ND | ND | | | | |
| Vinyl Acetate | 50 | ND | ND | | | | |
| MTBE | 5 | ND | ND | | | | |
| ETBE | 5 | ND | ND | | | | |
| DIPE | 5 | ND | ND | | | | |
| TAME | 5 | ND | ND | | | | |
| TBA | 20 | ND | ND | | | | |

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below DF × MDL).

**Southland Technical Services, Inc.**
Environmental Laboratories

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 09-28-2005 |
| Matrix: | Soil | Date Received: | 09-28-2005 |
| Digestion Method: | EPA 3050B | Date Digested: | 09-28-2005 |
| Batch No.: | 0929-M1 | Date Analyzed: | 09-29-2005 |
| | | Date Reported: | 09-30-2005 |

**EPA 7060A (Arsenic, TTLC)**
**Reporting Unit: mg/kg(ppm)**

| Sample ID | Lab ID | Arsenic | Reporting Limit |
|---|---|---|---|
| Method Blank | | ND | 2.5 |
| SS1-1/2 | Z509167-1 | 19.2 | 2.5 |
| SS1-1 | Z509167-2 | 5.4 | 2.5 |
| SS1-2 | Z509167-3 | 3.5 | 2.5 |
| SS2-1/2 | Z509167-4 | 7.7 | 2.5 |
| SS2-1 | Z509167-5 | 4.2 | 2.5 |
| SS2-2 | Z509167-6 | 5.7 | 2.5 |
| SS3-1/2 | Z509167-7 | 10.9 | 2.5 |
| SS3-1 | Z509167-8 | 5.7 | 2.5 |
| SS3-2 | Z509167-9 | 7.0 | 2.5 |
| SS4-1/2 | Z509167-10 | 32.7 | 2.5 |
| SS4-1 | Z509167-11 | 5.7 | 2.5 |
| SS4-2 | Z509167-12 | 22.2 | 2.5 |
| SS5-1/2 | Z509167-13 | 71.3 | 2.5 |
| SS5-1 | Z509167-14 | 70.0 | 2.5 |
| SS5-2 | Z509167-15 | 31.4 | 2.5 |
| SS6-1/2 | Z509167-17 | 10.4 | 2.5 |
| SS6-1 | Z509167-18 | 4.2 | 2.5 |
| SS6-2 | Z509167-19 | 5.4 | 2.5 |
| SS7-1/2 | Z509167-20 | 7.4 | 2.5 |
| | | | |

ND: Not Detected (at the specified limit).

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 09-28-2005 |
| Matrix: | Soil | Date Received: | 09-28-2005 |
| Digestion Method: EPA 3050B | | Date Digested: | 09-28-2005 |
| Batch No.: | 0929-M2 | Date Analyzed: | 09-29-2005 |
| | | Date Reported: | 09-30-2005 |

**EPA 7060A (Arsenic, TTLC)**
**Reporting Unit: mg/Kg(ppm)**

| Sample ID | Lab ID | Arsenic | Reporting Limit |
|---|---|---|---|
| Method Blank | | ND | 2.5 |
| SS7-1 | Z509167-21 | 6.2 | 2.5 |
| SS7-2 | Z509167-22 | 4.7 | 2.5 |
| SS8-1/2 | Z509167-23 | 5.6 | 2.5 |
| SS8-1 | Z509167-24 | 6.1 | 2.5 |
| SS8-2 | Z509167-25 | 4.4 | 2.5 |
| | | | |

ND: Not Detected (at the specified limit).

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 09-28-2005 |
| Matrix: | Soil | Date Received: | 09-28-2005 |
| Digestion Method: | EPA 3050B | Date Digested: | 09-28-2005 |
| Batch No.: | 0929-M1 | Date Analyzed: | 09-29-2005 |
| | | Date Reported: | 09-30-2005 |

**EPA 7190 (Total Chromium, TTLC)**
**Reporting Unit: mg/kg (ppm)**

| Sample ID | Lab ID | Total Chromium | Reporting Limit |
|---|---|---|---|
| Method Blank | | ND | ND |
| SS1-1/2 | Z509167-1 | 13.2 | 2.5 |
| SS1-1 | Z509167-2 | 11.6 | 2.5 |
| SS1-2 | Z509167-3 | 13.4 | 2.5 |
| SS2-1/2 | Z509167-4 | 11.0 | 2.5 |
| SS2-1 | Z509167-5 | 17.8 | 2.5 |
| SS2-2 | Z509167-6 | 9.9 | 2.5 |
| SS3-1/2 | Z509167-7 | 15.6 | 2.5 |
| SS3-1 | Z509167-8 | 11.4 | 2.5 |
| SS3-2 | Z509167-9 | 16.8 | 2.5 |
| | | | |

ND: Not Detected (at the specified limit).

Client: S & S Commercial Environmental Services
Project: 5928

Lab Job No.: Z509167
Matrix: Soil

Date Reported: 09-30-2005
Date Sampled: 09-28-2005

**EPA 8270C (Semi-VOCs by GC/MS, Page 1 of 2)**
Reporting Unit: mg/kg (ppm)

| DATE ANALYZED | | 09-30-05 | 09-30-05 | | | | |
|---|---|---|---|---|---|---|---|
| DATE EXTRACTED | | 09-29-05 | 09-29-05 | | | | |
| DILUTION FACTOR | | 1 | 100 | | | | |
| LAB SAMPLE I.D. | | | Z509167-16 | | | | |
| CLIENT SAMPLE I.D. | | | SS5-5 | | | | |
| COMPOUND | MDL | MB | | | | | |
| Phenol | 0.33 | ND | ND | | | | |
| Bis(2-chloroethyl) ether | 0.33 | ND | ND | | | | |
| 2-Chlorophenol | 0.33 | ND | ND | | | | |
| 1,3-Dichlorobenzene | 0.33 | ND | ND | | | | |
| 1,4-Dichlorobenzene | 0.33 | ND | ND | | | | |
| Benzyl alcohol | 0.66 | ND | ND | | | | |
| 1,2-Dichlorobenzene | 0.33 | ND | ND | | | | |
| 2-Methylphenol (o-cresol) | 0.33 | ND | ND | | | | |
| Bis(2-chloroisopropyl)ether | 0.33 | ND | ND | | | | |
| N-Nitrosodi-n-propylamine | 0.33 | ND | ND | | | | |
| 4-Methylphenol (p-cresol) | 0.33 | ND | ND | | | | |
| Hexachloroethane | 0.33 | ND | ND | | | | |
| Nitrobenzene | 0.33 | ND | ND | | | | |
| Isophorone | 0.33 | ND | ND | | | | |
| 2-Nitrophenol | 0.33 | ND | ND | | | | |
| 2,4-Dimethylphenol | 0.33 | ND | ND | | | | |
| Bis(2-chloroethoxy)methane | 0.33 | ND | ND | | | | |
| 2,4-Dichlorophenol | 0.33 | ND | ND | | | | |
| Benzoic acid | 1.65 | ND | ND | | | | |
| 1,2,4-Trichlorobenzene | 0.33 | ND | ND | | | | |
| Naphthalene | 0.33 | ND | ND | | | | |
| 4-Chloroaniline | 0.66 | ND | ND | | | | |
| Hexachlorobutadiene | 0.33 | ND | ND | | | | |
| 4-Chloro-3-methylphenol | 0.66 | ND | ND | | | | |
| 2-Methylnaphthalene | 0.33 | ND | ND | | | | |
| Hexachlorocyclopentadiene | 0.66 | ND | ND | | | | |
| 2,4,6-Trichlorophenol | 0.33 | ND | ND | | | | |
| 2,4,5-Trichlorophenol | 0.5 | ND | ND | | | | |
| 2-Chloronaphthalene | 0.33 | ND | ND | | | | |
| 2-Nitroaniline | 1.65 | ND | ND | | | | |
| Dimethylphthalate | 0.33 | ND | ND | | | | |
| Acenaphthylene | 0.33 | ND | ND | | | | |
| 2,6-Dinitrotoluene | 0.33 | ND | ND | | | | |

Client: S & S Commercial Environmental Services | Lab Job No.: Z509167 | Date Reported: 09-30-2005
Project: 5928 | Matrix: Soil | Date Sampled: 09-28-2005

**EPA 8270C (Semi-VOCs by GC/MS, Page 2 of 2)** Reporting Unit: mg/kg(ppm)

| COMPOUND | MDL | MB | SS5-5 | | | | |
|---|---|---|---|---|---|---|---|
| 3-Nitroaniline | 1.65 | ND | ND | | | | |
| Acenaphthene | 0.33 | ND | ND | | | | |
| 2,4-Dinitrophenol | 1.65 | ND | ND | | | | |
| Dibenzofuran | 0.33 | ND | ND | | | | |
| 4-Nitrophenol | 1.65 | ND | ND | | | | |
| 2,4-Dinitrotoluene | 0.33 | ND | ND | | | | |
| Fluorene | 0.33 | ND | ND | | | | |
| Diethylphthalate | 0.33 | ND | ND | | | | |
| 4-Chlorophenyl phenyl ether | 0.33 | ND | ND | | | | |
| 4-Nitroaniline | 1.65 | ND | ND | | | | |
| 1,2-Diphenylhydrazine | 0.33 | ND | ND | | | | |
| 4,6-Dinitro-2-methylphenol | 1.65 | ND | ND | | | | |
| N-Nitrosodiphenylamine | 0.33 | ND | ND | | | | |
| 4-Bromophenyl-phenyl ether | 0.33 | ND | ND | | | | |
| Hexachlorobenzene | 0.33 | ND | ND | | | | |
| Pentachlorophenol | 1.65 | ND | ND | | | | |
| Phenanthrene | 0.33 | ND | ND | | | | |
| Anthracene | 0.33 | ND | ND | | | | |
| Di-n-butylphthalate | 0.33 | ND | ND | | | | |
| Fluoranthene | 0.33 | ND | ND | | | | |
| Pyrene | 0.33 | ND | ND | | | | |
| Butyl benzylphthalate | 0.33 | ND | ND | | | | |
| Benzo(a)anthracene | 0.33 | ND | ND | | | | |
| 3,3'-Dichlorobenzidine | 0.66 | ND | ND | | | | |
| Chrysene | 0.33 | ND | ND | | | | |
| Bis(2-Ethylhexyl)phthalate | 0.33 | ND | 50.5 | | | | ← Y |
| Di-n-octylphthalate | 0.33 | ND | ND | | | | |
| Benzo(b)fluoranthene | 0.33 | ND | ND | | | | |
| Benzo(k)fluoranthene | 0.33 | ND | ND | | | | |
| Benzo(a)pyrene | 0.33 | ND | ND | | | | |
| Indeno(1,2,3-cd)pyrene | 0.33 | ND | ND | | | | |
| Dibenz(a,h)anthracene | 0.33 | ND | ND | | | | |
| Benzo(g,h,i)perylene | 0.33 | ND | ND | | | | |

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below MDL).

**Southland Technical Services, Inc.**
Environmental Laboratories

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 09-28-2005 |
| Matrix: | Soil | Date Received: | 09-28-2005 |
| Digestion Method: | EPA 3050B | Date Digested: | 09-28-2005 |
| Batch No.: | 1006-M1 | Date Analyzed: | 10-06-2005 |
| | | Date Reported: | 10-07-2005 |

**EPA 7060A (Arsenic, STLC)**
**Reporting Unit: mg/Kg(ppm)**

| Sample ID | Lab ID | Arsenic, STLC | Reporting Limit |
|---|---|---|---|
| Method Blank | | ND | 2.5 |
| SS5-1/2 | Z509167-13 | 4.0 | 2.5 |
| SS5-1 | Z509167-14 | 3.6 | 2.5 |
| | | | |

ND: Not Detected (at the specified limit).

Checked & approved by:

Roger Wang, Ph.D.
Laboratory Director

09-30-200

# EPA 8015M (TPH)
# Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | S509164-1 |
| Batch No.: | EI28-DS1 | Date Analyzed: | 09-28-2005 |

## I. MS/MSD Report
**Unit: ppm**

| Analyte | Sample Conc. | Spike Conc. | MS | MSD | MS %Rec. | MSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|---|---|---|
| TPH-d | ND | 200 | 165 | 165 | 82.5 | 82.5 | 0.0 | 30 | 70-130 |

## II. LCS Result
**Unit: ppm**

| Analyte | LCS Report Value | True Value | Rec.% | %Rec Accept. Limit |
|---|---|---|---|---|
| TPH-d | 199 | 200 | 99.5 | 80-120 |

ND: Not Detected (at the specified limit).

**Southland Technical Services, Inc.**
Environmental Laboratories

09-30-2005

# EPA 8260B
# Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | SS0928-1 |
| Batch No: | 0928-VOAS | Date Analyzed: | 09-28-2005 |

## I. MS/MSD Report
Unit: ppb

| Analyte | Sample Conc. | Spike Conc. | MS | MSD | MS %Rec. | MSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | ND | 20 | 17.1 | 14.2 | 85.5 | 71.0 | 18.5 | 30 | 70-130 |
| Benzene | ND | 20 | 23.8 | 23.2 | 119.0 | 116.0 | 2.6 | 30 | 70-130 |
| Trichloro-ethene | ND | 20 | 19.2 | 19.4 | 96.0 | 97.0 | 1.0 | 30 | 70-130 |
| Toluene | ND | 20 | 25.2 | 23.2 | 126.0 | 116.0 | 8.3 | 30 | 70-130 |
| Chlorobenzene | ND | 20 | 22.6 | 20.4 | 113.0 | 102.0 | 10.2 | 30 | 70-130 |

## II. LCS Result
Unit: ppb

| Analyte | LCS Value | True Value | Rec.% | Accept. Limit |
|---|---|---|---|---|
| 1,1-Dichloroethene | 41.4 | 50.0 | 82.8 | 80-120 |
| Benzene | 59.8 | 50.0 | 119.6 | 80-120 |
| Trichloro-ethene | 51.6 | 50.0 | 103.2 | 80-120 |
| Toluene | 59.1 | 50.0 | 118.2 | 80-120 |
| Chlorobenzene | 51.1 | 50.0 | 102.2 | 80-120 |

ND: Not Detected.

09-30-20(

## EPA 8270C
## Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | SS50930-1 |
| Batch No: | 0930-BNA | Date Analyzed: | 09-30-05 |

**MS/MSD Report**
**Unit: ppm**

| Compound | MB | Spike Conc. | MS | MSD | MS %Rec. | MSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|---|---|---|
| Phenol | ND | 10 | 11.3 | 12.3 | 113.0 | 123.0 | 8.5 | 40 | 12-130 |
| 2-Chlorophenol | ND | 10 | 8.59 | 9.78 | 85.9 | 97.8 | 13.0 | 40 | 24-134 |
| 1,4-Dichloro-benzene | ND | 5.0 | 3.78 | 4.14 | 75.6 | 82.8 | 9.1 | 40 | 36-124 |
| n-Nitroso-di-n-propylamine | ND | 5.0 | 5.48 | 6.12 | 109.6 | 122.4 | 11.0 | 40 | 41-230 |
| 1,2,4-Trichlorobenzene | ND | 5.0 | 2.89 | 3.07 | 57.8 | 61.4 | 6.0 | 40 | 44-142 |
| 4-Chloro-3-methylphenol | ND | 10 | 8.09 | 9.29 | 80.9 | 92.9 | 13.8 | 40 | 22-147 |
| Acenaphthene | ND | 5.0 | 3.82 | 4.51 | 76.4 | 90.2 | 16.6 | 40 | 47-145 |
| 4-Nitrophenol | ND | 10 | 12.0 | 11.4 | 120.0 | 114.0 | 5.1 | 58 | 12-132 |
| 2,4-Dinitro-toluene | ND | 5.0 | 3.14 | 3.95 | 62.8 | 79.0 | 22.8 | 40 | 39-139 |
| Pentachloro-phenol | ND | 10 | 4.96 | 6.38 | 49.6 | 63.8 | 25.0 | 51 | 14-176 |
| Pyrene | ND | 5.0 | 5.04 | 5.57 | 100.8 | 111.4 | 10.0 | 30 | 26-130 |

ND: Not Detected

09-30-20(

## EPA 7060A (As) & 7190 (Cr)
## Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | LCS |
| Batch No: | 0929-M1 | Date Analyzed: | 09-29-2005 |

### LCS/LCSD Report

| Analyte | MB Conc. | LCS %Rec. | LCSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|
| Arsenic (As) | ND | 121.0 | 119.0 | 1.7 | 30 | 70-130 |
| Chromium (Cr) | ND | 102.0 | 98.0 | 4.0 | 30 | 70-130 |
| | | | | | | |

ND: Not Detected

09-30-20C

## EPA 7060A (As)
### Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | LCS |
| Batch No: | 0929-M2 | Date Analyzed: | 09-29-2005 |

**LCS/LCSD Report**

| Analyte | MB Conc. | LCS %Rec. | LCSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|
| Arsenic (As) | ND | 113.9 | 113.5 | 0.4 | 30 | 70-130 |
| | | | | | | |

ND: Not Detected

10-07-200

**EPA 7060A (Arsenic,STLC)**
**Batch QA/QC Report**

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z509167 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | LCS |
| Batch No: | 1006-M1 | Date Analyzed: | 10-06-2005 |

**LCS/LCSD Report**

| Analyte | MB Conc. | LCS %Rec. | LCSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|
| Arsenic (As) | ND | 95 | 89 | 6 | 30 | 70-130 |
| | | | | | | |

ND: Not Detected

**SOUTHLAND TECHNICAL SERVICES, INC.**

**CHAIN OF CUSTODY RECORD**



Lab Job Number Z509167

Client: SiS Commercial Environmental Services

Address: 12960 Central Ave., #E, Chino, CA

Report Attention: Bill Lachmar | Phone: 714-508-9779 | Fax: 714-508-9781 | Sampled by: D.C.L.

Project Name/No.: 5728 | Project Site: KMS - 12021-23 Woodruff Ave., Downey

Analyses Requested: 602/8021 (BTEX,MTBE); 8015M (Gasoline); 8015M (Diesel); 8260B (VOCs); 8260B (Oxygenates, BTEX); 8260B (MTBE Confirm.); Arsenic; Chromium

T.A.T. Requested: ☐ Rush 8 12 24 hours ☒ 2-3 days ☐ Normal

Sample Condition: ☒ Chilled ☒ Intact ☐ Sample seals

| Client Sample ID | Lab Sample ID | Sample Collect Date | Sample Collect Time | Matrix Type | Sample Preserve | No.,type* & size of container | Remarks |
|---|---|---|---|---|---|---|---|
| SS1-1/2 | Z509167-1 | 9-28-05 | | Soil | | Bass | |
| SS1-1 | -2 | | | | | | |
| SS1-2 | -3 | | | | | | |
| SS1-5 | | | | | | | |
| SS2-1/2 | -4 | | | | | | |
| SS2-1 | -5 | | | | | | |
| SS2-2 | -6 | | | | | | |
| SS2-5 | | | | | | | |
| SS3-1/2 | -7 | | | | | | |
| SS3-1 | -8 | | | | | | |
| SS3-2 | -9 | | | | | | |
| SS3-5 | | ↓ | | | | ↓ | |

| Relinquished by | Company | Date | Time | Received by | Company |
|---|---|---|---|---|---|
| [signature] | SiS Commercial | 9-28-05 | 12:00 | [signature] | STS |
| Relinquished by | Company | Date | Time | Received by | Company |

Container types: M=Metal Tube; A=Air Bag; P=Plastic bottle; G=Glass bottle; V=VOA vial



Note: Samples are discarded 30 days after results are reported unless other arrangements are

**SOUTHLAND TECHNICAL SERVICES, INC.**

**CHAIN OF CUSTODY RECORD**



Lab Job Number Z509167

Client: S:S Commercial Environmental Services

Address: 12960 Central Ave. #E, Chino, CA, 91733

Report Attention: B. Il Lachmar | Phone: 714-508-9771 | Fax: 714-508-9771 | Sampled by: B. Il Lachmar

Project Name/No.: 5928 | Project Site: KMS 12021-23 Woodruff Ave., Downey

| Client Sample ID | Lab Sample ID | Sample Collect: Date | Sample Collect: Time | Matrix Type | Sample Preserve | No., type* & size of container | 602/8021 (BTEX,MTBE) | 8015M (Gasoline) | 8015M (Diesel) | 8260B (VOCs) | 8260B (Oxygenates, BTEX) | 8260B (MTBE Confirm.) | 8015 C8-C40 | 8270C | Arsenic | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS4-1/2 | Z509167-10 | 9-28-05 | | Soil | | Bass | | | | | | | | | X | | | | |
| SS4-1 | -11 | | | | | | | | | | | | | | X | | | | |
| SS4-2 | -12 | | | | | | | | | | | | | | X | | | | |
| SS4-5 | | | | | | | | | | | | | | | | | | | |
| SS5-1/2 | -13 | | | | | | | | | | | | | | X | | | | |
| SS5-1 | -14 | | | | | | | | | | | | | | X | | | | |
| SS5-2 | -15 | | | | | | | | | | | | | | X | | | | |
| SS5-5 | -16 | | | | Chill | | | | | X | | | X | X | | | | | |
| SS6-1/2 | -17 | | | | | | | | | | | | | | X | | | | |
| SS6-1 | -18 | | | | | | | | | | | | | | X | | | | |
| SS6-2 | -19 | | | | | | | | | | | | | | X | | | | |
| SS6-5 | | | | | | | | | | | | | | | | | | | |
| SS7-1/2 | -20 | | | | | | | | | | | | | | X | | | | |
| SS7-1 | -21 | | | | | | | | | | | | | | X | | | | |
| SS7-2 | -22 | | | | | | | | | | | | | | X | | | | |
| SS7-5 | | | | | | | | | | | | | | | | | | | |

T.A.T. Requested: ☐ Rush 8 12 24 hours ☒ 2-3 days ☐ Normal

Sample Condition: ☒ Chilled ☒ Intact ☐ Sample seals

| Relinquished by | Company | Date | Time | Received by | Company |
|---|---|---|---|---|---|
| | S:S Comm'l | 9-28-05 | 1200 | | S:S |
| Relinquished by | Company | Date | Time | Received by | Company |

Container types: M=Metal Tube, A=Air Bag, P=Plastic bottle, G=Glass bottle, V=VOA vial



Note: Samples are discarded 30 days after results are reported unless other arrangements are

**SOUTHLAND TECHNICAL SERVICES, INC.**

**CHAIN OF CUSTODY RECORD**



Lab Job Number Z509167

Client: S;S Commercial Environmental Services

Address: 12960 Central Ave., #E, Chino, CA

Report Attention: Bill Lachmar | Phone: 714-508-9779 | Fax: 714-508-9781 | Sampled by: W.C.L.

Project Name/No.: 5928 | Project Site: KMS-12021-23 Woodruff Ave., Downey

T.A.T. Requested: ☐ Rush 8 12 24 hours ☒ 2-3 days ☐ Normal

Sample Condition: ☒ Chilled ☒ Intact ☐ Sample seals

| Client Sample ID | Lab Sample ID | Sample Collect Date | Sample Collect Time | Matrix Type | Sample Preserve | No.,type* & size of container | 602/8021 (BTEX,MTBE) | 8015M (Gasoline) | 8015M (Diesel) | 8260B (VOCs) | 8260B (Oxygenates, BTEX) | 8260B (MTBE Confirm.) | 8015-C8-C40 | 8270C | Arsenic | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS8-1/2 | Z509167-23 | 9-28-05 | | So:l | ~~HCl~~ | Brass | | | | | | | | | X | | | | |
| SS8-1 | -24 | ↓ | | ↓ | ↓ | ↓ | | | | | | | | | X | | | | |
| SS8-2 | -25 | | | | | | | | | | | | | | X | | | | |
| SS8-5 | | ↓ | | ↓ | ↓ | ↓ | | | | | | | | | | | | | |

| Relinquished by | Company | Date | Time | Received by | Company |
|---|---|---|---|---|---|
| [signature] | S;S Commercial | 9-28-05 | 12:00 | [signature] | STL |
| Relinquished by | Company | Date | Time | Received by | Company |

Container types: M=Metal Tube, A=Air Bag, P=Plastic bottle, G=Glass bottle, V=VOA vial

Southland Tech. Services, Inc.
7801 Telegraph Road. Suite L & K Tel: (323) 888-0728

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

**Southland Technical Services, Inc.**
Environmental Laboratories

10-10-200

Mr. Bill Lachmar
S & S Commercial Environmental Services
13520 Amber Road
Chino, CA 91710

Project: 5928
Project Site: KMS-12021-23 Woodruff Ave., Downey, CA
Date Sampled: 10-05-2005
Lab Job No.: Z510018

Dear Mr. Lachmar:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 10-05-200 and analyzed by the following EPA methods:

EPA 8015M (Total Petroleum Hydrocarbons)

All analyses have met the QA/QC criteria of this laboratory.

The sample arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by CA DHS (Certificate Number 1986). Thank you for giving us th opportunity to serve you. Please feel free to call me at (323) 888-0728 if oB1-5ur laboratory can be of further servic to you.

Sincerely,

Roger Wang, Ph.D.
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.

**Southland Technical Services, Inc.**
Environmental Laboratories

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z510018 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 10-05-2005 |
| Matrix: | Soil | Date Received: | 10-05-2005 |
| Batch No.: | EJ05-DS1 | Date Analyzed: | 10-05-2005 |
| | | Date Reported: | 10-06-2005 |

**EPA 8015M (Total Petroleum Hydrocarbons)**
**Reporting Unit: mg/kg (ppm)**

| Sample ID | Lab ID | C8-C12 | C13-C23 (Diesel Range) | C24-C40 (Oil Range) |
|---|---|---|---|---|
| Reporting Limit | | 5 | 5 | 50 |
| Method Blank | | ND | ND | ND |
| SS-5-Alt-10' | Z510018-1 | ND | 6,820 | 2,750 |
| SS-5-Alt-15' | Z510018-2 | ND | 185 | 65 |
| SS-5-Alt-20' | Z510018-3 | 5.6 | 21,300 | 8,540 |
| SS-5-Alt-25' | Z510018-4 | ND | ND | ND |
| SS-5-Alt-30' | Z510018-5 | ND | ND | ND |
| SS-10-5' | Z510018-6 | ND | ND | ND |
| SS-10-10' | Z510018-7 | ND | ND | ND |
| SS-10-20' | Z510018-13 | ND | ND | ND |
| SS-11-5' | Z510018-8 | ND | 38,300 | 8,320 |
| SS-12-5' | Z510018-9 | ND | 21,200 | 11,100 |
| SS-12-10' | Z510018-10 | ND | 1,470 | 1,410 |
| SS-12-15' | Z510018-11 | ND | 73 | ND |
| SS-12-20' | Z510018-14 | ND | ND | ND |
| SS-13-10' | Z510018-12 | 80 | 29,200 | 15,100 |
| SS-13-15' | Z510018-15 | ND | 309 | 195 |
| SS-14-10' | Z510018-16 | ND | ND | ND |
| | | | | |

ND: Not Detected (at the specified limit).

10-10-200

# EPA 8015M (TPH)
# Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z510018 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | SS51005-1 |
| Batch No.: | EJ05-DS1 | Date Analyzed: | 10-05-2005 |

## I. MS/MSD Report
**Unit: ppm**

| Analyte | Sample Conc. | Spike Conc. | MS | MSD | MS %Rec. | MSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|---|---|---|
| TPH-d | ND | 200 | 214 | 213 | 107.0 | 106.5 | 0.5 | 30 | 70-130 |

## II. LCS Result
**Unit: ppm**

| Analyte | LCS Report Value | True Value | Rec.% | %Rec Accept. Limit |
|---|---|---|---|---|
| TPH-d | 508 | 500 | 101.6 | 80-120 |

ND: Not Detected (at the specified limit).

**SOUTHLAND TECHNICAL SERVICES, INC.**



**CHAIN OF CUSTODY RECORD**

Lab Job Number Z510018

| | | | |
|---|---|---|---|
| Client: S&S Commercial Environmental Services | | | |
| Address: 12960 Central Ave #E, Chino, CA 91733 | | | |
| Report Attention: Bill Lachmar | Phone: 714-508-9794 | Fax: 714/508-9791 | Sampled by: Hamid Khorzani |
| Project Name/No.: 5928 | Project Site: KMS 12021-23 Woodruff Av., Downey | | |

| Client Sample ID | Lab Sample ID | Sample Collect Date | Sample Collect Time | Matrix Type | Sample Preserve | No.,type* & size of container | 602/8021 (BTEX,MTBE) | 8015M (Gasoline) | 8015M (Diesel) | 8260B (VOCs) | 8260B (Oxygenates, BTEX) | 8260B (MTBE Confirm.) | 8015-C8-C40 | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS<Alt-5' | | 10/5/05 | 8:00 | Soil | | Tube | | | | | | | | Hold |
| SS5 Alt-10' | Z510018 | | | | | | | | | | | | ✓ | Z510018 |
| SS5 Alt-15' | " 2 | | | | | | | | | | | | ✓ | |
| SS5 Alt-20' | " 3 | | | | | | | | | | | | ✓ | |
| SS5 Alt-25' | " 4 | | | | | | | | | | | | ✓ | |
| SS5 Alt-30' | " 5 | | | | | | | | | | | | ✓ | |
| SS10-5' | " 6 | | | | | | | | | | | | ✓ | |
| SS10-10' | " 7 | | | | | | | | | | | | ✓ | |
| SS10-15' | | | | | | | | | | | | | | Hold |
| SS10-20' | -13 | | | | | | | | | | | | ✓ | ~~Hold~~ |
| SS10-25' | | | | | | | | | | | | | | Hold |
| SS10-30' | | | | | | | | | | | | | | Hold |
| SS11-5' | " 8 | | | | | | | | | | | | ✓ | |
| SS12-5' | " 9 | | | | | | | | | | | | ✓ | |
| SS12-10' | " 10 | | | | | | | | | | | | ✓ | |
| SS12-15' | " 11 | | | | | | | | | | | | ✓ | |

T.A.T. Requested: ☑ Rush 8 12 24 hours ☐ 2-3 days ☐ Normal

Sample Condition: ☑ Chilled ☑ Intact ☐ Sample seals

| Relinquished by | Company | Date | Time | Received by | Company | Container types: | |
|---|---|---|---|---|---|---|---|
| [signature] | S&S | 10/5/05 | 1:10 | [signature] | SS | A=Air Bag | M=Metal Tube |
| Relinquished by | Company | Date | Time | Received by | Company | G=Glass bottle | P=Plastic bottle V=VOA vial |
| | | | | | | | |

10-5-05 1:10 pm

Southland Tech. Services, Inc.

Note: Samples are discarded 30 days after results are reported unless other arrangements are

# SOUTHLAND TECHNICAL SERVICES, INC.

## CHAIN OF CUSTODY RECORD



Lab Job Number Z510018

Client: S&S Commerical Environmental Services

Address: 12960 Central Ave #E Chino, CA 91733

Report Attention: Bill Colchmar | Phone: 714/508-9794 | Fax: 714/504-9791 | Sampled by: Hamid Khorzahi

Project Name/No.: 5928 | Project Site: KMS. 12021-23 Woodruff Ave. Downey

T.A.T. Requested: ☑ Rush 8 12 24 hours ☐ 2-3 days ☐ Normal

Sample Condition: ☑ Chilled ☑ Intact ☐ Sample seals

| Client Sample ID | Lab Sample ID | Sample Collect Date | Sample Collect Time | Matrix Type | Sample Preserve | No.,type* & size of container | 602/8021 (BTEX,MTBE) | 8015M (Gasoline) | 8015M (Diesel) | 8260B (VOCs) | 8260B (Oxygenates, BTEX) | 8260B (MTBE Confirm.) | 8015 - C6-C40 | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS12-20' | -14 | 10/5/05 | | Soil | | | | | | | | | ✓ | ~~Hold~~ |
| SS13-10' | Z510018-7 | ↓ | | | | | | | | | | | ✓ | |
| SS13-15' | -15 | | | | | | | | | | | | ✓ | Hold |
| SS14-10' | -16 | | | | | | | | | | | | ✓ | ~~Hold~~ |
| SS14-15' | | ↓ | 12:30 | | | Tube | | | | | | | | Hold |

| Relinquished by | Company | Date | Time | Received by | Company | Container types: | |
|---|---|---|---|---|---|---|---|
| [signature] | S&S | 10/5/05 | 1:10 | Jessica Z. Tong | SLS | A=Air Bag | P=Plastic bottle |
| Relinquished by | Company | Date | Time | Received by | Company | G=Glass bottle | V=VOA vial |
| | | | | | 10-05-05 1:10pm | | M=Metal Tube |

Southland Tech. Services, Inc.

Note: Samples are discarded 30 days after results are reported unless other arrangements are

**Southland Technical Services, Inc.**
Environmental Laboratories

10/10/200:

Mr. Bill Lachmar
S & S Commercial Environmental Services
13520 Amber Road
Chino, CA 91710

Project: 5928
Project Site: KMS-12021-23 Woodruff Ave., Downey, CA
Date Sampled: 10-10-2005
Lab Job No.: Z510042

Dear Mr. Lachmar:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 10-10-200 and analyzed by the following EPA methods:

EPA 8015M (Total Petroleum Hydrocarbons)

All analyses have met the QA/QC criteria of this laboratory.

The sample arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by CA DHS (Certificate Number 1986). Thank you for giving us th opportunity to serve you. Please feel free to call me at (323) 888-0728 if oB1-5ur laboratory can be of further servic to you.

Sincerely,

Roger Wang, Ph.D.
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.

**Southland Technical Services, Inc.**
Environmental Laboratories

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z510042 |
| Project: | 5928 | | |
| Project Site: | KMS-12021-23 Woodruff Ave., Downey, CA | Date Sampled: | 10-10-2005 |
| Matrix: | Soil | Date Received: | 10-10-2005 |
| Batch No.: | EJ10-DS1 | Date Analyzed: | 10-10-2005 |
| | | Date Reported: | 10/10/2005 |

**EPA 8015M (Total Petroleum Hydrocarbons)**
**Reporting Unit: mg/kg (ppm)**

| Sample ID | Lab ID | C8-C12 | C13-C23 (Diesel Range) | C24-C40 (Oil Range) |
|---|---|---|---|---|
| Reporting Limit | | 5 | 5 | 50 |
| Method Blank | | ND | ND | ND |
| SS-5-Alt-35' | Z510042-1 | ND | ND | ND |
| SS-5-Alt-40' | Z510042-2 | ND | ND | ND |
| SS-5-Alt-45' | Z510042-3 | ND | ND | ND |
| | | | | |

ND: Not Detected (at the specified limit).

**Southland Technical Services, Inc.**
Environmental Laboratories

10/10/200

## EPA 8015M (TPH)
## Batch QA/QC Report

| | | | |
|---|---|---|---|
| Client: | S & S Commercial Environmental Services | Lab Job No.: | Z510042 |
| Project: | 5928 | | |
| Matrix: | Soil | Lab Sample ID: | Z510042-1 |
| Batch No.: | EJ10-DS1 | Date Analyzed: | 10-10-2005 |

### I. MS/MSD Report
**Unit: ppm**

| Analyte | Sample Conc. | Spike Conc. | MS | MSD | MS %Rec. | MSD %Rec. | % RPD | %RPD Accept. Limit | %Rec Accept. Limit |
|---|---|---|---|---|---|---|---|---|---|
| TPH-d | ND | 200 | 210 | 208 | 105.0 | 104.0 | 1.0 | 30 | 70-130 |

### II. LCS Result
**Unit: ppm**

| Analyte | LCS Report Value | True Value | Rec.% | %Rec Accept. Limit |
|---|---|---|---|---|
| TPH-d | 209 | 200 | 104.5 | 80-120 |

ND: Not Detected (at the specified limit).

**SOUTHLAND TECHNICAL SERVICES, INC.**

**CHAIN OF CUSTODY RECORD**



Lab Job Number 2510042

Client: S:S Commercial Environmental Services

Address: 2960 Central Ave. #E, Chino, CA

Report Attention: Bill Lederer | Phone: 714-508-7711 | Fax: 714-508-8979 | Sampled by: C.J.C.L.

Project Name/No.: 5928 | Project Site: Kuhl Mar. 12021 Woodruff, Downey

T.A.T. Requested: X Rush 8 12 24 hours; ☐ 2-3 days ☐ Normal

Sample Condition: X Chilled X Intact ☐ Sample seals

| Client Sample ID | Lab Sample ID | Sample Collect Date | Sample Collect Time | Matrix Type | Sample Preserve | No.,type* & size of container | 602/8021 (BTEX,MTBE) | 8015M (Gasoline) | 8015M (Diesel) | 8260B (VOCs) | 8260B (Oxygenates, BTEX) | 8260B (MTBE Confirm.) | C8-C40 | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SSSALT-35 | 2510042-1 | 10/05 | | Soil | Chill | TSbe | | | | | | | X | |
| SSSALT-40 | -2 | ↓ | | ↓ | ↓ | ↓ | | | | | | | X | |
| SSSALT-45 | -3 | ↓ | | ↓ | ↓ | ↓ | | | | | | | X | |

| Relinquished by | Company | Date | Time | Received by | Company |
|---|---|---|---|---|---|
| [signature] | S:S Commercial | 10-10-05 | 12:00 | [signature] | SES |
| Relinquished by | Company | Date | Time | Received by | Company |

Container types: M=Metal Tube; A=Air Bag; P=Plastic bottle; G=Glass bottle; V=VOA vial

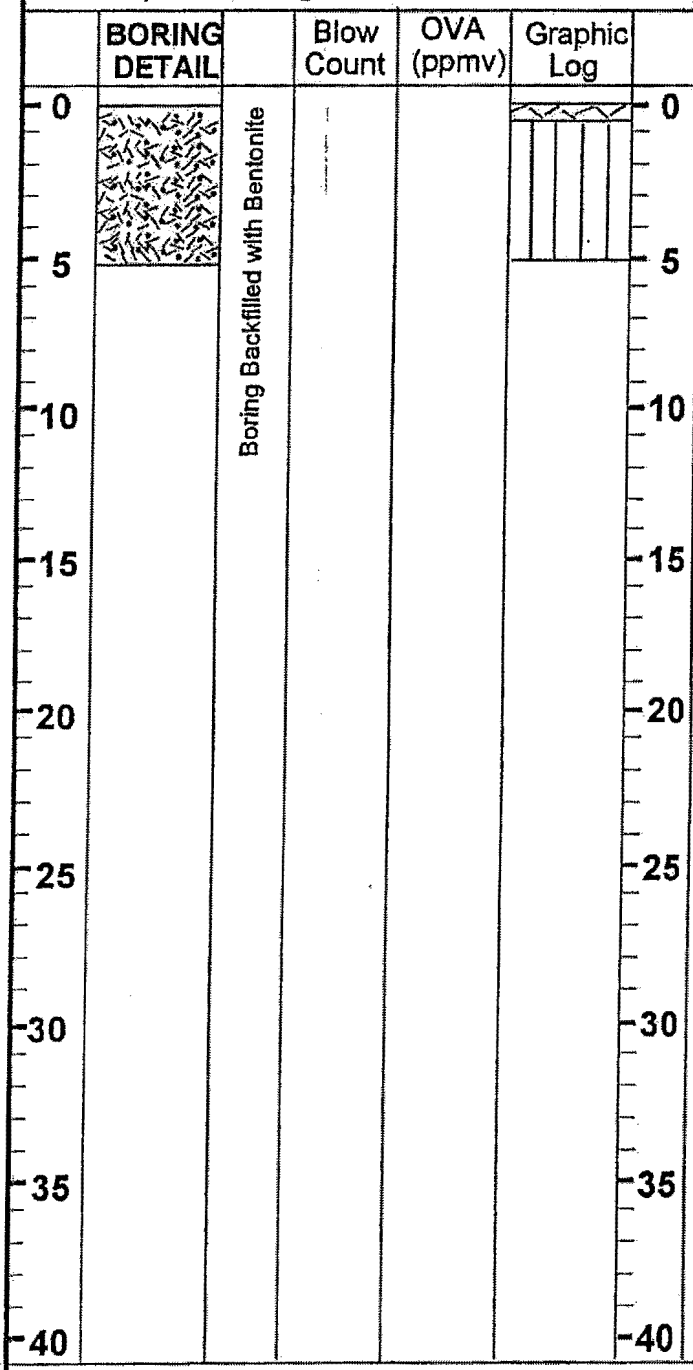
Southland Tech. Services, Inc.

Note: Samples are discarded 30 days after results are reported unless other arrangements are

# APPENDIX II

Soil Boring Logs

| INVESTIGATIVE SOIL BORING LOG DETAIL | | BORING NO. SS1 |
|---|---|---|
| Project Name: KMS Rubber | | Project Location: 12021 Woodruff Ave., Downey |
| Logged By: W.C.L. | Dated Drilled: 9/28/05 | Reviewed By: W. Lachmar, R.G. |
| **WATER / WELL DATA** | | Total Depth of Well Completed: NA |
| Depth of First Saturated Zone: NA | | Well Screen Type & Diameter: NA |
| Static Depth of Water in Well: NA | | **LITHOLOGIC DESCRIPTION** |
| Total Depth of Boring: 5' | | Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation |




| And (40-50%) | With (25-40%) | Some (10-25%) | Trace (0-10%) |
|---|---|---|---|

Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration

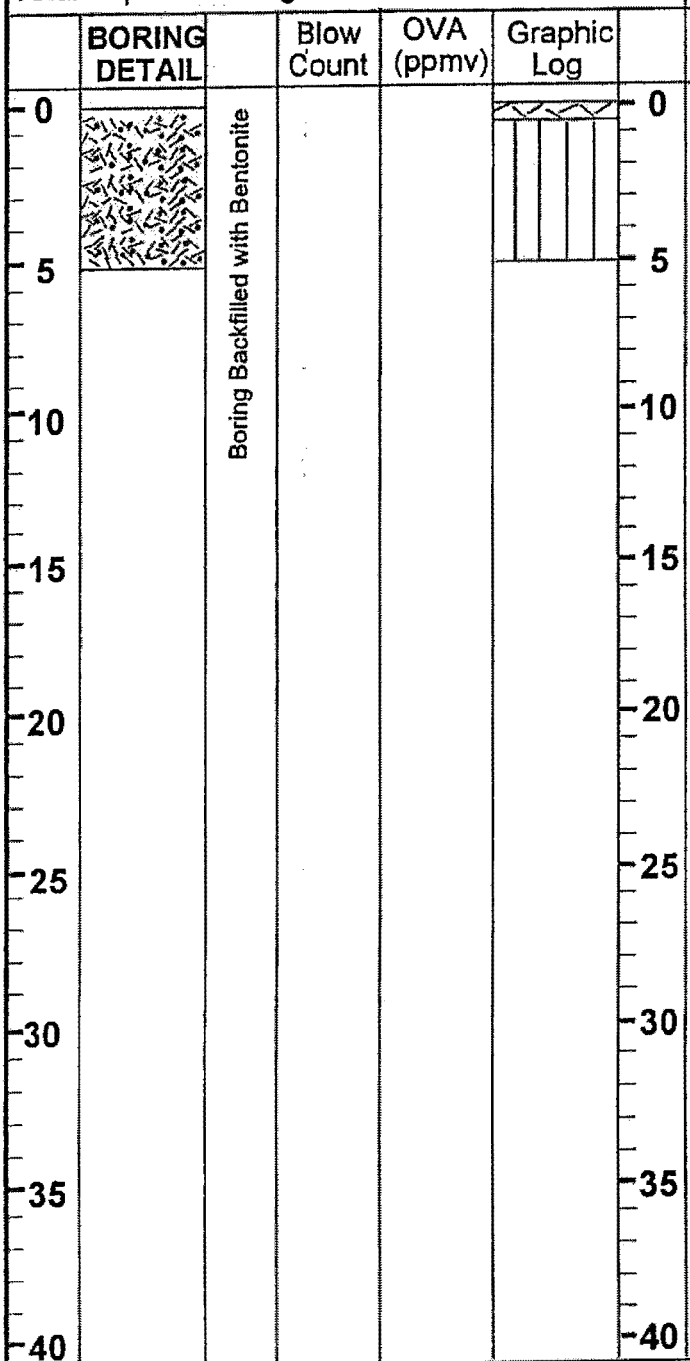


S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS2

| | |
|---|---|
| Project Name: KMS Rubber | Project Location: 12021 Woodruff Ave., Downey |
| Logged By: W.C.L. / Dated Drilled: 9/28/05 | Reviewed By: W. Lachmar, R.G. |
| **WATER / WELL DATA** | Total Depth of Well Completed: NA |
| Depth of First Saturated Zone: NA | Well Screen Type & Diameter: NA |
| Static Depth of Water in Well: NA | **LITHOLOGIC DESCRIPTION** |
| Total Depth of Boring: 5' | Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation |




And (40-50%) / With (25-40%) / Some (10-25%) / Trace (0-10%)

Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS3

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 9/28/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

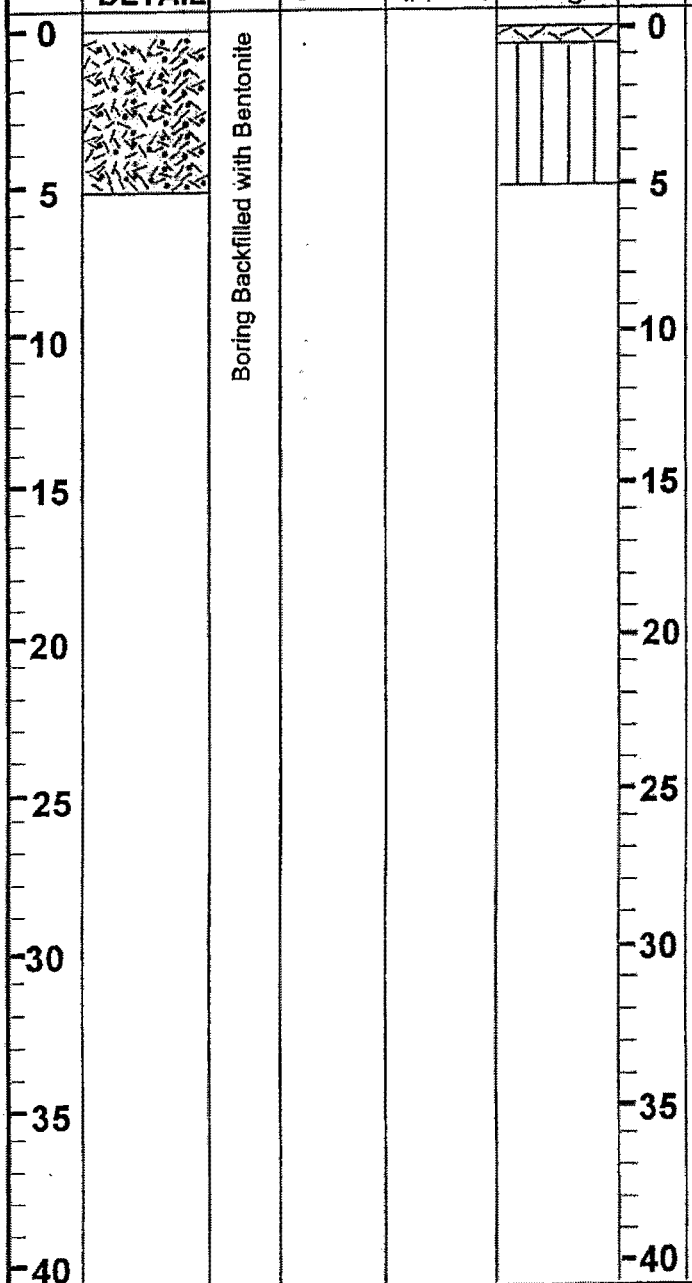
Static Depth of Water in Well: NA

Total Depth of Boring: 5'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) | With (25-40%) | Some (10-25%) | Trace (0-10%)




Approximately 3-inches of concrete

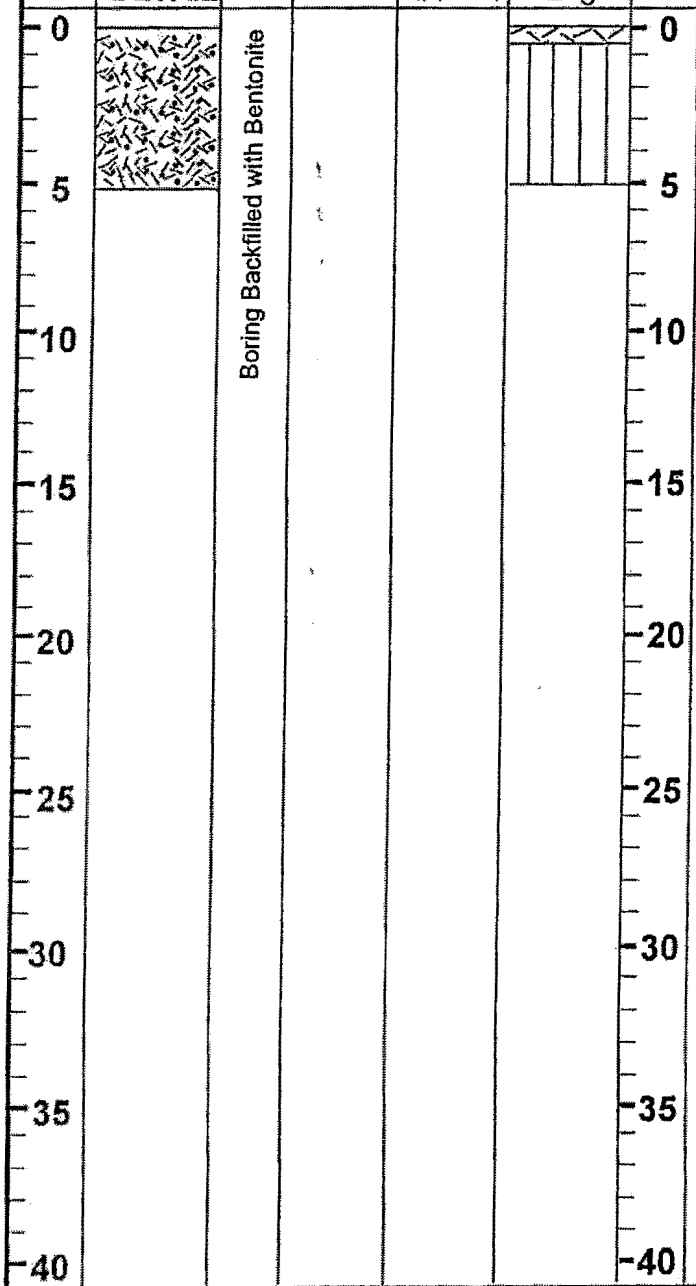
Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

| INVESTIGATIVE SOIL BORING LOG DETAIL | | BORING NO. SS4 |
|---|---|---|
| Project Name: KMS Rubber | | Project Location: 12021 Woodruff Ave., Downey |
| Logged By: W.C.L. | Dated Drilled: 9/28/05 | Reviewed By: W. Lachmar, R.G. |
| **WATER / WELL DATA** | | Total Depth of Well Completed: NA |
| Depth of First Saturated Zone: NA | | Well Screen Type & Diameter: NA |
| Static Depth of Water in Well: NA | | **LITHOLOGIC DESCRIPTION** |
| Total Depth of Boring: 5' | | Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation |




| And (40-50%) | With (25-40%) | Some (10-25%) | Trace (0-10%) |
|---|---|---|---|

Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS5 & 5 Alt

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 09/28/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

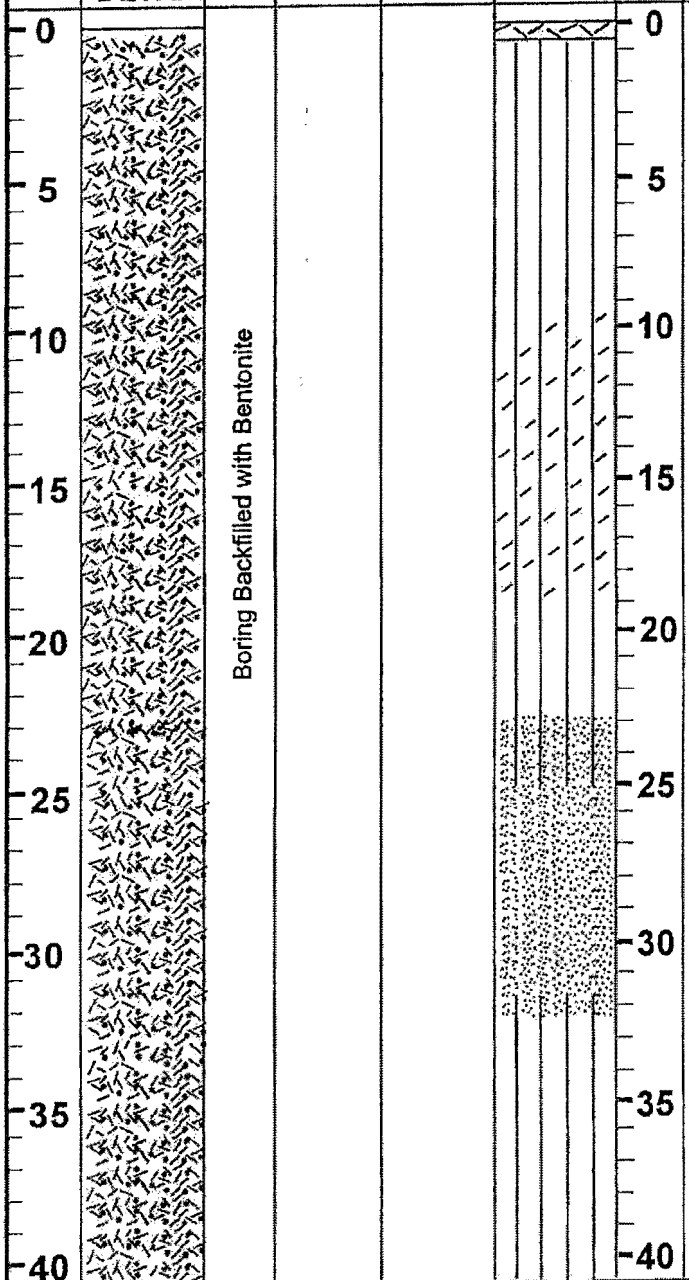
Static Depth of Water in Well: NA

Total Depth of Boring: 45'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

| BORING DETAIL | Blow Count | OVA (ppmv) | Graphic Log | And (40-50%) | With (25-40%) | Some (10-25%) | Trace (0-10%) |
|---|---|---|---|---|---|---|---|




0 Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

5 Oil impacted Silt, (ML), very moist, cohesive, black discoloration, oil odor

10 Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, plastic, some rock fragments, no discoloration, slight oil odor

15 Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, plastic, some rock fragments, no discoloration, no odor

20 Light Brown Silt (ML), moist, relatively friable, contact to fine-medium sand, no discoloration, no odor

25 Gray fine sand (SP), slight moisture, oose, friable, well sorted, no discoloration, no odor

30 Light Gray F-M Sand (SP), slgiht moisture, loose, friable, well sorted, no discoloration, no odor

35 Light Brown Silt (ML), slgiht moisture, firm, relatively cohesive, no odor, no discoloration

40 Light Brown Silt (ML), slgiht moisture, firm, relatively cohesive, no odor, no discoloration



S&S Form 20-A

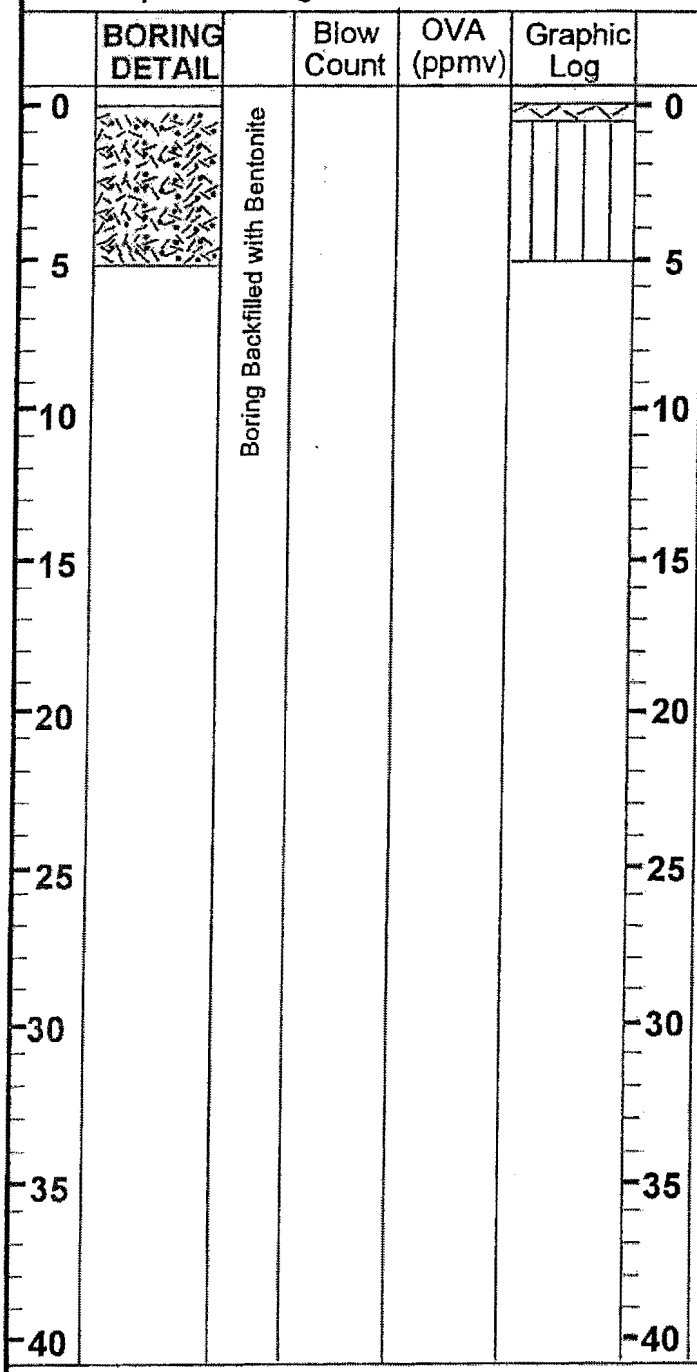
| INVESTIGATIVE SOIL COMPOSITE BORING LOG DETAIL | | BORING NO. SS5-Alt |
|---|---|---|
| Project Name: KMS Rubber | Project Location: 12021 Woodruff Ave., Downey | |
| Logged By: W.C.L. | Dated Drilled: 10/05/05 | Reviewed By: W. Lachmar, R.G. |

| GRAPHIC LOG | Boring Detail | OVA (ppm) | Drill Depth (In Feet) | LITHOLOGIC DESCRIPTION<br>Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation<br>And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%) |
|---|---|---|---|---|
| | | | 45<br>50<br>55<br>60<br>65<br>70<br>75<br>80<br>85 | Brown Very Fine Sand (SP), moist, well sorted, firm, no odor, no discoloration |



S&S FORM 20-A

| INVESTIGATIVE SOIL BORING LOG DETAIL | | BORING NO. SS6 |
|---|---|---|
| Project Name: KMS Rubber | | Project Location: 12021 Woodruff Ave., Downey |
| Logged By: W.C.L. | Dated Drilled: 9/28/05 | Reviewed By: W. Lachmar, R.G. |
| **WATER / WELL DATA** | | Total Depth of Well Completed: NA |
| Depth of First Saturated Zone: NA | | Well Screen Type & Diameter: NA |
| Static Depth of Water in Well: NA | | **LITHOLOGIC DESCRIPTION** |
| Total Depth of Boring: 5' | | Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation |




And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)

Approximately 3-inches of concrete

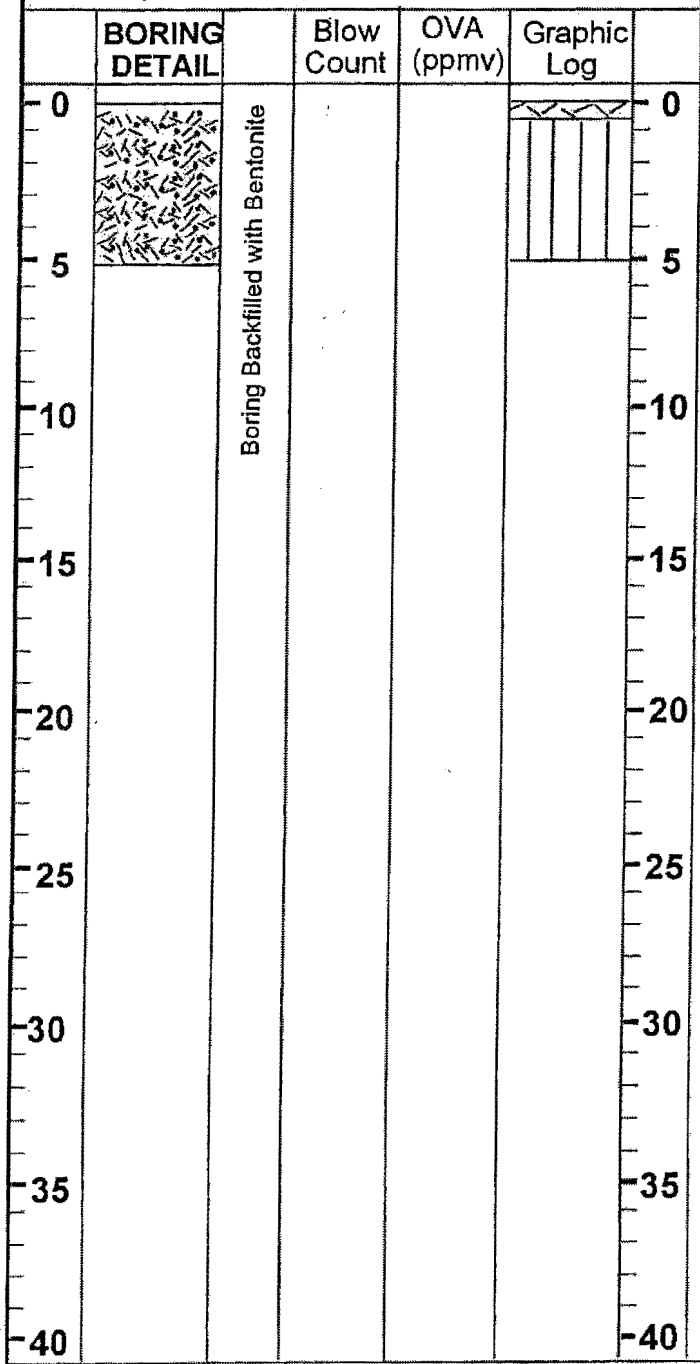
Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

| INVESTIGATIVE SOIL BORING LOG DETAIL | | BORING NO. SS7 |
|---|---|---|
| Project Name: KMS Rubber | | Project Location: 12021 Woodruff Ave., Downey |
| Logged By: W.C.L. | Dated Drilled: 9/28/05 | Reviewed By: W. Lachmar, R.G. |
| **WATER / WELL DATA** | | Total Depth of Well Completed: NA |
| Depth of First Saturated Zone: NA | | Well Screen Type & Diameter: NA |
| Static Depth of Water in Well: NA | | **LITHOLOGIC DESCRIPTION** |
| Total Depth of Boring: 5' | | Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation |




And (40-50%) | With (25-40%) | Some (10-25%) | Trace (0-10%)

Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS8

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 9/28/05

Reviewed By: W. Lachmar, R.G.

**WATER / WELL DATA**

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

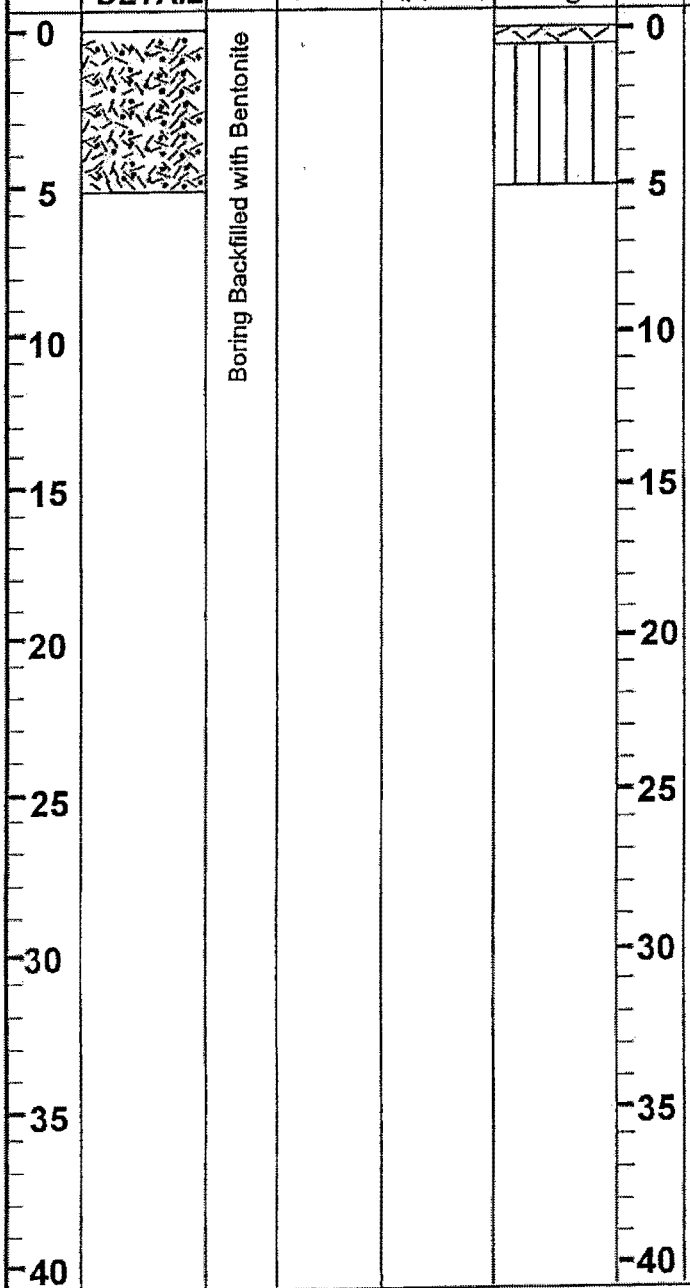
Static Depth of Water in Well: NA

Total Depth of Boring: 5'

**LITHOLOGIC DESCRIPTION**

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

| BORING DETAIL | | Blow Count | OVA (ppmv) | Graphic Log | And (40-50%) | With (25-40%) | Some (10-25%) | Trace (0-10%) |
|---|---|---|---|---|---|---|---|---|




Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, no discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS9

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 9/28/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

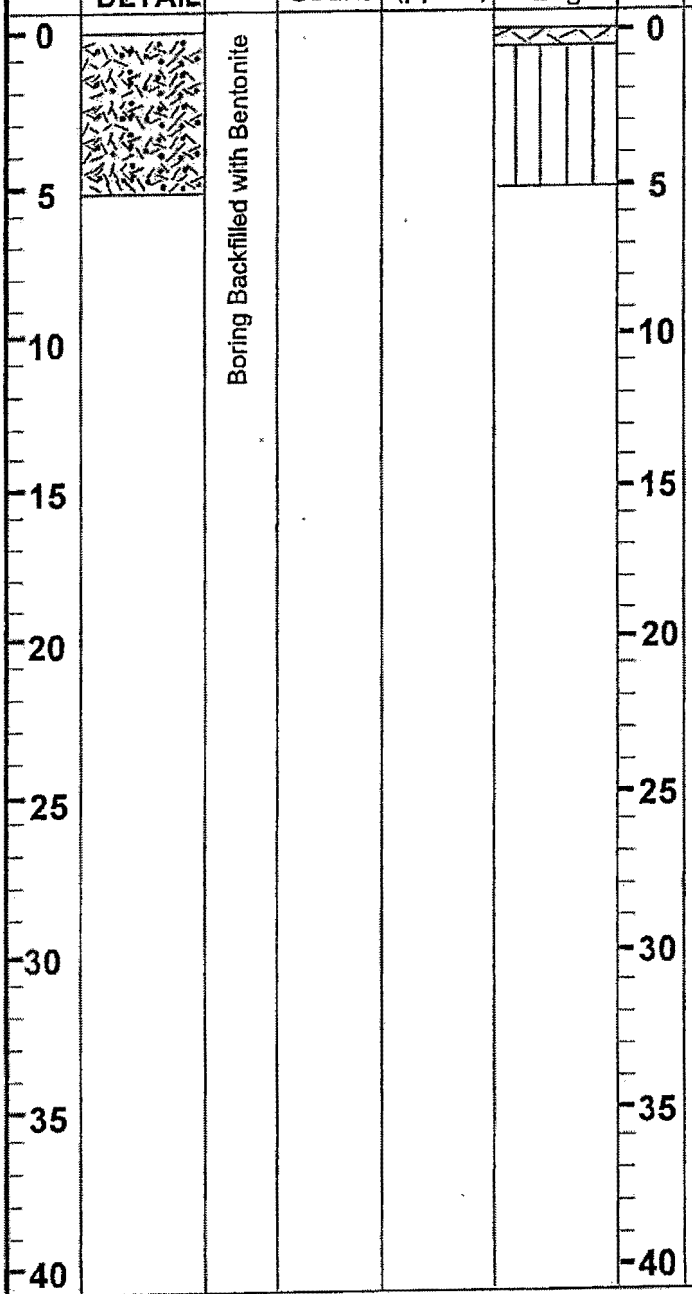
Static Depth of Water in Well: NA

Total Depth of Boring: 5'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

| And (40-50%) | With (25-40%) | Some (10-25%) | Trace (0-10%) |
|---|---|---|---|




Approximately 3-inches of concrete

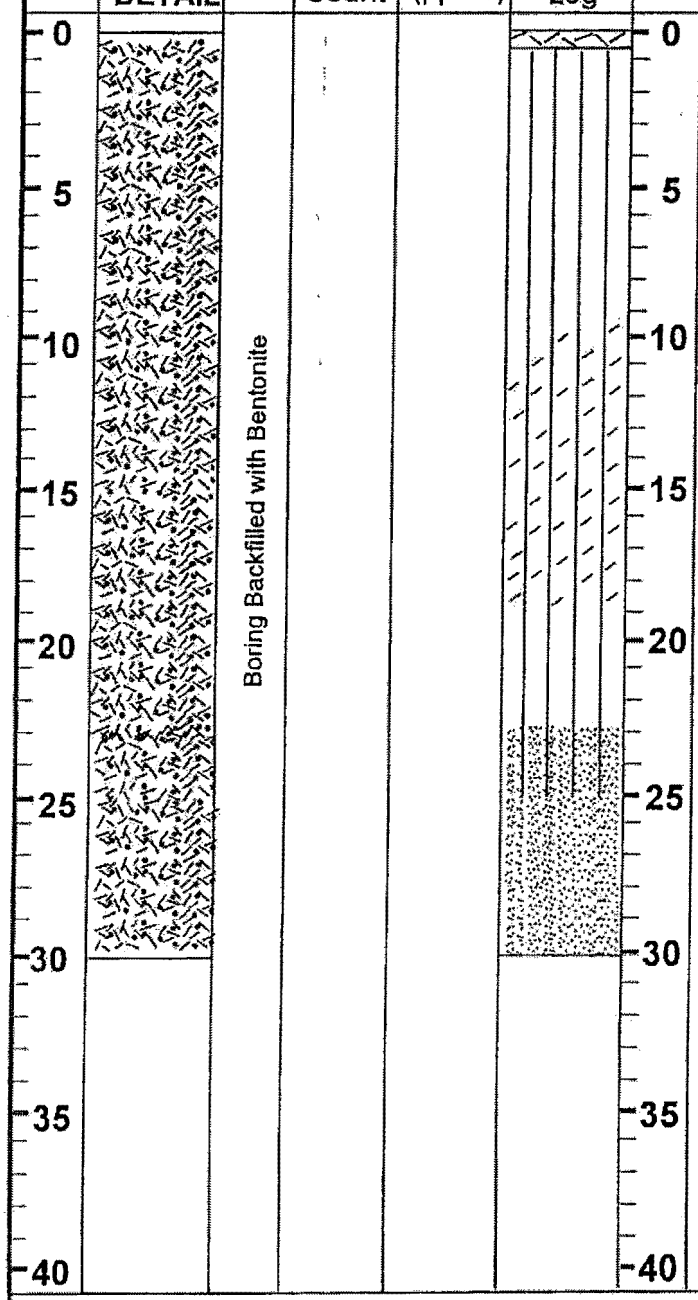
Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

| INVESTIGATIVE SOIL BORING LOG DETAIL | | BORING NO. SS510 |
|---|---|---|
| Project Name: KMS Rubber | | Project Location: 12021 Woodruff Ave., Downey |
| Logged By: W.C.L. | Dated Drilled: 10/05/05 | Reviewed By: W. Lachmar, R.G. |
| **WATER / WELL DATA** | | Total Depth of Well Completed: NA |
| Depth of First Saturated Zone: NA | | Well Screen Type & Diameter: NA |
| Static Depth of Water in Well: NA | | **LITHOLOGIC DESCRIPTION** |
| Total Depth of Boring: 30' | | Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation |




And (40-50%) | With (25-40%) | Some (10-25%) | Trace (0-10%)

Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, no odor, ho discoloration

Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, plastic,, no discoloration, faint oil odor

Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, pmedium plasticity, no discoloration, no odor

Light Brown Silt (ML), moist, relatively friable, contact to fine-medium sand, no discoloration, no odor

Gray fine sand (SP), slight moisture, oose, friable, well sorted, no discoloration, no odor

Light Gray F-M Sand (SP), slght moisture, loose, friable, well sorted, no discoloration, no odor



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS11

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 10/05/05

Reviewed By: W. Lachmar, R.G.

**WATER / WELL DATA**

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

Static Depth of Water in Well: NA

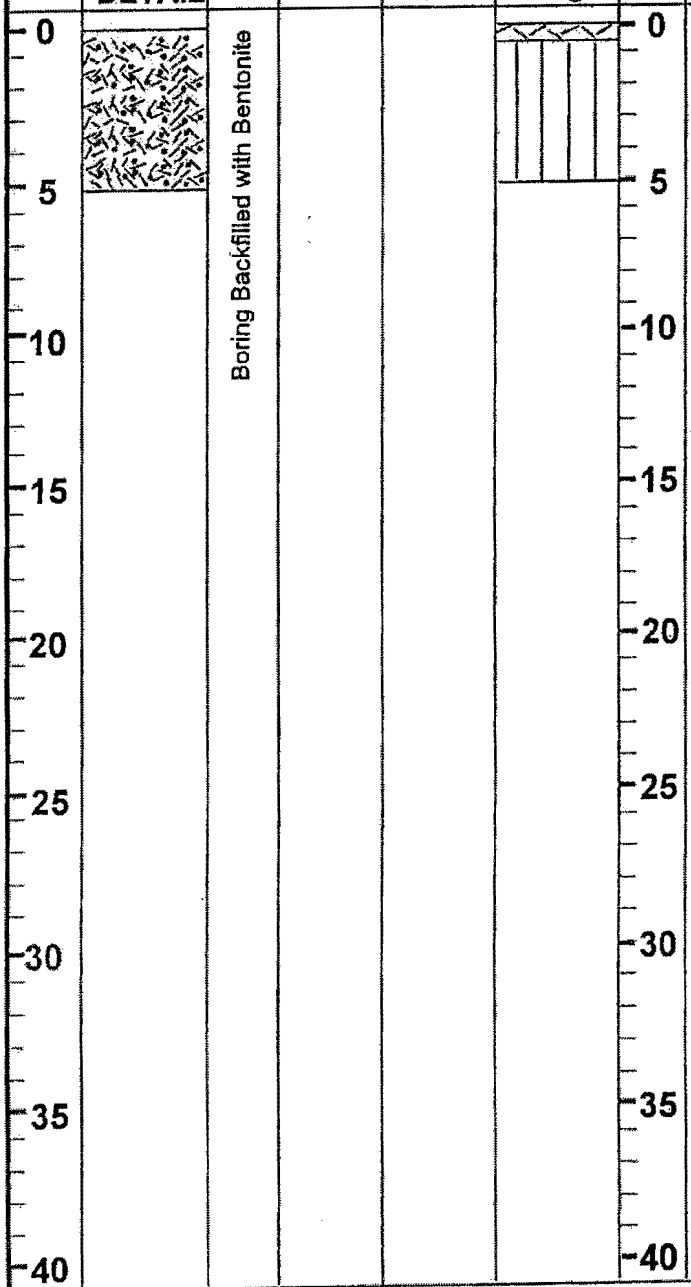
Total Depth of Boring: 5'

**LITHOLOGIC DESCRIPTION**

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)

| BORING DETAIL | Blow Count | OVA (ppmv) | Graphic Log |
|---|---|---|---|




Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS12

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 10/05/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

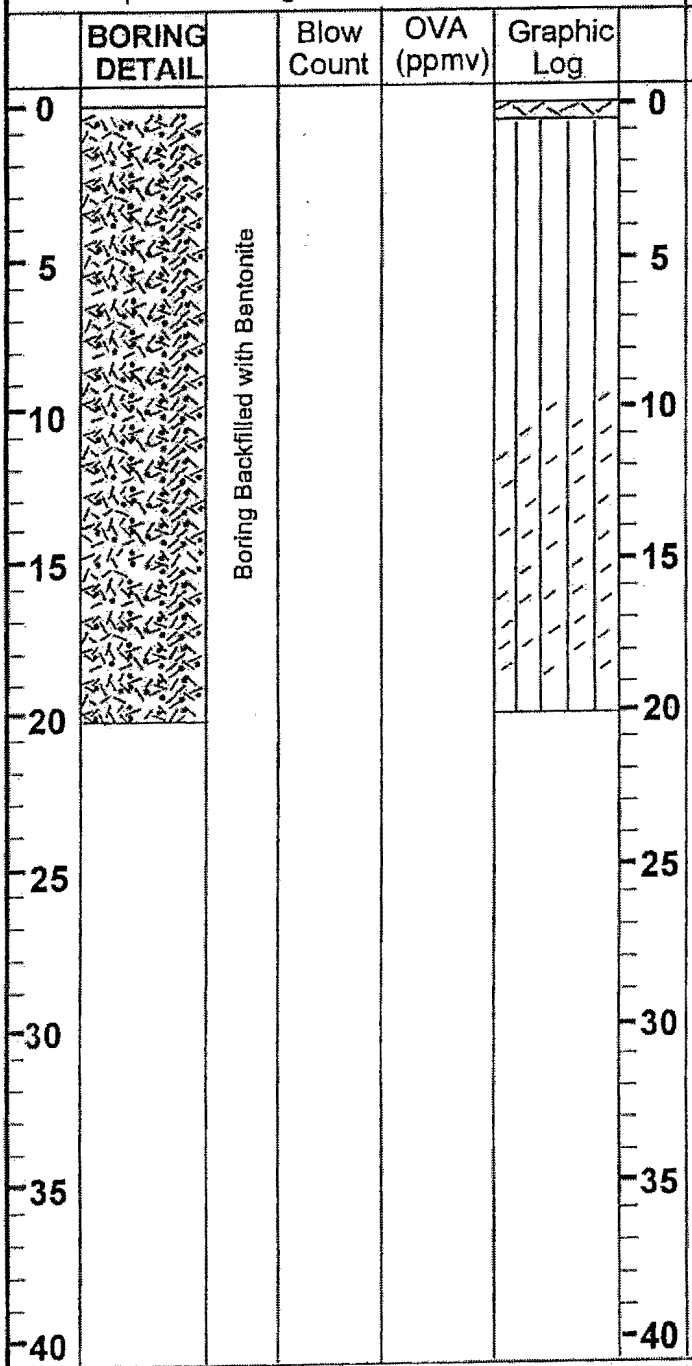
Static Depth of Water in Well: NA

Total Depth of Boring: 20'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)




Approximately 3-inches of concrete

Generally Brown, Moist Silt (ML) from 0-5 Feet

Olive Brown Silt, (ML), moist, firm, well sorted, faint odor, ho discoloration

Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, plastic,, no discoloration, faint oil odor

Olive-Brown Silty-Clay to Clay (ML-CL), moist, cohesive, medium plasticity, no discoloration, no odor

Light Brown Silt (ML), moist, relatively friable, contact to fine-medium sand, no discoloration, no odor



S&S Form 20-A

# INVESTIGATIVE SOIL BORING LOG DETAIL

BORING NO. SS13

Project Name: KMS Rubber

Project Location: 12021 Woodruff Ave., Downey

Logged By: W.C.L.

Dated Drilled: 10/05/05

Reviewed By: W. Lachmar, R.G.

## WATER / WELL DATA

Depth of First Saturated Zone: NA

Total Depth of Well Completed: NA

Well Screen Type & Diameter: NA

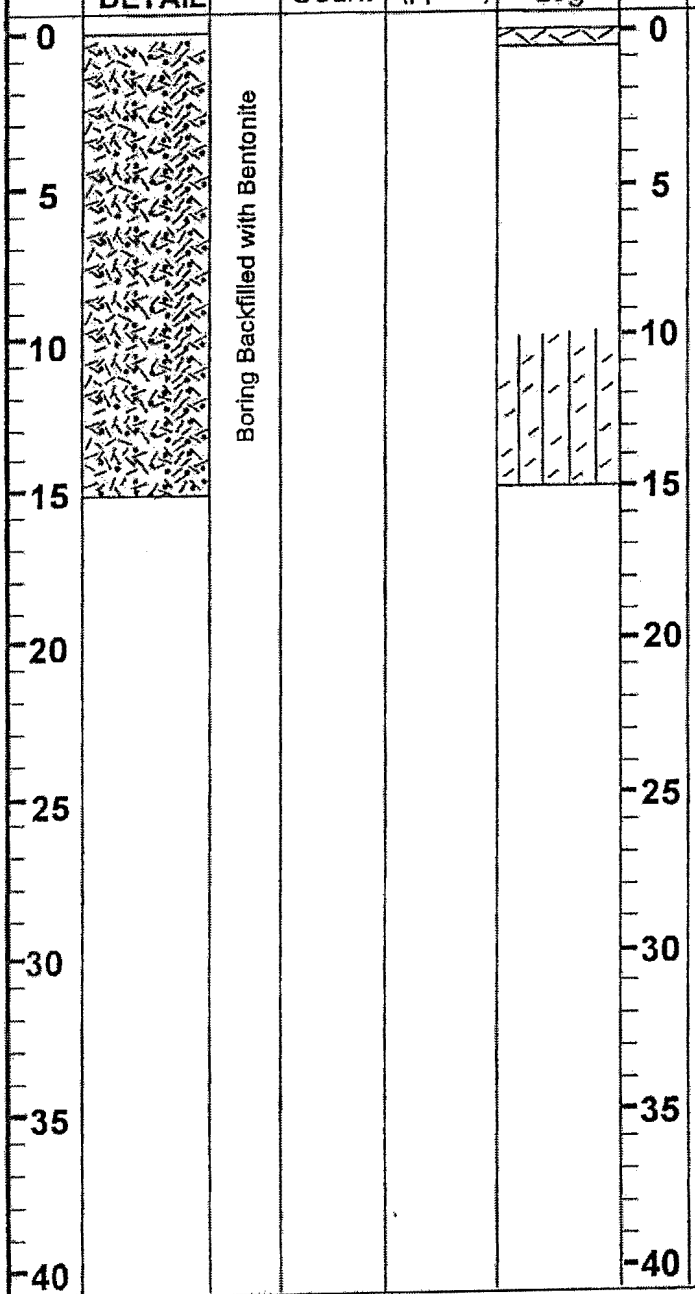
Static Depth of Water in Well: NA

Total Depth of Boring: 15'

## LITHOLOGIC DESCRIPTION

Standard Classification, Texture, Relative Moisture, Density, Firmness, Odor-Staining, USCS Designation

And (40-50%) With (25-40%) Some (10-25%) Trace (0-10%)




Approximately 3-inches of concrete

Olive-Brown Clayey-Silt (CL-ML), slight moisture, moderate plasticity,, no discoloration, no odor

Brown Silty-Clay to Clay (ML-CL), moist, cohesive, medium plasticity, no discoloration, no odor



S&S Form 20-A

# APPENDIX N:

# TANK PROTECT ENGINEERING "UST REPORTS" (15) DATED NOVEMBER 1989 THROUGH 1992

12790 - 12987

N

Stephen M. Lankford
California State Registered Geologist # 4283
2734 Johnson Drive, Suite 201
Ventura, Ca 93003
(805) 644 - 9916

Tank Protect Engineering
1963 North Main Street
Orange, Ca 92665

Attn: Cyrus Namini

November 13, 1989

Subject: Work Progress Report

Property: Kirkhill Inc.

Location: 12021 Woodruff.
Downey, Ca 90241.
Permit 5999
File 2987 R/C 1F TPE File KIRKHILL.ET

Gentlemen:

2. NAPHTHENIC OIL &

This report summarizes the work done on the above said site by Tank Protect Engineering, regarding removal of two diesel 10,000 gallon tanks, one oil 10,000 - gallon tank, site investigation and additional excavation activities to determine lateral and vertical extend of contamination.

(1))

## TANKS PULL - UP ACTIVITIES

On August 24, 1989 one 10,000 gallon gas tank which contained naphthenic type oil and two 10,000 gallon diesel tanks were removed from the subject site. The tanks were removed in accordance with local city and state regulations (i.e. drained, uncovered, washed, triple rinsed, decontaminated, purged with dry ice, and removed when L.E.L. readings were below the allowable level). The tanks were disposed of by delivery to American Metal Recycling Inc., at their facility located at 2202 S. Millken, Ontario, Ca 91761 for destruction. The liquid waste from triple rinse were shipped to De Menno/Kerdoon, at their location at 2000 N. Alameda St. Compton, Ca 90222 for disposal. Copy of liquid manifest and certificate of tank disposal attached.

## ON-SITE INVESTIGATION

After removal, a total of seven soil samples were taken on August 24, 1989 using a backhoe, from approximately 3 feet below the each end of the three underground storage tanks (sample points K-1, K-2, K-3, K-4, K-5 and K-6; see Figure 1) and one soil sample from Spoil pile (sample points K-7). All the soil samples obtained were immediately packed overflowing into brass jars, capped with a polyethylene lid, sealed with duct tape, labeled and immediately placed into a refrigerated ice chest. The samples were then transported by a company vehicle to a state certified laboratory (Ensotech Inc) accompanied by a chain-of-custody form. The chain-of-custody and history of events for the soil samples and analysis are documented in the attached enclosures. Originally liquid contents of the tank # 1 and the tank # 3 were mistakenly identified as diesel and oil respectively. An additional investigation of historical events indicates correct contents of the tank # 1 was naphthenic type oil and the tank # 3 was diesel.

As indicated from the laboratory test results, soil sample taken from under east end of oil tank #1 (sample point K-5) and soil sample from spoil pile (sample point K-7) showed high levels of total petroleum hydrocarbon (TPH) of 45,714 mg/kg and 5,030 mg/kg of total hydrocarbons respectively. Less than maximum allowable levels of hydrocarbon contamination were found in the soil samples K-1, K-2, K-3, K-4 and K-6. The contaminated soil was removed. The contamination was identified by color and odor.

K-4 has 325 ppm TPH

## EXPLORATORY WELL DRILLING

Based upon the laboratory test results obtained and our site observation, it was recommended that a total of six exploratory borings be made in order to approximate the limits of vertical and lateral contamination.

Four borings (B-1, B-2, B-3 and B-4) were drilled on September 26 and two more (B-5 and B-6) on September 27, 1989 at locations shown on Figure 2 - Plot Plan to determined a vertical extent of hydrocarbon contaminations. A Drill-Line Mobile E-53, 3-inch-dimeter hollow stem auger drilling rig was utilized for

File

# UNDERGROUND TANK INSPECTOR'S REPORT

[ ] Tank(s) Removal [ ] Tank(s) In Place [ ] Other

Date 8/24/89 Time 11:00 am

File Number I- 12987-1F Permit # 5999B

Site Name KIRKHILL INC.

Site Address 12021 Woodruff Avenue

Downey CA 90241

| No. of Tanks | Quantity | Contents | Type |
|---|---|---|---|
| 1 | 10K | Diesel | Steel |
| 2 | 10K | Diesel | " |
| 3 | 10K | Cutting Oil | " |

Contractor TANK PROTECT ENGINEERING Phone # (213) 592-4771

Address 2730 S. Harbor Blvd. Santa Ana

CA 92704

Sample Contractor Same as above Phone #

Address

Disposal Company AMR Ontario

Note: A slight contamination in the dispenser area due to the spillage over the years.

David Chow

Inspector

Thu

File

DATE OF TANK(S) REMOVAL 8/24/89

TIME 10:30 am

PERMIT # 5998 I# 12987-1F

NAME & ADDRESS:

Kirkhill Inc.

12021 Woodruff Ave

Downey, CA

TANK DESCRIPTION:

3 tanks

2 x 10K Diesel

1 x 10K Cotton oil

CONTRACTOR TANK PROTECT ENGINEERING

TEL: (714) 921-0888

DISPOSAL OF TANK(S) AMR Ontario

(1))

this borings. Soil samples were collected at 5 feet intervals using a california split sampler. The borings were drilled to a total depth of 40 feet. The lithologies of the samples were classified in accordance with the Unified Soil Classification System (Plate A-2). The lithologic logs of drilled well are enclosed. Upon completion of drilling, the borings were backfilled with soil.

## SOIL SAMPLING

Soil samples were monitored using Organic Vapor Analysis (OVA) for analyses of the emission of Volatile Organic Compounds (VOC) from soil per SCAQMD requirement. OVA reading were conducted continuously. A GasTechtor Hydrocarbon Surveyor Model 1314 was used to detect and indicate in parts per million (PPM) concentrations of hydrocarbons vapor from soil samples. The instrument has been properly calibrated by Allied Industrial Distributors.

The on-site observation and OVA reading were utilized to select a soil sample for laboratory analysis. A total of twelve soil samples from depths between 15 feet to 40 feet of six borings were considered to be most representative of the contamination. The selected soil samples were immediately end wrapped, capped, sealed by tape, labeled, placed into an ice chest and submitted for Hydrocarbon 418.1 analysis to Associated Laboratories and Ensotech Inc. Both laboratories are state-certified laboratories and chain of custody forms are attached. Copies of the laboratory test results on soil samples are enclosed.

Soil samples B-3/20 and B-6/20 indicated slight levels of hydrocarbon contamination. Laboratory results of soil samples taken at the depth of 20 feet (samples B-3 and B-6) showed 285 mg/kg and 158 mg/kg of TPH respectively. Test results of soil samples B-1/15, B-2/20, B-3/20, B-4/20, B-4/30, B-5/20 and B-6/20 are well within the acceptable limits of hydrocarbon content. Based on the above mentioned laboratory test results (see Appendix) contaminated soil zones are located in the vicinity of the removed oil tank pit #1 (Figure 2).

## GROUNDWATER

Groundwater was not encountered during the excavation. The depth of water table is reported to be at 89 feet below the surface of the ground at water well #1587, which located approximately .2 mile to the east from the site of investigation, as measured in April, 1989. (Data obtained from Flood Control District, ph: (818) 458-6120.

## EXCAVATION ACTION

Based on the data presented herein, it is evident that high levels of hydrocarbon contamination of the soil existed in the oil tank pit. Based on the lithological data presented and typical alluvial basin setting, the soil texture ranges from clay to sand. Based on lithology in conjunction with analytical data

(1))

for a number of leaks that have been investigated in the area, we assume hydrocarbon contamination is contained within clayey formation under the leak location.

On October 31, 1989 additional excavation of oil and diesel contaminated soil from removed tank pits down to 23 feet using a 235 Ecco excavator was performed. OVA monitoring and visual observation was utilized to determine the extent of contamination. A total of eight verification samples were collected using the excavator. All soil samples were immediately end wrapped, capped, sealed by tape, labeled, placed into ice chest and immediately delivered to state certified laboratory - Associated Laboratories, for Hydrocarbon 418.1 analysis with 24-hour turnaround. Chain of custody forms are attached as are copies of laboratory test results.

Six samples were analyze to characterize the soil contamination profile. As shown from the laboratory test results, soil samples taken from west end of oil tank pit#1 (sample point VS-6) indicated high level of hydrocarbon of 27,100 mg/kg. Non detectable level of hydrocarbon reported in the soil samples VS-1, VS-2, VS-3, VS-5 and VS-7. Additional excavation down to 25 feet was conducted on November 6, 1989 in the south west corner of the oil tank pit # 1. The contaminated soil was removed and piled separately. Soil sample VS-8 was collected from the west end of the oil tank pit#1, as was analyzed within 24-hours by Associated laboratories. The laboratory result indicated 55 mg/kg of hydrocarbon.

## REMEDIAL ACTION PROPOSAL

Based on the procedure and analysis discussed above, it was concluded that all contaminated soil has been removed from tank pits area. We propose to slurry in place the diesel tank # 4. The non-treatable naphthenic oil contaminated soil and the clumps to be hauled to the state approved waste dump landfill. The Tank Protect Engineering soil remediation process will be performed to abate the level of hydrocarbon contamination in piles, utilizing a special silica catalyst and hydrogen peroxide.

Hydrogen peroxide is adsorbed onto the the silica catalyst resulting in a slow release over time, enabling the treatment process to continue for several hours after application. A unique characteristic of silica catalyst is its catalytic surface which makes it several times more reactive and brings about rapid and complete oxidation of all hydrocarbons and other organics. Hydrogen peroxide also reacts with organic tetraethyl lead, cyanides, sulfides, and mercaptans. Hydrogen peroxide spontaneously decomposes to oxygen and water over time, so excessive peroxide during the treatment will not leave a hazardous residue. Nor is hydrogen peroxide toxic. When the soil is sprayed with hydrogen peroxide, an aerosol of hydrogen peroxide stays on top of the soil surface. This aerosol "blanket" prevents the escape of volatiles during mixing, thus no odors are produced. It is also in this aerosol space that photochemical oxidation of the hydrocarbons takes place. The

(1))

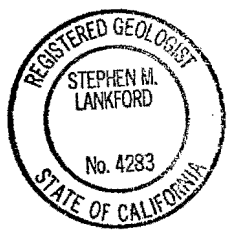
retained peroxide acts as a source of oxygen in the soil. Oxygen promotes aerobic bacterial growth, which further decompose any remaining organic residue.

Laboratory analysis will be performed of soil samples collected at three inches under the surface of the treated soil and continuing until a non-detectable level of hydrocarbon is reached. All soil samples will be analyzed by EPA Method 418.1.

After complete final verification soil sampling process the excavation site will be backfilled and compacted, using the clean decontaminated soil.

We trust that this proposal provides the required information for investigated site and we are looking forward to working with you on this project. Should you have any questions or suggestions regarding this remediation proposal, please contact Tank Protect Engineering office.

Very Truly Yours,




Stephen M. Lankford.....California State
Registered Geologist # 4283

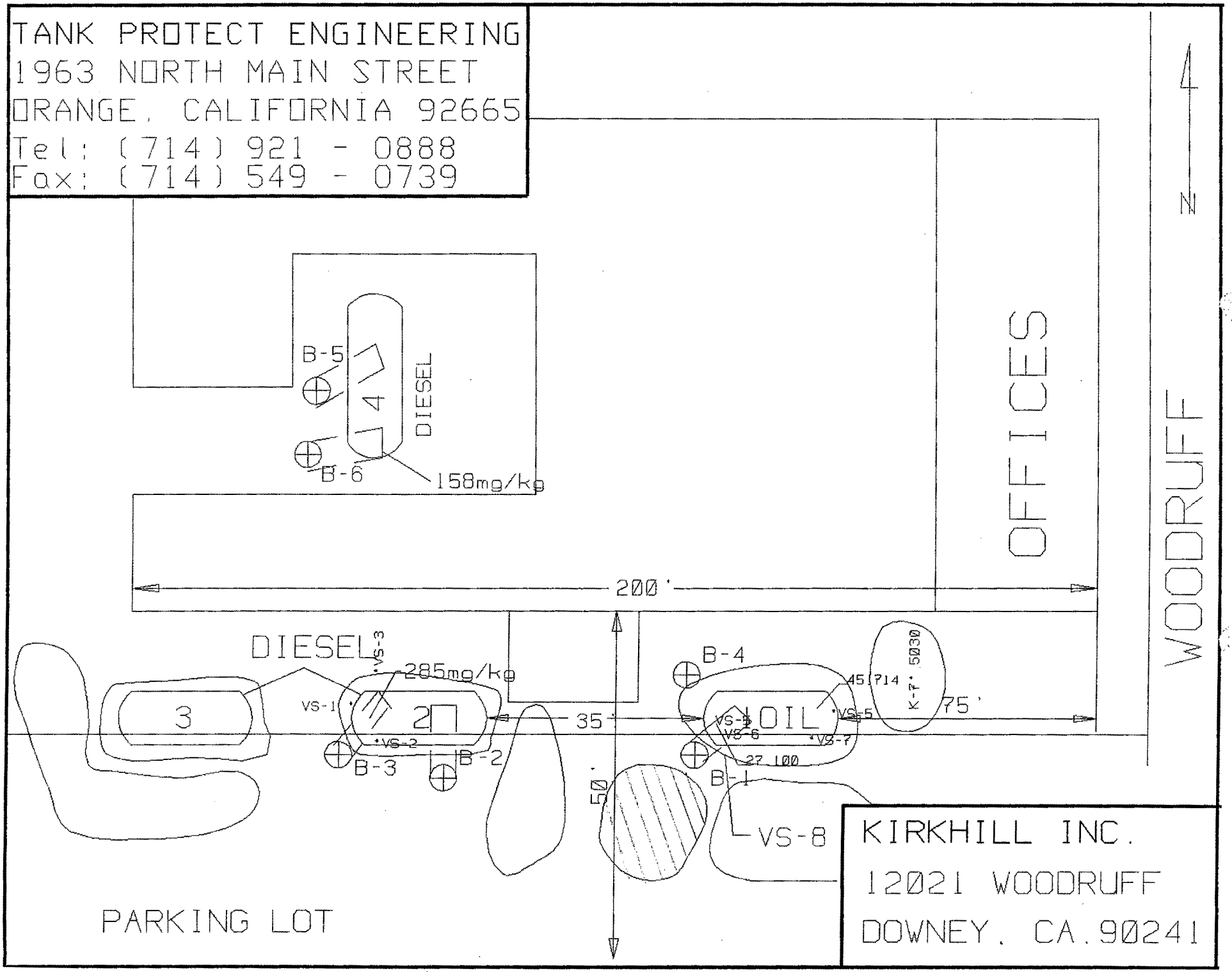
(1))

# A P P E N D I X

## SUMMARY SAMPLES REPORT

| FILE | SAMPLE No. | DATE | DEPTH | TPH DIESEL mg/kg | TRPH mg/kg | ETHYL BENZENE mg/kg | TOLUENE mg/kg | TOTAL XYLENE mg/kg |
|---|---|---|---|---|---|---|---|---|
| | | 1989 | | | | | | |
| F-404 | K-1 | 08/24 | 3' | ND<20 | 52 | | | |
| F-405 | K-2 | 08/24 | 3' | ND<20 | 32 | | | |
| F-406 | K-3 | 08/24 | 3' | | 32 | | | |
| F-407 | K-4 | 08/24 | 3' | | 325 | | | |
| F-408 | K-5 | 08/24 | 3' | | 45,714 | | | |
| F-409 | K-6 | 08/24 | 3' | | 1 | | | |
| F-410 | K-7 | 08/24 | 3' | | 5,030 | | | |
| F-912 | B-1 | 09/26 | 15' | | 10 | | | |
| F-913 | B-2 | 09/26 | 20' | | ND<10 | | | |
| F-914 | B-3 | 09/26 | 20' | | 285 | | | |
| F-915 | B-4 | 09/26 | 20' | | 12 | | | |
| F-916 | B-4 | 09/26 | 30' | | 14 | | | |
| | B-5 | 09/27 | 20' | | 27 | | | |
| | B-6 | 09/27 | 20' | | 158 | | | |
| G-112 | B-6 | 10/17 | 15' | ND<10 | | | | |
| G-113 | B-6 | 10/17 | 30' | ND<10 | | | | |
| G-114 | B-6 | 10/17 | 40' | ND<10 | | | | |
| G-115 | B-5 | 10/17 | 15' | ND<10 | | | | |
| G-116 | B-5 | 10/17 | 30' | ND<10 | | | | |
| | VS-1 | 10/31 | 23' | ND<10 | | | | |
| | VS-2 | 10/31 | 22' | ND<10 | | | | |
| | VS-3 | 10/31 | 23' | ND<10 | | | | |
| | VS-5 | 10/31 | 21' | ND<10 | | | | |
| | VS-6 | 10/31 | 23' | 27,100 | | | | |
| | VS-7 | 10/31 | 23' | ND<10 | | | | |
| | VS-8 | 11/06 | 25' | 55 | | | | |

TANK PROTECT ENGINEERING
1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
Tel: (714) 921 - 0888
Fax: (714) 549 - 0739




KIRKHILL INC.
12021 WOODRUFF
DOWNEY, CA. 90241

| MAJOR DIVISIONS | | | | | TYPICAL NAMES |
|---|---|---|---|---|---|
| COARSE-GRAINED SOILS (MORE THAN HALF IS LARGER THAN No. 200 SIEVE) | GRAVELS (MORE THAN HALF COARSE FRACTION IS LARGER THAN No. 4 SIEVE SIZE) | CLEAN GRAVELS WITH LITTLE OR NO FINES | GW |  | WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES |
| | | | GP |  | POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES |
| | | GRAVELS WITH OVER 12% FINES | GM |  | SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES |
| | | | GC |  | CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES |
| | SANDS (MORE THAN HALF COARSE FRACTION IS SMALLER THAN No. 4 SIEVE SIZE) | CLEAN SANDS WITH LITTLE OR NO FINES | SW |  | WELL-GRADED SANDS, GRAVELLY SANDS |
| | | | SP |  | POORLY GRADED SANDS, GRAVELLY SANDS |
| | | SANDS WITH OVER 12% FINES | SM |  | SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES |
| | | | SC |  | CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES |
| FINE-GRAINED SOILS (MORE THAN HALF IS SMALLER THAN No. 200 SIEVE) | SILTS AND CLAYS (LIQUID LIMIT 50% OR LESS) | | ML |  | INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY |
| | | | CL |  | INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS |
| | | | OL |  | ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY |
| | SILTS AND CLAYS (LIQUID LIMIT GREATER THAN 50%) | | MH |  | INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS |
| | | | CH |  | INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS |
| | | | OH |  | ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS |
| HIGHLY ORGANIC SOILS | | | Pt |  | PEAT AND OTHER HIGHLY ORGANIC SOILS |

■ – "Undisturbed" S&H or Shelby tube sample

▨ – Bulk or classification sample

▨ – Standard Penetration Test sample

▤ – No sample recovered

I – Core sample

Blows/ft – Blows required to drive sampler 12 inches with a 140-pound hammer falling 30 inches. Blow counts for S&H samplers are converted to approximate "equivalent" SPT N values (N = 0.5 X S&H blows per foot)

HC Odor – Hydrocarbon Odor
- No – No Odor
- Lo – Slight Odor
- Md – Moderate Odor
- Sg – Strong Odor

PID – Photoionization Detector reading (10.2-electron-volt lamp, calibrated using a benzene standard)

OVA – Organic Vapor Analyzer (flame ionization detector) calibrated using a methane standard

* – Sample submitted for chemical analysis

** – Based on HLA Temporary Bench Mark (TBM) shown on Plate 2. Assumed elevation = 100.00'.

KEY TO BORING LOG

Tank Protect Engineering
Environmental Management

SOIL CLASSIFICATION CHART & KEY TO BORING LOG

PLATE 2

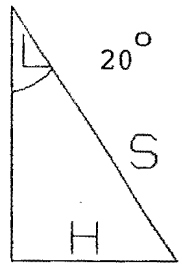
| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| HK | 19233,001.11 | CS | 5/89 | | |

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B-1

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft. | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay, Plastic (CL) | No | | | 4-10-12 |
| 20 * | No Recovery Twice | | | | 4-12-20 |
| 25 * | Yellow Sand (SP)<br>Medium-grained | No | | | 22-45-50 |
| 30 * | SP<br>Medium-grained | No | | | 12-32-45 |
| 35 * | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

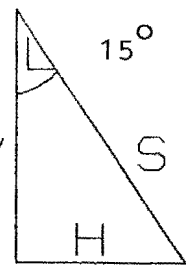
DRILLING DATE: 09/26/89

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B- 2

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay (CL) | No | | | 5-11-20 |
| 20 * | Brown Clay (CL) | No | | | 6-10-13 |
| 25 * | Yellow Sand (SO) Fine-grained | No | | | 10-33-40 |
| 30 * | SP | No | | | 13-21-50 |
| 35 | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

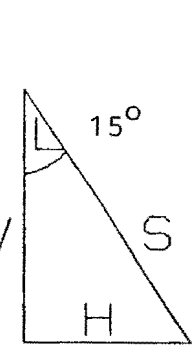
DRILLING DATE:

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B- 3

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft. | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay, Moist (CL) | No | | | 5-11-15 |
| 20 * | CL, Moist | No | | | 12-20-35 |
| 25 * | Yellow Sand (SP) Fine-grained | No | | | 5-17-20 |
| 30 | | | | | |
| 35 | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

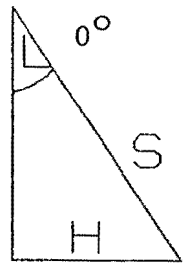
DRILLING DATE:

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B - 4

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|---|
| | | 3" Asphaltic Concrete | | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | * | Brown Clay (CL) | No | | | 4-6-9 |
| 20 | * | Brown Clay (CL) | No | | | 7-9-16 |
| 25 | | | | | | |
| 30 | * | Yellow Sand (SP)<br>Fine Grained | No | | | 13-23-35 |
| 35 | | | | | | |
| 40 | * | Silts (ML)<br>Dense, Moist, Fine-grained | No | | | 5-11-13 |
| 45 | | | | | | |
| 50 | | | | | | |
| 55 | | | | | | |
| 60 | | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

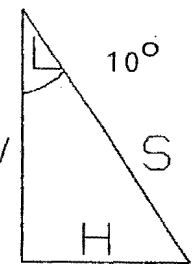
DRILLING DATE: 09/26/89

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B - 5

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft. | BLOWS COUNT |
|---|---|---|---|---|---|---|
| | | 3" Asphaltic Concrete | | | | |
| 5 | | | | | | |
| 10 | * | Brown Silty Clay (CL) | No | | | 6-12-13 |
| 15 | * | CL | No | | | 4-8-12 |
| 20 | * | Brown Sandy Clay (CL) | Lo 15 | | | 5-15-25 |
| 25 | * | Silty Sand (SM) | No | | | 6-7-23 |
| 30 | * | SM | Lo | | | 5-12-35 |
| 35 | * | Sand (SP) | No | | | 6-10-32 |
| 40 | * | Silts (ML) Moist | No | | | 12-18-22 |
| 45 | | | | | | |
| 50 | | | | | | |
| 55 | | | | | | |
| 60 | | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

DRILLING DATE: 09/27/89

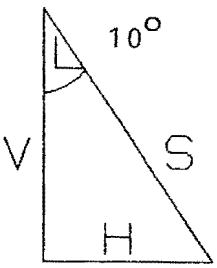
DRILL HOLD NO: B-5

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B-6

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | 3" Asphalt Concrete<br>Brown Silty Clay (CL) | | | | |
| 10 * | Brown Silty Clay (CL) | No | | | 3-6-10 |
| 15 * | CL | No | | | 6-15-18 |
| 20 * | Poorly Graded Sands (SP) | No | | | 4-15-25 |
| 25 | | | | | |
| 30 * | Brown Sandy Clays (CL) | No | | | 12-35-50 |
| 35 | | | | | |
| 40 * | Silty Soils (ML)<br>Moist | No | | | 12-15-20 |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

DRILLING DATE: 09/27/89

DRILL HOLD NO: B-6

001004

OAT

**FINAL CLOSURE REPORT**
CLOSURE PERMIT NO. 5999 & 6000
FILE NO.J12987-IF
For
**COUNTY OF LOS ANGELES**
**DEPT. OF PUBLIC WORKS**
**WASTE MANATGEMENT DIVISION**
900 S. Fremont Avenue
Alhambra, CA 91803-1331
Feb. 26, 1990

TPE
ENVIRONMENTAL
"ENVIRONMENTAL & GEOTECHNICAL CONSULTING"

E90-1514

February 26, 1990

**Subject:** **Tank Closure and Site Remediation Report**
**Closure Permit Nos. 5999 & 6000**
**File No. J/2987-IF**

**Property Location:** **Kirkhill, Inc.**
**12021 Woodruff**
**Downey, CA 90241**

Gentlemen:

TPE Environmental, Inc. (affiliate of Tank Protect Engineering) is pleased to submit the enclosed report documenting closure of four (4) underground storage tanks at the subject site, and our report of remediation of contaminated soils on site. The closure, excavation and treatment of contaminated soils and site investigation was performed in accordance with the requirements of Waste Management Division's (WMD) closure permit and the agreements between Kirkhill, Inc. and Tank Protect Engineering, dated July 28, August 15, September 11, October 25, 1989, and November 13, 1989.

• 1963 N. Main St.
Orange, CA 92665
714/921-0888
213/592-4771
FAX/921-1832

If there are any questions regarding this report or remediation plan, please contact Mike Leonard. If the report is acceptable, please notify us by issuing a closure letter to Kirkhill, Inc. with a carbon copy to TPE Environmental.

Respectfully submitted,

**TPE ENVIRONMENTAL, INC.**
1963 N. Main Street
Orange, CA 92665

Michael L. Leonard
General Manager/Principal Engineer
RCE #31181

REGISTERED PROFESSIONAL ENGINEER
MICHAEL L. LEONARD
NO. 31181
Exp. 12-31-92
CIVIL
STATE OF CALIFORNIA

MLL:cdn/E90-1514

Enclosure: Tank Closure and Site Remediation Report with Appendices A-D

Distribution: (2) Addressee

(2) County of Los Angeles
Dept of Public Works
Waste Management Division
900 S. Fremont Avenue
Alhambra, CA 91803-1331

(1) City of Downey
Bureau of Fire Prevention
1111 Brookshire Avenue
Downey, CA

**TANK CLOSURE REPORT AND REMEDIATION PLAN**

**Kirkhill, Inc. Property**
**12021 Woodruff Avenue**
**Downey, CA 90241**

**Waste Management Division File J12987-1F**
**Permit #5999 and #6000**

## 1.0 INTRODUCTION

The following summarizes the tank removal/abandonment, site investigation and site remediation work related to closure of four (4) underground storage tanks (UST) at the subject site.

## 2.0 SITE INFORMATION AND BACKGROUND

The site is located at 12021 Woodruff Avenue in Downey, California, (See Figure 1 - Site Location Map). The Kirkhill Plant, a facility for manufacture of plumbing and hardware parts, had the following underground storage tanks located on site which were to be abandoned:

| Tank No. | Capacity | Material Stored in Tank | Method of Abandonment |
|---|---|---|---|
| 1 | 10,000 Gal. | Naphthene, Cutting Oil | Removal |
| 2 | 10,000 Gal. | Diesel | Removal |
| 3 | 10,000 Gal. | Diesel | Removal |
| 4 | 7,500 Gal. | Diesel | Abandoned in Place by Slurry |

The locations are shown on Figure 2.

In July, 1989 Tank Protect Engineering submitted a workplan/proposal to Kirkhill, Inc. to remove and/or abandon-in-place these four tanks. Permits were applied for in August, 1989 and tank closure work proceeded. For abandonment-in-place of Tank No. 4, a site investigation by drilling and soil sampling/testing was required per Los Angeles County regulations. during removal of Tanks 1-3, soil samples from beneath the tanks were tested and some contamination was found, therefore, additional site investigation, excavation and remediation work was performed.

## 3.0 PERMITS

Prior to performing the tank closure work, permits were acquired from the Los Angeles County Department of Public Works, Waste Management Division (WMD) and the City of Downey Fire Prevention Bureau. WMD issued the following two permits:

| File No. | Permit No. | Tanks | Closure |
|---|---|---|---|
| J-12987-1F | 5999 | 1-Steel 10,000 Diesel | Permanent, Tank Removal |
| | | 1-Steel 10,000 Diesel | " " " |
| | | 1-Steel 10,000 Cutting Oil | " " " |
| J-12987-1F | 6000 | 1-Steel 7,500 Diesel | Permanent, Closure in Place |
| | 6000 Supplement | 1-Steel 7,500 Diesel | Drill Two (2) Borings |

Also, the City of Downey Bureau of Fire Prevention issued a permit for abandoning one (1) underground tank and removing three (3) underground tanks at the site. Copies of these permits are included in Appendix A.

This Tank Closure Report was prepared in accordance with the permit requirements.

## 4.0 TANK REMOVAL ACTIVITIES

On August 24, 1989 one (1) 10,000 gallon tank (Tank #1), which contained naphthenic type oil and two (2) 10,000 gallon diesel tanks (Tanks 2 and 3) were removed from the subject site. The tanks were removed in accordance with local city and state regulations (i.e. drained, uncovered, washed, triple rinsed, decontaminated, purged with dry ice, and removed when L.E.L. readings were below the allowable level). The tanks were disposed of by delivery to American Metal Recycling, Inc., at their facility located at 2202 S. Millken, Ontario, CA 91761 for destruction. Copies of liquid manifest and certificate of tank disposal are included in Appendix B.
Visible evidence of contamination (soil discoloration) was observed in portions of the excavation for cutting oil tank #1 and diesel tank #2.

## 5.0 SOIL SAMPLING DURING TANK REMOVAL

After tank removal, a total of seven (7) soil samples were taken on August 24, 1989 using a backhoe, from approximately 3 feet below each end of the three underground storage tanks (sample points K-1, K-2, K-3, K-4, K-5 and K-6; see Figure 2) and one soil sample from the spoil pile (sample point K-7). All the soil samples obtained were immediately packed overflowing into brass jars, capped with a polyethylene lid, sealed with duct tape, labeled and immediately placed into a refrigerated ice chest. The samples were then transported by a company vehicle to a State Certified Laboratory (Ensotech, Inc.) accompanied by a chain-of-custody form. The chain-of-custody and history of events for the soil samples and analysis are documented in Appendix C.

## 6.0 RESULTS OF LABORATORY CHEMICAL ANALYSES OF SAMPLES FROM BENEATH TANKS

As indicated from the laboratory test results (Appendix C), soil samples taken from under the east end of cutting oil Tank #1 and the west end under diesel Tank #2 (sample points K-5 and K-4) and soil samples from the spoil pile (sample point K-7) showed high levels of total petroleum hydrocarbons (TPH) of 45,714 mg/kg, 325 mg/kg and 5,030 mg/kg, respectively. Less than 100 mg/kg of hydrocarbon contamination was found in soil samples K-1, K-2, K-3, and K-6. A summary of soil sample analyses is provided in Appendix C.

## 7.0 SITE INVESTIGATION

To investigate leaks/spills around Tank 4 (which was to be abandoned in place) and investigate the lateral and vertical extent of contamination near Tank 1 and 2, six (6) soil borings to depths of 25 to 40 feet were performed at locations shown on Figure 2. Auger boring methods were used and samples obtained by driving a split-barrel sampler containing brass liners. (Logs of these borings are included in Appendix D.) Based on visible indications and sample depths, 12 samples were submitted for laboratory chemical analyses. Each sample was tightly capped, tapped, labeled, and immediately placed in an ice cooler for transport to the lab under proper chain-of-custody documentation. As shown, only samples from the 20 ft. depth in B-3 and B-6 had TPH greater than 100 mg/kg (See Appendix C).

Groundwater was not encountered in any of the six (6) borings nor during excavation. The depth of water table is reported in April, 1989 to be at 89 feet below ground surface at water well #1587 which is located approximately 0.2 miles east of the site. (Date obtained from verbal communications with the Flood Control District, telephone (818) 458-6120.

## 8.0 TANK CLOSURE BY FILLING

Tank #4, which is located in a very difficult area (near building foundations) for removal, was permitted for abandonment-in-place by filling. Samples from the 20 foot depth in Borings B-5 and B-6 near the tank indicated TPH of 27 and 158 mg/kg, respectively. Additional samples from depths of 15, 30, and 40 feet indicated TPH was not detected. With these very moderate levels of TPH, limited extent and adverse impacts of tank removal, it was confirmed to abandon the tank by filling. The tank was subsequently cleaned and filled with slurry as specified in the permit.

## 9.0 REMEDIAL ACTIONS

To remediate the contaminated soil on site, we performed the following scope of work:

* Manifested and hauled the non-treatable "cutting oil" contaminated soil removed from the Tank 1 pit for disposal at a licensed disposal facility. Approximately 72 cubic yards was hauled for disposal. (See Manifests in Appendix B.)

* Performed laboratory analyses of soil samples collected at various depths within the soil treatment piles, one sample per about every 10 cubic yards of soil. Individual samples were analyzed for hydrocarbons by the California Department of Health Services (DHS) method for Total Petroleum Hydrocarbons and found to contain less than 100 ppm TPH remaining after treatment. (See Appendix C samples G-486 through G-490).

* Backfilled the excavations with the treated soil and some imported soil and compacted the backfill.

* Decontaminated and removed equipment and treatment supplies/containers from the site.

* Repaved the surface of each backfilled excavation with asphaltic concrete to match existing pavements.

* Prepared this written report to document the treatment and replacement process.

## 10.0 SUMMARY

Three of the four underground storage tanks at the site have been removed in accordance with permit and regulatory agency requirements, and the fourth tanks has been abandoned in place by filling with slurry sand. Initial sample testing indicated contamination of soils beneath two of the removed tanks. A site investigation indicated limited vertical extend of contamination migration and no shallow groundwater at the site. Subsequent over-excavation successfully removed contaminated soils (both vertically and laterally) from near Tank 1 and Tank 2. All of the "cutting oil" contaminated soil (approximately 72 cubic yards) was properly transported under manifest to Casmalia as California Regulated Waste. The remaining diesel contaminated soil, approximately 50 cubic yards total was treated in stockpiles on site by mixing the soil with silica catalyst and hydrogen peroxide. Verification sample tests indicated treatment had reduced TPH to below 100 ppm. Moderate levels of fuel contamination were found in one boring near Tank 4, but due to the limited extent and adverse impacts of tank removal, this tank was abandoned in place in accordance with Permit #6000 requirements.

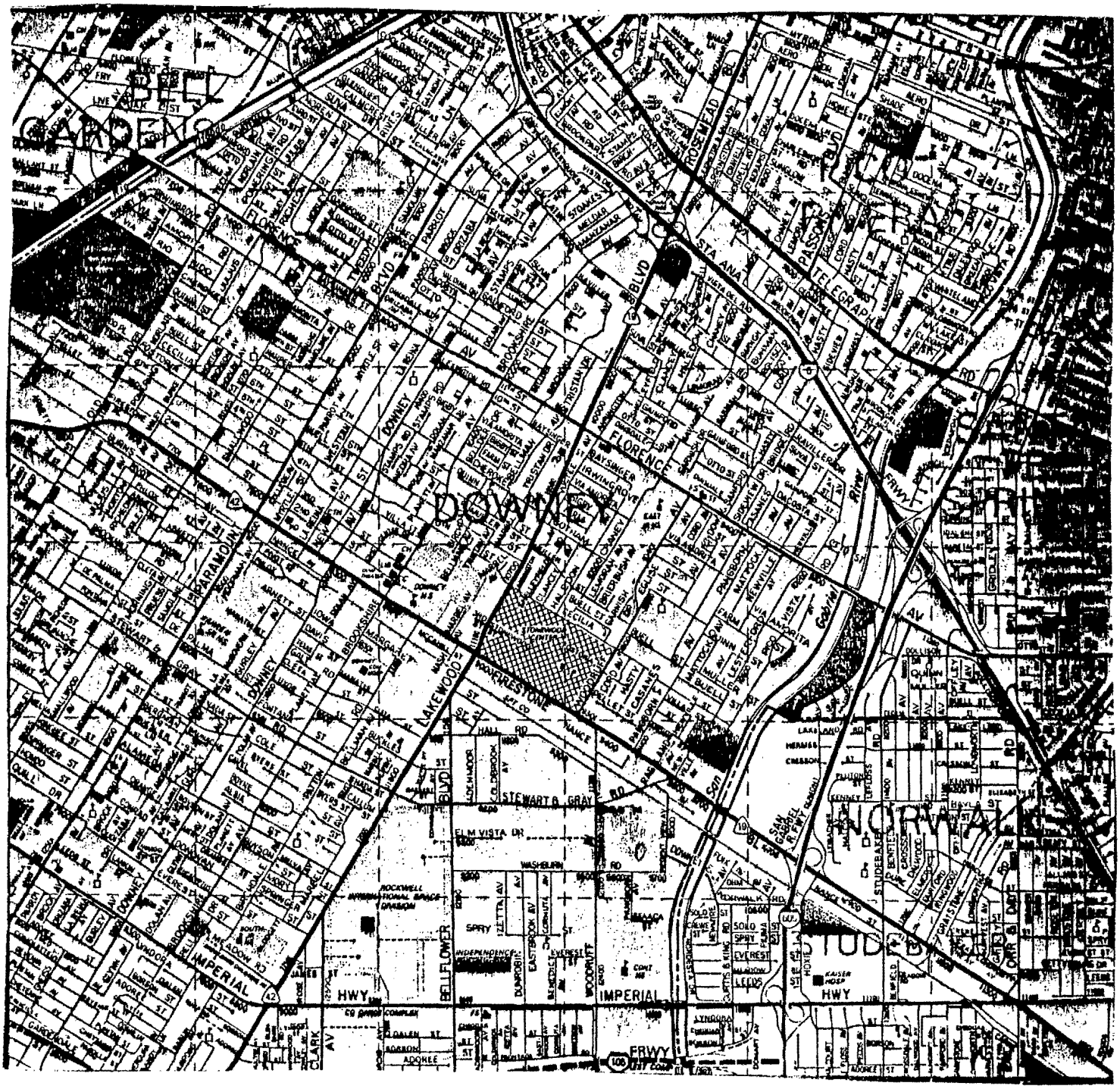



Figure 1: Site Location

TANK PROTECT ENGINEERING
1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
Tel: (714) 921 - 0888
Fax: (714) 549 - 0739

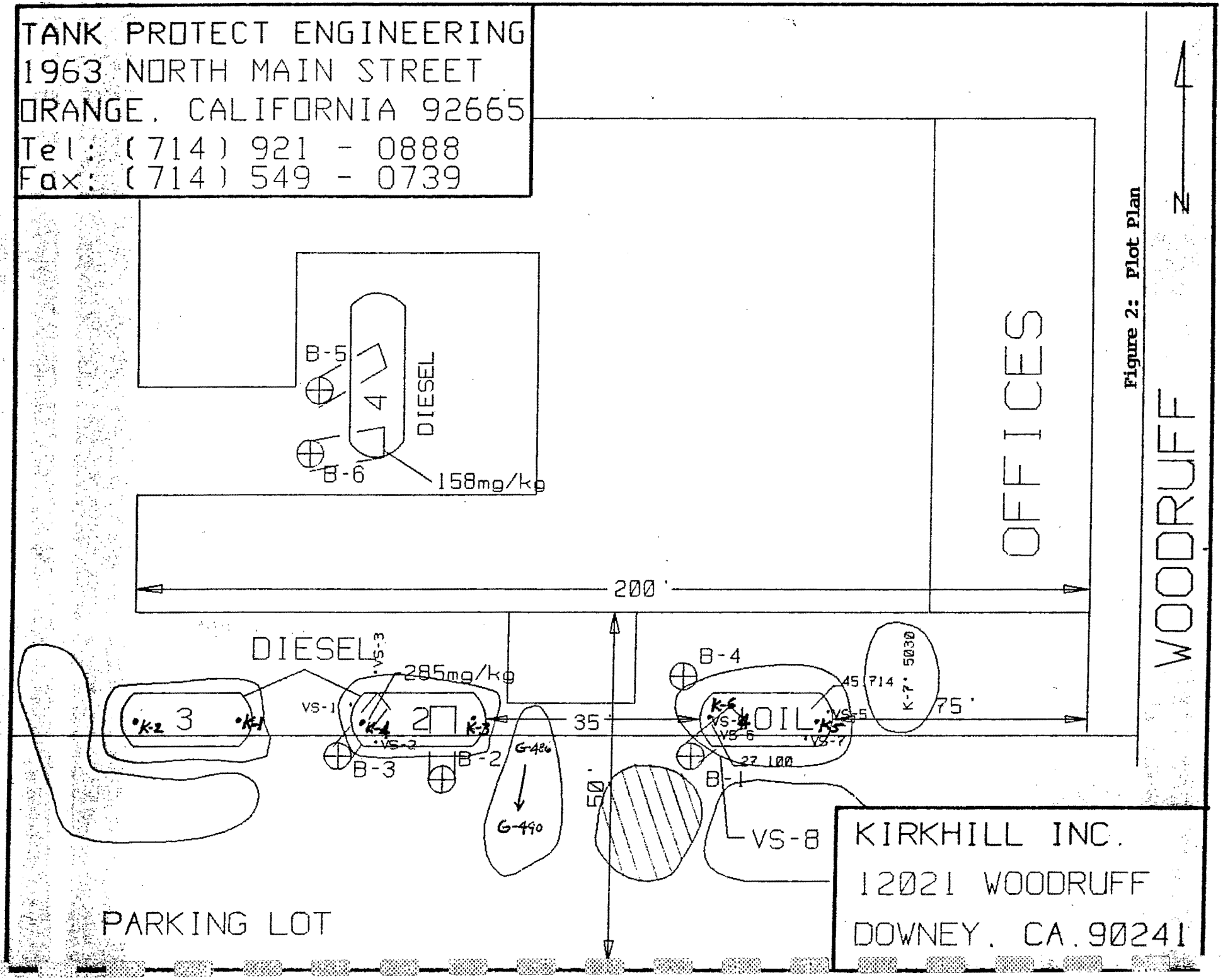



Figure 2: Plot Plan

KIRKHILL INC.
12021 WOODRUFF
DOWNEY, CA. 90241

# APPENDIX A

# PERMITS

APPLICATION FOR CLOSURE
HAZARDOUS MATERIALS UNDERGROUND STORAGE
COUNTY OF LOS ANGELES-DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION
900 S. FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331

Permit 5999 B
File 2987 R/C IF
Fee $ 277.00
Check [ ] Cash [ ]

OWNER: Name Raymond Ballanger Phone (213) 803-3421
Mailing Address 12021 Woodruff Ave City Downey State CA Zip 90241

FACILITY:
Occupant Name Kirkhill Inc. Phone (213) 803-3421
Site Address 12021 Woodruff Ave City Downey Zip 90241
Mailing Address 12021 Woodruff Ave City Downey State CA Zip 90241
Contact Person Dave Davis Title

CONTRACTOR [X], complete below: OWNER/OPERATOR AS CONTRACTOR [ ]
Name Tank Protect Engineering Phone (714) 921-0698
State License No. 489994 Class B & A

CLOSURE REQUESTED:
[X] PERMANENT, TANK REMOVAL (See Conditions A and C Attached)
How many underground tanks will remain after this closure? 1
[ ] PERMANENT, CLOSURE IN PLACE (See Conditions A and D Attached)
[ ] TEMPORARY (See Conditions A and B Attached)

TANK DESCRIPTION: PLOT PLAN ATTACHED [X] EXISTING HMUSP NO.

| Tank No. | Tank Mat'l | Age | Capacity | Materials Stored (Past/Present) |
|---|---|---|---|---|
| 1 | steel | N/A | 10,000 | Diesel |
| 2 | steel | N/A | 10,000 | Diesel |
| 3 | steel | N/A | 10,000 | cutting oil |

COMPLETE THE FOLLOWING:

| | YES | NO |
|---|---|---|
| Has an unauthorized release ever occurred at this site? | [ ] | [X] |
| Have structural repairs ever been made to these tanks? | [ ] | [X] |
| Will new underground tanks be installed after closure? | [ ] | [X] |
| Will any wells, including monitoring wells, be abandoned? | [ ] | [X] |

NOTICE: CONTAMINATED TANKS AND RESIDUES THAT MAY BE LEFT IN TANKS TO BE CLOSE MAY BE A HAZARDOUS WASTE WHICH MUST BE TRANSPORTED AND DISPOSED OF PURSUANT TO CHAPTER 6.5, CALIFORNIA HEALTH & SAFETY CODE. FAILURE TO COMPLY MAY BE PROSECUTED AS A FELONY VIOLATION.

By signature below the applicant certifies that all statements and disclosures above are true and correct and that they have read and agree to abide by this permit and all conditions and limitations attached.

Applicant's Signature Cyrus D. Namini Date 8-9-89
(Print Name) Cyrus D. Namini Phone (714) 921-0886
Owner [ ] Operator [ ] Contractor [X]

TO BE COMPLETED BY THE DEPARTMENT OF PUBLIC WORKS

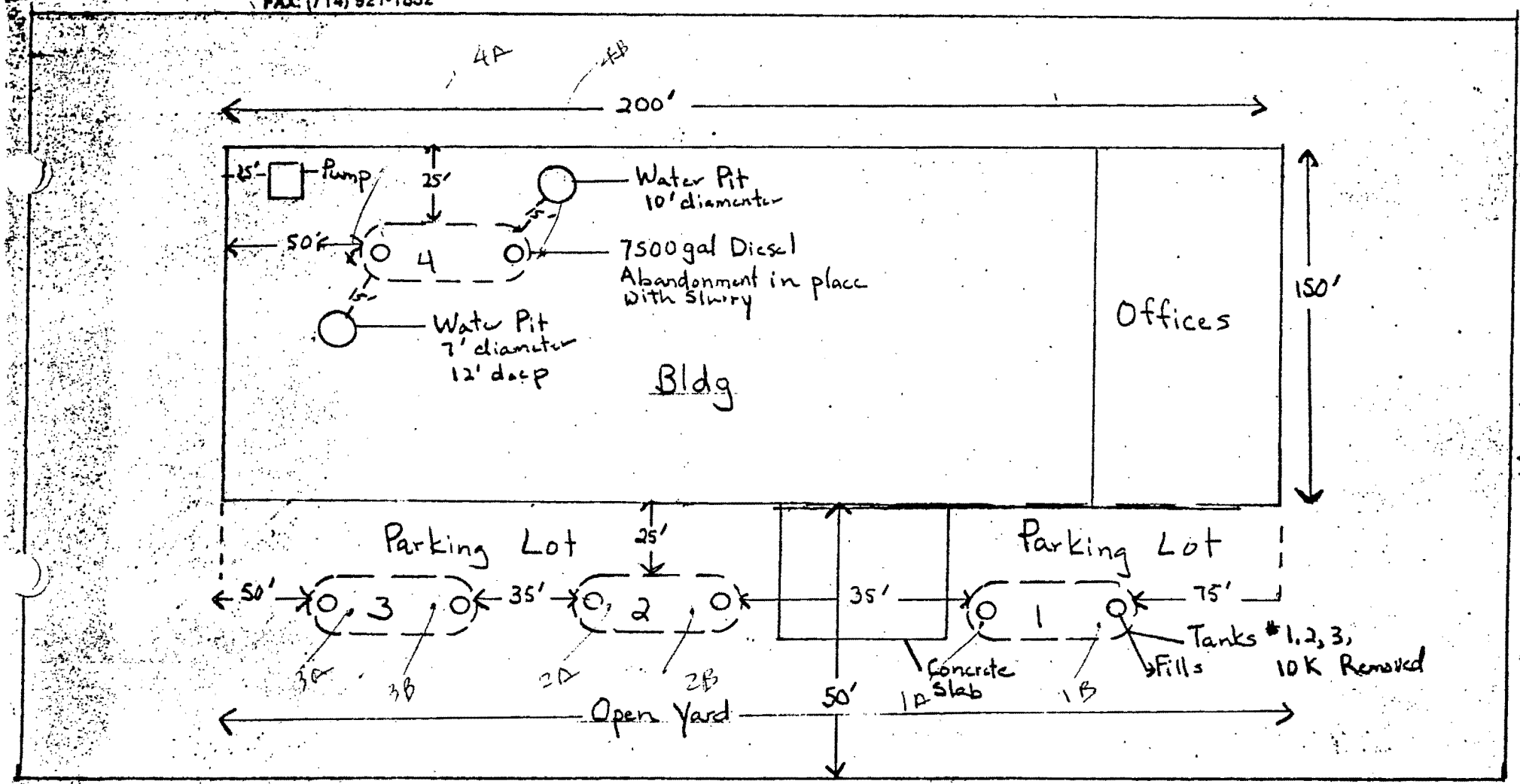
PURSUANT TO SECTION 11.80.070B, LOS ANGELES COUNTY CODE, PERMISSION IS HEREBY GRANTED TO PROCEED WITH THE CLOSURE DESCRIBED ABOVE SUBJECT TO THE ATTACHED CONDITIONS AND LIMITATIONS [X]. THIS PERMIT EXPIRES 180 DAYS FROM THE DATE BELOW.

T.A. TIDEMANSON
Director of Public Works T. A. Tidemanson 8-9-89

**TANK PROTECT ENGINEERING**

1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
TEL: (714) 921-0888 (213) 592-4771
FAX: (714) 921-1832

N




Kirkhill Inc.
12021 Woodruff
Downey CA. 90241

CLOSURE PERMIT SUPPLEMENT
HAZARDOUS MATERIALS UNDERGROUND STORAGE
LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION
900 S. FREMONT AVENUE
ALHAMBRA, CA 91803

Closure Permit No. 5999 B
File No. I-12987-1F

To satisfy the permanent closure requirements for underground storage tanks previously storing hazardous materials, site integrity must be demonstrated by the analysis of soil samples and, if applicable, groundwater samples as outlined below. These requirements are in addition to the conditions listed on the Application for closure or contained in an approved Closure Plan.

1. Samples shall be obtained at the sampling points (SP) indicated on the attached plot plan.

2. For each SP, samples shall be obtained at the following depths:

| SP | Depth(s) | Compounds | Analysis Method |
|---|---|---|---|
| 1A, 1B, 2A, 2B | 2-4' BELOW tank invert | TPH | 418.1 |
| 3A, 3B | | TPH | 418.1 + 8015 |
| | | | |
| | | | |

3. All soil samples obtained shall be undisturbed and unexposed prior to analysis. The method used to obtain the samples and the date of sampling shall be included in the final report. ←

4. If groundwater is encountered during sampling, a groundwater monitoring well shall be established at the most downgradient sampling point. The well shall be developed by removing a minimum of four well volumes and a groundwater sample shall be obtained and analyzed. NO

5. The analysis results for all soil samples shall be expressed in milligrams per kilogram (mg/kg). Analysis results for groundwater samples shall be expressed in parts per billion (ppb). ✓

6. Analysis results shall be reported on laboratory letterhead and shall include the following information: a) The date the analysis was conducted; b) The method of extraction (if applicable); c) The method of analysis. ✓

7. All soil/groundwater samples obtained shall be handled and transported to laboratory in strict accordance with applicable EPA regulations utilizing chain-of-custody procedures. Chain-of-custody documentation shall be included in the final report. ✓

8. If the soil/groundwater analysis indicates undefined contamination at the facility, additional sampling shall be required to define the vertical and lateral extent present. NO

9. A final report that contains all of the above required information shall be submitted to the office above within one (1) month from the sampling date or 180 days from the date of this permit, whichever earlier. 12/5/89 GK

cg1/FORMPERMIT

ATTENTION CONTRACTOR

## NOTIFICATION REQUIREMENTS

Pursuant to Los Angeles County Code, Section 11.78.045, and the Conditions and Limitations of the attached Hazardous Materials Underground Storage Closure Permit, you are required to complete ALL of the agency notifications indicated below within the time period specified prior to commencement of work on this closure.

[ X ] 72 HOURS - DEPARTMENT OF PUBLIC WORKS INDUSTRIAL WASTE ENGINEERING INSPECTOR:

>>Unless otherwise noted DPW inspectors are available at the following offices between 8:00 a.m. and 9:30 a.m. ONLY.<<

[ X ] BELLFLOWER DISTRICT - (213) 804-2584
16600 Civic Center Dr., Bellflower, CA 90607

[ ] CENTINELA VALLEY REGION - (213) 5[illegible]-4862
24320 S. Narbonne Ave., Lomita, CA 90717

[ ] LENNOX DISTRICT - (213) 4[illegible]-5650
4353 Lennox Blvd., Len[illegible], CA 90304

[ ] SAN GABRIEL VALLEY DISTRICT - (818) 574-0962
1245 S. Baldwin [illegible]., Arcadia, CA 91006

[ ] EAST LOS ANGELES DISTRICT - (213) 260-3466
[illegible] Pomona Blvd., Los Angeles, CA 90022

[ ] SAN DIMAS REGION - (818) 339-6281
201 E. Bonita Ave., San Dimas, CA 91773

[ ] NEWHALL REGION - (805) 253-7207
23757 W. Valencia Blvd., Santa Clarita, CA 91355

[ X ] 24 HOURS (OR AS REQUIRED) - LOCAL FIRE DEPARTMENT FIRE PREVENTION INSPECTOR:

[ ] City of Downey (213) 869-7331 Ext 258 24 hr notice

[ ] Los Angeles County Fire Department

[ X ] 24 HOURS - SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
(818) 572-6195

FAILURE TO PROVIDE NOTICE AS REQUIRED ABOVE MAY RESULT IN PERMIT REVOCATION, ADDITIONAL SITE ASSESSMENT REQUIREMENTS AND/OR ADMINISTRATIVE PENALTIES AS PROVIDED BY LAW.

CLOSENOTE
12/88

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
CLOSURE REPORT REQUIREMENTS

A closure report shall be submitted to the Los Angeles County Department of Public Works, Waste Management Division, P.O. Box 1460, Alhambra, CA 91802 containing:

✓ 1. File number of facility and closure permit number.

cost map locations 2. Plot plan to scale showing locations of tanks, sampling points, buildings, adjacent streets and north arrow.

3. Description of methods for obtaining, handling and transporting samples.

✓ 4. Time and date samples were obtained.

5. If borings were established, boring logs certified by a CA Registered Geologist, CA Certified Engineering Geologist or CA Registered Civil Engineer with sufficient experience in soils.

✓ 6. Chain-of-custody documentation initiated by person obtaining sample through person at State Department of Health Services certified laboratory.

✓ 7. Disposal destination of tanks and evidence of legal disposal.

8. Analysis results by a State certified laboratory submitted on laboratory letterhead showing analysis date, methods of extraction and methods of analysis.

9. Documentation as to depth of groundwater at facility.

10. Manifests to documentation hazardous waste disposal of any removed soil and rinseate.

✓ 11. Any observations of site contamination.

12. Remedial action plan to mitigate contamination.

13. Report to be signed by CA Registered Geologist, CA Certified Engineering Geologist or CA Registered Civil Engineer with sufficient experience in soils.

Signature William Fulton Date 8-9-89

cg2/CLOSURE

APPLICATION FOR CLOSURE
HAZARDOUS MATERIALS UNDERGROUND STORAGE
COUNTY OF LOS ANGELES-DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION
900 S. FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331

Permit 6090 B
File 1287 R/C IF
Fee $ 144.00
Check [ ] Cash [ ]

OWNER: Name Raymond Ballanger Phone (213) 803-3421
Mailing Address 12021 Woodruff Ave City Downey State CA Zip 90241

FACILITY:
Occupant Name Kirkhill Inc Phone 213/803-3421
Site Address 12021 Woodruff Ave City Downey Zip 90241
Mailing Address Kirkhill Inc City Downey State CA Zip 90241
Contact Person Dave Davis Title Vice President

CONTRACTOR [X], complete below: OWNER/OPERATOR AS CONTRACTOR [ ]
Name Tank Protect Engineering Phone (714) 921-0989
State License No. 482994 Class B+A

CLOSURE REQUESTED:
[ ] PERMANENT, TANK REMOVAL (See Conditions A and C Attached)
How many underground tanks will remain after this closure? 1
[X] PERMANENT, CLOSURE IN PLACE (See Conditions A and D Attached)
[ ] TEMPORARY (See Conditions A and B Attached)

TANK DESCRIPTION: PLOT PLAN ATTACHED [X] EXISTING HMUSP NO.

| Tank No. | Tank Mat'l | Age | Capacity | Materials Stored (Past/Present) |
|---|---|---|---|---|
| 4 | Steel | N/A | 7,500 | ~~Gasoline~~ Diesel |

COMPLETE THE FOLLOWING:

| | YES | NO |
|---|---|---|
| Has an unauthorized release ever occurred at this site? | [ ] | [X] |
| Have structural repairs ever been made to these tanks? | [ ] | [X] |
| Will new underground tanks be installed after closure? | [ ] | [X] |
| Will any wells, including monitoring wells, be abandoned? | [ ] | [X] |

NOTICE: CONTAMINATED TANKS AND RESIDUES THAT MAY BE LEFT IN TANKS TO BE CLOSE MAY BE A HAZARDOUS WASTE WHICH MUST BE TRANSPORTED AND DISPOSED OF PURSUANT TO CHAPTER 6.5, CALIFORNIA HEALTH & SAFETY CODE. FAILURE TO COMPLY MAY BE PROSECUTED AS A FELONY VIOLATION.

By signature below the applicant certifies that all statements and disclosures above are true and correct and that they have read and agree to abide by this permit and all conditions and limitations attached.

Applicant's Signature Cyrus D. Namini Date 8-9-89
(Print Name) Cyrus D. Namini Phone (714) 921-0988
Owner [ ] Operator [ ] Contractor [X]

TO BE COMPLETED BY THE DEPARTMENT OF PUBLIC WORKS

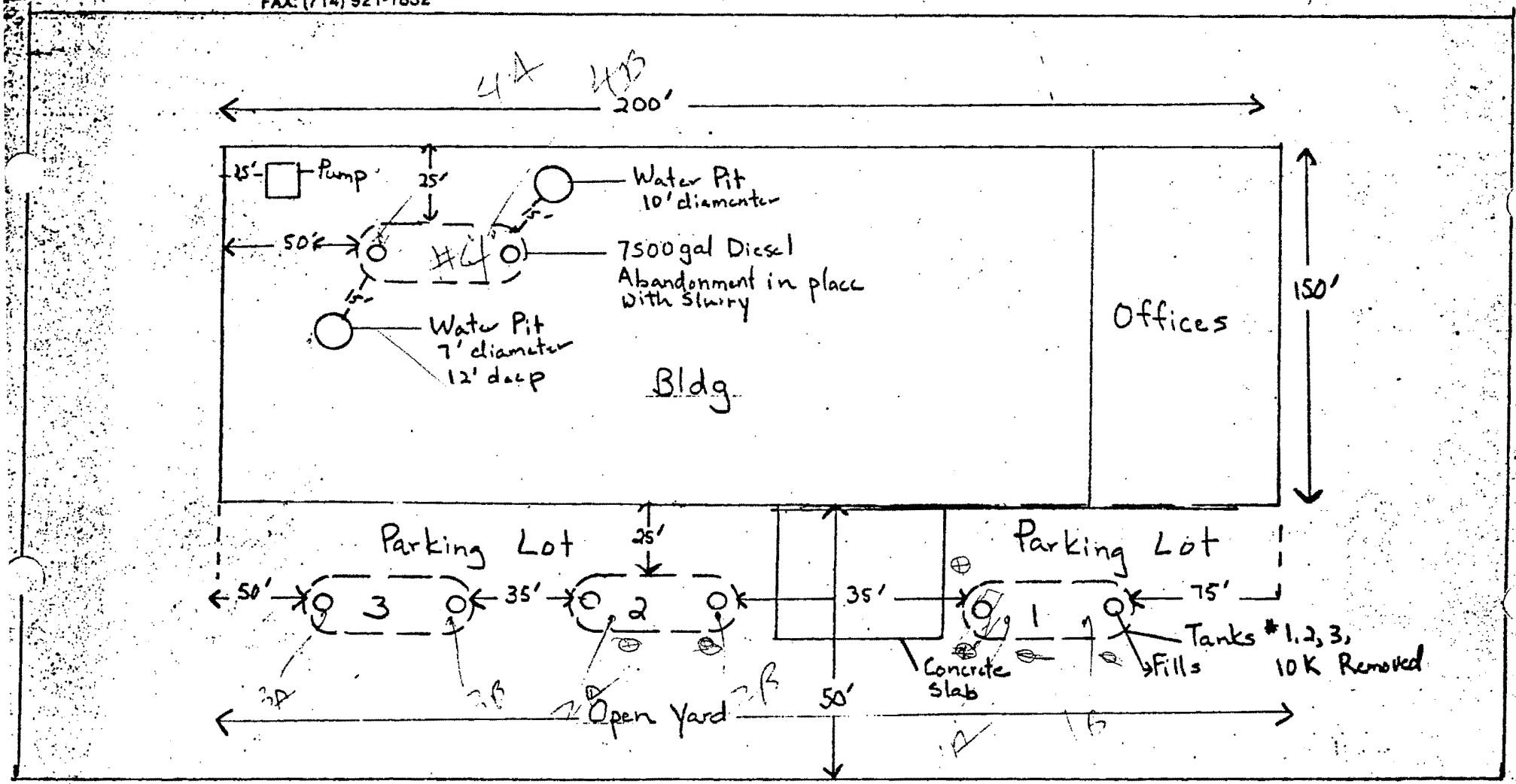
PURSUANT TO SECTION 11.80.070B, LOS ANGELES COUNTY CODE, PERMISSION IS HEREBY GRANTED TO PROCEED WITH THE CLOSURE DESCRIBED ABOVE SUBJECT TO THE ATTACHED CONDITIONS AND LIMITATIONS [X]. THIS PERMIT EXPIRES 180 DAYS FROM THE DATE BELOW.

T.A. TIDEMANSON
Director of Public Works

**TANK PROTECT ENGINEERING**

1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
TEL: (714) 921-0888 (213) 592-4771
FAX: (714) 921-1832

N




Kirkhill Inc.
12021 Woodruff
Downey CA. 90241

CLOSURE PERMIT SUPPLEMENT
HAZARDOUS MATERIALS UNDERGROUND STORAGE
LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION
900 S. FREMONT AVENUE
ALHAMBRA, CA 91803

Closure Permit No. 6090 B
File No. I- 12987-1F

To satisfy the permanent closure requirements for underground storage tanks previously storing hazardous materials, site integrity must be demonstrated by the analysis of soil samples and, if applicable, groundwater samples as outlined below. These requirements are in addition to the conditions listed on the Application for closure or contained in an approved Closure Plan.

1. Samples shall be obtained at the sampling points (SP) indicated on the attached plot plan.

2. For each SP, samples shall be obtained at the following depths:

| SP | Depth(s) | Compounds | Analysis Method |
|---|---|---|---|
| 4A, 4B | TWO 40' BORINGS Below TANK invert | TPH | 418-1 |
| | | | |
| | | | |
| | | | |

3. All soil samples obtained shall be undisturbed and unexposed prior to analysis. The method used to obtain the samples and the date of sampling shall be included in the final report.

4. If groundwater is encountered during sampling, a groundwater monitoring well shall be established at the most downgradient sampling point. The well shall be developed by removing a minimum of four well volumes and a groundwater sample shall be obtained and analyzed.

5. The analysis results for all soil samples shall be expressed in milligrams per kilogram (mg/kg). Analysis results for groundwater samples shall be expressed in parts per billion (ppb).

6. Analysis results shall be reported on laboratory letterhead and shall include the following information: a) The date the analysis was conducted; b) The method of extraction (if applicable); c) The method of analysis.

7. All soil/groundwater samples obtained shall be handled and transported to laboratory in strict accordance with applicable EPA regulations utilizing chain-of-custody procedures. Chain-of-custody documentation shall be included in the final report.

8. If the soil/groundwater analysis indicates undefined contamination at the facility, additional sampling shall be required to define the vertical and lateral extent present.

9. A final report that contains all of the above required information shall be submitted to the office above within one (1) month from the sampling date or 180 days from the date of this permit, whichever earlier.

cg1/FORMPERMIT

ATTENTION CONTRACTOR

NOTIFICATION REQUIREMENTS

Pursuant to Los Angeles County Code, Section 11.78.045, and the Conditions and Limitations of the attached Hazardous Materials Underground Storage Closure Permit, you are required to complete ALL of the agency notifications indicated below within the time period specified prior to commencement of work on this closure.

[ X ] 72 HOURS - DEPARTMENT OF PUBLIC WORKS INDUSTRIAL WASTE ENGINEERING INSPECTOR:

>>Unless otherwise noted DPW inspectors are available at the following offices between 8:00 a.m. and 9:30 a.m. ONLY.<<

[ X ] BELLFLOWER DISTRICT - (213) 804-2584
16600 Civic Center Dr., Bellflower, CA 90807

[ ] CENTINELA VALLEY REGION - (213) 534-4862
24320 S. Narbonne Ave., Lomita, CA 90717

[ ] LENNOX DISTRICT - (213) 419-5650
4353 Lennox Blvd., Lennox, CA 90304

[ ] SAN GABRIEL VALLEY DISTRICT - (818) 574-0962
1245 S. Baldwin Ave., Arcadia, CA 91006

[ ] EAST LOS ANGELES DISTRICT - (213) 260-3466
5141 E. Pomona Blvd., Los Angeles, CA 90022

[ ] SAN DIMAS REGION - (818) 339-6281
201 E. Bonita Ave., San Dimas, CA 91773

[ ] NEWHALL REGION - (805) 253-7207
23757 W. Valencia Blvd., Santa Clarita, CA 91355

[ X ] 24 HOURS (OR AS REQUIRED) - LOCAL FIRE DEPARTMENT FIRE PREVENTION INSPECTOR:

[ X ] City of Downey (213) 869-7331 CA1258

[ ] Los Angeles County Fire Department

[ X ] 24 HOURS - SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(818) 572-6195

FAILURE TO PROVIDE NOTICE AS REQUIRED ABOVE MAY RESULT IN PERMIT REVOCATION, ADDITIONAL SITE ASSESSMENT REQUIREMENTS AND/OR ADMINISTRATIVE PENALTIES AS PROVIDED BY LAW.

CLOSENOTE
12/88

1/4/96
217

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
CLOSURE REPORT REQUIREMENTS

A closure report shall be submitted to the Los Angeles County Department of Public Works, Waste Management Division, P.O. Box 1460, Alhambra, CA 91802 containing:

1. File number of facility and closure permit number.

2. Plot plan to scale showing locations of tanks, sampling points, buildings, adjacent streets and north arrow.

3. Description of methods for obtaining, handling and transporting samples.

4. Time and date samples were obtained.

5. If borings were established, boring logs certified by a CA Registered Geologist, CA Certified Engineering Geologist or CA Registered Civil Engineer with sufficient experience in soils.

6. Chain-of-custody documentation initiated by person obtaining sample through person at State Department of Health Services certified laboratory.

7. Disposal destination of tanks and evidence of legal disposal.

8. Analysis results by a State certified laboratory submitted on laboratory letterhead showing analysis date, methods of extraction and methods of analysis.

9. Documentation as to depth of groundwater at facility.

10. Manifests to documentation hazardous waste disposal of any removed soil and rinseate.

11. Any observations of site contamination.

12. Remedial action plan to mitigate contamination.

13. Report to be signed by CA Registered Geologist, CA Certified Engineering Geologist or CA Registered Civil Engineer with sufficient experience in soils.

Signature William Fuller Date 8-9-89

cg2/CLOSURE

# CITY OF DOWNEY

11111 BROOKSHIRE AVE. • TELEPHONE 869-7331, EXT. 258

**FIRE**

## BUREAU OF FIRE PREVENTION PERMIT / APPLICATION

DATE REC'D 8/10 BY WES

OWNER Kirkhill Inc

MAIL ADDRESS 12021 Woodruff

CITY Downey TEL. NO. (213) 803-3401

CONTRACTOR Tank Protect Engineering

ADDRESS 1963 N. Main St

CITY Orange TEL. NO. (714) 921-6826

STATE LIC. NO. 489994 DOWNEY BUS. LICENSE NO. 209714

ARCHITECT OR ENGINEER

ADDRESS

CITY TEL. NO.

STATE LIC. NO. DOWNEY BUS. LICENSE NO.

| NEW | ADD | ALTER | REPAIR | ABANDON | REMOVE | OCCUPANCY |
|---|---|---|---|---|---|---|
| | | | | X | X | |

LIMITED TIME USE | FROM | TO | CERT. OF OCC. NO.

AREA SQ. FT. | NO. STORIES

WALL COVERING | INT. | EXT.

PROPOSED WORK ABANDON UG TANK
REMOVE 3 UG TANKS

SIGNATURE OF APPLICANT William Fuller

ADDRESS 1963 W. Main St

PERMIT FEE

$ 500.00

ADDRESS 12021 WOODRUFF

| | |
|---|---|
| PLANNING DEPT. APPROVAL | DATE |
| PUBLIC WORKS DEPT. APPROVAL | DATE |
| BUILDING & SAFETY APPROVAL | DATE |
| MISC. APPROVAL | DATE |
| W.C. INS. NO. | DATE |

| APPROVALS | DATE | INSPECTOR'S SIGNATURE |
|---|---|---|
| PIPING — | | |
| TANK — | | |
| PRESSURE TEST | | 1107 1840 |
| ACTIVATION TEST | | 7107362715 50 |
| WIRING | | |
| ALARM TEST | | |
| EXTINGUISHER | | |
| FINAL APPROVAL | | |

24 HR. NOTICE REQUIRED PRIOR TO INSPECTION SERVICE — **869-7331**

| TANK UL # | | |
|---|---|---|
| | | |
| | | |

I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE IS CORRECT AND AGREE TO COMPLY WITH ALL CITY OF DOWNEY AND STATE OF CALIFORNIA LAWS REGULATING BUILDING CONSTRUCTION. I CERTIFY THAT IN DOING THE WORK AUTHORIZED HEREBY I WILL NOT EMPLOY ANY PERSON IN VIOLATION OF THE LABOR CODE OF THE STATE OF CALIFORNIA IN RELATING TO WORKMEN'S COMPENSATION INSURANCE.

[X]

[ ] I AM THE OWNER OF THE PROPERTY AND WILL PERSONALLY PERFORM THE ABOVE WORK.

[ ] I AM THE OWNER OF THIS PROPERTY AND WILL CONTRACT TO HAVE ALL OF THE WORK PERFORMED BY LICENSED CONTRACTOR.

SIGNATURE OF PERMITTEE X William Fuller

FIRE DEPT. APPROVAL W. E. Stumm

CONTRACTOR COPY

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

No- 0526290

# PERMIT

**Permit Issued To**
*(Insert Employer's Name, Address and Telephone No.)*

TANK PROJECT ENGINEERING
2730 S. Harbor Blvd., Unit #H
Santa Ana, CA 92704
(714) 549-9009

No. _____

Date January 17, 1989

Region _____

District Downey C4

Tel. (213) 861-9993

Type of Permit ANNUAL EXCAVATION/TRENCHING PERMIT - 1989

Pursuant to Labor Code Sections 6500 and 6502, this Permit is issued to the above-named employer for the projects described below.

| State Contractor's License Number | | | Permit Valid through | |
|---|---|---|---|---|
| 489994 B | | | December 31, 1989 | |
| Description of Project | Location Address | City and County | Anticipated Dates | |
| | | | Starting | Completion |
| Excavation/Trenching | Various | Various | 1/17/89 | 12/31/89 |
| THIS PERMIT IS ISSUED SUBJECT TO THE CONDITION THAT THE WORK IS PERFORMED BY THE SAME EMPLOYER. THE APPROPRIATE DISTRICT OFFICE SHALL BE NOTIFIED IN WRITING OF LOCATION OF JOB SITE PRIOR TO COMMENCEMENT. | | | | |

It is the Division's policy to send copies of permits and [illegible] appropriate local [illegible] office.

***This Permit is issued upon the following conditions:***

1. That the work is performed by the same employer. If this is an annual permit the appropriate District Office shall be notified, in writing, of dates and location of job site prior to commencement.
2. That employer will comply with all occupational safety and health standards or orders applicable to the above projects, and any other lawful orders of the Division.
3. That if any unforeseen condition causes deviation from the plans or statements contained in the Permit Application Form the employer will notify the Division immediately.
4. Any variation from the specification and assertions of the Permit Application Form or violation of safety orders may be cause to revoke the permit.
5. This permit shall be posted at or near each place of employment as provided in 8 CAC 341.4.

B of A 16-66/1220 #12728

| Received From | Received By | |
|---|---|---|
| CM | RR | |
| ☐ Cash ☒ Check | Amount $100.00 | Date 1/17/89 |

Investigated by _____ Safety Engr. Date 1/17/89

Approved by _____ Dist. Manager Date _____

EMPLOYER ORIGINAL—GREEN DISTRICT COPY—PINK
ACCOUNTING COPY—CANARY REGION COPY—WHITE
B-880 (Rev. 2-81)

8d 96216

# APPENDIX B

## MANIFESTS AND CERTIFICATE OF TANK DESTRUCTION

Oil

# ROADWEST OIL & VACUUM CO., INC.

10053 BOGARDUS AVE.
WHITTIER, CA 90603
213/693-9881 213/946-7480
FAX 213/946-7749
TAX I.D. # 95-4084731

## Transportation Receipt

Invoice 5229

Sales Person [illegible]
Unit # 18

EPA #CAT080029770
State ID # 0408

Contact Bill # 749
Customer Tank Pro Tech Engineering
Address 1963 N. MAin St.
City Orange, Ca. 92667
Phone 714-549-9009

Date Aug. 24, 1989
Appointment Time 7:30 AM
Manifest # 89809229
☐ C.O.D. ☒ P.O. # Verbal per Bill
NET 14 YES

Dispose of

☒ Tank Pulls, Fuel & $H_2O$ ☒ Fuel Tanks # 2 ☒ Oil Tanks # 1
☐ Clarifiers ☐ Non Haz ☐ Hazardous ☐ 1 ☐ 2 ☐ 3 ☐ 4 Other
☐ Drums ☐ Fuel ☐ Oil ☐ $H_2O$ ☐ Solids ☐ Water Soluble ☐ Other
☐ Tanks ☐ Fuel ☐ Oil ☐ $H_2O$ ☐ Solids ☐ Water Soluble ☐ Other
☐ Tank cleaning, $H_2O$ & Fuel
☒ Other Triple Rinse

Job Site: KIRKHILL, INC.
12021 Woodruff Map page 60 D 5
Downey, Ca. 90241

Shipped ☒ Tanker ☐ Box

E.P.A. # CAC 000 199 973
State Tax I.D. #

☐ Waste Flammable Liquid, N.O.S., UN 1993
☐ Waste Combustible Liquid, N.O.S., NA 1993
☐ Hazardous Waste, Liquid, N.O.S., ORM-E, NA 9189
☐ Waste Oil N.O.S., Combustible Liquid NA 1270
☒ Other California Regulated Waste Only
☐ Non-Hazardous

Ship To:

**TSD FACILITY**
DE MENNO/KERDOON
2000 N. ALAMEDA ST.
COMPTON, CA 90222
(213) 537-7100
E.P.A. CAT 080013352

UNIT PRICE

☒ Gal 400
☒ Disposal Fees Solids 2.40 Per/Gal $500 Min.
☒ Disposal Fees Liquids .40/.79 Per/Gal
☒ Freight & Labor 65.50 Per Hr.
☒ Lab Fees 150.00 E.A.
☐ Wash Out E.A.
☐ Drum Disposal E.A.
☐ Other

Balance Due $

Customer Signature [signature]

Form Approved OMB No. 2050—0039 (Expires 9-30-9
Please print or type. *(Form designed for use on elite (12-pitch typewriter).*

Department of Health Services
Toxic Substances Control Division
Sacramento, California

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: CAC000117997 | 012219

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
Kirkhill, Inc.
12021 Woodruff
Downey, Ca 90241

4. Generator's Phone: 714 548-9009

A. State Manifest Document Number: 89809229

B. State Generator's ID: NOT STATE I D NUMBER

5. Transporter 1 Company Name: Roadwest Oil & Vacuum Co., Inc.

6. US EPA ID Number: CAT080012971 7 0

C. State Transporter's ID: 4112-23

D. Transporter's Phone: 213-693-9881

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
DeMenno/Kerdoon
2000 N. Alameda St.
Compton, Ca. 90222

10. US EPA ID Number: CAT080013352

G. State Facility's ID: CAT080013352

H. Facility's Phone: 213-537-7100

| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt/Vol | I. Waste No. |
|---|---|---|---|---|---|
| a. California Regulated Waste Only | 001 | TT | 1400 | G | State 223 / EPA/Other NONE |
| b. DOT-E 2222 | | | | | State / EPA/Other |
| c. | | | | | State / EPA/Other |
| d. | | | | | State / EPA/Other |

J. Additional Descriptions for Materials Listed Above:
CONTAMINATED SOILS
WITH HYDROCARBONS
1 1/4 YARD
55 1/2 GALLON

K. Handling Codes for Wastes Listed Above
a. 01 b.
c. d.

15. Special Handling Instructions and Additional Information:
Gloves & Goggles

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name: [illegible] | Signature: [signature] | Month Day Year: 10 12 1/15

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Anthony R. Carillo | Signature: [signature] | Month Day Year: 10 12 1/15

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: | Signature: | Month Day Year:

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

YELLOW: GENERATOR RETAINS

**WEIGHMASTER CERTIFICATE**

THIS IS TO CERTIFY THAT THE FOLLOWING DESCRIBED COMMODITY WAS WEIGHED, MEASURED, OR COUNTED BY A WEIGHMASTER, WHOSE SIGNATURE IS ON THIS CERTIFICATE, WHO IS A RECOGNIZED AUTHORITY OF ACCURACY, AS PRESCRIBED BY CHAPTER 7 (COMMENCING WITH SECTION 12700) OF DIVISION 5 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE, ADMINISTERED BY THE DIVISION OF MEASUREMENT STANDARDS OF THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE.

WEIGHED AT: **N.T.U. ROAD, CASMALIA, CA.**

WEIGHT IN POUNDS:

75580 lb GROSS
DT 30720 lb TARE
44860 lb NET

2:01PM 11-22-89

BY: CASMALIA RESOURCES WEIGHMASTER

DEPUTY Lorraine Moy DRIVER Mark Gastiger CLASS 3-5 SPR

☐ HAZARDOUS ☐ NON-HAZARDOUS

# CASMALIA RESOURCES

P.O. BOX 5275 • SANTA BARBARA, CA 93150 • PHONE (805) 969-5897

123864

GENERATOR Kirk Hill INC

TRANSPORTER Pacific Petrol

BILLED TO

POINT OF ORIGIN Downey, CA

WASHOUT: YES ____ NO X

MANIFEST # 88243329

TRUCK LIC. #'S 2M0961

TRAILER LIC. #'S 1VP59

APPOINTMENT NUMBER 16

**FOR OFFICE USE ONLY**

1. ____ @ ____ ____
2. ____ @ ____ ____
3. ____ ____
4. WASHOUT ____ ____
5. Hazardous Waste Fee ____ TONS @ ____ ____
6. SUPERFUND ____ ____
7. S. B. COUNTY TAX ____

TOTAL $ ____

Form Approved OMB No. 2050-0039 (Expires 9-3

Please print or type. (Form designed for use on elite 12-pitch typewriter).

Toxic Substances Control Division
Sacramento, California

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD009178223 | Manifest Document No. 12502

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: KIRKHILL INC 12021 WOODRUFF DOWNEY CA 70241

4. Generator's Phone (714) 9210788

A. State Manifest Document Number: 8243329

B. State Generator's ID:

5. Transporter 1 Company Name: PACIFIC PETROLEUM | 6. US EPA ID Number: CAD039168563

C. State Transporter's ID: 006317

D. Transporter's Phone: 805 925-1792

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: CASMALIA RESOURCES NTV 2D CASMALIA CA 93427 | 10. US EPA ID Number: CAD010207481

G. State Facility's ID

H. Facility's Phone: 805 937 5449

| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt/Vol | I. Waste No. |
|---|---|---|---|---|---|
| a. WASTE SOIL WITH HYDROCARBONS CALIFORNIA REGULATED WASTE ONLY | 001 | DT | 99018 | Y | State 611 / EPA/Other 000 RCRA |
| b. | | | | | State / EPA/Other |
| c. | | | | | State / EPA/Other |
| d. | | | | | State / EPA/Other |

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above: a. | b. | c. | d.

15. Special Handling Instructions and Additional Information

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | 1 | 1 | 42817 |

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| CASTIGA MARK | | 1 | 1 | 42817 |

18. Transporter 2 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | | | |

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | | | |

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

OLL4526

DHS 8022 A (1/88)
EPA 8700—22
Rev. 9-86) Previous editions are obsolete.

Do Not Write Below This Line

YELLOW: GENERATOR RETAINS

**WEIGHMASTER CERTIFICATE**

THIS IS TO CERTIFY THAT THE FOLLOWING DESCRIBED COMMODITY WAS WEIGHED, MEASURED, OR COUNTED BY A WEIGHMASTER, WHOSE SIGNATURE IS ON THIS CERTIFICATE, WHO IS A RECOGNIZED AUTHORITY OF ACCURACY, AS PRESCRIBED BY CHAPTER 7 (COMMENCING WITH SECTION 12700) OF DIVISION 5 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE, ADMINISTERED BY THE DIVISION OF MEASUREMENT STANDARDS OF THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE.

WEIGHED AT: **N.T.U. ROAD, CASMALIA, CA.**

WEIGHT IN POUNDS:

76840 lb GROSS
PT 29420 lb TARE
47420 lb NET

2:04PM 11-22-89

BY: CASMALIA RESOURCES WEIGHMASTER

DEPUTY Bonnie Mfg DRIVER Don Wilson CLASS 7-5 SPR

☐ HAZARDOUS ☐ NON-HAZARDOUS

# CASMALIA RESOURCES

P.O. BOX 5275 • SANTA BARBARA, CA 93150 • PHONE (805) 969-5897

12386

GENERATOR Kirk Hill

TRANSPORTER Jerucon

BILLED TO

POINT OF ORIGIN Downey, CA

WASHOUT: YES ___ NO X

MANIFEST # 882 43343

TRUCK LIC. #'S 1V6855

TRAILER LIC. #'S 1UA5

APPOINTMENT NUMBER 17

**FOR OFFICE USE ONLY**

1. ____ @ ____ ____
2. ____ @ ____ ____
3. ____ ____
4. WASHOUT ____ ____
5. Hazardous Waste Fee ____ TONS @ ____ ____
6. SUPERFUND ____ ____
7. S. B. COUNTY TAX ____

TOTAL $ ____

Form Approved OMB No. 2050-0039 (Expires 9-30)
Please print or type. (Form designed for use on el... pitch typewriter).

Toxic Substances Control Division
Sacramento, California

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC000917773 | Manifest Document No. | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
KIRKHILL INC
12021 WOODRUFF
DOWNEY CA 90241

4. Generator's Phone (714) 9210888

A. State Manifest Document Number 88243343

B. State Generator's ID HAHQ3610HA20

5. Transporter 1 Company Name: JERUICON INC | 6. US EPA ID Number: CAD982512092

C. State Transporter's ID

D. Transporter's Phone 805 9220771

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID 004956

F. Transporter's Phone

9. Designated Facility Name and Site Address
CASMALIA RESOURCES
NTN RD
CASMALIA CA 93429 | 10. US EPA ID Number: CAD020748125

G. State Facility's ID CAD020748125

H. Facility's Phone 805 937 8445

| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt/Vol | I. Waste No. |
|---|---|---|---|---|---|
| a. WASTE SOIL WITH HYDROCARBONS CALIFORNIA REGULATED WASTE ONLY | 001 | DT | 13 | YD | State 611 / EPA/Other NON RCRA |
| b. | | | | | State / EPA/Other |
| c. | | | | | State / EPA/Other |
| d. | | | | | State / EPA/Other |

GENERATOR'S COPY
Return To Generator

J. Additional Descriptions for Materials Listed Above
WASTE ACCPT #
3620319 KG

K. Handling Codes for Wastes Listed Above
a. 03 | b. | c. | d.

15. Special Handling Instructions and Additional Information

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR

Printed/Typed Name | Signature | Month Day Year 1/1/89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name CASMALIA RESOURCES | Signature | Month Day Year 1/12/89

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DA

**WEIGHMASTER CERTIFICATE**

THIS IS TO CERTIFY THAT THE FOLLOWING DESCRIBED COMMODITY WAS WEIGHED, MEASURED, OR COUNTED BY A WEIGHMASTER, WHOSE SIGNATURE IS ON THIS CERTIFICATE, WHO IS A RECOGNIZED AUTHORITY OF ACCURACY, AS PRESCRIBED BY CHAPTER 7 (COMMENCING WITH SECTION 12700) OF DIVISION 5 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE, ADMINISTERED BY THE DIVISION OF MEASUREMENT STANDARDS OF THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE.

WEIGHED AT: **N.T.U. ROAD, CASMALIA, CA.**

WEIGHT IN POUNDS:

79080 lb GROSS
28640 lb TARE
50440 lb NET

11-22-89 2:05PM

BY: CASMALIA RESOURCES WEIGHMASTER

DEPUTY Jennifer Bailey DRIVER Rondy Lewis CLASS 7-5 GC SPR

☐ HAZARDOUS ☐ NON-HAZARDOUS

# CASMALIA RESOURCES

P.O. BOX 5275 • SANTA BARBARA, CA 93150 • PHONE (805) 969-5897

123866

GENERATOR Kirkhill Inc

TRANSPORTER Jewicon

BILLED TO

POINT OF ORIGIN Downey Ca.

WASHOUT: YES ____ NO 2

MANIFEST # 89 469174

TRUCK LIC. #'S 3T3458 2

TRAILER LIC. #'S 1UF1573

APPOINTMENT NUMBER

**FOR OFFICE USE ONLY**

1. ____ @ ____ ____
2. ____ @ ____ ____
3. ____ ____
4. WASHOUT ____ ____
5. Hazardous Waste Fee ____ TONS @ ____ ____
6. SUPERFUND ____ ____
7. S. B. COUNTY TAX ____

TOTAL $ ____

Form Approved OMB No. 2050-0039 (Expires 9-30)

Toxic Substances Control Division
Sacramento, California

Please print or type. *(Form designed for use on elite 12-pitch typewriter).*

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC000101979173 Manifest Document No. 10003

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
KIRKHILL INC
12021 WOOD RUFF
DOWNEY, CA. 90241

A. State Manifest Document Number 8946917 4

B. State Generator's ID

4. Generator's Phone (714) 921 0888

5. Transporter 1 Company Name: JERVICON INC

6. US EPA ID Number: CAD 981 251 920 9

C. State Transporter's ID 006325

D. Transporter's Phone 805 922 0771

7. Transporter 2 Company Name

6. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CASMALIA RESOURCES
NTU RD
CASMALIA CA 93429

10. US EPA ID Number: CAD 982 074 181

G. State Facility's ID

H. Facility's Phone 805 937 8449

| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt/Vol | I. Waste No. |
|---|---|---|---|---|---|
| a. WASTE SOIL WITH HYDROCARBONS CALIFORNIA REGULATED WASTE ONLY | 001 | DT | 00918 | Y | State 611<br>EPA/Other NON RCRA |
| b. | | | | | State<br>EPA/Other |
| c. | | | | | State<br>EPA/Other |
| d. | | | | | State<br>EPA/Other |

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above
a. b.
c. d.

15. Special Handling Instructions and Additional Information

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

| Printed/Typed Name | Signature | Month Day Year |
|---|---|---|
| Erin Tomlin | | 1/1/12289 |

**TRANSPORTER**

17. Transporter 1 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month Day Year |
|---|---|---|
| RANDY LIMON | Randy Limon | 1/1/12289 |

18. Transporter 2 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month Day Year |
|---|---|---|
| | | |

**FACILITY**

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

| Printed/Typed Name | Signature | Month Day Year |
|---|---|---|
| | | |

**GENERATOR**

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700-22
Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

YELLOW: GENERATOR RETAINS

**PACIFIC PETROLEUM CORPORATION**

P.O. Box 2297, Orcutt, CA 93455
Tel: (805) 925-1947

No. 3165

DATE: 11-22-89

CHARGE TO: Jennecon

LOCATION: Bakhell Inc (12021 Woodruff Downey Ca)

YOUR ORDER No. _____

☐ Highway Use

| FROM | NO. OF LOADS | BARRELS | DESCRIPTION: MUD | WATER | OIL | WASTE | TO | TIME |
|---|---|---|---|---|---|---|---|---|
| Location | 1 | LOAD — DIRT — | | | | | Cosmalia Rec | |
| | | | | | | | | |
| | | | | | | | | |

LOST TIME EXPLANATION — LOST TIME DEDUCT

TOTAL TIME

Equip # 372 Vacuum Truck Capacity 18 yds Out ____ A.M. P.M. In ____ A.M. P.M. Hours ____ @ ____ TOTAL ____

Equip # ____ Type ____ Out ____ A.M. P.M. In ____ A.M. P.M. Hours ____ @ ____ TOTAL ____

Disposal Ticket # ____ Quantity ____ @ ____ Ton ____ TOTAL ____

Hazardous Waste Fee ____ Tons @ ____ TOTAL ____

Spreading Fee ____ Loads @ ____ TOTAL ____

____ % County Tax TOTAL ____

Waste Hauler # 88243329 Washout ____ TOTAL ____ Disposal TOTAL ____

____ % Surcharge on Disposal Charges ____

TOTAL CHARGES ____

REMARKS:

Hauled (1) load of dirt from the Above location to Cosmalia Rancho.

OPERATOR Mark Gastazzi RECEIVED BY: [signature]

TERMS: NET UPON RECIEPT

A CHARGE OF 1½% PER MONTH, 18% PER ANNUM WILL BE MADE ON ALL PAST DUE ACCOUNTS.

"These charges include (1) fees to pay for regulation of transportation companies by the California Public Utilities Commission and (2) taxes paid to California Cities instead of excise or business license taxes they could otherwise impose."

CUSTOMER

P.U.C. 162563

# SERVICON INC.

SANTA MARIA, CA 93455
805/922-0771

NO. 4081

TRUCK # 101

Date 11-22 19 89

NAME OF UNDERLYING CARRIER: SERVICON INC

DRIVER SIGNATURE: Don Valencia

CONSIGNOR: WHO OWNED MAT'L: KIRK HILL INC

CONSIGNEE: WHO REC'D MAT'L: CASMALIA RESOURCES

DEBTOR: WHO PAYS:

POINT OF ORIGIN WHERE MAT'L WAS LOADED: DOWNEY CA

DESTINATION: WHERE MAT'L. DELIVERED: CASMALIA RESOURCES

| LOADING ARRIVE | LOADING DEPART | UNLOADING ARRIVE | UNLOADING DEPART | PROD. AREA OR TRIP TIME | MATERIAL | TICKET NO. OR ITEM NO. | TONS | ZONE OR MILES | RATE | | AMOUNT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | |
| 2 | | | | HAUL BACK | | # 882433 | 43 | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | |

| TIME COMPLETED LAST LOADING | TIME ARRIVED TO DUMP LAST LOAD | TIME FINISH LAST DUMP | ALLOWANCE FOR COMPLETION LAST TRIP |
|---|---|---|---|
| | | | |

TOTAL

LOCATION DRIVER REPORTED: 1002 Wadsworth, Downey CA

TYPE OF EQUIPMENT: End Dump

BODY CAPACITY: 35 yd

NO. OF AXLES: 5

REMARKS:

ACCESSORIAL CHARGES:

REPORTING TIME A.M. / P.M.

ENDING TIME A.M. / P.M.

TOTAL TIME HRS. / MIN.

MEAL & TRUCK DOWNTIME HRS. / MIN.

NET CHARGEABLE TIME HRS. / MIN.

DEBTOR AGREES TO PAY LEGAL FEES, COURT COSTS FOR COLLECTION OR DELINQUENT ACCOUNTS AND LEGAL RATE OF INTEREST FOR PAST DUE ACCOUNTS.

HOURLY RATE

HOURLY CHARGES DUE

SIGNATURE OF CONSIGNEE (or agent)

TOTAL COMBINED CHARGES DUE

FOR OFFICE USE ONLY

PUBLIC UTILITIES COMMISSION REQUIRES PAYMENT FOR THESE CHARGES NOT LATER THAN THE FIFTEENTH OF THE MONTH FOLLOWING DATE OF THIS BILL.

TRUCK OWNER COPY

# CASMALIA RESOURCES

WCF Sheet No. _____

WAN _____

## WASTE CHARACTERIZATION FORM: Please read instructions on reverse side before completing.

**Part A:** Generator/Transporter Information

Waste G
Company Name: KIRKHILL, INC. US EPA I.D. No.: CAC000199973
Technical Contact Person: CYRUS D. NAMINI Telephone No.: (714) 921-0888
Generating Facility Address: City 12021 Woodruff, Downey State CA Zip 90241

Transporter:
Company Name: JERVICON US EPA I.D. No.: CAC000199973
Contact Person: Jerry Telephone No.: (805) 722-0771
Address: City 1565 Better Avia Rd., Santa Maria State CA Zip 93454

**Part B:** Waste Stream Identification

General Description of Waste: SOIL CONTAMINATED WITH NEW OIL.
Process Generating Waste: UNDERGROUND TANK

**Part C:** Physical Characteristics

Color: _____ Physical State: ☐ Solid ☐ Liquid Slurry ☐ Paste ☐ Powder pH. _____
Layers: ☐ One Phase ☐ Two Layers ☐ Multi-Layered Flashpoint: _____ Free Liquids: ☐ No ☐ Yes
Odor: ☐ Strong ☐ Mild ☐ None Characterized as: _____ ☐ Organic ☐ Aqueous
Density _____ ☐ lb/gal. ☐ lb/cu.yd. Moisture or Water _____ % Settleable Solids (for liquids) _____ %

**Part D:** Waste Composition (must total 100%)

| | |
|---|---|
| PLEASE SEE ATTACHED | % |
| LABORATORY ANALYSIS | % |
| | % |
| | % |
| | % |
| | % |
| | % |
| | % |
| | % |

**Part E:** Metals **N/A**

☐ Total, ppm
☐ Extract (☐ EP Toxicity, ☐ TCLP, ☐ Cal. WET)

| | | | |
|---|---|---|---|
| Arsenic (As) | | Mercury (Hg) | |
| Barium (Ba) | | Nickel (Ni) | |
| Cadmium (Cd) | | Selenium (Se) | |
| Chromium (Cr) | | Silver (Ag) | |
| Copper (Cu) | | Thallium (Tl) | |
| Lead (Pb) | | Zinc (Zn) | |
| Hexavalent Chromium (Cr-VI) | | | |

**Part F:** Other Constituents, ppm **N/A**

| | Pesticides (list): | | Other Components (list): | |
|---|---|---|---|---|
| Total Cyanides | | ppm | | ppm |
| Reactive Cyanide (If total CN ≥ 250 ppm) | | ppm | | ppm |
| Total Sulfides | | ppm | | ppm |
| Reactive Sulfide (If total $S^{=}$ ≥ 500 ppm) | | ppm | | ppm |
| PCBs | | ppm | | ppm |

**Part G:** Hazardous Characteristics

☐ Cancer Suspect Agent ☐ EP Toxic ☐ Ignitable ☐ Corrosive ☐ Poison ☐ Radioactive ☐ Etiologic Agent
Reactivity: ☐ None ☐ Water Reactive ☐ Explosive ☐ Pyrophoric ☐ Oxidizer ☐ Cyanide/Sulfide
☐ Other _____
RCRA Hazardous Waste? XX No ☐ Yes RCRA Waste Code No. _____
State Hazardous Waste? ☐ No ☐ Yes State Waste Code No. _____
California Extremely Hazardous Waste? ☐ No ☐ Yes Permit No. _____ (Attach copy of E.H. Waste Permit)

**Part H:** Shipping Information

DOT Hazardous? ☐ Yes XX No Proper Shipping Name/I.D. Number CALIFORNIA REGULATORY AGENCY
Method: ☐ Bulk Liquid XX Bulk Solid ☐ Containerized (type) EST. < 50 Tons
Quantity: _____ gal _____ cu. yd. _____ Containers per: ☐ Month ☐ Quarter ☐ Year ☐ One Time ☐ Other _____

**Part I:** Certification Statement

I hereby certify that the above and attached waste description is complete and accurate to the best of my knowledge and that all known or suspected hazards have been identified. Further, I understand that, should the waste constituents vary from those described, a new Waste Characterization Form must be submitted with another representative sample.

Name (Please print) CYRUS D. NAMINI Title President

Signature _____ Date 11/15/00

**METAL RECYCLING, INC.**

2202 South Milliken Avenue
Ontario, CA 91761
(714) 947-2888

No. 32035

# TANK DISPOSAL FORM

Date: 8.21.1989
Job #
P. O. #

CONTRACTOR: Tank Protect Eng.
ADDRESS: 1963 North Main St. Orange, CA 92665
JOB SITE: Kickhill Inc.
ADDRESS: 12021 Woodruff Downey, CA
DESTINATION: A.M.R. 2202 S. Milliken Ave., Ontario, CA 91761

| DATE | TIME | PROJECTED TANKS | ORDERED BY: | LIC. NO. |
|---|---|---|---|---|
| 8-24-89 | 10:00 | 3-10,000 | | 6 |

SPECIAL INSTRUCTIONS: 2-Trucks

TIME IN: 9:30 AM
TIME OUT: 11:30 AM

| ✓ | Services Rendered | Cost |
|---|---|---|
| ___ | Disposal Fee | 200.00 |
| ___ | Extensive Loading Time | 150.00 |
| ___ | Disposal Fee with Permit | 300.00 |
| ___ | Fiberglass Tank Disposal Fee Per Tank | 400.00 |
| ___ | Delivered | 200.00 |
| ___ | Bobtail Disposal Fee | 250.00 |
| ___ | Cancellation Fee | 250.00 |
| | TOTAL CHARGES | $200.00 |

All fees incurred are per load unless specified. Terms are net 30 days from date of invoice. Contractor's signature represents acceptance of terms for payment, and confirms that tank removal complies with State laws.

Dennis Conrad
CONTRACTOR'S SIGNATURE

**TANKS RECEIVED**

| QTY. | GALLONS | TYPE F* | TYPE S* | NET TONS | TOTAL |
|---|---|---|---|---|---|
| | 280 | ☐ | ☐ | .14 | |
| | 500 | ☐ | ☐ | .21 | |
| | 550 | ☐ | ☐ | .24 | |
| | 1000 - 12 ft. | ☐ | ☐ | .44 | |
| | 1000 - 6 ft. | ☐ | ☐ | .61 | |
| | 1500 | ☐ | ☐ | .87 | |
| | 2000 | ☐ | ☐ | .97 | |
| | 2500 | ☐ | ☐ | 1.14 | |
| | 3000 | ☐ | ☐ | 1.32 | |
| | 4000 | ☐ | ☐ | 1.64 | |
| | 5000 | ☐ | ☐ | 2.42 | |
| | 6000 | ☐ | ☐ | 2.84 | |
| | 7500 | ☐ | ☐ | 3.26 | |
| | 8000 | ☐ | ☐ | 3.44 | |
| | 9000 | ☐ | ☐ | 3.82 | |
| 2 | 10000 | ☐ | ☒ | 4.33 | 8.66 |
| | 12000 | ☐ | ☐ | 4.93 | |

NO. OF TANKS: 2 — TOTAL NET TONS: 8.66

*F — FIBERGLASS *S — STEEL 105

**CERTIFICATE OF TANK DISPOSAL / DESTRUCTION**

THIS IS TO CERTIFY THE RECEIPT AND ACCEPTANCE OF THE TANK(S) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED HAVE BEEN COMPLETELY DESTROYED FOR SCRAP PURPOSES ONLY.

R Conrad
AUTHORIZED REP.

8-24-89
DATE

CONTRACTOR COPY

**METAL RECYCLING, INC.**

2202 South Milliken Avenue
Ontario, CA 91761
(714) 947-2888

No. 32034

# TANK DISPOSAL FORM

Date: 8-21, 1989
Job #
P. O. #

CONTRACTOR: Tank Protect Eng.
ADDRESS: 1963 North Main St. Orange, CA 92665
JOB SITE: Kirkhill Inc
ADDRESS: 12021 Woodruff Downey, CA
DESTINATION: A.M.R. 2202 S. Milliken Ave., Ontario, CA 91761

| DATE | TIME | PROJECTED TANKS | ORDERED BY: | LIC. NO. |
|---|---|---|---|---|
| 8-24-89 | 10:00 | 3-10000 | | #1 |

SPECIAL INSTRUCTIONS: 2-Trucks

TIME IN: 10:00
TIME OUT: 11:30

| ✓ | Services Rendered | Cost |
|---|---|---|
| ✓ | Disposal Fee | 200.00 |
| ___ | Extensive Loading Time | 150.00 |
| ___ | Disposal Fee with Permit | 300.00 |
| ___ | Fiberglass Tank Disposal Fee Per Tank | 400.00 |
| ___ | Delivered | 200.00 |
| ___ | Bobtail Disposal Fee | 250.00 |
| ___ | Cancellation Fee | 250.00 |
| | TOTAL CHARGES | $ 200.00 |

All fees incurred are per load unless specified. Terms are net 30 days from date of invoice. Contractor's signature represents acceptance of terms for payment, and confirms that tank removal complies with State laws.

X _____
CONTRACTOR'S SIGNATURE

**TANKS RECEIVED**

| QTY. | GALLONS | TYPE F* | TYPE S* | NET TONS | TOTAL |
|---|---|---|---|---|---|
| | 280 | ☐ | ☐ | .14 | |
| | 500 | ☐ | ☐ | .21 | |
| | 550 | ☐ | ☐ | .24 | |
| | 1000 - 12 ft. | ☐ | ☐ | .44 | |
| | 1000 - 6 ft. | ☐ | ☐ | .61 | |
| | 1500 | ☐ | ☐ | .87 | |
| | 2000 | ☐ | ☐ | .97 | |
| | 2500 | ☐ | ☐ | 1.14 | |
| | 3000 | ☐ | ☐ | 1.32 | |
| | 4000 | ☐ | ☐ | 1.64 | |
| | 5000 | ☐ | ☐ | 2.42 | |
| | 6000 | ☐ | ☐ | 2.84 | |
| | 7500 | ☐ | ☐ | 3.26 | |
| | 8000 | ☐ | ☐ | 3.44 | |
| | 9000 | ☐ | ☐ | 3.82 | |
| 1 | 10000 | ☐ | ☑ | 4.33 | 4.33 |
| | 12000 | ☐ | ☐ | 4.93 | |

NO. OF TANKS: 1
TOTAL NET TONS: 4.33

*F — FIBERGLASS *S — STEEL 105

**CERTIFICATE OF TANK DISPOSAL / DESTRUCTION**

THIS IS TO CERTIFY THE RECEIPT AND ACCEPTANCE OF THE TANK(S) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED HAVE BEEN COMPLETELY DESTROYED FOR SCRAP PURPOSES ONLY.

_____ AUTHORIZED REP.

8-24-89 DATE

CONTRACTOR COPY

# APPENDIX C

# CHAIN OF CUSTODY FORMS AND LABORATORY TEST REPORTS

APPENDIX C

SUMMARY SOIL SAMPLES ANALYSIS REPORT

| FILE | SAMPLE NO. | DATE | DEPTH | TPH DIESEL mg/kg | TRPH mg/kg | ETHYL BENZENE mg/kg | TOLUENE mg/kg | TOTAL XYLENE mg/kg |
|---|---|---|---|---|---|---|---|---|
| | | 1989 | | | | | | |
| F-404 | K-1 | 08/24 | 3' | ND<20 | 52 | | | |
| F-405 | K-2 | 08/24 | 3' | ND<20 | 32 | | | |
| F-406 | K-3 | 08/24 | 3' | | 32 | | | |
| F-407 | K-4 | 08/24 | 3' | | 325 | | | |
| F-408 | K-5 | 08/24 | 3' | | 45,714 | | | |
| F-409 | K-6 | 08/24 | 3' | | 1 | | | |
| F-410 | K-7 | 08/24 | 3' | | 5,030 | | | |
| F-912 | B-1 | 09/26 | 15' | | 10 | | | |
| F-913 | B-2 | 09/26 | 20' | | ND<10 | | | |
| F-914 | B-3 | 09/26 | 20' | | 285 | | | |
| F-915 | B-4 | 09/26 | 20' | | 12 | | | |
| F-916 | B-4 | 09/26 | 30' | | 14 | | | |
| | B-5 | 09/27 | 20' | | 27 | | | |
| | B-6 | 09/27 | 20' | | 158 | | | |
| G-112 | B-6 | 10/17 | 15' | ND<10 | | | | |
| G-113 | B-6 | 10/17 | 30' | ND<10 | | | | |
| G-114 | B-6 | 10/17 | 40' | ND<10 | | | | |
| G-115 | B-5 | 10/17 | 15' | ND<10 | | | | |
| G-116 | B-5 | 10/17 | 30' | ND<10 | | | | |
| | VS-1 | 10/31 | 23' | ND<10 | | | | |
| | VS-2 | 10/31 | 22' | ND<10 | | | | |
| | VS-3 | 10/31 | 23' | | | | | |
| | VS-5 | 10/31 | 21' | ND<10 | | | | |
| | VS-6 | 10/31 | 23' | 27,100 | | | | |
| | VS-7 | 10/31 | 23' | ND<10 | | | | |
| | VS-8 | 10/31 | 25' | 55 (Resample after further excavation) | | | | |
| G-486 | VS-1 | 11/22 | | 33 | | | | |
| G-487 | VS-2 | 11/22 | | 17 | | | | |
| G-488 | VS-3 | 11/22 | | 37 | Stockpile samples after treatment | | | |
| G-489 | VS-4 | 11/22 | | 87 | | | | |
| G-490 | VS-5 | 11/22 | | 55 | | | | |

**ASSOCIATED LABORATORIES**
806 N. Batavia • Orange, CA 92668
(714) 771-6900 • FAX: (714) 538-1209

# CHAIN OF CUSTODY RECORD

Date 8-24-89 Page 1 of 1

CLIENT KIRKHILL INC.
ADDRESS 12021 WOODRUFF AVE
DOWNEY, CA 90241
PROJECT NAME

PROJECT MANAGER Doug Lee
PHONE NUMBER 714-921-0888
SAMPLERS: (Signature) Doug Lee

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ____ Cooled ____ Frozen ____
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | SAMPLE TYPE: AIR | SAMPLE TYPE: SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| =404 K-1 EAST | EAST TANK #3 Diesel | 8-24-89 | 12:03 | | | / | | | 418-1, 8015D |
| =405 K-2 WEST | WEST TANK #3 Diesel | 8-24-89 | 12:06 | | | / | | | 418-1, 8015D |
| =406 K-3 | EAST TANK #2 Diesel | 8-24-89 | 12:10 | | | / | | | 418.8 [illegible] |
| =407 K-4 | WEST TANK #2 Diesel | 8-24-89 | 12:15 | | | / | | | 418.8 [illegible] |
| =408 K-5 | EAST TANK #1 Oil | 8-24-89 | 12:25 | | | / | | | 418.8 [illegible] |
| =409 K-6 | WEST TANK #1 Oil | 8-24-89 | 12:30 | | | / | | | 418.8 [illegible] |
| =410 K-7 | STOCKPILE OIL | 8-24-89 | 12:30 | | | / | | | 418.1 [illegible] |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|
| | Selena Enriquez | 8/24 |
| Relinquished by: (Signature) | Received by Laboratory for analysis: (Signature) | Date/Time |
| | | |

Special Instructions:

I hereby authorize the performance of the above indicated work.

DISTRIBUTION: White with report. Yellow to AL, Pink to Courier, Gold to Main Lab

806 N. Batavia • Orange, CA 92668
(714) 771-6900 • FAX: (714) 538-1209

# CHAIN OF CUSTODY RECORD

Date 9/26/89 Page 1 of 1

TPE

CLIENT: Kirkhill

ADDRESS: 12021 Woodruff
Downey Ca 90241

PROJECT NAME:

PROJECT MANAGER: Eric Taubin

PHONE NUMBER: 714-921-0888

SAMPLERS: (Signature)

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ____ Cooled ____ Frozen ____
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | SAMPLE TYPE: AIR | SAMPLE TYPE: SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| F-912 B1-15' | B-1 - 15 feet | 9/26 | 1105 | | | X | 1 | | 418.1 |
| F-913 B2-20' | B-2 20 feet | 9/26 | 1210 | | | X | 1 | | 8015 |
| F-914 B-3 20 | B-3 - 20' feet | 9/26 | 130 | | | X | 1 | | 418.1 |
| F-915 B-4-20 | B-4 - 20 feet | 9/26 | 400 | | | X | 1 | | 418.1 |
| F-916 B-4-30 | B-4 - 30 feet | 9/26 | 900 | | | X | 1 | | 418.1 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|
| | | 9/27/89 1127 |
| Relinquished by: (Signature) | Received by Laboratory for analysis: (Signature) | Date/Time |

I hereby authorize the performance of the above indicated work.

Special Instructions:

DISTRIBUTION: White with report ... Pink to ...

(714) 771-6900 • FAX (714) 538-1209

TPE

Date 9-27-89 Page 1 of 1

| | |
|---|---|
| CLIENT: KIRKHILL, INC | PROJECT MANAGER: Eric Touchan |
| ADDRESS: 12021 Woodruff | PHONE NUMBER: 714-921-0333 |
| Downey, California. | SAMPLERS: (Signature) |
| PROJECT NAME: KIRKHILL | |

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ____ Cooled ____ Frozen ____
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | SAMPLE TYPE: AIR | SAMPLE TYPE: SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| B-5 | 20' feet | 9-27 | | | | X | 1 | | 418.1 |
| B-6 | 20' feet | 9-27 | | | | X | 1 | | 418.1 |
| | | | | | | | | | |
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Relinquished by: (Signature) [signature]
Received by: (Signature) [signature]
Date/Time 9-27-89 4:00p.

I hereby authorize the performance of the above indicated work.

Relinquished by: (Signature)
Received by Laboratory for analysis: (Signature) [signature]
Date/Time

Special Instructions:

DISTRIBUTION: White with report, Yellow to AL,
Pink to Courier, Gold to Male Lab

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RUSH

# CHAIN OF CUSTODY RECORD

Date _____ Page _____ of _____

CLIENT: Kirkhill
ADDRESS: 12021 Woodruff.
Tank Protect Eng.

PROJECT MANAGER: Eric Tanbin
PHONE NUMBER: 714 921-0888
SAMPLERS: (Signature)

PROJECT NAME

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ____ Cooled ____ Frozen ____
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| | SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | SAMPLE TYPE: AIR | SAMPLE TYPE: SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|---|
| -112 | B-6 | 15' | 10/17 | | | | | | | T P BT |
| -113 | B-6 | 30' | 10/17 | | | | | | | " |
| -114 | B-6 | 40' | 10/17 | | | | | | | " |
| -115 | B-5 | 15' | 10/17 | | | | | | | |
| -116 | B-5 | 30' | 10/17 | | | | | | | |
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| Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|
| | Silvia, Enviotech, | 10/17 |
| Relinquished by: (Signature) | Received by Laboratory for analysis: (Signature) | Date/Time |
| | | |

Special Instructions:

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Rush 24hr

# CHAIN OF CUSTODY RECORD

Date 10.31 Page 1 of 1

CLIENT: Tank Protect Engineer
ADDRESS: 1963 N. Main St.
Orange Ca 92665
PROJECT NAME: Kirk Hill
PROJECT MANAGER: C. Naimine
PHONE NUMBER: 714. 921-0888
SAMPLERS: (Signature)

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ____ Cooled ____ Frozen ____
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | SAMPLE TYPE: AIR | SAMPLE TYPE: SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| VS-1 | West End. Pit #2 23' | 10-31 | 11:22 | | | X | 1 | | 418.1 |
| VS-2 | South Wall Pit #2 22' | | 11:40 | | | | | | |
| VS-3 | North Wall Pit #2 ~~23~~' | | 11:55 | | | | | | |
| VS-5 | East End. Pit #1 21' | | 12:30 | | | | | | |
| VS-6 | W. End Pit #1 23' | | 12:45 | | | | | | |
| VS-7 | E.N. Wall Pit #1 23' | | 1:10 | | | | | | |
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Relinquished by: (Signature)
Received by: (Signature)
Date/Time 10-31 3:12p.

I hereby authorize the performance of the above indicated work.

Relinquished by: (Signature)
Received by Laboratory for analysis: (Signature)
Date/Time

Special Instructions:

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# CHAIN OF CUSTODY RECORD

Date Nov 6 Page 1 of 1

CLIENT Tank Protect Engs
ADDRESS 1963 N Main St
Orange CA 92665
PROJECT NAME Kirkhill

PROJECT MANAGER Eric Taubin
PHONE NUMBER 714-921-0888
SAMPLERS: (Signature)

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ____ Cooled ____ Frozen ____
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE WATER | SAMPLE TYPE AIR | SAMPLE TYPE SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| VS-8 | W. End Pit #1 25' | 11/6 | 1330 | | | X | 1 | | 418.1 |
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Relinquished by: (Signature) [signature]
Received by: (Signature)
Date/Time

Relinquished by: (Signature)
Received by Laboratory for analysis: (Signature) [signature]
Date/Time 11-6-89 2:10

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Special Instructions:

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C_486 to C_490

CHAIN OF CUSTODY RECORD

Date 11/22 Page 89 of 1

CLIENT: Tame Protect Env.
ADDRESS: 1963 N. Main
Orange Ca 92665
PROJECT NAME: Kirkhill
PROJECT MANAGER: Eric Tambin
PHONE NUMBER: 714-921-0888
SAMPLERS: (Signature)

Samples Intact Yes ___ No ___
County Seals Intact Yes ___ No ___
Sample Ambient ___ Cooled ___ Frozen ___
Same Day ___ 24 Hr. ___
Regular X 48 Hr. ___

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | SAMPLE TYPE: AIR | SAMPLE TYPE: SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| C_486 VS-1 | Soil Spoil #1 | 11/22 | 11:00 | | | X | 1 | | 418.1 |
| C_487 VS-2 | " 2 | | | | | | | | |
| C_488 VS-3 | " 3 | | | | | | | | |
| C_489 VS-4 | " 4 | | | | | | | | |
| C_490 VS-5 | " 5 | | | | | | | | |

Relinquished by: (Signature)

Received by: (Signature) Silvia Enstock 11/27/89

Date/Time

Relinquished by: (Signature)

Received by Laboratory for analysis: (Signature)

Date/Time

Special Instructions:

I hereby authorize the performance of the above indicated work.

DISTRIBUTION

# Analytical Report

State Approved Hazardous Waste Testing Laboratory • Certificate #133

ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 8/24/89 | Date Analyzed | 8/25/89 |
| Date Submitted | 8/24/89 | Lab No. | F-404, F-405, F-406, F-407 |

**CLIENT :** Tank Protect Engineering
1963 N. Main Street
Orange, CA. 92665

**SITE:** Kirkhill Inc.
12021 Woodruff Avenue
Downey, CA. 90241

**SAMPLE :** F-404; F# K-1, East tank #3 oil, grab soil sample
F-405; F# K-2, West tank #3 oil, grab soil sample
F-406; F# K-3, East tank #2 diesel, grab soil sample
F-407; F# K-4, West tank #2 diesel, grab soil sample

**RESULTS**

| PARAMETER | F-404 | F-405 | F-406 | F-407 |
|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 52 | 32 | 32 | 325 |
| Total Petroleum Hydrocarbons (Diesel), mg/kg (2) | ND<20 | ND<20 | - | - |

**Method of analysis:**

(1) Method 418.1, Methods for Chemical Analysis of Water Wastes, EPA-600/4-79-020, March 1983.

(2) DHS Recommended procedure; Leaking Underground Fuel Tank (LUFT) Field Manual, California SWRCB, December 1987.

Bob Moezzi, Ph.D.
Lab Supervisor

Yaw-Tsung Hwang
Analyst

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# Analytical Report

State Approved Hazardous Waste Testing Laboratory • Certificate #133

ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 8/24/89 | Date Analyzed | 8/25/89 |
| Date Submitted | 8/24/89 | Lab No. | F-408, F-409, F-410 |

**CLIENT :** Tank Protect Engineering
1963 N. Main Street
Orange, CA. 92665

**SITE:** Kirkhill Inc.
12021 Woodruff Avenue
Downey, CA. 90241

**SAMPLE :** F-408; F# K-5, East tank #1 diesel, grab soil sample
F-409; F# K-6, West tank #1 diesel, grab soil sample
F-410; F# K-7, Stockpile oil, grab soil sample

| | RESULTS | | |
|---|---|---|---|
| **PARAMETER** | **F-408** | **F-409** | **F-410** |
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 45714 | 1 | 5030 |

Method of analysis:

(1) Method 418.1, Methods for Chemical Analysis of Water Wastes, EPA-600/4-79-020, March 1983.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Yaw Sang Huang
Analyst

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ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 9/26/89 | Date Analyzed | 9/26/89 |
| Date Submitted | 9/26/89 | Lab No. | F-912 |

CLIENT: Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

SITE: Kirkhill
12021 Woodruff
Downey, Ca. 90241

SAMPLE: F-912; F# B-1, 15 feet

| PARAMETER | RESULTS F-912 |
|---|---|
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 10 |

Method of analysis:

(1) Method 418.1, Methods for Chemical Analysis of Water Wastes, EPA-600/4-79-020, March 1983.

Bob Moezzi, Ph.D.
Lab Supervisor

Analyst

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ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 9/26/89 | Date Analyzed | 9/26/89 |
| Date Submitted | 9/26/89 | Lab No. | F-913 |

**CLIENT:** Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

**SITE:** Kirkhill
12021 Woodruff
Downey, Ca. 90241

**SAMPLE:** F-913; F# B-2, 20 feet

| | RESULTS |
|---|---|
| **PARAMETER** | **F-913** |
| Total petroleum hydrocarbons (Gasoline) mg/kg (1) | N.D.,<10 |

**Method of Analysis:**
(1) DHS Recommended procedure; Leaking Underground Fuel Tank (LUFT) Field Manual, California SWRCB, December 1987.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Yan-Dong Huang
Analyst

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ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 9/26/89 | Date Analyzed | 9/26/89 |
| Date Submitted | 9/26/89 | Lab No. | F-914, F-915, F-916 |

**CLIENT:** Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

**SITE:** Kirkhill
12021 Woodruff
Downey, Ca. 90241

**SAMPLE:** F-914; F# B-3, 20 feet
F-915; F# B-4, 20 feet
F-916; F# B-4, 30 feet

| | RESULTS | | |
|---|---|---|---|
| **PARAMETER** | **F-914** | **F-915** | **F-916** |
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 285 | 12 | 14 |

**Method of analysis:**

(1) Method 418.1, Methods for Chemical Analysis of Water Wastes, EPA-600/4-79-020, March 1983.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Yau-Sang Hwang
Analyst

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ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92668 - 714/771-6900 FAX 714/538-1209

CLIENT

Tank Protect Engineering (1895)
1963 North Main
Orange, CA 92665

Attn: Doug Rose

LAB NO. F72506

REPORTED 09/29/89

SAMPLE Soil

RECEIVED 09/27/89

IDENTIFICATION Kirkhill, Inc.
12021 Woodruff, Downey

BASED ON SAMPLE As Submitted

| | Hydrocarbons (418.1) (mg/kg) |
|---|---|
| B-5 | 27 |
| B-6 | 158 |

ASSOCIATED LABORATORIES

Edward S. Behare, Ph.D.

ESB/ql

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# Analytical Report

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ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 10/17/89 | Date Analyzed | 10/17/89 |
| Date Submitted | 10/17/89 | Lab No. | G-115, G-116 |

CLIENT: Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

SITE: Kirkhill
12021 Woodruff
Downey, CA. 90241

SAMPLE: G-115; F#B-5, 15' grab soil sample
G-116; F#B-5, 30' grab soil sample

RESULTS

| PARAMETER | G-115 | G-116 |
|---|---|---|
| Total petroleum hydrocarbons (Gasoline), mg/kg (1) | N.D.,<10 | N.D.,<10 |

Method of Analysis:
(1) DHS Recommended procedure; Leaking Underground Fuel Tank (LUFT) Field Manual, California SWRCB, December 1987.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Analyst

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# Analytical Report

State Approved Hazardous Waste Testing Laboratory • Certificate #133

ENSOTECH INC

Date Sampled 10/17/89 Date Analyzed 10/17/89

Date Submitted 10/17/89 Lab No. G-112, G-113, G-114

**CLIENT:** Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

**SITE:** Kirkhill
12021 Woodruff
Downey, CA. 90241

**SAMPLE:** G-112; F#B-6, 15' grab soil sample
G-113; F#B-6, 30' grab soil sample
G-114; F#B-6, 40' grab soil sample

RESULTS

| PARAMETER | G-112 | G-113 | G-114 |
|---|---|---|---|
| Total petroleum hydrocarbons (Gasoline), mg/kg (1) | N.D.,<10 | N.D.,<10 | N.D.,<10 |

**Method of Analysis:**
(1) DHS Recommended procedure; Leaking Underground Fuel Tank (LUFT) Field Manual, California SWRCB, December 1987.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Analyst

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ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92668 - 714/771-6900
FAX 714/538-1209

CLIENT

Tank Protect Engineering (1895)
1963 North Main
Orange, CA 92665

Attn: Doug Rose

LAB NO. F76181
REPORTED 11/01/89
RECEIVED 10/31/89

SAMPLE Soil
IDENTIFICATION Kirkhill
BASED ON SAMPLE As Submitted

| | Hydrocarbons (418.1) (mg/kg) |
|---|---|
| VS-1 | ND<10 |
| VS-2 | ND<10 |
| VS-3 | ND<10 |
| VS-5 | ND<10 |
| VS-6 | 27,100 |
| VS-7 | ND<10 |

ASSOCIATED LABORATORIES

Edward S. Behare, Ph.D.

ESB/ql

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FAX 714/538-1209

CLIENT

Tank Protect Engineering (1895)
1963 N. Main St.
Orange, CA 92665

Attn: Doug Rose

LAB NO. F76498
REPORTED 11/07/89
RECEIVED 11/06/89

SAMPLE Soil
IDENTIFICATION Kirkhill, VS-8
BASED ON SAMPLE As Submitted

| | |
|---|---|
| Hydrocarbons (418.1) | 55 mg/kg |

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ESB/ql

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# Analytical Report

ENSOTECH INC

State Approved Hazardous Waste Testing Laboratory • Certificate #133

| | | | |
|---|---|---|---|
| Date Sampled | 11/22/89 | Date Analyzed | 11/28/89 |
| Date Submitted | 11/27/89 | Lab No. | G-486, G-487, G-488 |

CLIENT: Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

SITE: Kirkhill
12021 Woodruff
Downey, Ca. 90241

SAMPLE: G-486; field #VS-1, grab soil sample
G-487; field #VS-2, grab soil sample
G-488; field #VS-3, grab soil sample

| | RESULTS | | |
|---|---|---|---|
| PARAMETER | G-486 | G-487 | G-488 |
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 33 | 17 | 37 |

Method of analysis:
(1) Method 418.1, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Analyst

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# Analytical Report

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ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 11/22/89 | Date Analyzed | 11/28/89 |
| Date Submitted | 11/27/89 | Lab No. | G-489, G-490 |

revised

CLIENT: Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

SITE: Kirkhill
12021 Woodruff
Downey, Ca. 90241

SAMPLE: G-489; field #VS-4, grab soil sample
G-490; field #VS-5, grab soil sample

| | RESULTS | |
|---|---|---|
| PARAMETER | G-489 | G-490 |
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 87 | 55 |

**Method of analysis:**
(1) Method 418.1, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Analyst

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# APPENDIX D

## LOGS OF TEST BORINGS

| MAJOR DIVISIONS | | | | | TYPICAL NAMES |
|---|---|---|---|---|---|
| COARSE-GRAINED SOILS (MORE THAN HALF IS LARGER THAN No. 200 SIEVE) | GRAVELS (MORE THAN HALF COARSE FRACTION IS LARGER THAN No. 4 SIEVE SIZE) | CLEAN GRAVELS WITH LITTLE OR NO FINES | GW | | WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES |
| | | | GP | | POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES |
| | | GRAVELS WITH OVER 12% FINES | GM | | SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES |
| | | | GC | | CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES |
| | SANDS (MORE THAN HALF COARSE FRACTION IS SMALLER THAN No. 4 SIEVE SIZE) | CLEAN SANDS WITH LITTLE OR NO FINES | SW | | WELL-GRADED SANDS, GRAVELLY SANDS |
| | | | SP | | POORLY GRADED SANDS, GRAVELLY SANDS |
| | | SANDS WITH OVER 12% FINES | SM | | SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES |
| | | | SC | | CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES |
| FINE-GRAINED SOILS (MORE THAN HALF IS SMALLER THAN No. 200 SIEVE) | SILTS AND CLAYS (LIQUID LIMIT 50% OR LESS) | | ML | | INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY |
| | | | CL | | INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS |
| | | | OL | | ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY |
| | SILTS AND CLAYS (LIQUID LIMIT GREATER THAN 50%) | | MH | | INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS |
| | | | CH | | INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS |
| | | | OH | | ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS |
| HIGHLY ORGANIC SOILS | | | Pt | | PEAT AND OTHER HIGHLY ORGANIC SOILS |

■ – "Undisturbed" S&H or Shelby tube sample

⊘ – Bulk or classification sample

⊠ – Standard Penetration Test sample

▤ – No sample recovered

I – Core sample

Blows/ft – Blows required to drive sampler 12 inches with a 140-pound hammer falling 30 inches. Blow counts for S&H samplers are converted to approximate "equivalent" SPT N values (N = 0.5 X S&H blows per foot)

HC Odor – Hydrocarbon Odor

- No – No Odor
- Lo – Slight Odor
- Md – Moderate Odor
- Sg – Strong Odor

PID – Photoionization Detector reading (10.2-electron-volt lamp, calibrated using a benzene standard)

OVA – Organic Vapor Analyzer (flame ionization detector) calibrated using a methane standard

* – Sample submitted for chemical analysis

** – Based on HLA Temporary Bench Mark (TBM) shown on Plate 2. Assumed elevation = 100.00'.

KEY TO BORING LOG

Tank Protect Engineering
*Environmental Management*

SOIL CLASSIFICATION CHART & KEY TO BORING LOG

PLATE 2

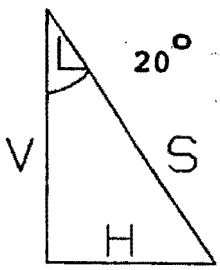
| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| HK | 19233.001.11 | CS | 5/89 | | |

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B-1

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft. | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay, Plastic (CL) | No | | | 4-10-12 |
| 20 * | No Recovery Twice | | | | 4-12-20 |
| 25 * | Yellow Sand (SP) Medium-grained | No | | | 22-45-50 |
| 30 * | SP Medium-grained | No | | | 12-32-45 |
| 35 * | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

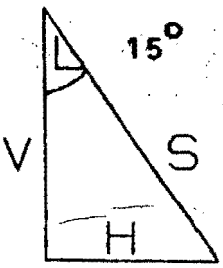
DRILLING DATE: 09/26/89

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B- 2

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay (CL) | No | | | 5-11-20 |
| 20 * | Brown Clay (CL) | No | | | 6-10-13 |
| 25 * | Yellow Sand (SO) Fine-grained | No | | | 10-33-40 |
| 30 * | SP | No | | | 13-21-50 |
| 35 | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

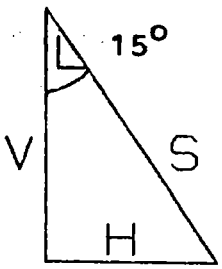
DRILLING DATE:

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B- 3

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|---|
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | * | Brown Clay, Moist (CL) | No | | | 5-11-15 |
| 20 | * | CL, Moist | No | | | 12-20-35 |
| 25 | * | Yellow Sand (SP) Fine-grained | No | | | 5-17-20 |
| 30 | | | | | | |
| 35 | | | | | | |
| 40 | | | | | | |
| 45 | | | | | | |
| 50 | | | | | | |
| 55 | | | | | | |
| 60 | | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

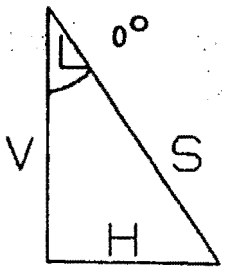
DRILLING DATE:

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B - 4

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft. | BLOWS COUNT |
|---|---|---|---|---|---|---|
| | | 3" Asphaltic Concrete | | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | * | Brown Clay (CL) | No | | | 4-6-9 |
| 20 | * | Brown Clay (CL) | No | | | 7-9-16 |
| 25 | | | | | | |
| 30 | * | Yellow Sand (SP)<br>Fine Grained | No | | | 13-23-35 |
| 35 | | | | | | |
| 40 | * | Silts (ML)<br>Dense, Moist, Fine-grained | No | | | 5-11-13 |
| 45 | | | | | | |
| 50 | | | | | | |
| 55 | | | | | | |
| 60 | | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

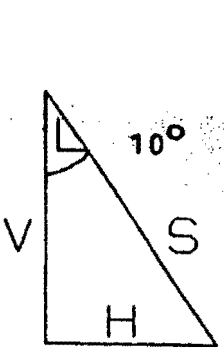
DRILLING DATE: 09/26/89

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B - 5

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft. | BLOWS COUNT |
|---|---|---|---|---|---|---|
| | | 3" Asphaltic Concrete | | | | |
| 5 | | | | | | |
| 10 | * | Brown Silty Clay (CL) | No | | | 6-12-13 |
| 15 | * | CL | No | | | 4-8-12 |
| 20 | * | Brown Sandy Clay (CL) | Lo 15 | | | 5-15-25 |
| 25 | * | Silty Sand (SM) | No | | | 6-7-23 |
| 30 | * | SM | Lo | | | 5-12-35 |
| 35 | * | Sand (SP) | No | | | 6-10-32 |
| 40 | * | Silts (ML) Moist | No | | | 12-18-22 |
| 45 | | | | | | |
| 50 | | | | | | |
| 55 | | | | | | |
| 60 | | | | | | |

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

DRILLING DATE: 09/27/89

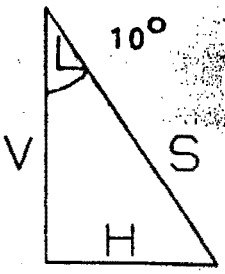
DRILL HOLD NO: B-5

TANK PROTECT ENGINEERING
ENVIRONMENTAL MANAGEMENT

# LOG OF BORING B - 6

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|---|
| | | 3" Asphalt Concrete<br>Brown Silty Clay (CL) | | | | |
| 5 | | | | | | |
| 10 | * | Brown Silty Clay (CL) | No | | | 3-6-10 |
| 15 | * | CL | No | | | 6-15-18 |
| 20 | * | Poorly Graded Sands (SP) | No | | | 4-15-25 |
| 25 | | | | | | |
| 30 | * | Brown Sandy Clays (CL) | No | | | 12-35-50 |
| 35 | | | | | | |
| 40 | * | Silty Soils (ML)<br>Moist | No | | | 12-15-20 |
| 45 | | | | | | |
| 50 | | | | | | |
| 55 | | | | | | |
| 60 | | | | | | |

PROJECT: Kirkhill
LOCATION: 12021 Woodruff
Downey, CA 90242

DRILLING DATE: 09/27/89

DRILL HOLD NO: B-6

10148

# TANK CLOSURE AND SITE REMEDIATION REPORT

For

**KIRKHILL, INC.**

12021 Woodruff

Downey, CA 90241

June 5, 1990

Submitted by:

**TPE ENVIRONMENTAL, INC.**

TPE
ENVIRONMENTAL
"ENVIRONMENTAL & GEOTECHNICAL CONSULTING"

E90-1514.A

June 5, 1990

Kirkhill, Inc.
12021 Woodruff
P.O. Box 7012
Downey, CA 90241-0030

Attention: Mr. Raymond Ballanger

**Subject: Tank Closure and Site Remediation Report**
**Kirkhill, Inc.**
**12021 Woodruff**
**Downey, CA 90241**

Dear Mr. Ballanger:

Based on the information requirements specified by the Department of Public Works, County of Los Angeles (File No. I-12987, dated 5/17/90) in their review of the subject report, we are herewith submitting the following information:

1. Two geological cross sections (refer to Figure 1 and Figure 2) along $A_1$ - $A_2$ and $B_1$ - $B_2$ of the plot plan (refer to Figure 3). The contaminated soil was excavated and treated/disposed.

2. A total of 54 $yds^3$ of oil contaminated soil and clumps of diesel contaminated soil was removed from Tank #1 and Tank #2 pits, and shipped under manifest to Casmalia Resources, NTU Road, Casmalia, CA 93429. Remaining contaminated soil of approximately 50 $yds_3$ was removed and treated on-site using Tank Protect Engineering's hydrogen peroxide process with silica catalyst. The treated soil was backfilled into the pits using Tank Protect Engineering's standard compaction procedures. Calculations on the excavated soils are presented in Appendix A. Location of different soil spoils during excavation are depicted in Figure 3.

3. Figure 4 contains the location of the tank post-excavation backhoe samples collected from each pit and/or stockpile, marked with yellow color. Figure 5 contains the location of tank post-excavation borehole samples, marked with yellow color. Figure 5 contains the location of deep excavation verification samples, marked in pink color. Figure 6 contains the location of treatment verification samples from soil spoil piles, marked in yellow color.

1963 N. Main St.
Orange, CA 92665
714/921-0888
213/592-4771
FAX: 714/921-1832

4. Appendix B contains field raw-data boring logs and the refined boring logs showing depths and contamination levels. The logs contain available information on description of the earth material (USCS), drilling date, and signature of a registered Civil Engineer. Description of the drilling, and soil sampling, handling and preparation procedures used is in Appendix C.

5. A list containing all laboratory samples and field equivalent numbers is given in Appendix D.

6. During borings, except for borehole #5, none of the holes indicated hydrocarbon contamination by the Gas Techtor Organic Vapor Meter (refer to Appendix B).

In borehole #5, the Gas Techtor detected low concentrations (about 15 ppm) of hydrocarbon contamination in samples collected at 20′ and 30′ depths. The borehole was further drilled up to 40′ depth, and field and laboratory measurements detected no hydrocarbon contamination. Therefore, it is obvious from the boring logs that none of the borings were terminated at any depth showing contamination. It is to be noted that, excavation and direct disposal or treatment of soil was conducted wherever there was suspected contamination.

7. Sample handling protocol:

Each of the post-excavation samples K-1 to K-7, verification samples VS-1 to VS-8 (no laboratory #) during excavation, and verification samples after treatment VS-1 to VS-5 (laboratory #'s G486 to G490) were immediately packed overflowing into brass jars, capped with a polyethylene lid, sealed with duct tape, labeled and immediately placed into a refrigerated ice chest. The samples were then transported by a company vehicle to state certified laboratories (Ensotech, Inc. and Associated Laboratories) under a chain of custody (refer to Appendix E for the completed chain-of custody forms).

In sampling all six boreholes, a split-barrel sampler with clean brass liners was primarily used. In some instances, samples were acquired by grabbing drill cuttings and placing them overflowing into clean glass jars. A total of 12 samples suspected for hydrocarbon contamination were collected and submitted for laboratory chemical analyses. Sampling details are as follows:

| Sample Number | Sample Location | Test Required |
|---|---|---|
| B-1, 15′ | Borehole #1, Depth 15′ | 418.1 |
| B-2, 20′ | Borehole #2, Depth 20′ | 8015 |

| | | |
|---|---|---|
| B-3, 20′ | Borehole #3, Depth 20′ | 418.1 |
| B-4, 20′ | Borehole #4, Depth 20′ | 418.1 |
| B-4, 30′ | Borehole #4, Depth 30′ | 418.1 |
| B-5, 15′ | Borehole #5, Depth 15′ | 418.1 |
| B-5, 20′ | Borehole #5, Depth 20′ | 418.1 |
| B-5, 30′ | Borehole #5, Depth 30′ | 418.1 |
| B-6, 15′ | Borehole #6, Depth 15′ | 418.1 |
| B-6, 20′ | Borehole #6, Depth 20′ | 418.1 |
| B-6, 30′ | Borehole #6, Depth 30′ | 418.1 |
| B-6, 40′ | Borehole #6, Depth 40′ | 418.1 |

Each of the samples was collected in a clean brass liner or a clean glass jar, tightly capped with polyethylene caps on each end or lid, sealed with duct tape, labeled and immediately placed in a refrigerated ice chest. The samples were transported to state certified laboratories (Ensotech, Inc. and Associated Laboratories) under chain-of-custody (refer to Appendix E for the completed chain of custody forms).

8. On the DPW permit, naphthalene type oil was indicated as cutting oil (refer to permit #5999, Appendix F). The trade name for the cutting oil is EDGIFLEX-200. Chemically, cutting oil contains petroleum distillate. The chemical family name for this oil is petroleum hydrocarbon. The common name for the cutting oil is naphthenic type oil. The oil is a ~~complex~~ mixture of naphthenic, paraffinic and aromatic petroleum hydrocarbons. From the information provided by the cutting oil manufacturers (refer to Edgington Oil Company, Inc., Material Safety Data Sheet, Appendix G), there is no indication of the presence of naphthalene as a chemical compound in the oil. In addition, it is noted by Bellanger that the oil referred to here as a cutting oil is not a thread cutting oil. Therefore, during the closure or remediation of the subject site, for all purposes, the contaminant was considered and tested (by EPA Method 418.1) as petroleum hydrocarbon and no reference of naphthalene was made.

9. Treatment process used in the remediation:

Excavation of Soil:

Using a 235 Ecco Excavator, contaminated soil was excavated up to 23′ below ground surface in Tank #1 pit and Tank #2 pit on 10/31/89. During the excavation, OVA monitoring and visual observation was utilized to determine the extent of contamination. A total of eight verification samples were collected using the excavator. Refer to Appendix E for the chain-of-custody. Six samples (VS-1, VS-2, VS-3, VS-5, VS-6 and VS-7) were analyzed by a state certified laboratory (Associated Laboratories) to characterize the soil contamination profile. Laboratory test results (refer to Appendix E) indicated a high level of TPH (27,100 mg/kg) in soil sample VS-6 from the west end of oil tank pit #1. Non-detectable levels of TPH were reported in the remaining five samples. Additional excavation down to 25′ was conducted on 11/6/89 in the west end of the oil tank pit #1. The contaminated soil was removed and piled separately. Soil sample VS-8 was collected from the newly excavated depth and analyzed for TPH. Laboratory results showed allowable concentration of TPH (55 mg/kg). Therefore, no further excavation was beyond the 25′ depth was required.

Similar to oil tank pit #1; sampling/testing, over excavation to 23′ depth, and resampling/testing was performed in diesel tank pit #2. These details are shown on Figure 2.

Treatment:

Based on the chemical analyses and visual observation, a total of approximately 56 $yds^3$. of non-treatable naphthenic type oil contaminated soil and clumps of diesel contaminated soil was hauled to a state approved disposal facility under manifest (refer to Appendix H for completely filled in manifest forms).

The remaining approximately 50 $yds^3$ of excavated soil was treated by TPE soil remediation process using a special silica catalyst and hydrogen peroxide to oxidize the hydrocarbons. Refer to Appendix I for details of the treatment process.

On 11/22/90 five grab soil samples VS-1 to VS-5 were collected from the treatment piles (as depicted in Figure 6) and chemically tested for TPH using EPA Method 418.1. The chemical analyses detected (refer to Appendix E) TPH values <100 mg/kg (17 mg/kg to 87 mg/kg). Therefore, further treatment of the contaminated soil was terminated, and the excavated pits were backfilled with the clean, treated soil and additional imported clean soil using TPE's standard compaction procedure (according to the contract).

10. As per the Tank Removal Proposal/Contract between Kirkhill, Inc. and Tank Protect Engineering dated 7/28/89 (page 2, paragraph 6) the excavated pits were backfilled using TPE's standard compaction procedure. In the DPW Closure Permits {refer to Appendix F, Permit #'s 5999 (File #12987 R/C 1F) and 6000B (File #12987 R/C 1F)}, Closure Permit Supplements {refer to Appendix F, Permit #'s 12987-1F and 6000B (File #I-12987-1F)}, and City of Downey Fire Department permit for tank closure (refer to Appendix F), the requirement of certified soil compaction was not specified.

    Proper backfilling and compaction procedures followed by TPE at the subject site included:

    > Imported and treated soil was placed in the excavated pits using 8" lifts. Utilizing vibrating plates, compaction (anticipating that there will not be any future construction at the excavated site) was achieved for each lift. During the backfill, moisture condition of the soil was observed.

11. Figures 7 and 8 are the legible location map and a plot plan respectively showing two adjacent cross streets and a north arrow.

12. Lithology of the site subsurface contains clays, sands and silts within the 40' drilled depth. Clays are moist, plastic and brown in color. They extend uniformly to about 22'depth in the site area. Due to the possible disturbance during the building construction, clays and sands encountered in borehole #5 and borehole #6 under Tank #4 appear to be disturbed (due to anthropogenic causes). If they were to represent the natural geological setting, they represent a vertical facies change which is not anticipated from the regional geology. A sand layer of about 8' thick underlies the clay layer. Sands are yellow in color, poorly-sorted-ranging in grain size from fine grained to medium grained. Vertically the sand bed ranges in composition from clayey sands, to sands and silty sands. The sands are underlined by silty sands and silts. Silts and silty sands are moist, dense and fine grained. Subsurface geology observed in all six boreholes drilled at the site is matching with the regional geology. Hydrogeologically, the subject site is located in the Gaspur water-bearing zone. Regionally, the Gaspur water-bearing zone is located in the extensive lowland of the coastal plain in Los Angeles and Orange Counties which is called the "Downey Plain". Essentially, the Downey Plain comprises the alluvial fans of the Los Angeles, San Gabriel, and Santa Ana Rivers. The subject site is located near the San Gabriel River. A regional geological cross section (refer to Figure 9) near the subject site (near Firestone Blvd.) from plate Number 7 of the geological survey water-supply paper 1109 entitled "Ground-Water Geology of the Coastal Zone, Long Beach - Santa Ana Area,

California" reveals the presence of clays near the surface, underlined by interbedded silts, silty clays, sandy silts and sands. Boreholes drilled at the site up to a depth of 40' encountered no groundwater. The nearest recorded water well (#1587) to the subject site (approximately 0.2 miles east from the subject site) indicates groundwater depth to be 89' from the surface (measured in April, 1989). The top of the sandy/sand and gravel of Gaspur water-bearing zone at the subject site is around 60' deep from the surface.

13. Site History (Past and Present Business Operation):

Land use of the subject site until 1952 was for agricultural purposes. In 1952 the site was initially developed for the current industrial use by the construction of buildings. Fuel Tank #4 was installed (along with the building construction) in 1952 to store diesel fuel. Over the course of time, with the expansion of the facility's business, the other three tanks (Tank #1, Tank #2, and Tank #3) were installed. Approximate periods of installation of the three tanks are: Tank #1, mid to late 60's, Tank #2 in 1974, and Tank #3, early 70's. Currently, the site is used for manufacturing rubber goods used in plumbing.

14. Detailed Information on Abandonment-In-Place of Tank:

Due to the likelihood of building foundation disturbances by the excavation operations, and difficult site conditions to approach the underground storage tank (UST) #4, it was decided to abandon the tank in place. To this affect, permits (refer to Appendix F) were obtained from the Department of Public Works (DPW), Waste Management Division, Los Angeles County (Closure Permit No. 6000B, File No. I-12987-1F) and from Fire Department, City of Downey (dated 8/10/89). To investigate the possibility of contamination from the UST, as per the specification of the DPW permit, two boreholes were drilled on either side of the tank, up to a depth of 40' (borehole numbers 5 and 6). In the laboratory, chemical analyses using EPA Method 418.1 (as per the supplemental permit, refer to Appendix F) were performed. Except for samples collected at 20' depth, no other sample (at 15', 30' and 40') in both the wells showed any detectable TPH. Analysis of the samples collected at 20' depth in borings B-5 and B-6 detected low TPH contents of 27 and 158 mg/kg, respectively. The presence of less permeable clays below the contaminated zone, groundwater level at approximately 90' depth, and the presence of allowable concentrations of TPH contamination (per LUFT Field Manual and past/current DPW/WMD guidelines), confirmed the decision to abandon the tank in place. Leaching potential analysis for diesel using Table 2-1 of Leaking Underground Fuel Tank (LUFT) Field Manual revealed the following ratings for the subject site:

| | | | |
|---|---|---|---|
| * | Minimum depth to groundwater | 89' | 9 pts. |
| * | Fractures in subsurface | None | 10 pts. |
| * | Average annual precipitation | 10-25" | 9 pts. |
| * | Man made conduits | None | 10 pts. |
| * | Unique site features | At least one | 9 pts. |
| | Total Points | | 47 pts. |

Thereofore the maximum allowable TPH (Diesel) levels at the subject is 1000 ppm.

The tank was cleansed using standard triple rinse methods on 8/24/89 (by Roadwest Oil and Vacuum Company, Inc., Whittier, CA 90603) and abandoned in place by filling it with a slurry mixture as approved by the Fire Department. 400 gallons of rinse water derived from cleaning was disposed under manifest (refer to Appendix H, Manifest Document #89809229, dated 8/24/89) at DeMenno/Kerdoon, 2000 N. Alameda Street, Compton, CA 90222.

15. Site Health and Safety Plan:

For each job conducted by TPE, a standard site health and safety plan is followed. TPE has a seven sectioned corporate safety manual. TPE field personnel have undergone hazardous waste handling health and safety training. An example of the short version of health and safety plan followed at the subject site is attached in Appendix J.

In the Tank Protect Engineering progress report (dated 12/5/89) page 2, paragraph 2, it was noted that originally (in the DPW permit #5999) liquid contents of Tank #1 and Tank #3 were mistakenly identified as diesel and oil, respectively. Based on Tank Protect Engineering's on-site investigation of historical events, it was indicated that the correct contents of Tank #1 was naphthenic type oil and that of Tank #3 was diesel.

Nearly all of the information provided in the above description was derived either from the Final Closure Report submitted by TPE Environmental on 2/26/90, or from the work progress report submitted to the Department of Public Works, County of Los Angeles on 12/5/89. Therefore, it is TPE Environmental's opinion that most of the information provided here is repetitive from previous reports incurring extra efforts and expenditure on behalf of the TPE Environmental Staff. It is requested that Los Angeles County DPW, WMD issue a closure letter for this project as soon as possible to Kirkhill, Inc. with a copy to TPE Environmental.

Thank you once again for the opportunity to be of service. If you should have any questions regarding any of the information provided above, please contact Mike Leonard.

Respectfully submitted,

**TPE ENVIRONMENTAL, INC.**

Michael L. Leonard, Sr., MSCE
General Manager/
Principal Engineer
RCE #31181, REA # 01960

Ravi P. Pendurthi, MES
Staff Hydrogeologist

MLL/RPP:jcc/E90-1514.A

Attachments: Figures
Appendices A-J

Distribution: (1) Addressee w/o attachments
(3) LA County DPW/HD Attention: Ofari Amoah
(1) California Regional Water Quality Control Board, Reference: Tank Closure and Site Remediation Report, Kirkhill, Inc., County of Los Angeles, Department of Public Works, File No. I-12987, dated May 17, 1990.
(1) File

REGISTERED PROFESSIONAL ENGINEER MICHAEL L. LEONARD NO. 31181 Exp. 12-31-92 CIVIL STATE OF CALIFORNIA

REGISTERED ENVIRONMENTAL ASSESSOR MICHAEL L. LEONARD NO. REA-01960 STATE OF CALIFORNIA

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


IN REPLY PLEASE
REFER TO FILE:
I-12987

May 17, 1990

Mr. Raymond Ballange
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballange:

**CLOSURE SITE ASSESSMENT**
**SOIL REMEDIATION REPORT**
**12021 WOODRUFF AVENUE, DOWNEY**

This office has reviewed the report submitted on February 28, 1990 which contained information on the Site Assessment and the remediation of soil contaminated with cutting oil and diesel subsequent to the removal of three underground storage tanks. The following information must be submitted to our office to aid the review process:

1. Provide a cross-section of the plume under each tank.
2. Indicate the total volume of the soil removed. Support your answer with calculations for the each tank pit.
3. Indicate the post-excavation samples from each pit and/or stockpile.
4. Submit the field raw-data boring logs and the refined boring logs showing depths and contamination levels. Boring logs must include the description of the earth material (USCS), drilling date, company methods and signed by either a registered Civil Engineer with sufficient experience in soil or engineering geologist/geologist.
5. Identify all sample shown on the laboratory report.
6. Explain why borings were terminated at depth which showed contamination.
7. Describe the handling protocol.

8. Explain why the presence of napthtalene was not indicated on the closure permit application.

9. Describe the treatment process (including progress reports) used for the remediation and the laboratory results of the confirmation samples.

10. Provide evidence of proper soil compaction.

11. Submit a legible location map and a plot plan showing two adjacent cross streets and a north arrow.

12. Describe site hydrogeology and its features.

13. Provide information on site history (past and present business operation).

14. Submit detailed information on abandonment-of-tank-in-place.

15. Submit the site Health and Safety Plan used during the excavation and the treatment process.

Please submit the request by June 22, 1990.

Pleas fell free to contact Ofori Amoah at (818) 458-3573 for any further assistance.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By _____
Ofori Amoah
UST Pilot Program
Waste Management Division

Reviewed _____
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

Enc.

cc: California Regional Water Quality
Control Board
Tank Protect Engineering

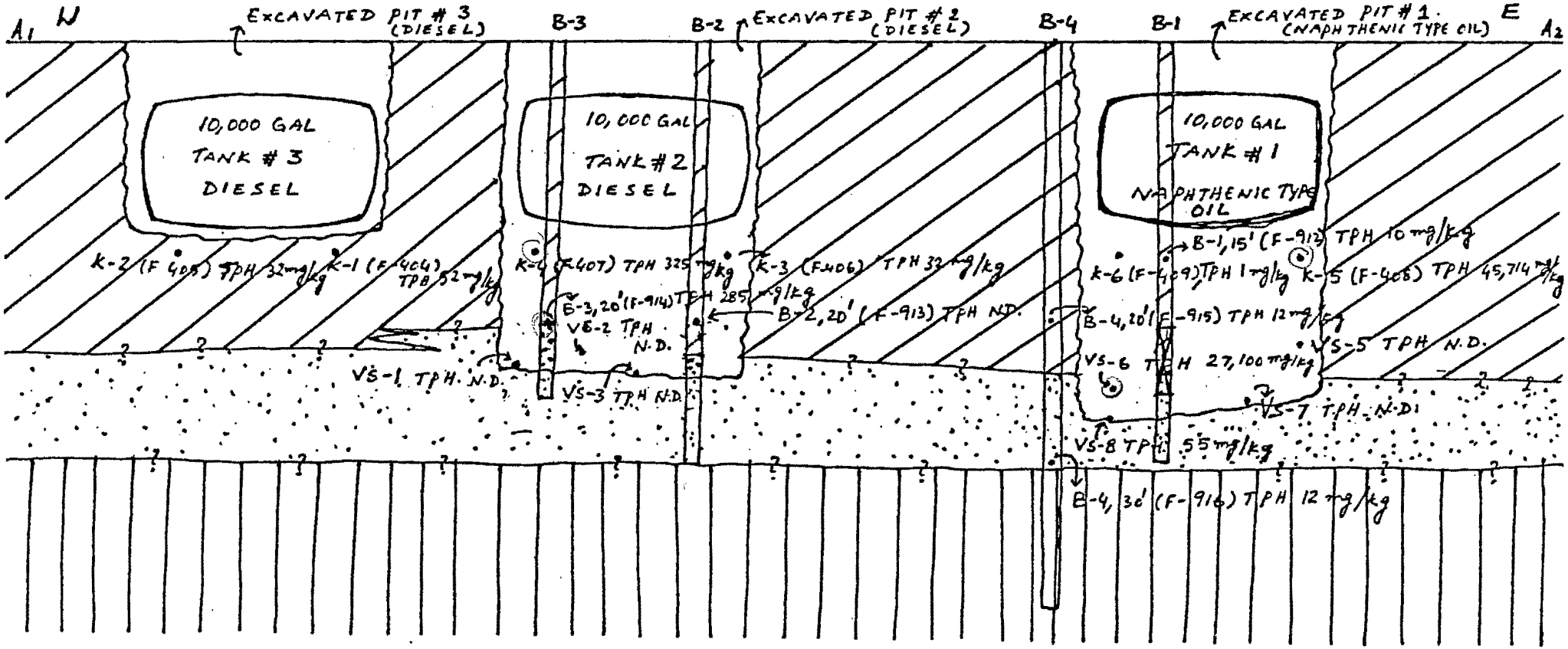
PP100 4/90

ts(3)/12987

## FIGURE 1: GEOLOGICAL CROSS-SECTION ALONG $A_1$-$A_2$ OF PLOT PLAN

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Groundwater Detected in Borings (Published Nearest Well Data Indicates Groundwater at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were indicated in Parentesis.

Scale: 1" = 10'. (H&V)
B-1, B-2, B-3, B-4: Projected Bore Hole Names
K__, B__, VS__: Sample Names
? = Interpreted Lithology

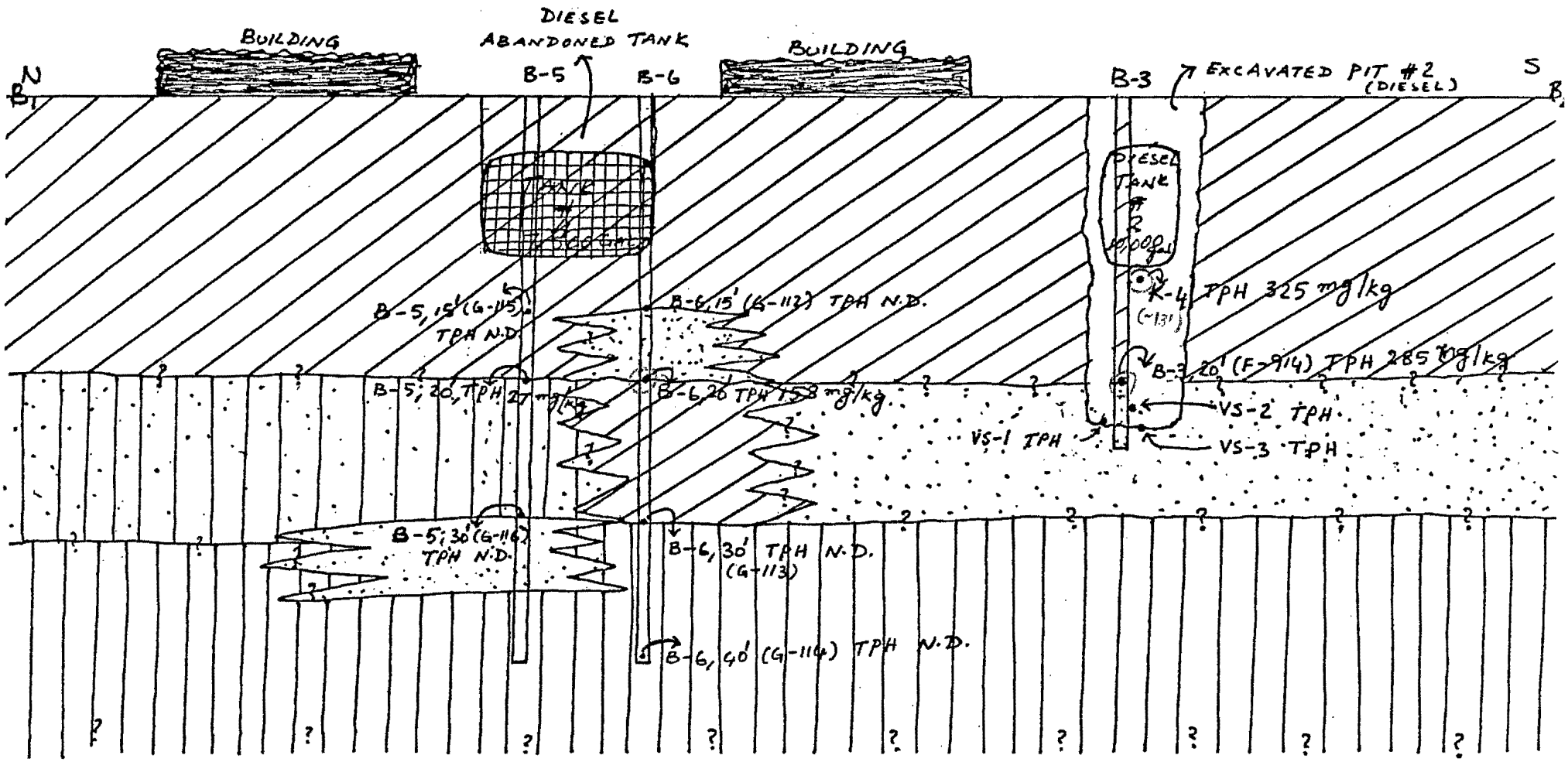
CLAY (CL) SILTS (ML)
SAND (SP) NO RECOVERY

Prepared by: R.P. Pendurthi, Staff Hydrogeologist RPP.
Approved by: M.L. Leonard, Certified C.E. MLL

## FIGURE 2: GEOLOGICAL CROSS-SECTION ALONG $B_1$-$B_2$ OF PLOT PLAN

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Groundwater Detected in Borings (Published Nearest Well Data Indicates Groundwater at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were Indicated in Parenthesis.

Scale: 1" = 10' (H&V)
B-3, B-5, B-6: Bore Hole Names (Projected)
K__, B__, VS__: Sample Names
? = Interpreted Lithology

CLAY (CL) SILTY SAND (SM)
SAND (SP) SILTS (ML)

Prepared by: R.P. Pendurthi, Staff Hydrogeologist *RPP*
Approved by: M.L. Leonard, Certified C.E. *MLL*

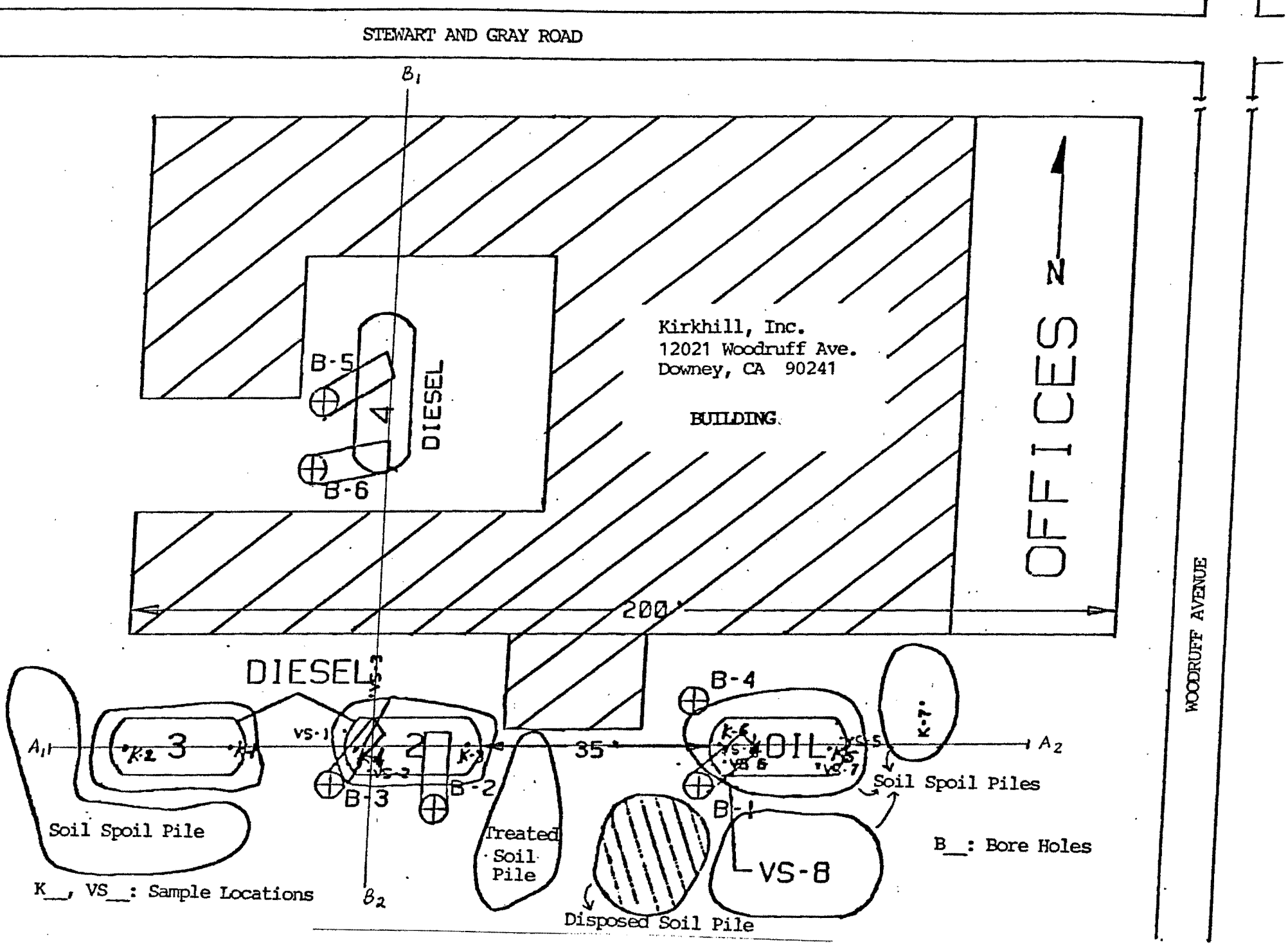



FIGURE 3 – PLOT PLAN AND CROSS-SECTION PLANES

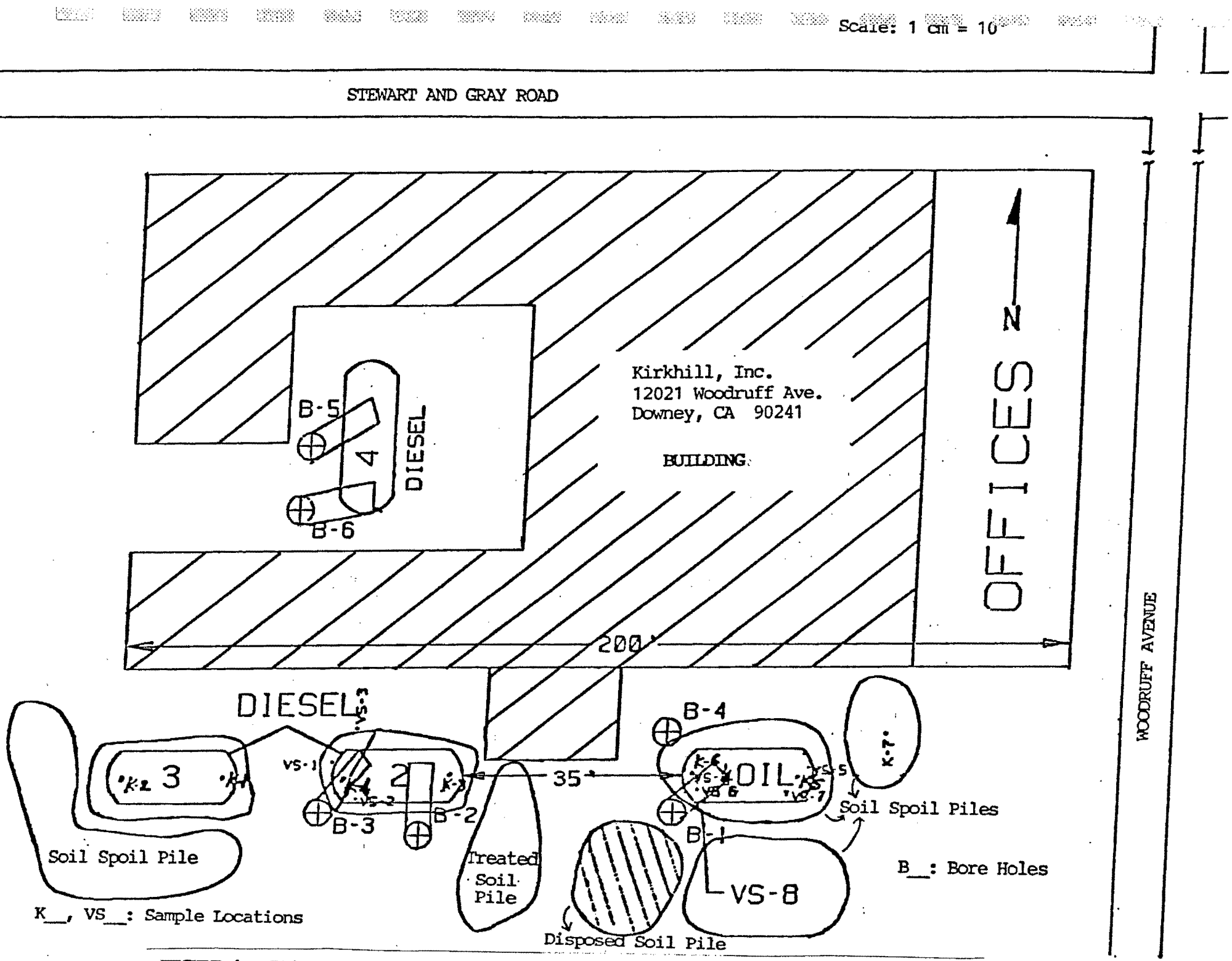
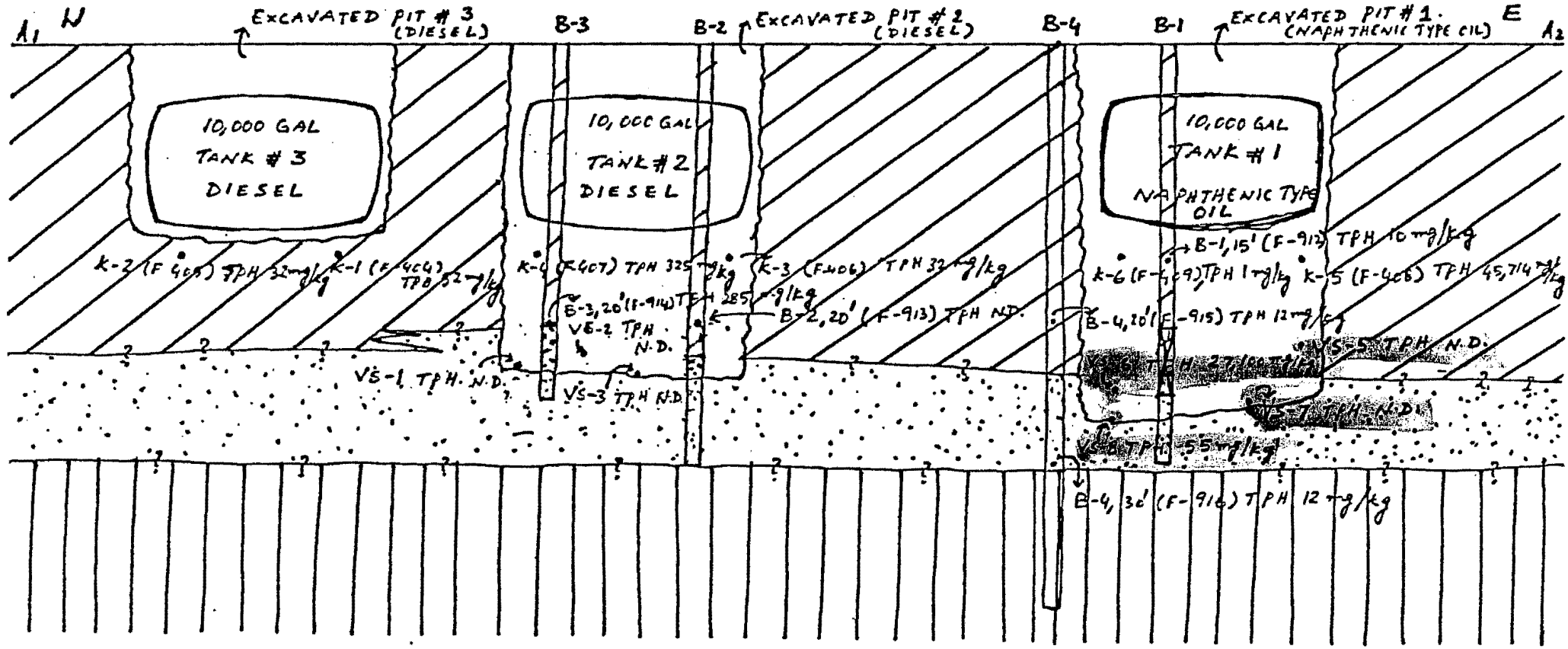



FIGURE 4 - PLOT PLAN SHOWING LOCATION OF POST TANK EXCAVATION SAMPLES (K-1 TO K-7)

## FIGURE 5 - GEOLOGICAL CROSS-SECTION ALONG $A_1$-$A_2$ OF PLOT PLAN SHOWING SAMPLE LOCATIONS

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Groundwater Detected in Borings (Published Nearest Well Data Indicates Groundwater at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were indicated in Parentesis.

Scale: 1" = 10'. (H&V)
B-1, B-2, B-3, B-4: Projected Bore Hole Names
K__, B__, VS__: Sample Names
? = Interpreted Lithology

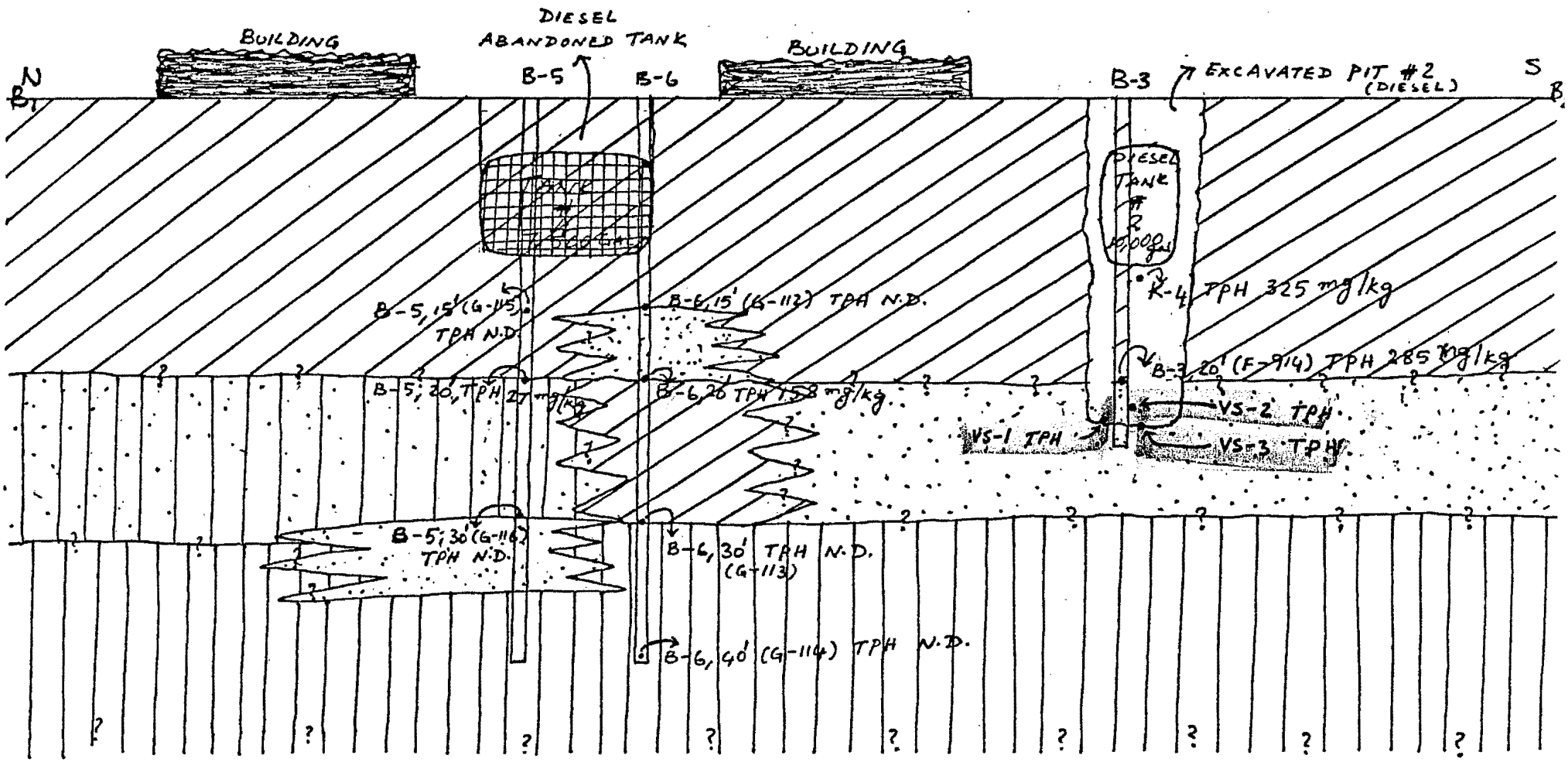
CLAY (CL) SILTS (ML)
SAND (SP) NO RECOVERY

Prepared by: R.P. Pendurthi, Staff Hydrogeologist RPP.
Approved by: M.L. Leonard, Certified C.E. MLL

## FIGURE 5 - GEOLOGICAL CROSS-SECTION ALONG $B_1$-$B_2$ OF PLOT PLAN SHOWING SAMPLE LOCATIONS

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Groundwater Detected in Borings (Published Nearest Well Data Indicates Groundwater at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were Indicated in Parenthesis.

Scale: 1" = 10' (H&V)
B-3, B-5, B-6: Bore Hole Names (Projected)
K__, B__, VS__: Sample Names
? = Interpreted Lithology

CLAY (CL) | SILTY SAND (SM) | SAND (SP) | SILTS (ML)

Prepared by: R.P. Pendurthi, Staff Hydrogeologist RPP.
Approved by: M.L. Leonard, Certified C.E. MLL

Scale: 1 cm = 10'

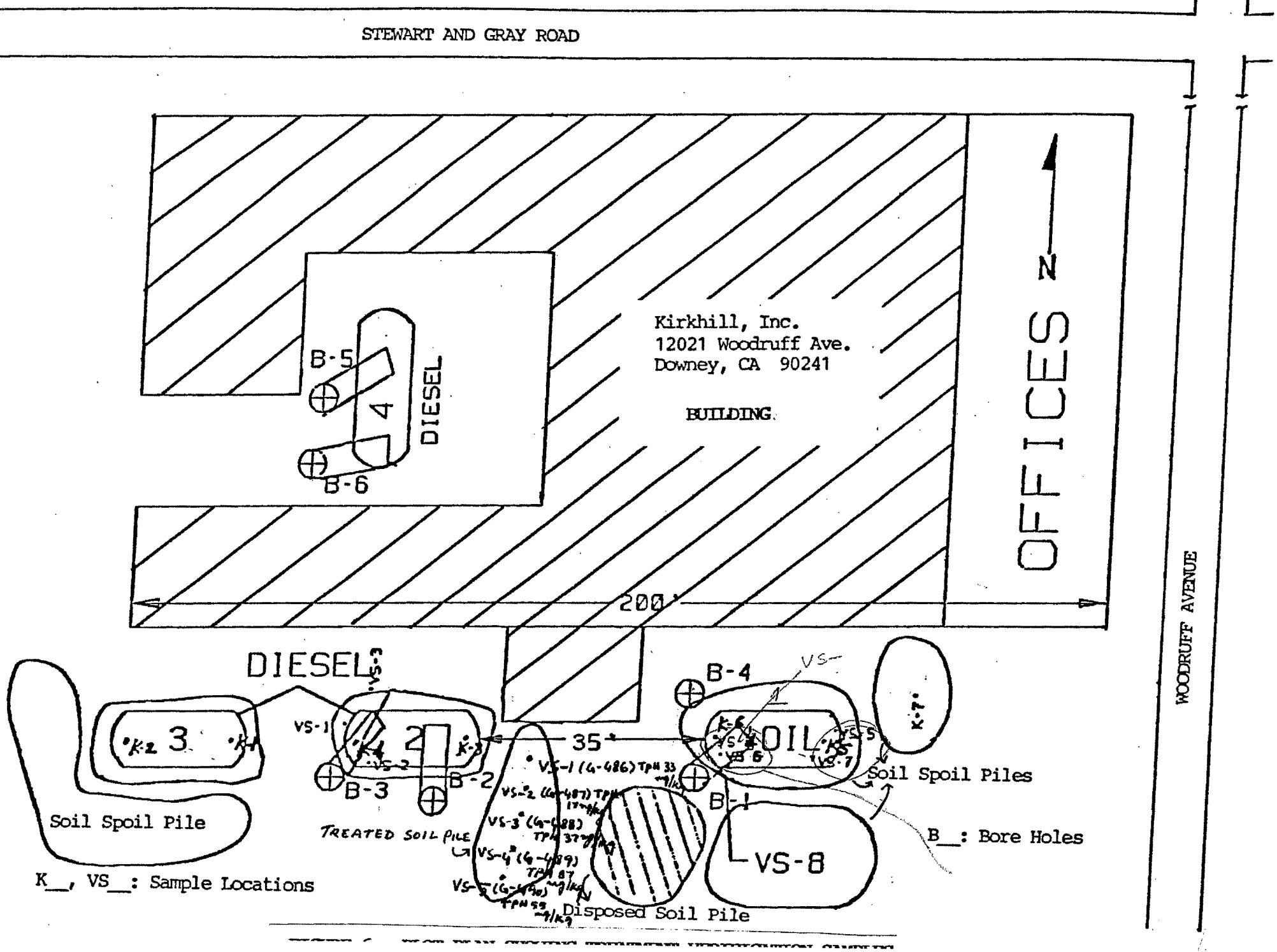

STEWART AND GRAY ROAD
Kirkhill, Inc.
12021 Woodruff Ave.
Downey, CA 90241
BUILDING
OFFICES
N
B-5
4
DIESEL
B-6
200'
DIESEL
3
2
B-3
B-2
B-4
OIL
B-1
VS-8
35'
VS-1 (4-486) TPH 33 mg/kg
TREATED SOIL PILE
Soil Spoil Pile
Soil Spoil Piles
Disposed Soil Pile
B__: Bore Holes
K__, VS__: Sample Locations
WOODRUFF AVENUE




FIGURE 7 – SITE LOCATION MAP

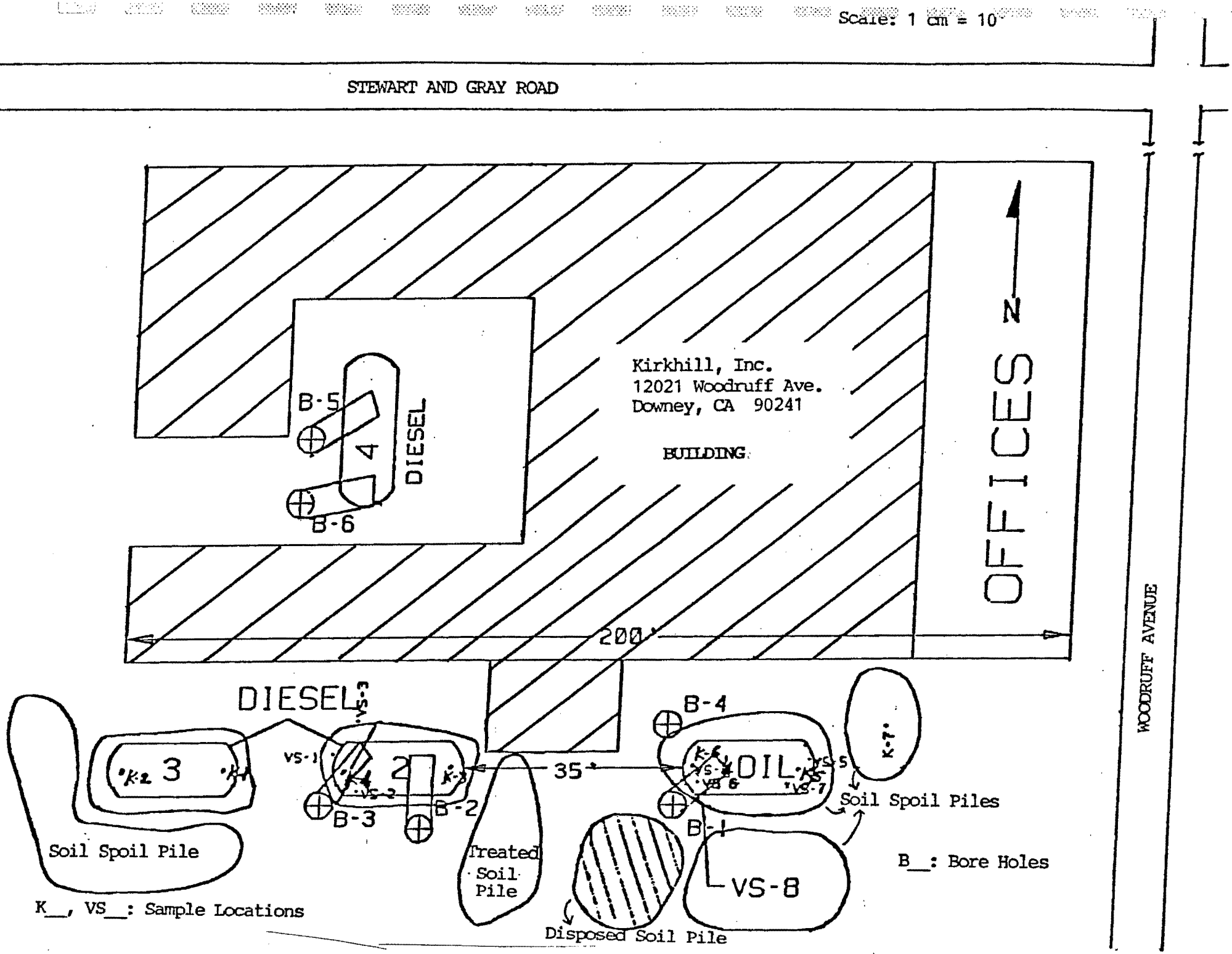



FIGURE 8 - PLOT PLAN

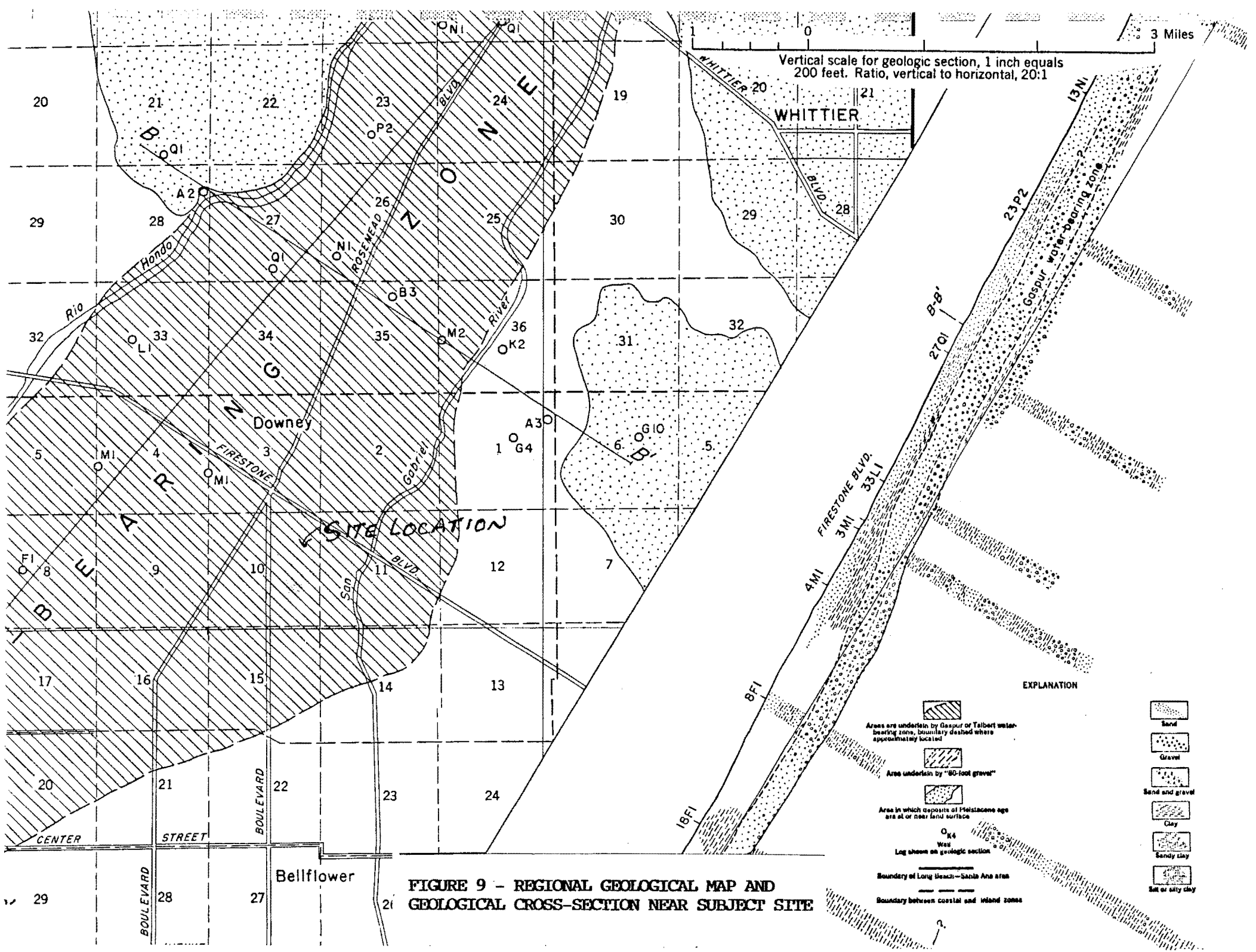
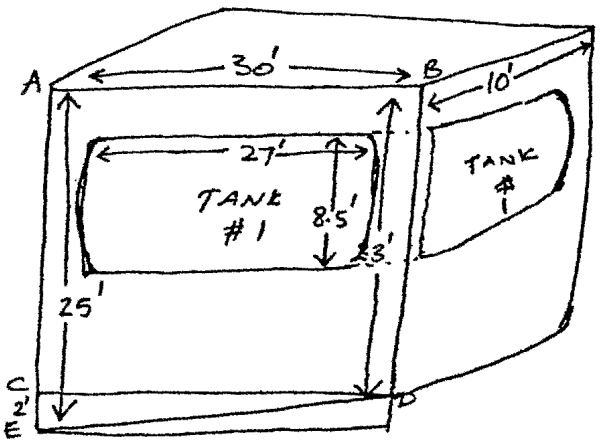



FIGURE 9 – REGIONAL GEOLOGICAL MAP AND GEOLOGICAL CROSS-SECTION NEAR SUBJECT SITE

# APPENDIX A

# CALCULATION OF EXCAVATED SOIL VOLUMES

TANK # 1 : Naphthenic Type Oil




Pit Volume of Tank #1 Pit (V)

V = Length x Width x Height

ABCD Volume ($V_1$) = 30' x 10' x 23' = 6,900 $ft^3$

CED Section Volume ($V_2$) = $\frac{1}{2}$ 30 x 10 x 2 = 300 $ft^3$

Total Tank# 1 Pit Volume (V) = $V_1 + V_2$ = 7,200 $ft^3$

= $7200/27$ = 266.7 $yd^3$

Tank #1 Volume ($T_1$)

Tank outer Diameter = 8.5' Length (h) = 27'

Tank Volume (T) $\approx \pi r^2 h$

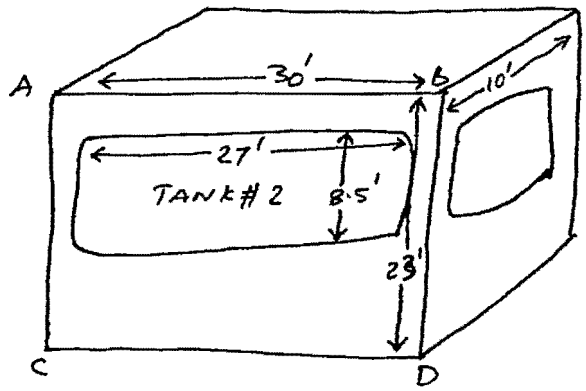
$T = \pi \times (4.25)^2 \times 27 = 1532.7$ $ft^3$

= $1532.7/27$ = 56.8 $yd^3$

Volume of Soil Excavated (S) = V − T

S = 266.7 − 56.8 = 209.9 $yd^3$

Tank # 2 : Diesel Tank

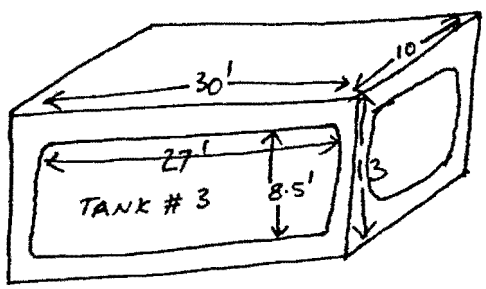



Pit volume = $30' \times 23' \times 10'$ = 6,900 $ft^3$
= 255.6 $yd^3$

Tank volume = $\pi (4.25)^2 27$ = 1532.7 $ft^3$
= 56.8 $yd^3$

Excavated Soil vol. = 255.6 − 56.8 = 198.8 $yd^3$

Tank # 3 : Diesel Tank




Pit Volume = $30' \times 13' \times 10'$ = 3900 $ft^3$
= 144.5 $yd^3$

Tank Volume = $\pi (4.25)^2 27$ = 1532.7 $ft^3$ ?
= 56.8 $yd^3$

Excavated Soil vol. = 144.5 − 56.8 = 87.7 $yd^3$

Total Volume of Three Tank Pits

$= 7200 + 6900 + 3900 = 18,000\ ft^3$

$= 666.7\ yd^3$

Total Volume of Three Tanks Removed

$= 1532.7 \times 3 = 4598.1\ ft^3$

$= 170.3\ yd^3$

Total Volume of Soil Excavated

$= 666.7 - 170.3 = 496.4\ yd^3$

Volume of Soil Disposed at a State Certified Disposal Facility $= 18\ yd^3 + 18\ yd^3 + 18\ yd^3 = 54\ yd^3$

Volume of Soil treated using TPE's Special Silica catalyst and hydrogen peroxide method

$\approx 50\ yd^3$

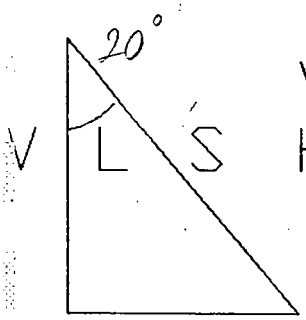
Uncontaminated Soil Excavated from Three Tank pits

$= 496.4 - (54 + 50) = 392.4\ yd^3$

Volume of Clean Soil Imported for Backfilling Three Excavated Tank pits.

$= 666.7 - (50 + 392.4) = \underline{224.3\ yd^3}$

# APPENDIX B




$V = S(\cos L)$
$H = S(\sin L)$

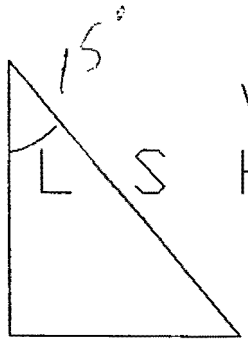
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ENGINEERING

# LOG OF DRILL HOLE

PROJECT: Kirkhill
LOCATION: 1202 Woodcroft

DRILL HOLE NO. B-1
DRILLING DATE: 9/26/89

| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | TPH PPM | V ft | H ft | BLOW COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 X | Brown clay, plastic (CL) | N.D | 14.09 | 5.13 | 4-10-12 |
| 20 X | No Recovery 1 twice. | | 18.79 | 6.84 | 4-12-20 |
| 25 X | Yellow Sand (SP) medium grained. | N.D | 23.49 | 8.55 | 22-45-50 (5") |
| 30 X | SP medium grained | N.D. | 28.19 | 10.26 | 12-32-45 |
| 35 X | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |




$V = S(\cos L)$
$H = S(\sin L)$

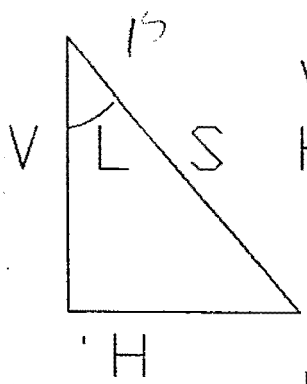
TANC PROTECT
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# LOG OF DRILL HOLE

PROJECT: Kirkhill
LOCATION:

DRILL HOLE NO. B-2
DRILLING DATE:

| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | TPH PPM | V ft | H ft. | BLOW COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown clay (CL) | Nb | 14.47 | 3.88 | 5-11-20 |
| 20 * | Brown clay (CL) | No | 19.32 | 5.17 | 6-10-13 |
| 25 * | Yellow Sand (SP) | No | 24.15 | 6.47 | 10-33-40 |
| 30 * | fine grained SP | No | 28.98 | 7.76 | 13-21-50 |
| 35 | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |




$V = S(\cos L)$
$H = S(\sin L)$

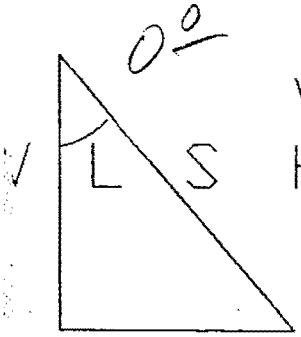
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ENGINEERING

# LOG OF DRILL HOLE

PROJECT: Kirkhill
LOCATION:

DRILL HOLE NO. B-3
DRILLING DATE:

| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | TPH PPM | V ft | H ft. | BLOW COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay, moist (CL) | No | 19.49 | 3.88 | 5-11-15 |
| 20 * | CL, moist | No | 19.32 | 5.17 | 12-20-3[illegible] |
| 25 * | Yellow Sand (SP) | No | 21.15 | 6.47 | 5-17-20 |
| 30 | fine grained | | | | |
| 35 | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |




$V = S(\cos L)$
$H = S(\sin L)$

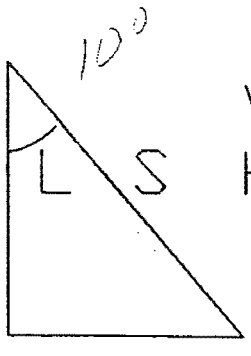
TANC PROTECT
ENGINEERING

# LOG OF DRILL HOLE

PROJECT: Kirkhill.
LOCATION:

DRILL HOLE NO. B-4.
DRILLING DATE: 9-26-85

| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | TPH PPM | V ft | H ft. | BLOW COUNT |
|---|---|---|---|---|---|
| | 3" Asphaltic concrete. | | | | |
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay (CL) | No | | | 4-6-9 |
| 20 * | Brown Clay (CL) | No | | | 9-9-16 |
| 25 | | | | | |
| 30 * | Yellow Sand (SP) fine grained. | No | | | 13-23-35 |
| 35 | | | | | |
| 40 * | Silts, (ML). dense, moist, fine grained. | No | | | 5-11-13 |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |




V=S(cosL)
H=S(sinL)

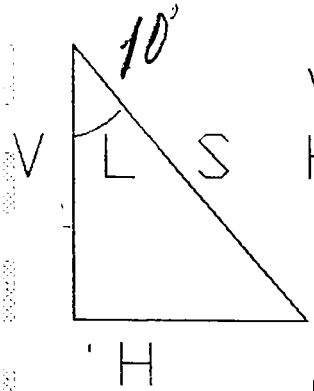
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ENGINEERING

# LOG OF DRILL HOLE

PROJECT: Kurkhill
LOCATION: 1202 Woodruff

DRILL HOLE NO. B-5
DRILLING DATE: 9/27/89

| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | TPH PPM | V Ft | H Ft | BLOW COUNT |
|---|---|---|---|---|---|
| | 3" Asphaltic concrete | | | | |
| 5 | | | | | |
| 10 | Brown silty clay (CL) | No | 9.85 | 1.74 | 6-12-18 |
| 15 | CL | No | 14.77 | 2.60 | 4-8-12 |
| 20 | Brown Sandy Clay (CL) | Lo 15 | 19.70 | 3.47 | 5-15-25 |
| 25 | Silty Sand ½ (SM) | No | 24.62 | 4.34 | 6-7-? |
| 30 | SM | Lo | 29.54 | 5.21 | 5-12-? |
| 35 | Sand (SP) | No | 34.47 | 6.08 | 6-10-3? |
| 40 | Silt's (ML) moist | No1 | 39.39 | 6.94 | 12-18-22 |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |




V=S(cosL)
H=S(sinL)

TANC PROTECT
ENGINEERING

# LOG OF DRILL HOLE

PROJECT: Kuykhill
LOCATION: 1202 Woodruff

DRILL HOLE NO. B-6
DRILLING DATE: 9/27/85

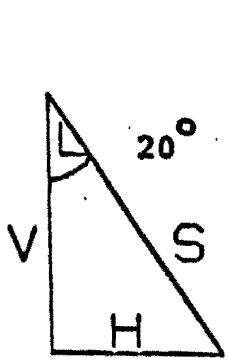
| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | TPH PPM | V ft | H ft. | BLOW COUNT |
|---|---|---|---|---|---|
| 5 | 3" Asphaltic concrete<br>BROWN Silty Clay (CL) | | | | |
| 10 | BROWN Silty Clay (CL) | No | 9.85 | 1.74 | 3-6-10. |
| 15 | CL | No | 14.77 | 2.60 | 6-15-18 |
| 20 | Poorly graded Sands (SP) | No | 19.70 | 3.47 | 4-15-25 |
| 25 | | | | | |
| 30 | BROWN Sandy Clays (CL) | No | 29.54 | 5.21 | 12-35-50 |
| 35 | | | | | |
| 40 | Silty Soils (ML).<br>moist | No | 39.39 | 6.94 | 12-15-20 |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

TANK PROTECT ENGINEERING

# LOG OF BORING B-1

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay, Plastic (CH) | ND | 14.0 | 5.1 | 4-10-12 |
| 20 * | No Recovery Twice | | 18.7 | 6.8 | 4-12-20 |
| 25 * | Yellow Sand (SP) Medium-grained | ND | 23.4 | 8.5 | 22-45-50 |
| 30 * | Sand, Poorly Graded (SP) Medium-grained | ND | 28.1 | 10.2 | 12-32-45 |
| 35 * | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

ND = No Detected Organic Vapors

Prepared By:
Eric Taubin

Reviewed By:
Ravi P. Pendurthi,
Staff Hydrogeologist

Approved By:
Michael L. Leonard,
Registered C.E.

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

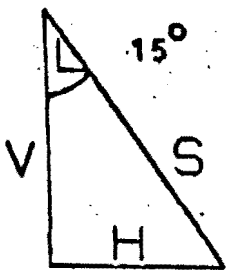
DRILLING DATE: 09/26/89

TANK PROTECT ENGINEERING

# LOG OF BORING B - 2

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay (CL) | ND | 14.4 | 3.8 | 5-11-20 |
| 20 * | Brown Clay (CL) | ND | 19.3 | 5.1 | 6-10-13 |
| 25 * | Yellow Sand (SP) Fine-grained | ND | 24.1 | 6.4 | 10-33-40 |
| 30 * | Sand, Poorly Graded (SP) | ND | 28.9 | 7.7 | 13-21-50 |
| 35 | | | | | |
| 40 | | | | | |
| 45 | ND = No Detected Organic Vapors | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

Prepared By:
Eric Taubin
Reviewed By:
Ravi P. Pendurthi,
Staff Hydrogeologist
Approved By:
Michael L. Leonard
Registered C.E.

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

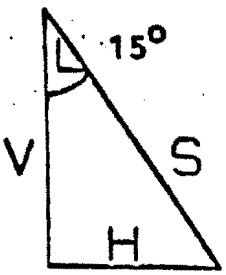
DRILLING DATE: 9/26/89

TANK PROTECT ENGINEERING

# LOG OF BORING B- 3

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | **Brown Clay, Moist (CL)** | ND | 14.4 | 3.8 | **5-11-15** |
| 20 * | Brown Clay, Moist (CL) | ND | 19.3 | 5.1 | **12-20-35** |
| 25 * | **Yellow Sand (SP) Fine-grained** | ND | 24.1 | 6.4 | **5-17-20** |
| 30 | | | | | |
| 35 | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | ND: No Detected Organic Vapors | | | | |
| 55 | | | | | |
| 60 | | | | | |

Prepared By:
Eric Taubin
Reviewed By:
Ravi P. Pendurthi
Staff Hydrogeologist
Approved By:
Michael L. Leonard
Registered C.E.

PROJECT: Kirkhill

LOCATION: 12021 Woodruff

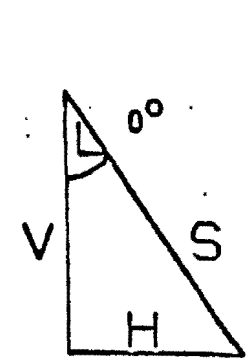
DRILLING DATE: 9/26/89

TANK PROTECT ENGINEERING

# LOG OF BORING B-4

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| | 3" Asphaltic Concrete | | | | |
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay (CL) | ND | | | 4-6-9 |
| 20 * | Brown Clay (CL) | ND | | | 7-9-16 |
| 25 | | | | | |
| 30 * | Yellow Sand (SP)<br>Fine Grained | ND | | | 13-23-3 |
| 35 | | | | | |
| 40 * | Silts (ML)<br>Dense, Moist, Fine-grained | ND | | | 5-11-13 |
| 45 | | | | | |
| 50 | | | | | |
| 55 | ND: No Detected Organic Vapors | | | | |
| 60 | | | | | |

Prepared By:
Eric Taubin
Reviewed By:
Ravi P. Pendurthi
Staff Hydrogeologist
Approved By:
Michael L. Leonard
Registered C.E.

PROJECT: Kirkhill

LOCATION 12021 Woodruff
Downey, CA 90242

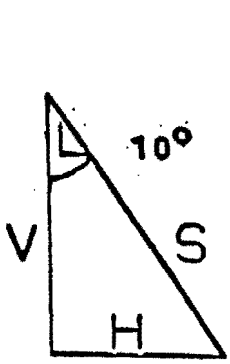
DRILLING DATE: 09/26/89

TANK PROTECT ENGINEERING

# LOG OF BORING B-5

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | 3" Asphaltic Concrete | | | | |
| 10 * | **Brown Silty Clay (CL)** | ND | 9.8 | 1.7 | **6-12-13** |
| 15 * | Brown Silty Clay (CL) | ND | 14.7 | 2.6 | **4-8-12** |
| 20 * | **Brown Sandy Clay (CL)** | LO 15 | 19.7 | 3.4 | **5-15-25** |
| 25 * | **Silty Sand (SM)** | ND | 24.6 | 4.3 | **6-7-23** |
| 30 * | Silty Sand (SM) | LO | 29.5 | 5.2 | **5-12-35** |
| 35 * | **Sand (SP)** | ND | 34.4 | 6.0 | **6-10-32** |
| 40 * | **Silts (ML) Moist** | ND | 39.3 | 6.9 | **12-18-2** |
| 45 | | | | | |
| 50 | ND: No Detected Organic Vapors | | | | |
| 55 | | | | | |
| 60 | | | | | |

Prepared By:
Eric Taubin
Reviewed By:
Ravi P. Pendurthi
Staff Hydrogeologist
Approved By:
Michael L. Leonard
Registered C.E.

PROJECT: Kirkhill
LOCATION: 12021 Woodruff
Downey, CA 90242

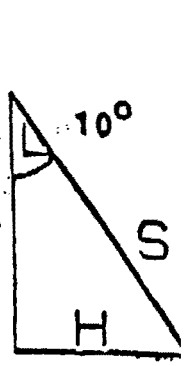
DRILLING DATE: 09/27/89

TANK PROTECT ENGINEERING

# LOG OF BORING B-6

$V = S(\cos L)$

$H = S(\sin L)$




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | 3" Asphalt Concrete<br>Brown Silty Clay (CL) | | | | |
| 10 * | Brown Silty Clay (CL) | ND | 9.8 | 1.7 | 3-6-10 |
| 15 * | Brown Silty Clay (CL) | ND | 14.7 | 2.6 | 6-15-1 |
| 20 * | Poorly Graded Sands (SP) | ND | 19.7 | 3.4 | 4-15-2 |
| 25 | | | | | |
| 30 * | Brown Sandy Clays (CL) | ND | 29.5 | 5.2 | 12-35- |
| 35 | | | | | |
| 40 * | Silty Soils (ML)<br>Moist | ND | 39.3 | 6.9 | 12-15- |
| 45 | | | | | |
| 50 | | | | | |
| 55 | ND: No Detected Organic Vapors | | | | |
| 60 | | | | | |

Prepared By:
Eric Taubin
Reviewed By:
Ravi P. Pendurthi
Staff Hydrogeologist
Approved By:
Michael L. Leonard
Registered C.E.

PROJECT: Kirkhill
LOCATION: 12021 Woodruff
Downey, CA 90242

DRILLING DATE: 09/27/89

# APPENDIX C

# APPENDIX C

## DESCRIPTION OF DRILLING, AND SOIL SAMPLING, HANDLING AND PREPARATION PROCEDURES

Auger flights used during the drilling were hollow-stem type with an inside diameter of 3.75 inches and an outside diameter of 8.0 inches. Individual auger flights were 5 feet in length. A retractable plug prevented soil from entering into the auger flights during the boring process. The plug, which is inserted and retrieved by a wireline, is at the end of a 140-pound drive hammer. When target depth is reached, a Modified California Sampler is placed at the bottom of the hammer and lowered by wireline, to the bottom of the boring. The sampler is then driven into the soil, and the soil into the sampler barrel. Details of the components of the Modified California Sampler are described below. Following the driving operation, the hammer and sampler are retrieved from the boring and separated; soil samples are removed from the sampler and prepared for shipment to an analytical laboratory.

The Modified California Sampler consists of an outer sampler barrel and an inner, thin-walled set of brass tubes. As soil is forced into the sample barrel by the driving action described above, a soil sample is collected in the inner tubes. For this application, three 6-inch long by 2.0-inch diameter brass tubes were used. After retrieval from the boring and subsequent detachment from the hammer, the sampler was dismantled and the inner tubes containing the soil sample were removed. The middle tube sample was sealed by covering the ends with aluminum foil, placing plastic caps on each tube end, and securing the caps with duct tape. The sample was then labeled and placed in an ice chest for cold storage. In instances where split-barrel sampling was difficult, samples were acquired by grabbing drill cuttings and placing them overflowing into clean glass jars.

Each soil sample collected was analyzed in the field for possible hydrocarbon contamination by use of a Gas Techtor organic vapor meter. The sample was "sniffed" and the meter readings (parts per million) recorded on the boring log. The model 1314 Gas Techtor is a battery-powered instrument that can detect and indicate concentrations of organic gas or vapor in air, in parts per million.

Samples under test are drawn continuously by means of a built-in pump and analyzed by the relative excitation level produced from a heated platinum catalyst coil. This instrument will respond to a variety of different gases including various petroleum products. Because the Gas Techtor will show positive readings for gases which occur naturally in soil materials (for example: butane and hydrogen sulfate), the readings produced by the instrument were used along with visual inspection of soil materials in evaluating whether or not soil samples were believed contaminated. After a review of all field data, selected soil samples were forwarded to the analytical laboratory for testing.

To avoid cross-contamination between samples and boreholes, the Modified California Sampler and the brass tube inserts were cleaned before each use. The sampling equipment was washed with an aqueous solution of alconox, rinsed once with tap water, twice with distilled water and allowed to air dry. Rotation of clean auger flights while boring was also performed.

# APPENDIX D

SUMMARY OF SAMPLE REPORTS

| Lab Sample No. | Field Sample No. | Date of Sampling | Sample Depth | TPH (mg/kg) | EPA's Anal. Method | TPH Recoverable (mg/kg) | EPA's Anal. Method |
|---|---|---|---|---|---|---|---|
| Post Tank Excavation Samples: | | | | | | | |
| F-404 | K-1 | 8/24/89 | 3' | ND<20 | 8015 | 52 | 418.1 |
| F-405 | K-2 | 8/24/89 | 3' | ND<20 | 8015 | 32 | 418.1 |
| F-406 | K-3 | 8/24/89 | 3' | | | 32 | 418.1 |
| F-407 | K-4 | 8/24/89 | 3' | | | 325 | 418.1 |
| F-408 | K-5 | 8/24/89 | 3' | | | 45,714 | 418.1 |
| F-409 | K-6 | 8/24/89 | 3' | | | 1 | 418.1 |
| F-410 | K-7 | 8/24/89 | 3' | | | 5,030 | 418.1 |
| Bore Hole Samples: | | | | | | | |
| F-912 | B-1 | 9/26/89 | 15' | | | 10 | 418.1 |
| F-913 | B-2 | 9/26/89 | 20' | ND<10 | 8015 | | |
| F-914 | B-3 | 9/26/89 | 20' | | | 285 | 418.1 |
| F-915 | B-4 | 9/26/89 | 20' | | | 12 | 418.1 |
| F-916 | B-4 | 9/26/89 | 30' | | | 14 | 418.1 |
| | B-5 | 9/27/89 | 20' | | | 27 | 418.1 |
| | B-6 | 9/27/89 | 20' | | | 158 | 418.1 |
| G-112 | B-6 | 10/17/89 | 15' | ND<10 | 8015 | | |
| G-113 | B-6 | 10/17/89 | 30' | ND<10 | 8015 | | |
| G-114 | B-6 | 10/17/89 | 40' | ND<10 | 8015 | | |
| G-115 | B-5 | 10/17/89 | 15' | ND<10 | 8015 | | |
| G-116 | B-5 | 10/17/89 | 30' | ND<10 | 8015 | | |

SUMMARY OF SAMPLE REPORTS (CON'T.)

| Lab Sample No. | Field Sample No. | Date of Sampling | Sample Depth | TPH Diesel (mg/kg) | EPA's Anal. Method | TPH Recov-erable (mg/kg) | EPA's Anal. Method |
|---|---|---|---|---|---|---|---|
| Post-Pit Deep Excavation Samples: | | | | | | | |
| | VS-1 | 10/31/89 | 23' | ND<10 | 418.1 | | |
| | VS-2 | 10/31/89 | 22' | ND<10 | 418.1 | | |
| | VS-3 | 10/31/89 | 23' | ND<10 | 418.1 | | |
| | VS-5 | 10/31/89 | 21' | ND<10 | 418.1 | | |
| | VS-6 | 10/31/89 | 23' | 27,100 | 418.1 | | |
| | VS-7 | 10/31/89 | 23' | ND<10 | 418.1 | | |
| | VS-8 | 11/06/89 | 25' | 55 | 418.1 | | |
| Treatment Verification Samples: | | | | | | | |
| G-486 | VS-1 | 11/22/89 | 3' | | | 33 | 418.1 |
| G-487 | VS-2 | 11/22/89 | 3' | | | 17 | 418.1 |
| G-488 | VS-3 | 11/22/89 | 3' | | | 37 | 418.1 |
| G-488 | VS-4 | 11/22/89 | 3' | | | 87 | 418.1 |
| G-490 | VS-5 | 11/22/89 | 3' | | | 55 | 418.1 |

# Analytical Report

State Approved Hazardous Waste Testing Laboratory • Certificate #133

ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 8/24/89 | Date Analyzed | 8/25/89 |
| Date Submitted | 8/24/89 | Lab No. | F-404, F-405, F-406, F-407 |

**CLIENT :** Tank Protect Engineering
1963 N. Main Street
Orange, CA. 92665

**SITE:** Kirkhill Inc.
12021 Woodruff Avenue
Downey, CA. 90241

**SAMPLE :** F-404; F# K-1, East tank #3 oil, grab soil sample
F-405; F# K-2, West tank #3 oil, grab soil sample
F-406; F# K-3, East tank #2 diesel, grab soil sample
F-407; F# K-4, West tank #2 diesel, grab soil sample

| | RESULTS | | | |
|---|---|---|---|---|
| **PARAMETER** | **F-404** | **F-405** | **F-406** | **F-407** |
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 52 | 32 | 32 | 325 |
| Total Petroleum Hydrocarbons (Diesel), mg/kg (2) | ND<20 | ND<20 | - | - |

**Method of analysis:**

(1) Method 418.1, Methods for Chemical Analysis of Water Wastes, EPA-600/4-79-020, March 1983.

(2) DHS Recommended procedure; Leaking Underground Fuel Tank (LUFT) Field Manual, California SWRCB, December 1987.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Yaw-Sang Huang
Analyst

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# Analytical Report

State Approved Hazardous Waste Testing Laboratory • Certificate #133

ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 8/24/89 | Date Analyzed | 8/25/89 |
| Date Submitted | 8/24/89 | Lab No. | F-408, F-409, F-410 |

CLIENT : Tank Protect Engineering
1963 N. Main Street
Orange, CA. 92665

SITE: Kirkhill Inc.
12021 Woodruff Avenue
Downey, CA. 90241

SAMPLE : F-408; F# K-5, East tank #1 diesel, grab soil sample
F-409; F# K-6, West tank #1 diesel, grab soil sample
F-410; F# K-7, Stockpile oil, grab soil sample

| | RESULTS | | |
|---|---|---|---|
| PARAMETER | F-408 | F-409 | F-410 |
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 45714 | 1 | 5030 |

Method of analysis:

(1) Method 418.1, Methods for Chemical Analysis of Water Wastes, EPA-600/4-79-020, March 1983.

Bob Moezzi, Ph.D.
Lab Supervisor

Yaw Sang Huang
Analyst

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# Analytical Report

State Approved Hazardous Waste Testing Laboratory • Certificate #133

ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 9/26/89 | Date Analyzed | 9/26/89 |
| Date Submitted | 9/26/89 | Lab No. | F-912 |

CLIENT: Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

SITE: Kirkhill
12021 Woodruff
Downey, Ca. 90241

SAMPLE: F-912; F# B-1, 15 feet

| | RESULTS |
|---|---|
| PARAMETER | F-912 |
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 10 |

Method of analysis:

(1) Method 418.1, Methods for Chemical Analysis of Water Wastes, EPA-600/4-79-020, March 1983.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Analyst

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# Analytical Report

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ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 9/26/89 | Date Analyzed | 9/26/89 |
| Date Submitted | 9/26/89 | Lab No. | F-913 |

**CLIENT:** Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

**SITE:** Kirkhill
12021 Woodruff
Downey, Ca. 90241

**SAMPLE:** F-913; F# B-2, 20 feet

| PARAMETER | RESULTS F-913 |
|---|---|
| Total petroleum hydrocarbons (Gasoline) mg/kg (1) | N.D.,<10 |

**Method of Analysis:**
(1) DHS Recommended procedure; Leaking Underground Fuel Tank (LUFT) Field Manual, California SWRCB, December 1987.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Yaw-Dang Hung

Analyst

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# Analytical Report

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ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 9/26/89 | Date Analyzed | 9/26/89 |
| Date Submitted | 9/26/89 | Lab No. | F-914, F-915, F-916 |

**CLIENT:** Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

**SITE:** Kirkhill
12021 Woodruff
Downey, Ca. 90241

**SAMPLE:** F-914; F# B-3, 20 feet
F-915; F# B-4, 20 feet
F-916; F# B-4, 30 feet

| | RESULTS | | |
|---|---|---|---|
| **PARAMETER** | **F-914** | **F-915** | **F-916** |
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 285 | 12 | 14 |

**Method of analysis:**

(1) Method 418.1, Methods for Chemical Analysis of Water Wastes, EPA-600/4-79-020, March 1983.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Yau-Jang Hwang
Analyst

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ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92668 - 714/771-6900 FAX 714/538-1209

CLIENT

Tank Protect Engineering (1895)
1963 North Main
Orange, CA 92665

Attn: Doug Rose

LAB NO. F72506
REPORTED 09/29/89

SAMPLE Soil
RECEIVED 09/27/89

IDENTIFICATION Kirkhill, Inc.
12021 Woodruff, Downey

BASED ON SAMPLE As Submitted

| | Hydrocarbons (418.1) (mg/kg) |
|---|---|
| B-5 | 27 |
| B-6 | 158 |

ASSOCIATED LABORATORIES

Edward S. Behare, Ph.D.

ESB/ql

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

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# Analytical Report

State Approved Hazardous Waste Testing Laboratory • Certificate #133

ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 10/17/89 | Date Analyzed | 10/17/89 |
| Date Submitted | 10/17/89 | Lab No. | G-115, G-116 |

**CLIENT:** Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

**SITE:** Kirkhill
12021 Woodruff
Downey, CA. 90241

**SAMPLE:** G-115; F#B-5, 15' grab soil sample
G-116; F#B-5, 30' grab soil sample

**RESULTS**

| PARAMETER | G-115 | G-116 |
|---|---|---|
| Total petroleum hydrocarbons (Gasoline), mg/kg (1) | N.D.,<10 | N.D.,<10 |

**Method of Analysis:**
(1) DHS Recommended procedure; Leaking Underground Fuel Tank (LUFT) Field Manual, California SWRCB, December 1987.

Bob Moezzi
Bob Moezzi, Ph.D.
Lab Supervisor

Analyst

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# Analytical Report

State Approved Hazardous Waste Testing Laboratory • Certificate #133

ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 10/17/89 | Date Analyzed | 10/17/89 |
| Date Submitted | 10/17/89 | Lab No. | G-112, G-113, G-114 |

CLIENT: Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

SITE: Kirkhill
12021 Woodruff
Downey, CA. 90241

SAMPLE: G-112; F#B-6, 15' grab soil sample
G-113; F#B-6, 30' grab soil sample
G-114; F#B-6, 40' grab soil sample

RESULTS

| PARAMETER | G-112 | G-113 | G-114 |
|---|---|---|---|
| Total petroleum hydrocarbons (Gasoline), mg/kg (1) | N.D.,<10 | N.D.,<10 | N.D.,<10 |

Method of Analysis:
(1) DHS Recommended procedure; Leaking Underground Fuel Tank (LUFT) Field Manual, California SWRCB, December 1987.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Analyst

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ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92668 - 714/771-6900 FAX 714/538-1209

CLIENT

Tank Protect Engineering (1895)
1963 North Main
Orange, CA 92665

Attn: Doug Rose

LAB NO. F76181

REPORTED 11/01/89

SAMPLE Soil

IDENTIFICATION Kirkhill

BASED ON SAMPLE As Submitted

RECEIVED 10/31/89

| | Hydrocarbons (418.1) (mg/kg) |
|---|---|
| VS-1 | ND<10 |
| VS-2 | ND<10 |
| VS-3 | ND<10 |
| VS-5 | ND<10 |
| VS-6 | 27,100 |
| VS-7 | ND<10 |

ASSOCIATED LABORATORIES

Edward S. Behare, Ph.D.

ESB/ql

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TESTING & CONSULTING
Chemical •
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ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92668 - 714/771-6900
FAX 714/538-1209

CLIENT

Tank Protect Engineering
1963 N. Main St.
Orange, CA 92665

Attn: Doug Rose

LAB NO. (1895) F76498

REPORTED 11/07/89

RECEIVED 11/06/89

SAMPLE Soil

IDENTIFICATION Kirkhill, VS-8

BASED ON SAMPLE As Submitted

| | |
|---|---|
| Hydrocarbons (418.1) | 55 mg/kg |

ASSOCIATED LABORATORIES

Edward S. Behare, Ph.D.

ESB/ql

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TESTING & CONSULTING
Chemical •
Microbiological •
Environmental •

# Analytical Report

State Approved Hazardous Waste Testing Laboratory • Certificate #133

ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 11/22/89 | Date Analyzed | 11/28/89 |
| Date Submitted | 11/27/89 | Lab No. | G-486, G-487, G-488 |

CLIENT: Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

SITE: Kirkhill
12021 Woodruff
Downey, Ca. 90241

SAMPLE: G-486; field #VS-1, grab soil sample
G-487; field #VS-2, grab soil sample
G-488; field #VS-3, grab soil sample

| | RESULTS | | |
|---|---|---|---|
| PARAMETER | G-486 | G-487 | G-488 |
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 33 | 17 | 37 |

Method of analysis:
(1) Method 418.1, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Analyst

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# Analytical Report

State Approved Hazardous Waste Testing Laboratory • Certificate #133

ENSOTECH INC

| | | | |
|---|---|---|---|
| Date Sampled | 11/22/89 | Date Analyzed | 11/28/89 |
| Date Submitted | 11/27/89 | Lab No. | G-489, G-490 |

revised

**CLIENT:** Tank Protect Engineering
1963 North Main Street
Orange, CA. 92665

**SITE:** Kirkhill
12021 Woodruff
Downey, Ca. 90241

SAMPLE: G-489; field #VS-4, grab soil sample
G-490; field #VS-5, grab soil sample

| | RESULTS | |
|---|---|---|
| PARAMETER | G-489 | G-490 |
| Total Recoverable Petroleum Hydrocarbons, mg/kg (1) | 87 | 55 |

Method of analysis:
(1) Method 418.1, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983.

Bob Moezzi

Bob Moezzi, Ph.D.
Lab Supervisor

Analyst

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# APPENDIX E

ASSOCIATED LABORATORIES
808 N. Batavia • Orange, CA 92668
(714) 771-6900 • FAX: (714) 538-1209

# CHAIN OF CUSTODY RECORD

Date 8-24-89 Page 1 of 1

CLIENT KIRKHILL INC.
ADDRESS 12021 WOODRUFF AVE
DOWNEY, CA 90241
PROJECT NAME
PROJECT MANAGER Doug Lee
PHONE NUMBER 714-921-0888
SAMPLERS: (Signature) Doug Lee

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ____ Cooled ____ Frozen ____
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | SAMPLE TYPE: AIR | SAMPLE TYPE: SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| 404 K-1 EAST | EAST TANK #3 Diesel | 8-24-89 | 12:05 | | | / | | | 418-1, 8015D |
| 405 K-2 WEST | WEST TANK #3 Diesel | 8-24-89 | 12:06 | | | / | | | 418-1, 8015D |
| 406 K-3 | EAST TANK #2 Diesel | 8-24-89 | 12:10 | | | / | | | 418.8 [illegible] |
| 407 K-4 | WEST TANK #2 Diesel | 8-24-89 | 12:15 | | | / | | | 418.8 [illegible] |
| 408 K-5 | EAST TANK #1 Diesel | 8-24-89 | 12:25 | | | / | | | 418.8 [illegible] |
| 409 K-6 | WEST TANK #1 Diesel | 8-24-89 | 12:30 | | | / | | | 418.8 [illegible] |
| 410 K-7 | STOCKPILE OIL | 8-24-89 | 12:30 | | | / | | | 418.1 [illegible] |
| | | | | | | | | | |
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| Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|
| | Selina Escotch | 8/24 |
| Relinquished by: (Signature) | Received by Laboratory for analysis: (Signature) | Date/Time |
| | | |

Special Instructions:

I hereby authorize the performance of the above indicated work.

DISTRIBUTION: White with report. Yellow to AL, Pink to Courier, Gold to Main Lab

800 N. Batavia • Orange, CA 92668
(714) 771-6900 • FAX: (714) 538-1209

CHAIN OF CUSTODY RECORD

Date 9/26/89 Page 1 of 1

TPE.

CLIENT: Kirkhill

ADDRESS: 12021 Woodruff
Downey Ca 90241

PROJECT NAME:

PROJECT MANAGER: Eric Taubin

PHONE NUMBER: 714-921-0888

SAMPLERS: (Signature)

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ____ Cooled ____ Frozen ____
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | SAMPLE TYPE: AIR | SAMPLE TYPE: SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| -912 B-1-15' | B-1 - 15 feet. | 9/26 | 1105 | | | X | 1 | | 418.1 |
| -913 B-2-20' | B-2 20 feet | 9/26 | 1210 | | | X | 1 | | 8015 |
| -914 B-3-20 | B-3 -20 feet | 9/26 | 1330 | | | X | 1 | | 418.1 |
| -915 B-4-20 | B-4 - 20 feet | 9/26 | 400 | | | X | 1 | | 418.1 |
| -916 B-4-30 | B-4 - 30 feet | 9/26 | 500 | | | X | 1 | | 418.1 |
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| Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|
| | | 9/26/89 |
| Relinquished by: (Signature) | Received by Laboratory for analysis: (Signature) | Date/Time |

I hereby authorize the performance of the above indicated work.

Special Instructions:

DISTRIBUTION: White with report, Yellow to AL

(714) 771-6900 • FAX (714) 538-1209

TPE

Date 9-27-07 Page 1 of 1

CLIENT: KIRKHILL, LVE
ADDRESS: 12021 Woodruff
Downey, California.
PROJECT NAME: KIRKHILL

PROJECT MANAGER: Eric Tousbin
PHONE NUMBER: 714-921-0855
SAMPLERS: (Signature)

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ____ Cooled ____ Frozen ____
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | SAMPLE TYPE: AIR | SAMPLE TYPE: SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| B-5 | 20' feet | 9-27 | | | | X | 1 | | 418.1 |
| B-6 | 20' feet | 9-27 | | | | X | 1 | | 418.1 |
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Relinquished by: (Signature)

Received by: (Signature)

Date/Time 9-27-07 4:00p.

I hereby authorize the performance of the above indicated work.

Relinquished by: (Signature)

Received by Laboratory for analysis: (Signature)

Date/Time

Special Instructions:

DISTRIBUTION: White with report, Yellow to AL, Pink to Courier, Gold to Main Lab

806 N. Batavia • Orange, CA 92868
(714) 771-6900 • FAX: (714) 538-1209

RUSH

# CHAIN OF CUSTODY RECORD

Date _____ Page _____ of _____

CLIENT: Kirkhill

ADDRESS: 12021 Woodruff.
Tank Protect Eng.

PROJECT NAME

PROJECT MANAGER: Eric Tanbin

PHONE NUMBER: 714 921-0888

SAMPLERS: (Signature)

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ____ Cooled ____ Frozen ____
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | AIR | SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| -112 B-6 | 15' | 10/17 | | | | | | | T P H |
| -113 B-6 | 30' | 10/17 | | | | | | | ↓ |
| -114 B-6 | 40' | 10/17 | | | | | | | ↓ |
| -115 B-5 | 15' | 10/17 | | | | | | | |
| -116 B-5 | 30' | 10/17 | | | | | | | |
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| Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|
| | Silvia, Ensotech, | 10/17 |
| Relinquished by: (Signature) | Received by Laboratory for analysis: (Signature) | Date/Time |
| | | |

Special Instructions:

I hereby authorize the performance of the above indicated work.

_____

DISTRIBUTION: White, Yellow

806 N. Batavia • Orange, CA 92668
(714) 771-6900 • FAX: (714) 538-1209

# CHAIN OF CUSTODY RECORD

Rush 24 hr Date 10.31 Page 1 of 1

CLIENT: Tank Protect Engineering
ADDRESS: 1963 N. Main St.
Orange Ca 92665
PROJECT NAME: Kirk Hill
PROJECT MANAGER: C. Naimine
PHONE NUMBER: 714. 921-0888
SAMPLERS: (Signature)

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ___ Cooled ___ Frozen ___
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | SAMPLE TYPE: AIR | SAMPLE TYPE: SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| VS-1 | West End. Pit #2 23' | 10-31 | 11[22] | | | X | 1 | | 418.1 |
| VS-2 | South Wall Pit #2 22' | | 11[40] | | | | | | |
| VS-3 | North Wall Pit #2 ~~23~~ 21' | | 11[55] | | | | | | |
| VS-5 | East End. Pit #1 21' | | 12[30] | | | | | | |
| VS-6 | W. End Pit #1 23' | | 12[45] | | | | | | |
| VS-7 | E.N. Wall Pit #1 23' | | 1[10] | | | | | | |
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Relinquished by: (Signature)
Received by: (Signature)
Date/Time 10-31 3:12p.

I hereby authorize the performance of the above indicated work.

Relinquished by: (Signature)
Received by Laboratory for analysis: (Signature)
Date/Time

Special Instructions:

DISTRIBUTION:

2008 N. Batavia • Orange, CA 92668
(714) 771-6900 • FAX: (714) 538-1209

# CHAIN OF CUSTODY RECORD

Date Nov 6 Page 1 of 1

CLIENT Tank Protect Engs
ADDRESS 1963 N Main St
Orange CA 92665
PROJECT NAME Kirkhill

PROJECT MANAGER Eric Tamblin
PHONE NUMBER 714-921-0888
SAMPLERS: (Signature)

Samples Intact Yes ____ No ____
County Seals Intact Yes ____ No ____
Sample Ambient ____ Cooled ____ Frozen ____
Same Day ____ 24 Hr. ____
Regular ____ 48 Hr. ____

| SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE WATER | SAMPLE TYPE AIR | SAMPLE TYPE SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|
| VS-8 | W. End Pit #1 25' | 11/6 | 1300 | | | X | 1 | | 418.1 |
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Relinquished by: (Signature)
Received by: (Signature)
Date/Time
I hereby authorize the performance of the above indicated work.

Relinquished by: (Signature)
Received by Laboratory for analysis: (Signature)
Date/Time 11-6-89 2:10

Special Instructions:

DISTRIBUTION: White with report, Yellow to AL

508 N. Batavia • Orange, CA 92668
(714) 771-6900 • FAX: (714) 538-1209

C_486 to C_490

Date 11/22 Page 89 of 1

CLIENT: Tank Protect Eng.
ADDRESS: 1963 N. Main
Orange Ca 92665
PROJECT NAME: Kirkhill

PROJECT MANAGER: Eric Tamkin
PHONE NUMBER: 714-921-0828
SAMPLERS: (Signature)

Samples Intact Yes ___ No ___
County Seals Intact Yes ___ No ___
Sample Ambient ___ Cooled ___ Frozen ___
Same Day ___ 24 Hr. ___
Regular X 48 Hr. ___

| | SAMPLE NUMBER | LOCATION DESCRIPTION | DATE | TIME | SAMPLE TYPE: WATER | SAMPLE TYPE: AIR | SAMPLE TYPE: SOLID | NO. OF CNTNRS. | SUSP. CONTAM. | TESTS REQUIRED |
|---|---|---|---|---|---|---|---|---|---|---|
| C_486 | VS-1 | Soil Spoil #1 | 11/22 | 1130 | | | X | 1 | | 418.1 |
| C_487 | VS-2 | " 2 | | | | | | | | |
| C_488 | VS-3 | " 3 | | | | | | | | |
| C_489 | VS-4 | " 4 | | | | | | | | |
| C_490 | VS-5 | " 5 | | | | | | | | |

Relinquished by: (Signature)
Received by: (Signature) Silvia Enstock 11/27/89
Date/Time

I hereby authorize the performance of the above indicated work.

Relinquished by: (Signature)
Received by Laboratory for analysis: (Signature)
Date/Time

Special Instructions:

DISTRIBUTION: White with report ... Pink to Al...

# APPENDIX F

# CITY OF DOWNEY

11111 BROOKSHIRE AVE. • TELEPHONE 869-7331, EXT. 258

# FIRE

## BUREAU OF FIRE PREVENTION PERMIT / APPLICATION

DATE REC'D 8/10 BY WES

ADDRESS 12021 WOODRUFF

OWNER Kirkhill Inc

MAIL ADDRESS 12021 Woodruff

CITY Downey TEL. NO. (213) 803-3401

CONTRACTOR Tank Hotel Engineering

ADDRESS 1963 N. Main St

CITY Orange TEL. NO. (714) 921-6826

STATE LIC. NO. 489994 DOWNEY BUS. LICENSE NO. 209714

ARCHITECT OR ENGINEER

ADDRESS

CITY TEL. NO.

STATE LIC. NO. DOWNEY BUS. LICENSE NO.

| | | |
|---|---|---|
| PLANNING DEPT. APPROVAL | | DATE |
| PUBLIC WORKS DEPT. APPROVAL | | DATE |
| BUILDING & SAFETY APPROVAL | | DATE |
| MISC. APPROVAL | | DATE |
| W.C. INS. NO. | | DATE |

| APPROVALS | DATE | INSPECTOR'S SIGNATURE |
|---|---|---|
| PIPING — | | |
| TANK — | | |
| PRESSURE TEST | | 4074840 |
| ACTIVATION TEST | | 7107 6715 50 |
| WIRING | | |
| ALARM TEST | | |
| EXTINGUISHER | | |
| FINAL APPROVAL | | |

24 HR. NOTICE REQUIRED PRIOR TO INSPECTION SERVICE — **869-7331**

| TANK UL # | | |
|---|---|---|
| | | |
| | | |

NEW | ADD | ALTER | REPAIR | ~~ABANDON~~ | ~~REMOVE~~ | OCCUPANCY

LIMITED TIME USE | FROM | TO | CERT. OF OCC. NO.

AREA SQ. FT. | NO. STORIES

WALL COVERING | INT. | EXT.

PROPOSED WORK ABANDON UG TANK
REMOVE 3 UG TANKS

SIGNATURE OF APPLICANT William Hall

ADDRESS 1963 N. Main St

PERMIT FEE

$ 500.00

I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE IS CORRECT AND AGREE TO COMPLY WITH ALL CITY OF DOWNEY AND STATE OF CALIFORNIA LAWS REGULATING BUILDING CONSTRUCTION. I CERTIFY THAT IN DOING THE WORK AUTHORIZED HEREBY I WILL NOT EMPLOY ANY PERSON IN VIOLATION OF THE LABOR CODE OF THE STATE OF CALIFORNIA IN RELATING TO WORKMEN'S COMPENSATION INSURANCE.

☒

☐ I AM THE OWNER OF THE PROPERTY AND WILL PERSONALLY PERFORM THE ABOVE WORK.

☐ I AM THE OWNER OF THIS PROPERTY AND WILL CONTRACT TO HAVE ALL OF THE WORK PERFORMED BY LICENSED CONTRACTOR.

SIGNATURE OF PERMITTEE X William Hall

FIRE DEPT. APPROVAL W. E. Stevens

CONTRACTOR COPY

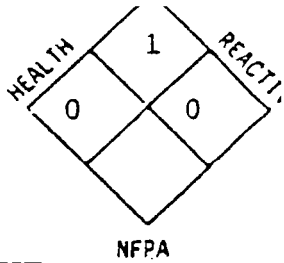
# APPENDIX G

| | |
|---|---|
| MSDS NO. | EDG-002 |
| CAS NO. | 64741-53-3 |
| UN NO. | 1268 |

# EDGINGTON OIL COMPANY, INC.

## MATERIAL SAFETY DATA SHEET

Edgiflex 200




MANUFACTURER
Edgington Oil Company, Inc.
2400 East Artesia Boulevard
Long Beach, California 90805

CONTACT:
Safety & Health Supervisor

Telephone No: (213) 423-1465

24 HOUR EMERGENCY ASSISTANCE
CHEMTREC 800-424-9300

NFPA HAZARD RATING

| | |
|---|---|
| 0 - LEAST | 3 - HIGH |
| 1 - SLIGHT | 4 - EXTREME |
| 2 - MODERATE | |

| | |
|---|---|
| PRODUCT | EDGIFLEX - 200 |
| COMMON NAME | NAPHTHENIC TYPE OIL |
| GENERIC NAME | NAPHTHENIC DISTILLATE |
| CHEMICAL NAME | PETROLEUM DISTILLATE |
| CHEMICAL FAMILY | PETROLEUM HYDROCARBON |
| DOT PROPER SHIPPING NAME | PETROLEUM DISTILLATE |

## WARNING STATEMENTS

CAUTION

HEALTH WARNING: Over exposure to mist from this product may cause pulmonary irritation, dizziness and nausea. The handling procedures and safety precautions in this MSDS should be followed to minimize employee exposure.

## SECTION I - INGREDIENTS

*THRESHOLD LIMIT VALUE SET BY: A. OSHA B. ACGIH C. SEE SECTION III D. OTHER NE. NOT ESTABLISHED

NOTE: UNITS ARE IN ppm UNLESS SPECIFIED OTHERWISE

| | % | TLV* |
|---|---|---|
| This product is a complex mixture of naphthenic, paraffinic and aromatic petroleum hydrocarbons. The composition will vary depending on the crude source. | 100 | Oil Mist: 5 mg/$M^3$ A,B |

## SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

| | |
|---|---|
| HANDLING AND STORING PRECAUTIONS | Keep away from heat and open flames. Keep containers tightly closed. Store away from strong oxidizing agents in a cool, dry place with adequate ventilation. |
| OTHER PRECAUTIONS | Remove product contaminated clothing and launder before re-use. Avoid generating oil mists while handling.<br><br>NOTICE:<br>There is no evidence that similar oils showing positive results on laboratory animals have any adverse effects on humans if simple precautions are taken in using protective equipment and good personal hygiene. |

## SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

| | | | |
|---|---|---|---|
| DOT FLAMMABILITY CLASSIFICATION | N/A | FLASH POINT: RANGE: LEL-UEL | 320°F (232°C) C.O.C.<br>2.0% - 6.0% |
| EXTINGUISHING MEDIA | Use water fog, foam, dry chemical or $CO_2$. Do not use direct stream of water. Product will float and can be reignited on surface of water. | | |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture. | | |
| FIRE FIGHTING PROCEDURES | Clean fire area of unprotected personnel. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots) including a positive pressure NIOSH approved self-contained breathing apparatus. Cool exposed containers and structures with water. | | |

## SECTION IX - PHYSICAL DATA

| APPROXIMATE BOILING RANGE | VAPOR DENSITY | EVAPORATION RATE | PERCENT VOLATILE | SOLUBILITY IN WATER |
|---|---|---|---|---|
| D1160 DIST. IBP 535°F (329°C) | Heavier than air | Nil | @ 70°F Ø | No |

| SPECIFIC GRAVITY | APPROXIMATE BULK DENSITY | VAPOR PRESSURE |
|---|---|---|
| 0.9328 | 7.65 lbs/gal @ 70°F | Nil |

| | |
|---|---|
| APPEARANCE AND ODOR | This product is a clear, amber liquid with a characteristic machine oil odor. |

## SECTION X - DOCUMENTARY INFORMATION

| PRODUCT CODE NO. | ISSUE DATE | REPLACES MSDS NO. | PREVIOUS PRODUCT CODE NO. | PREVIOUSLY ISSUE |
|---|---|---|---|---|
| 705 | 8/12/85 | | 606 | |

DISCLAIMER OF EXPRESS AND IMPLIED WARRANTIES

The information in this document is believed to be correct as of the date issued. HOWEVER, NO WARRANTY MERCHANTABILITY, FITNESS FOR ANY USE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. This information and the product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.

## SECTION IV - SPECIAL PROTECTION INFORMATION

| | |
|---|---|
| RESPIRATORY PROTECTION (SPECIFY TYPE) | If airborne concentrations exceed the TLV, use a NIOSH approved organic filter/cartridge type respirator. For high concentrations and/or oxygen deficiency, use air supplied respirator. |
| VENTILATION | General mechanical ventilation may be adequate for maintaining airborne concentrations below established exposure limits. If general ventilation is inadequate, supplemental local exhaust may be required. Other special precautions, such as respiratory protection may be required if airborne concentrations cannot be reduced to below the recommended exposure limit by ventilation. |
| PROTECTIVE GLOVES | The use of neoprene gloves which are impermeable to this product is advised to prevent skin contact and possible irritation. |
| EYE PROTECTION | Chemical goggles are recommended to safeguard against eye contact, irritation or injury. |
| OTHER PROTECTIVE EQUIPMENT | It is recommended that an emergency shower and eyewash be available in the work area. Barrier creams that are specific for oil based materials are recommended when gloves are impractical. |

## SECTION V - REACTIVITY DATA

| | |
|---|---|
| STABILITY | Stable. |
| CONDITIONS TO AVOID | Avoid elevated temperatures and all sources of ignition. |
| INCOMPATIBILITY (MATERIALS TO AVOID) | Avoid contact with strong oxidizing agents such as oxygen and fluorine. |
| HAZARDOUS DECOMPOSITION PRODUCTS | Thermal decomposition in the presence of air may yield major amounts of oxides of carbon. |
| HAZARDOUS POLYMERIZATION | Will not occur. |
| CONDITIONS TO AVOID | |

## SECTION VI - SPILL OR LEAK PROCEDURES

HIGHWAY OR RAILWAY SPILLS:
CHEMTREC (800) 424-9300

| | |
|---|---|
| PRECAUTIONS IN CASE OF RELEASE OR SPILL | Use recommended protective equipment listed in Section IV. Eliminate potential sources of ignition. Shut off source of leak/spill when safe to do so. Dike and contain large spills. Keep out of surface waters and any water courses or sewers entering or leading to surface waters. |
| WASTE DISPOSAL METHOD | Pick up large spills with vacuum trucks or pumps. Absorb residue and small leaks/spills with sand or inert absorbent, and collect in suitable containers. Dispose of per RCRA, Title 42 of the United States Code, beginning at Section 6901 and applicable state and local requirements. |

## SECTION II - EMERGENCY AND FIRST AID PROCEDURES

LOS ANGELES POISON INFORMATION CENTER: (213) 664-2121

| | |
|---|---|
| EYE CONTACT | If irritation from exposure to fumes or vapors develops, move away from exposure and into fresh air. Flush the affected eye(s) with clean running water for at least 15 minutes. If redness or irritation develops, seek medical attention. |
| SKIN CONTACT | DO NOT USE GASOLINES, THINNERS OR SOLVENTS TO REMOVE THIS PRODUCT FROM THE SKIN. Wipe any excess material from the skin with a clean dry cloth. Remove contaminated clothing. Cleanse the affected skin area(s) thoroughly with soap and water and, if necessary, a waterless cleanser. If irritation or redness develops and persists, seek medical attention. |
| INHALATION | If respiratory tract irritation or symptoms of intoxication develop, victim should be moved from exposure into fresh air. If the victim is not breathing or if breathing difficulties develop, artificial respiration or oxygen should be administered by qualified personnel. Seek medical attention. |
| INGESTION | DO NOT INDUCE VOMITING. If victim is conscious and alert, give two (2) to three (3) cups of milk or water to drink. If gastrointestinal irritation develops and persists, seek medical attention. |

## SECTION III - PHYSIOLOGICAL EFFECTS AND HEALTH INFORMATION

| | |
|---|---|
| EYE EFFECTS | This product may cause eye irritation. Direct cotnact with thi product, or repeated or prolonged exposure to its vapors, fumes or mists may cause burning, tearing, redness and conjunctivitis. |
| SKIN EFFECTS | Repeated or prolonged contact with this product or its vapors, fumes or mists may cause redness, irritation and dermatitis. |
| ACUTE EFFECTS | Exposure to mists, or repeated or prolonged exposure to vapors when this product is heated, may cause transient irritation to the nose, throat and upper respiratory tract. Exposure to higher concentrations for prolonged periods may result in more serious respiratory tract irritation and inflammation, dizziness, lightheadedness and headache.<br><br>Ingestion of this product may cause irritation to the stomach and intestinal tract. |
| CHRONIC EFFECTS | This product has not undergone long term laboratory tests to determine chronic effects. Some similar mineral oils have been shown to induce cancer in laboratory animals. However, there is no evidence that oils showing positive results have any adverse effects on humans if simple precautions are taken in using protective equipment and good personal hygiene. |

# APPENDIX H

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-3
Please print or type. (Form designed for use on el 12-pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD009117173 — Manifest Document No. 12222

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
KIRKHILL INC
12021 WOODRUFF
4. Generator's Phone (714) 9210788 DOWNEY CA 70241

A. State Manifest Document Number 8824329
B. State Generator's ID

5. Transporter 1 Company Name PACIFIC PETROLEUM — 6. US EPA ID Number CAD029168563
C. State Transporter's ID 006317
D. Transporter's Phone 805 925-1791

7. Transporter 2 Company Name — 8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
CASMALIA RESOURCES
NTU RD
CASMALIA CA 93427 — 10. US EPA ID Number CAD020174891
G. State Facility's ID
H. Facility's Phone 805 937 8449

| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt/Vol | I. Waste No. |
|---|---|---|---|---|---|
| a. WASTE SOIL WITH HYDROCARBONS CALIFORNIA REGULATED WASTE ONLY | | DT | 00018 | Y | State 611 / EPA/Other NON RCRA |
| b. | | | | | State / EPA/Other |
| c. | | | | | State / EPA/Other |
| d. | | | | | State / EPA/Other |

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | 11 | 14 | 87 |

**TRANSPORTER**

17. Transporter 1 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| GASTIGER MARK | | 11 | 24 | 87 |

18. Transporter 2 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | | | |

**FACILITY**

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | | | |

GENERATOR — IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700—22
Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

YELLOW: GENERATOR RETAINS

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30
Please print or type. (Form designed for use on el. )-pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC000917773 — Manifest Document No.

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
KIRKHILL INC
12021 WOODRUFF
DOWNEY CA 90241

4. Generator's Phone (714) 7210888

A. State Manifest Document Number 8824343

B. State Generator's ID HAHQ3601HA201

5. Transporter 1 Company Name: JERICON INC — 6. US EPA ID Number: CAD982511207

C. State Transporter's ID

D. Transporter's Phone 805 9220331

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID 5C4456

F. Transporter's Phone

9. Designated Facility Name and Site Address
CASMALIA RESOURCES
NTU RD
CASMALIA CA 93427 — 10. US EPA ID Number: CAD020748125

G. State Facility's ID CAD020748125

H. Facility's Phone 805 937 8449

| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt/Vol | I. Waste No. |
|---|---|---|---|---|---|
| a. WASTE SOIL WITH HYDROCARBONS CALIFORNIA REGULATED WASTE ONLY | 001 | DT | 13 | T | State 611 EPA/Other NON RCRA |
| b. | | | | | State EPA/Other |
| c. | | | | | State EPA/Other |
| d. | | | | | State EPA/Other |

GENERATOR'S COPY
Return To Generator

J. Additional Descriptions for Materials Listed Above
WASTE Acct #
3620319 KG

K. Handling Codes for Wastes Listed Above
a. 03 b. c. d.

15. Special Handling Instructions and Additional Information

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name — Signature — Month Day Year 1 1 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name CASMALIA RESOURCES — Signature — Month Day Year 1 1 22 89

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700—22
Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAY

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-9
Please print or type. * (Form designed for use on elite pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD009101979773 Manifest Document No. 10883

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
KIRKHILL INC
12021 WOODRUFF

A. State Manifest Document Number 89469174

B. State Generator's ID HAH131601149120

4. Generator's Phone (714) 921 0888 DOWNEY, CA. 90241

5. Transporter 1 Company Name JERICON INC

6. US EPA ID Number CAD981251192

C. State Transporter's ID 006325

D. Transporter's Phone 805 922 0731

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CASMALIA RESOURCES
NTU RD
CASMALIA CA 93429

10. US EPA ID Number CAD020748125

G. State Facility's ID CAD020748125

H. Facility's Phone 805 937 8449

| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt/Vol | I. Waste No. |
|---|---|---|---|---|---|
| a. WASTE SOIC WITH HYDROCARBONS CALIFORNIA REGULATED WASTE ONLY | 001 | DT | 00018 | Y | State 611 / EPA/Other NON RCRA |
| b. | | | | | State / EPA/Other |
| c. | | | | | State / EPA/Other |
| d. | | | | | State / EPA/Other |

GENERATOR COPY
Return To Generator

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above
a. 03 b.
c. d.

15. Special Handling Instructions and Additional Information
WAN 362039 19 KG

16.
**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| ERIC TANAK | | 1 | 12 | 89 |

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| RANDY LIMON | Randy Limon | 1 | 12 | 89 |

18. Transporter 2 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | | | |

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| 123866-50,440 LBS CASMALIA RESOURCES | | 1 | 12 | 89 |

Do Not Write Below This Line

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

State of Calito...—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-9
Please print or type. *(Form designed for use on elite (12-pitch typewriter).*

Department of Health Services
Toxic Substances Control Division
Sacramento, California

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Kirkhill, Inc.
12021 Woodruff
Downey, Ca 90241

4. Generator's Phone ( 714 ) 548-9009

A. State Manifest Document Number: 89809229

B. State Generator's ID: NOT STATE I D NUMBER

5. Transporter 1 Company Name: Roadwest Oil & Vacuum Co., Inc.

6. US EPA ID Number: CAT080029771

C. State Transporter's ID: 2172

D. Transporter's Phone: 213-693-9881

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
DeMenap/Kerdoon
2000 N. Alameda St.
Compton, Ca. 90222

10. US EPA ID Number: CAT080011352

G. State Facility's ID: CAT080011352

H. Facility's Phone: 213-537-7100

| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt/Vol | I. Waste No. |
|---|---|---|---|---|---|
| a. California Regulated Waste Only | 001 | TT | 1400 | G | State 223 / EPA/Other NONE |
| b. DOT-E 2122 | | | | | State / EPA/Other |
| c. | | | | | State / EPA/Other |
| d. | | | | | State / EPA/Other |

J. Additional Descriptions for Materials Listed Above
Contaminated Concrete
Pads & Miscellaneous
Debris

K. Handling Codes for Wastes Listed Above
a. 01 b.
c. d.

15. Special Handling Instructions and Additional Information
Gloves & Goggles

16.
**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| [illegible] | [signature] | 10 | 21 | 89 |

**TRANSPORTER**

17. Transporter 1 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| William J. Collins | [signature] | 10 | 21 | 89 |

18. Transporter 2 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | | | |

**FACILITY**

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | | | |

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

DHS 8022 A (1/88)
PA 8700—22
Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

YELLOW: GENERATOR RETAINS

# APPENDIX I

## TPE SOIL REMEDIATION PROCESS USING SPECIAL SILICATE CATALYST AND HYDROGEN PEROXIDE

At the subject site, remediation was conducted by utilizing TPE's soil remediation process using special silica catalyst and hydrogen peroxide. Silica catalyst, a synthetic polysilicate, provided a large surface area for adsorption of volatile hydrocarbons, reducing their emission into the atmosphere. Because of this adsorptive capability, hydrogen peroxide was adsorbed onto the silica catalyst resulting in a slow release over time, enabling the treatment process to continue for several hours after application. Another unique characteristic of silica catalyst was its catalytic surface which made it several times more reactive and brought about rapid oxidation of all hydrocarbons and other organics. With the adsorptive and catalytic properties of silica catalyst, and the oxidative property of hydrogen peroxide, oxidation of fuel hydrocarbons and other organics was achieved through the TPE method.

Hydrogen peroxide had several additional advantages over other strong oxidants. Hydrogen peroxide spontaneously decomposes to oxygen and water over time, so excessive peroxide during the treatment would not leave a hazardous residue. Nor was hydrogen peroxide toxic. This compares favorably with such other common oxidants as chlorine, which can be acutely toxic, and which forms hydrochloric acid and chlorinated hydrocarbons as by-products.

When the soil was sprayed with hydrogen peroxide, an aerosol of hydrogen peroxide stayed on top of the soil surface. This aerosol "blanket" prevented the escape of volatiles during mixing, thus no odors were produced. It was also in this aerosol space that photochemical oxidation of the hydrocarbons had taken place. The retained peroxide acted as a source of oxygen in the soil. Oxygen promoted aerobic bacterial growth, which further decomposed any remaining organic residue. The presence of oxygen also inhibited the growth of anaerobic bacteria (those that produced foul-smelling by-products) and partly accounted for the lack of odors where TPE process was utilized.

Personal tools were decontaminated at the end of each working day. Major treatment equipment was left in the treatment area until the project was completed. It was then decontaminated prior to leaving the job site.

Five soil samples were collected at various depths in the treatment pile, one sample per 10 cubic yards, and analyzed for total hydrocarbon content utilizing E.P.A. Method 418.1.

After final verification soil sampling process was completed, the excavation site was backfilled and compacted using the clean decontaminated soil and imported gravel. Equipment was decontaminated and removed from the site, as were the treatment supplies and containers.

# APPENDIX J

TPE ENVIRONMENTAL, INC.
TAILGATE SAFETY MEETING

Site _____ Project No. _____

Date _____ Time _____

Client _____ Address _____

Specific Location _____

Type of Work _____

Chemicals Used _____

## SAFETY TOPICS PRESENTED

Protective Clothing/Equipment _____

Chemical Hazards _____

Physical Hazards _____

Emergency Procedures _____

Hospital/Clinic _____ Phone ( ) _____ Paramedic Phone ( ) _____

Hospital Address _____

Special Equipment _____

Other _____

## ATTENDEES

| NAME PRINTED | SIGNATURE |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Meeting conducted by:

_____ _____

NAME PRINTED SIGNATURE

Supervisor _____ Manager _____

TPE
ENVIRONMENTAL
"ENVIRONMENTAL
& GEOTECHNICAL
CONSULTING"

E90-1514.C

N 000572

July 23, 1990

Los Angeles County
Deptartment of Public Works
Waste Management Division
UST Pilot Program - Annex Building
P.O. Box 1460
Alhambra, CA 91802-1460

Attention: Mr. Ofari Amoah

**Subject: Re-typed Figures According to Your Specs, Additional Information Requirement Sheet, Closure, Site Assessment, Soil Remediation Report**
**Site Location: 12021 Woodruff Avenue**
**Downey, CA**
**WMD Pilot Program Reference File #I-12987**

Dear Mr. Amoah:

As per your specifications, I am enclosing nine re-typed figures for your perusal.

If you need any additional information, please call me at 1-800-464-TANK.

Thank you for your time and patient review.

Respectfully submitted,

**TPE ENVIRONMENTAL, INC.**

Ravi P. Pendurthi

Ravi P. Pendurthi, MSES
Staff Hydrogeologist

RPP:cdn/E90-1514.C

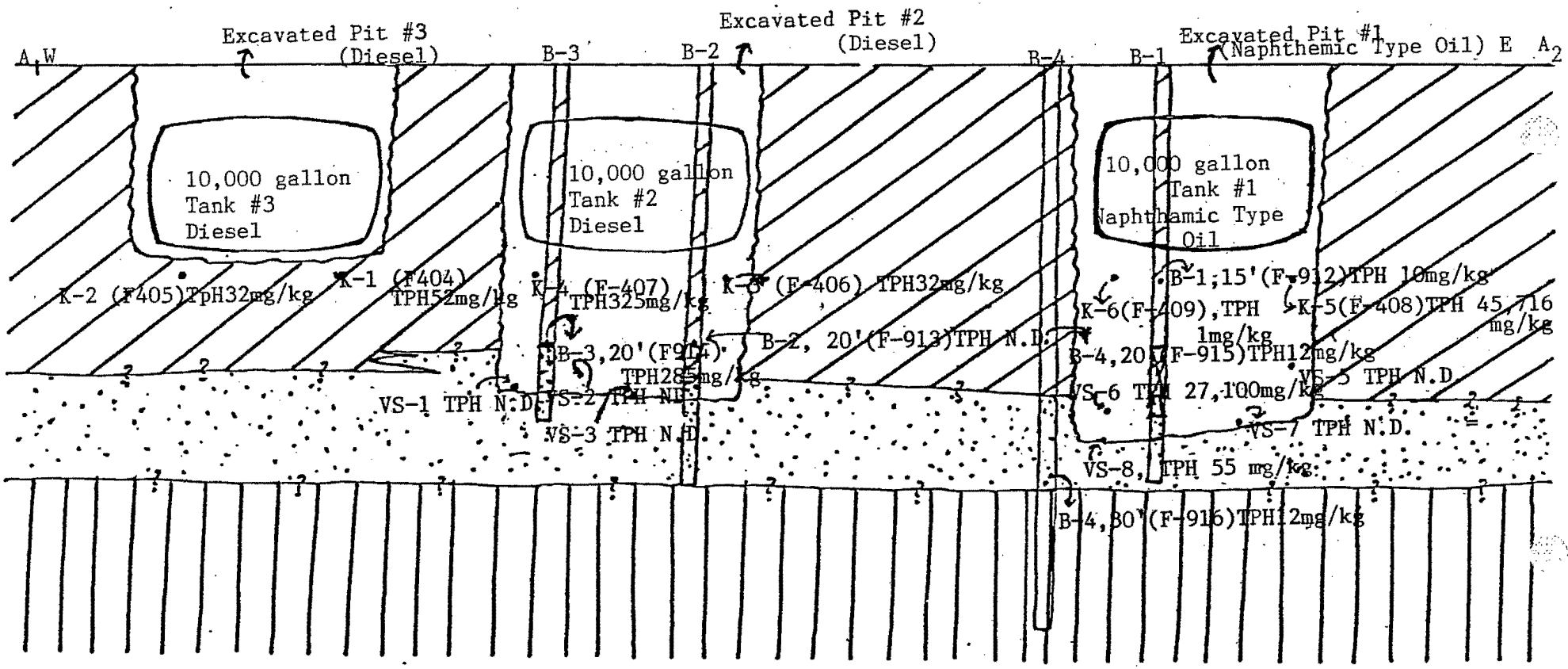
Enclosure 3.

1963 N. Main St.
Orange, CA 92665
714/921-0888
213/592-4771
FAX: 714/921-1832

FIGURE 1: GEOLOGICAL CROSS-SECTION ALONG $A_1$-$A_2$ OF PLOT PLAN

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Groundwater Detected in Borings (Published Nearest Well Data Indicates Groundwater at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were indicated in Parentesis.

Scale: 1" = 10'. (H&V)
B-1, B-2, B-3, B-4: Projected Bore Hole Names
K__, B__, VS__: Sample Names
? = Interpreted Lithology

CLAY (CL)
SILTS(ML)
SAND (SP)
NO RECOVERY

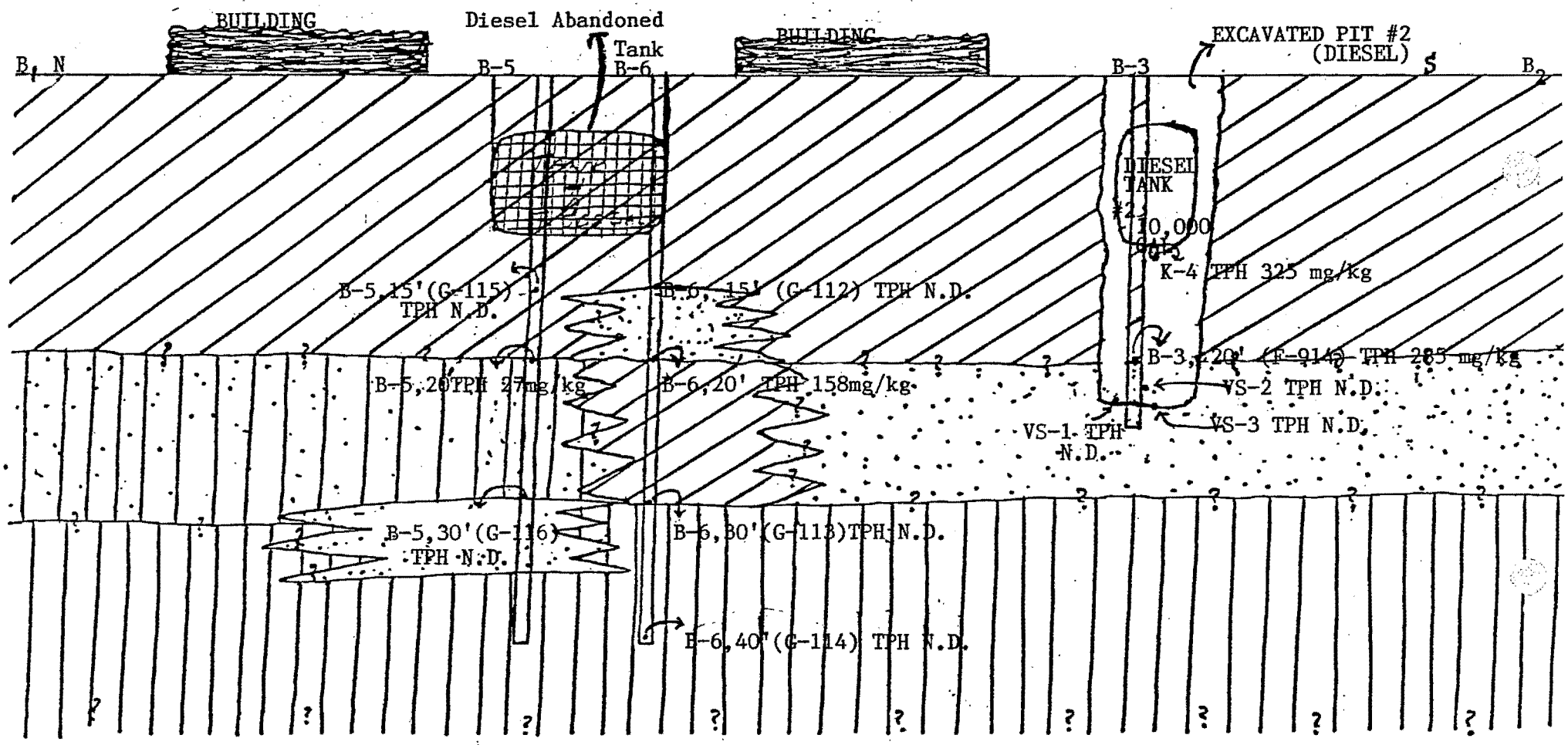
Prepared by: R.P. Pendurthi, Staff Hydrogeologist RP.
Approved by: M.L. Leonard, Certified C.E. ML

00572

# FIGURE 2: GEOLOGICAL CROSS-SECTION ALONG $B_1$-$B_2$ OF PLOT PLAN

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Groundwater Detected in Borings (Published Nearest Well Data Indicates Groundwater at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were Indicated in Parenthesis.

Scale: 1" = 10' (H&V)
B-3, B-5, B-6: Bore Hole Names (Projected)
K__, B__, VS__: Sample Names
? = Interpreted Lithology

CLAY (CL)
SILTY SAN (SM)
SAND (SP)
SILTS (ML

Prepared by: R.P. Pendurthi, Staff Hydrogeologist RPP.
Approved by: M.L. Leonard, Certified C.E. MLL

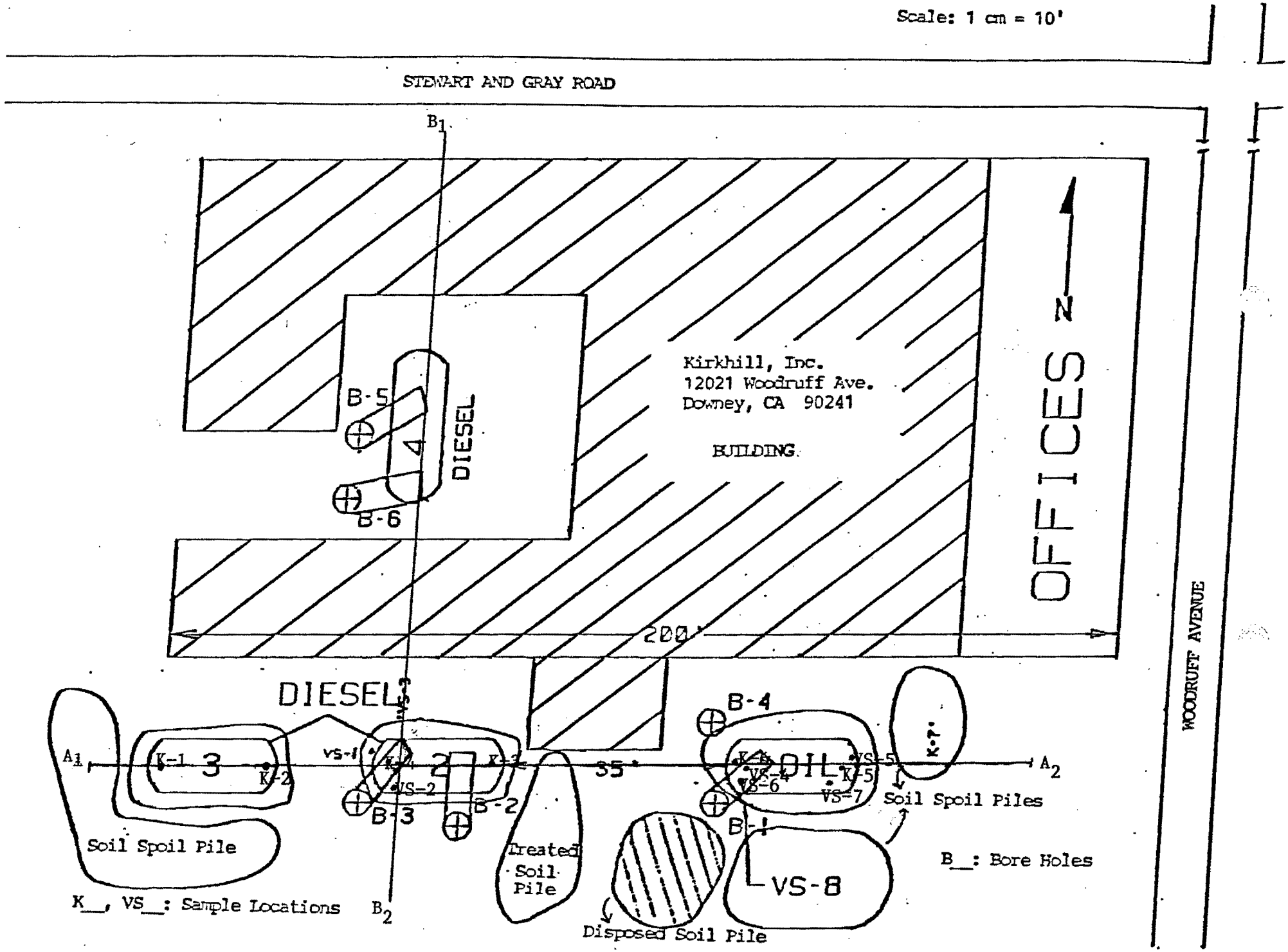



FIGURE 3 - PLOT PLAN AND CROSS-SECTION PLANES

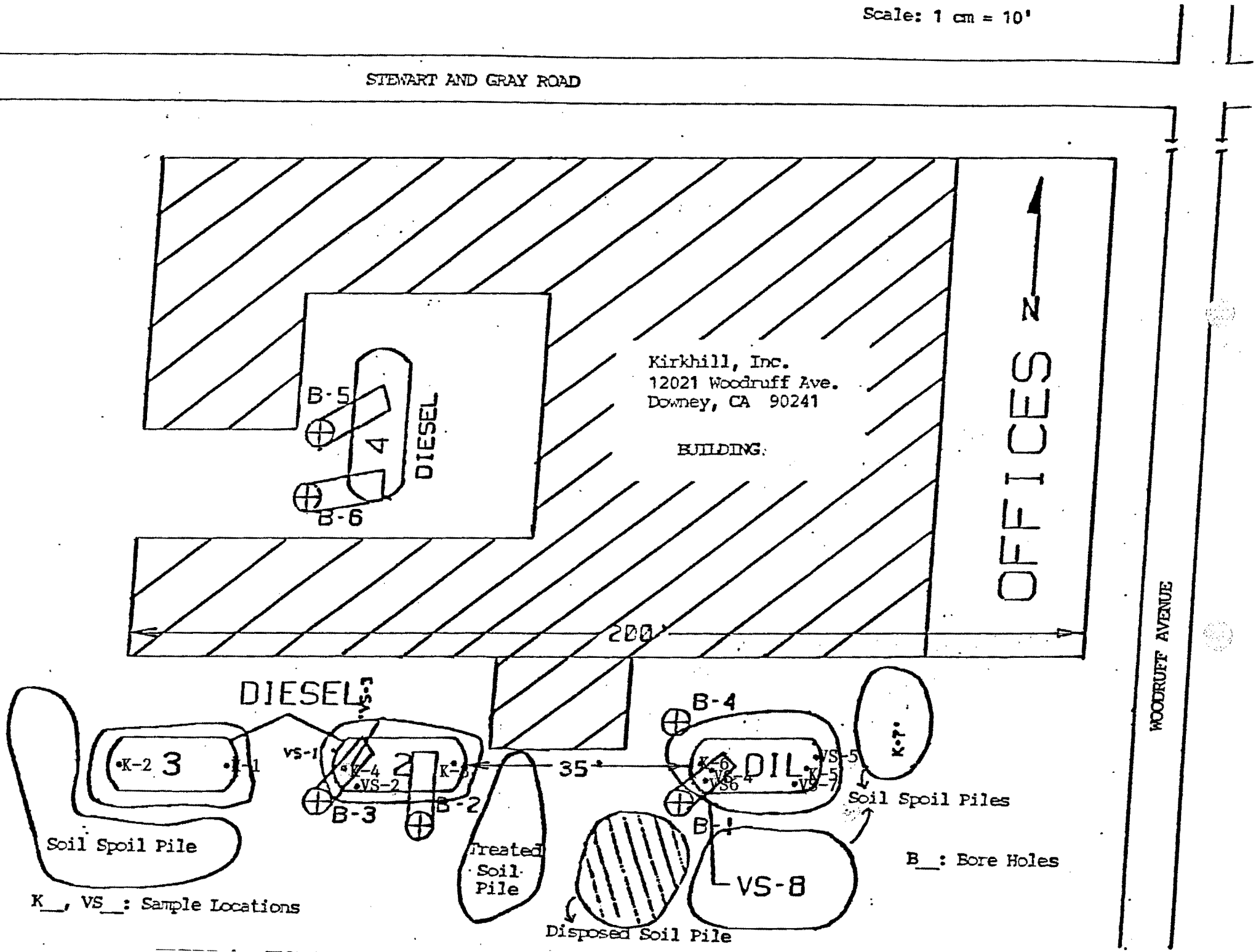
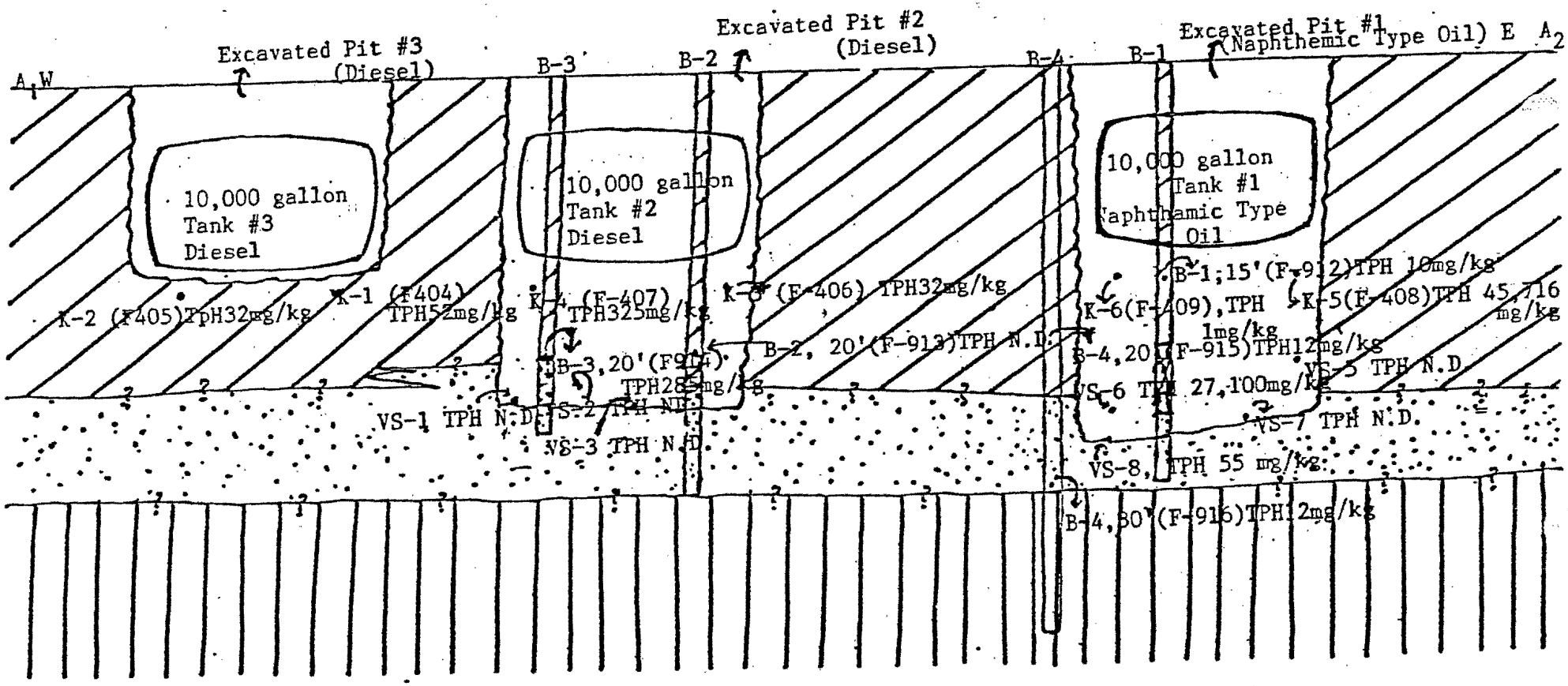

Scale: 1 cm = 10'
STEWART AND GRAY ROAD
Kirkhill, Inc.
12021 Woodruff Ave.
Downey, CA 90241
BUILDING
OFFICES
N
B-5
4
DIESEL
B-6
200'
WOODRUFF AVENUE
DIESEL
VS-3
K-2
3
K-1
VS-1
K-4
2
K-3
VS-2
B-3
B-2
35'
B-4
DIL
K-6
VS-4
VS6
VS-5
K-7
Soil Spoil Piles
B-1
Soil Spoil Pile
Treated Soil Pile
VS-8
Disposed Soil Pile
B__: Bore Holes
K__, VS__: Sample Locations

FIGURE 5 - GEOLOGICAL CROSS-SECTION ALONG $A_1$-$A_2$ OF PLOT PLAN SHOWING SAMPLE LOCATIONS

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Ground-water Detected in Borings (Published Nearest Well Data Indicates Ground-water at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were indicated in Parentesis.

Scale: 1" = 10'. (H&V)
B-1, B-2, B-3, B-4: Projected Bore Hole Names
K__, B__, VS__: Sample Names
? = Interpreted Lithology

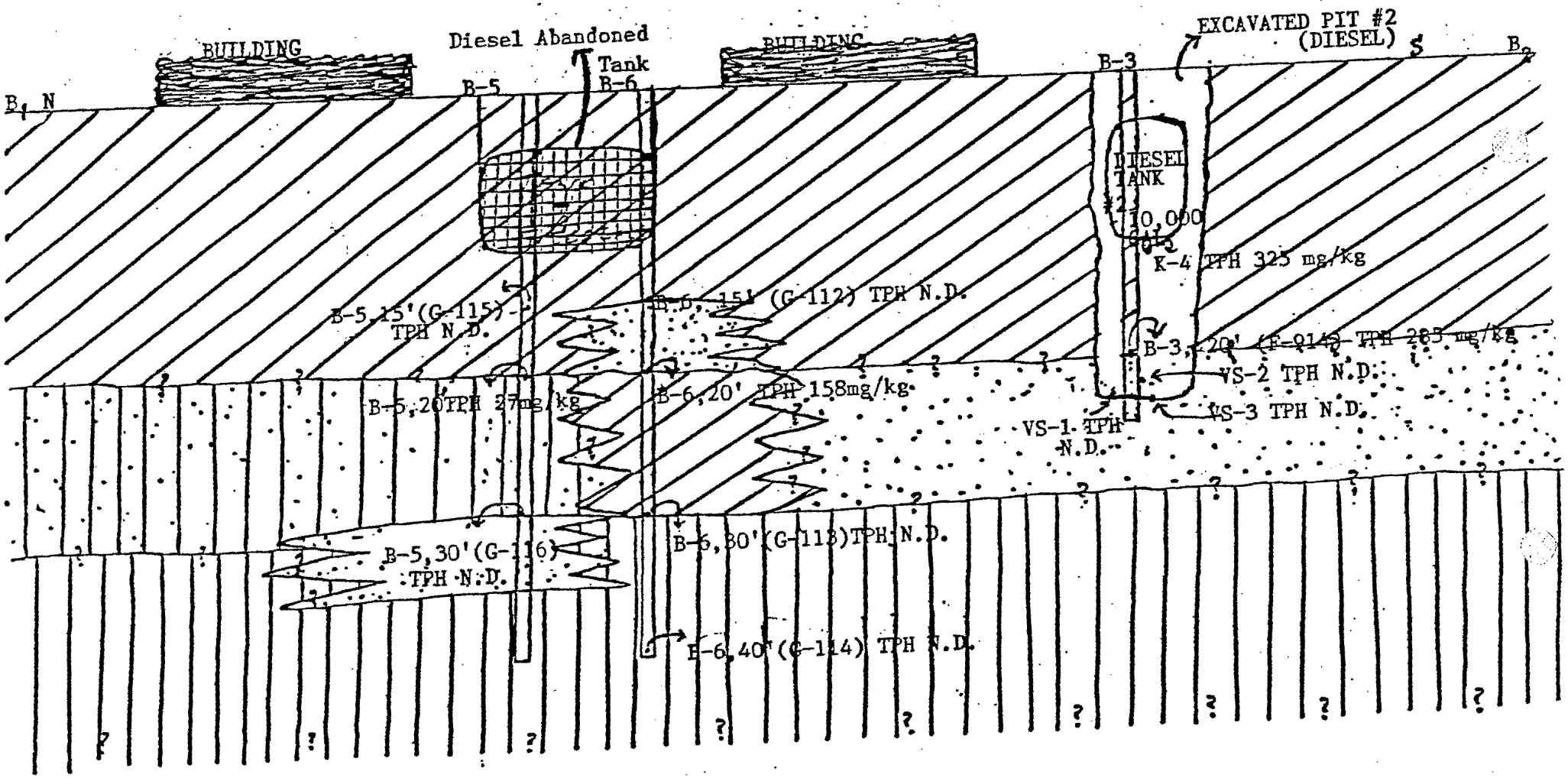
CLAY (CL)
SILTS(ML)
SAND (SP)
NO RECOVERY

Prepared by: R.P. Penduthi, Staff Hydrogeologist RPP.
Approved by: M.L. Leonard, Certified C.E. MLL

FIGURE 5 - GEOLOGICAL CROSS-SECTION ALONG $B_1$-$B_2$ OF PLOTPLAN SHOWING SAMPLE LOCATION

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes:
1. NO Ground-water Detected in Borings (Published Nearest Well Data Indicates Ground-water at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were Indicated in Parenthesis.

Scale: 1" = 10' (H&V)
B-3, B-5, B-6: Bore Hole Names (Projected)
K__, B__, VS__: Sample Names
? = Interpreted Lithology

CLAY (CL)
SILTY SAN (SM)
SAND (SP)
SILTS (ML

Prepared by: R.P. Pendurthi, Staff Hydrogeologist *RPP*
Approved by: M.L. Leonard, Certified C.E. *MLL*

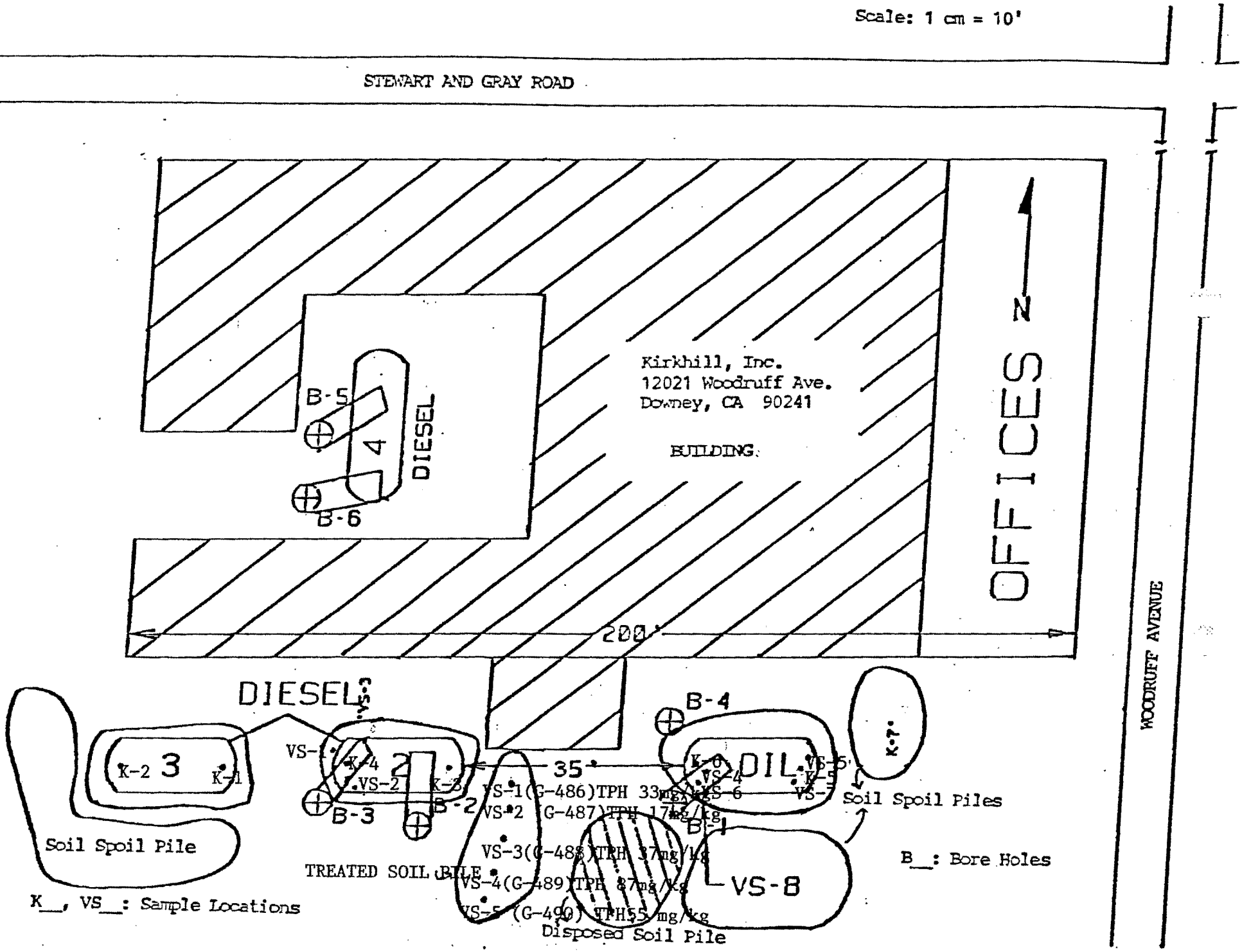



FIGURE 6 - PLOT PLAN SHOWING TREATMENT VERIFICATION SAMPLES

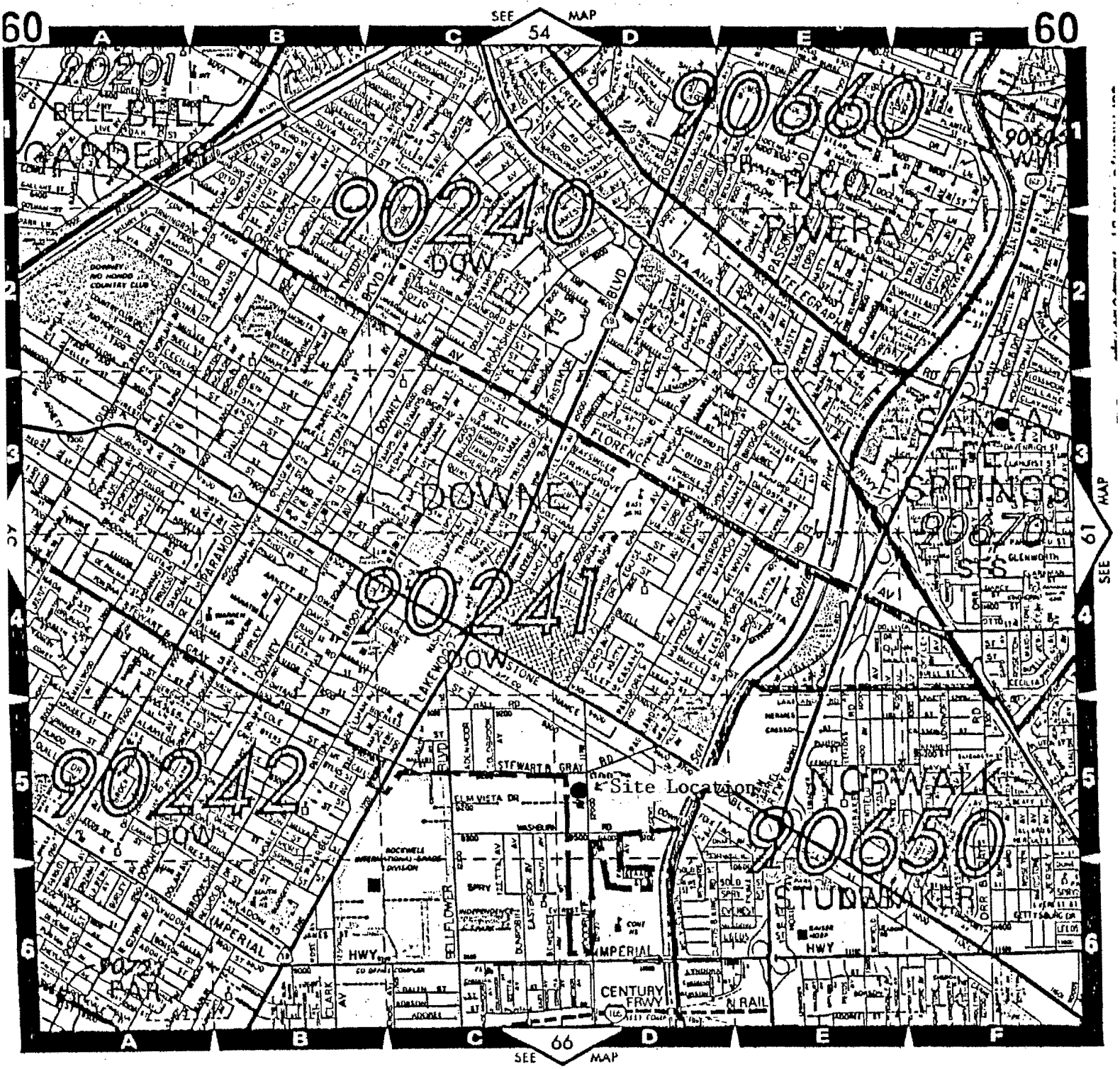
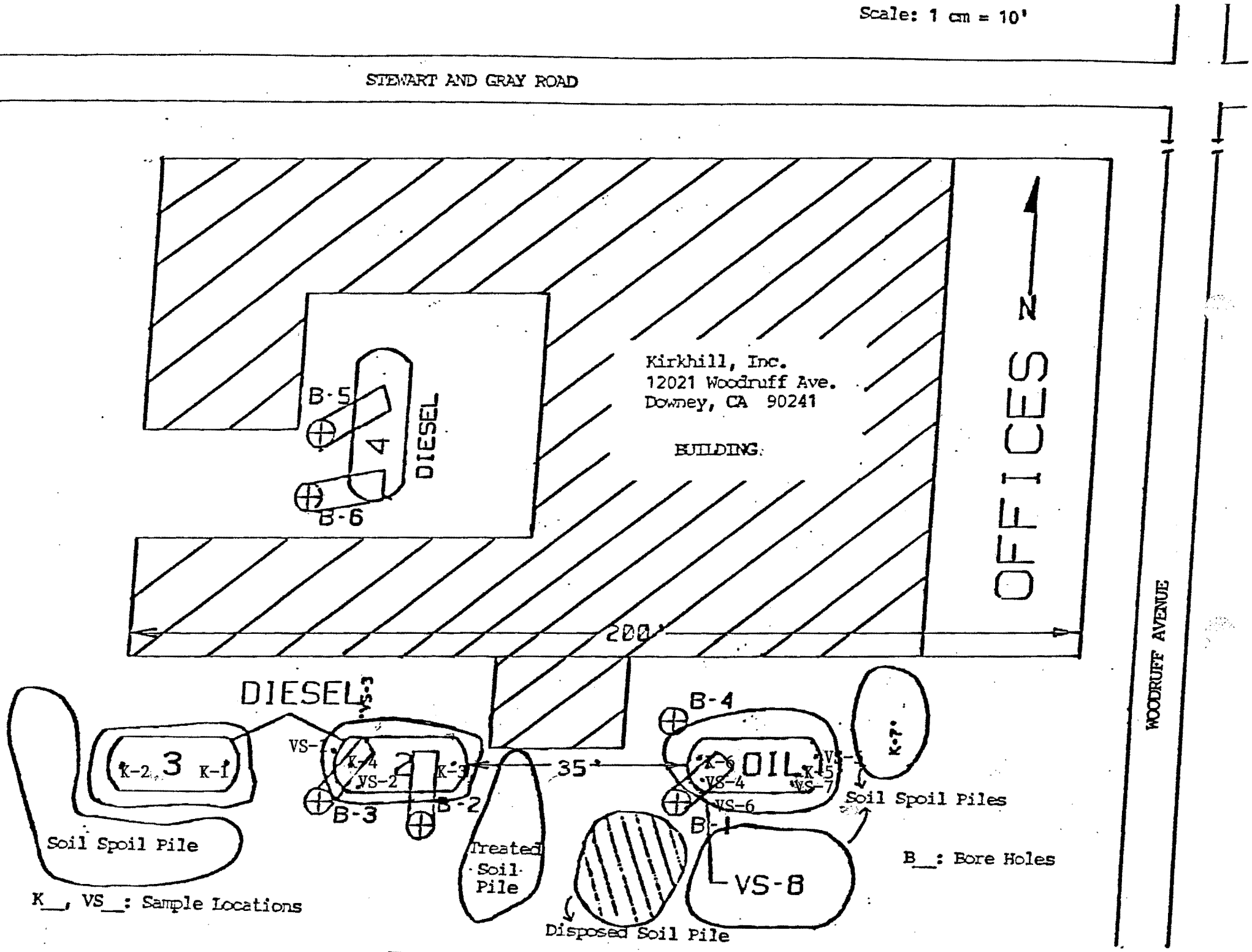



FIGURE 7 - SITE LOCATION MAP


Scale: 1 cm = 10'
STEWART AND GRAY ROAD
Kirkhill, Inc.
12021 Woodruff Ave.
Downey, CA 90241
BUILDING
OFFICES
N
WOODRUFF AVENUE
200'
B-5
4
DIESEL
B-6
DIESEL
VS-3
VS-1
K-4
VS-2
K-3
B-3
B-2
K-2
3
K-1
Soil Spoil Pile
35'
B-4
OIL
K-6
VS-4
K-5
VS-7
VS-5
K-7
Soil Spoil Piles
VS-6
B-1
VS-8
Treated Soil Pile
Disposed Soil Pile
B__: Bore Holes
K__, VS__: Sample Locations

RECEIVED
DEPT. OF PUBLIC WORKS

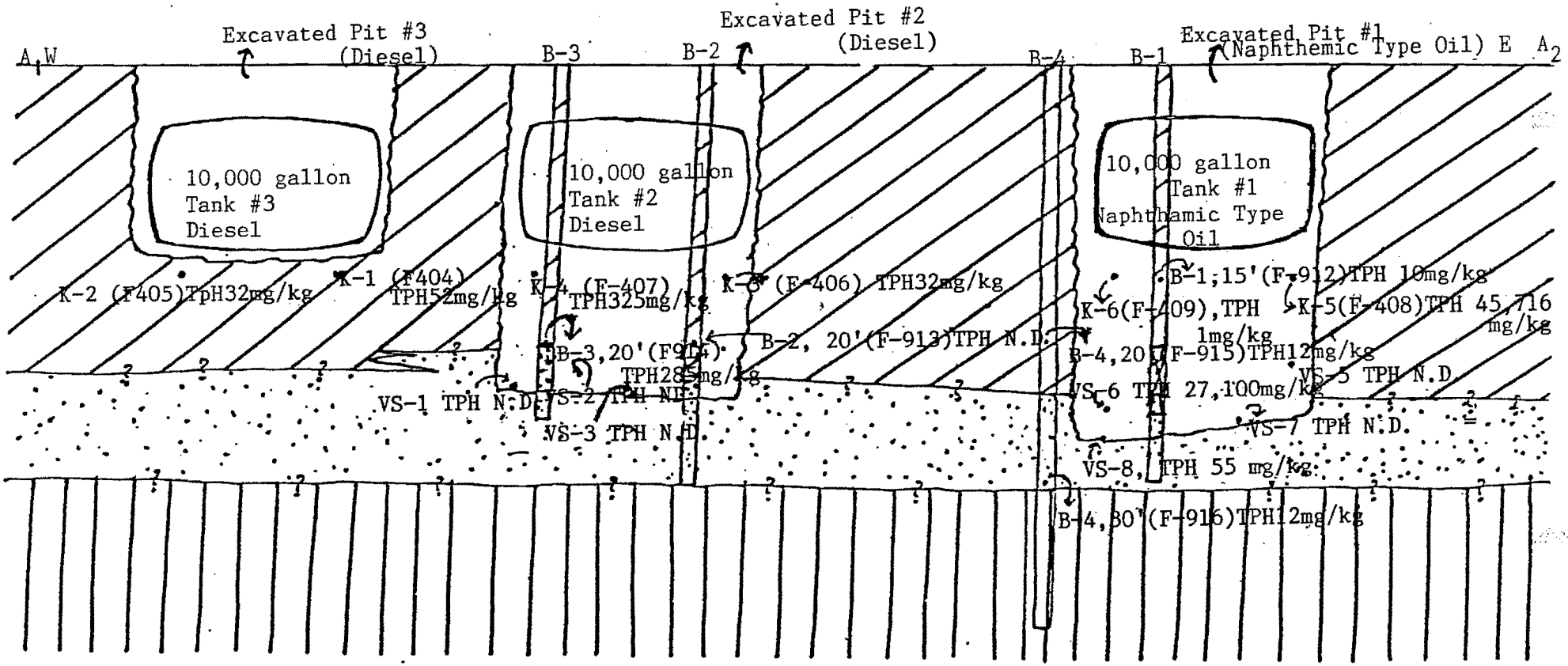
1990 JUL 27 AM 8:55

MAILROOM
900 S. FREMONT AVE.

FIGURE 1: GEOLOGICAL CROSS-SECTION ALONG $A_1$-$A_2$ OF PLOT PLAN

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Groundwater Detected in Borings (Published Nearest Well Data Indicates Groundwater at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were indicated in Parentesis.

Scale: 1" = 10'. (H&V)
B-1, B-2, B-3, B-4: Projected Bore Hole Names
K__, B__, VS__: Sample Names
? = Interpreted Lithology

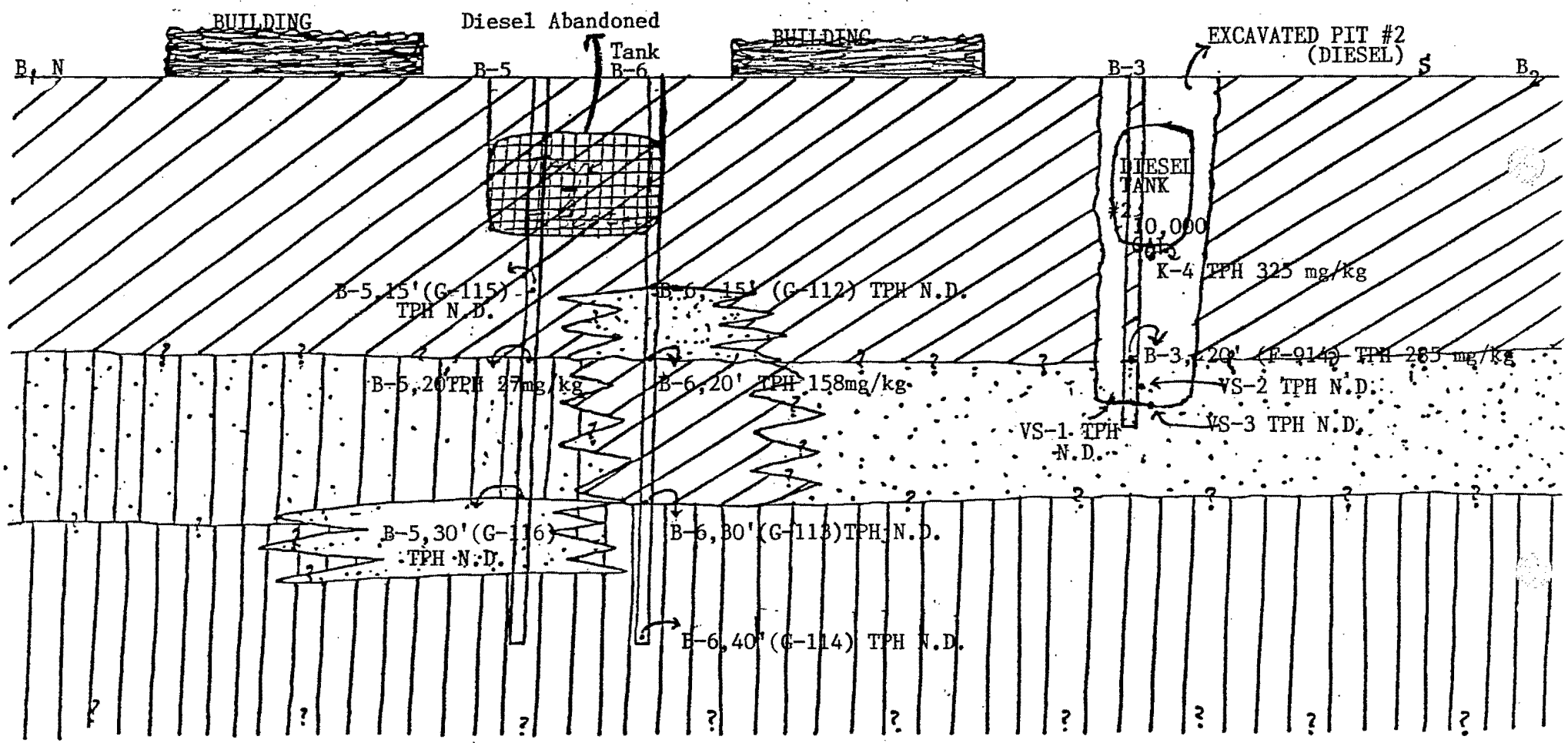
CLAY (CL)
SILTS(ML)
SAND (SP)
NO RECOVERY

Prepared by: R.P. Pendurthi, Staff Hydrogeologist
Approved by: M.L. Leonard, Certified C.E.

# FIGURE 2: GEOLOGICAL CROSS-SECTION ALONG $B_1$-$B_2$ OF PLOT PLAN

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Groundwater Detected in Borings (Published Nearest Well Data Indicates Groundwater at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were Indicated in Parenthesis.

Scale: 1" = 10' (H&V)
B-3, B-5, B-6: Bore Hole Names (Projected)
K__, B__, VS__: Sample Names
? = Interpreted Lithology

CLAY (CL)
SILTY SAND (SM)
SAND (SP)
SILTS (ML)

Prepared by: R.P. Pendurthi, Staff Hydrogeologist RPP
Approved by: M.L. Leonard, Certified C.E. MLL

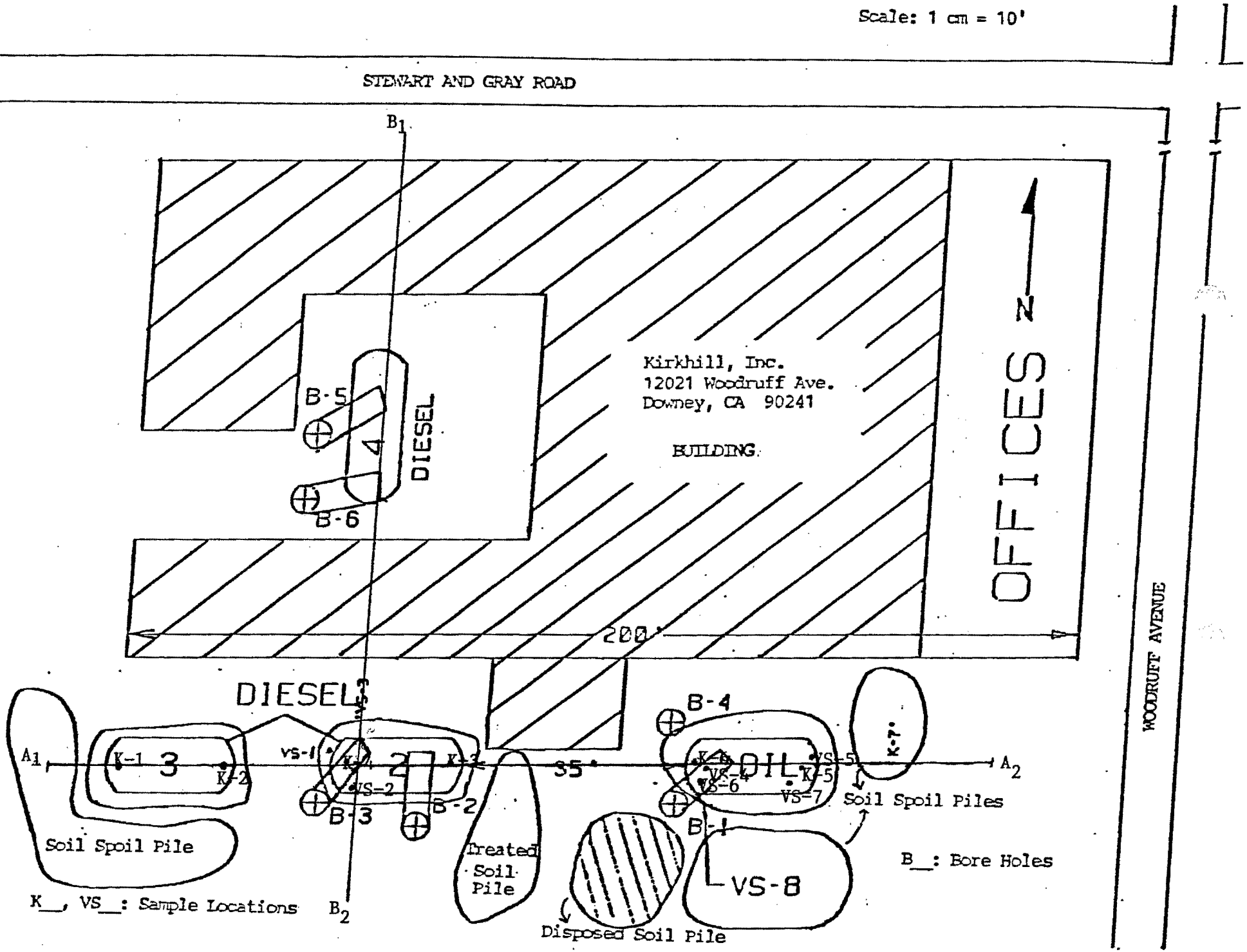



FIGURE 3 - PLOT PLAN AND CROSS-SECTION PLANES

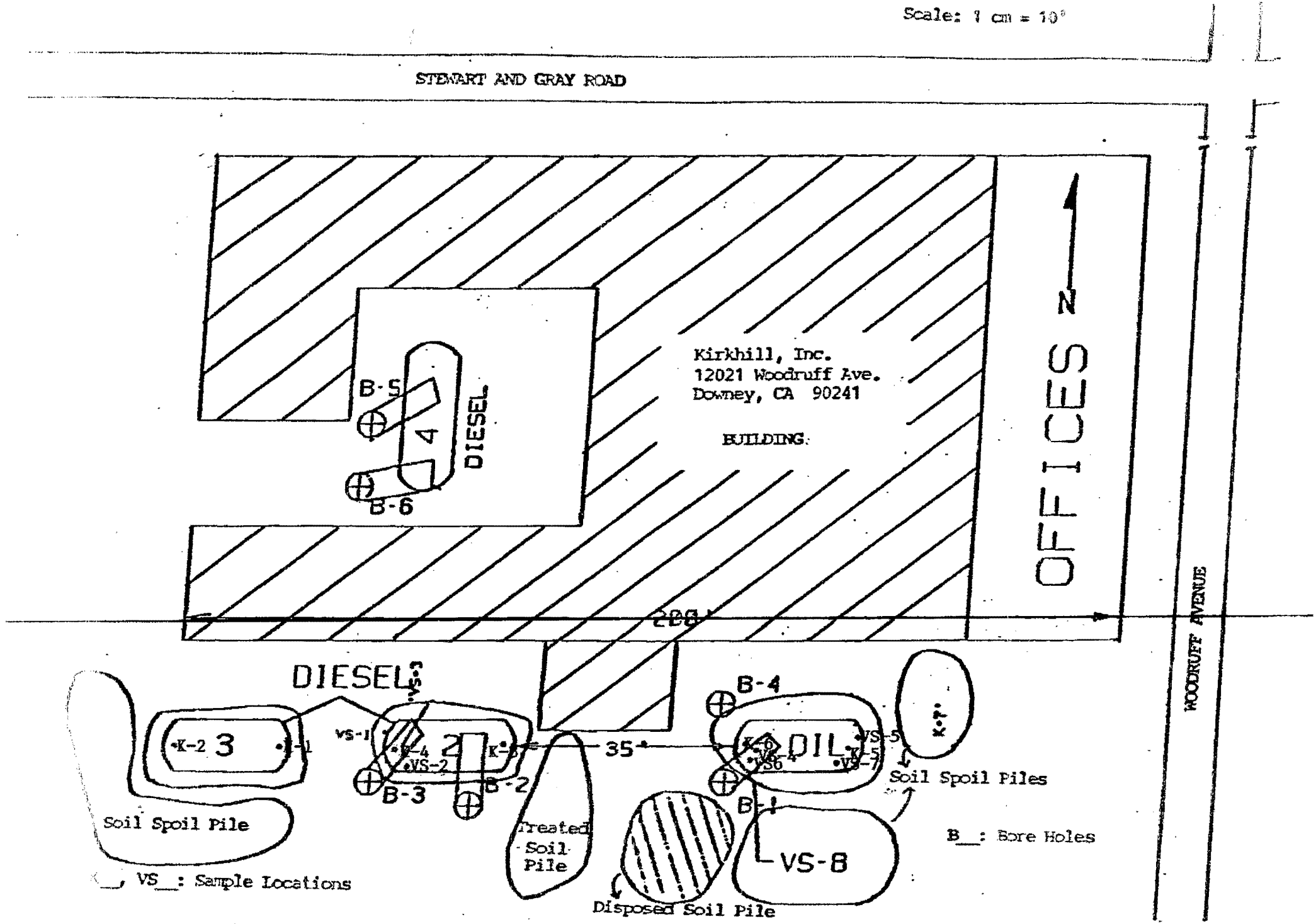
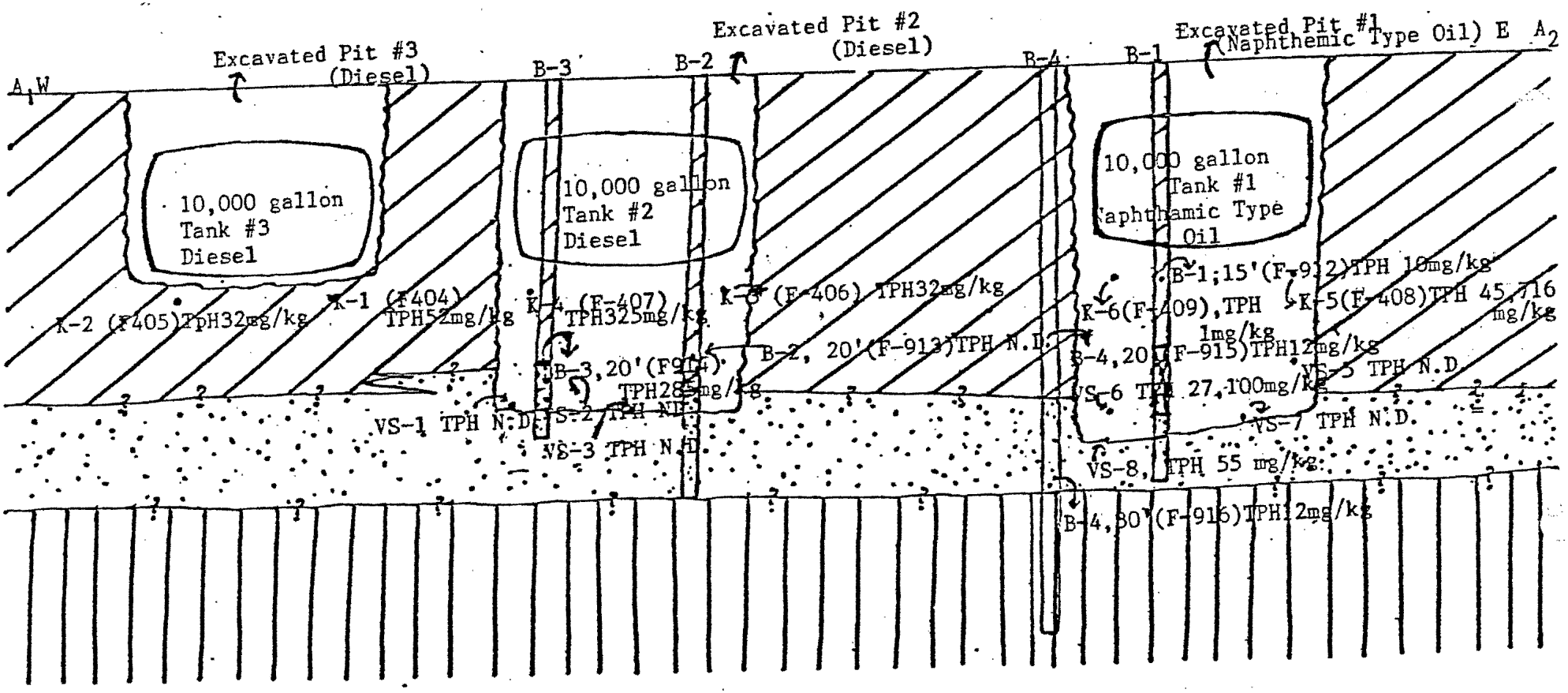



FIGURE 4 - PLOT PLAN SHOWING LOCATION OF POST TANK EXCAVATION SAMPLES (K-1 TO K-7)

FIGURE 5 - GEOLOGICAL CROSS-SECTION ALONG $A_1$-$A_2$ OF PLOT PLAN SHOWING SAMPLE LOCATIONS

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Scale: 1" = 10'. (H&V)
B-1, B-2, B-3, B-4: Projected Bore Hole Names
K__, B__, VS__: Sample Names
? = Interpreted Lithology

CLAY (CL)
SILTS(ML)
SAND (SP)
NO RECOVERY

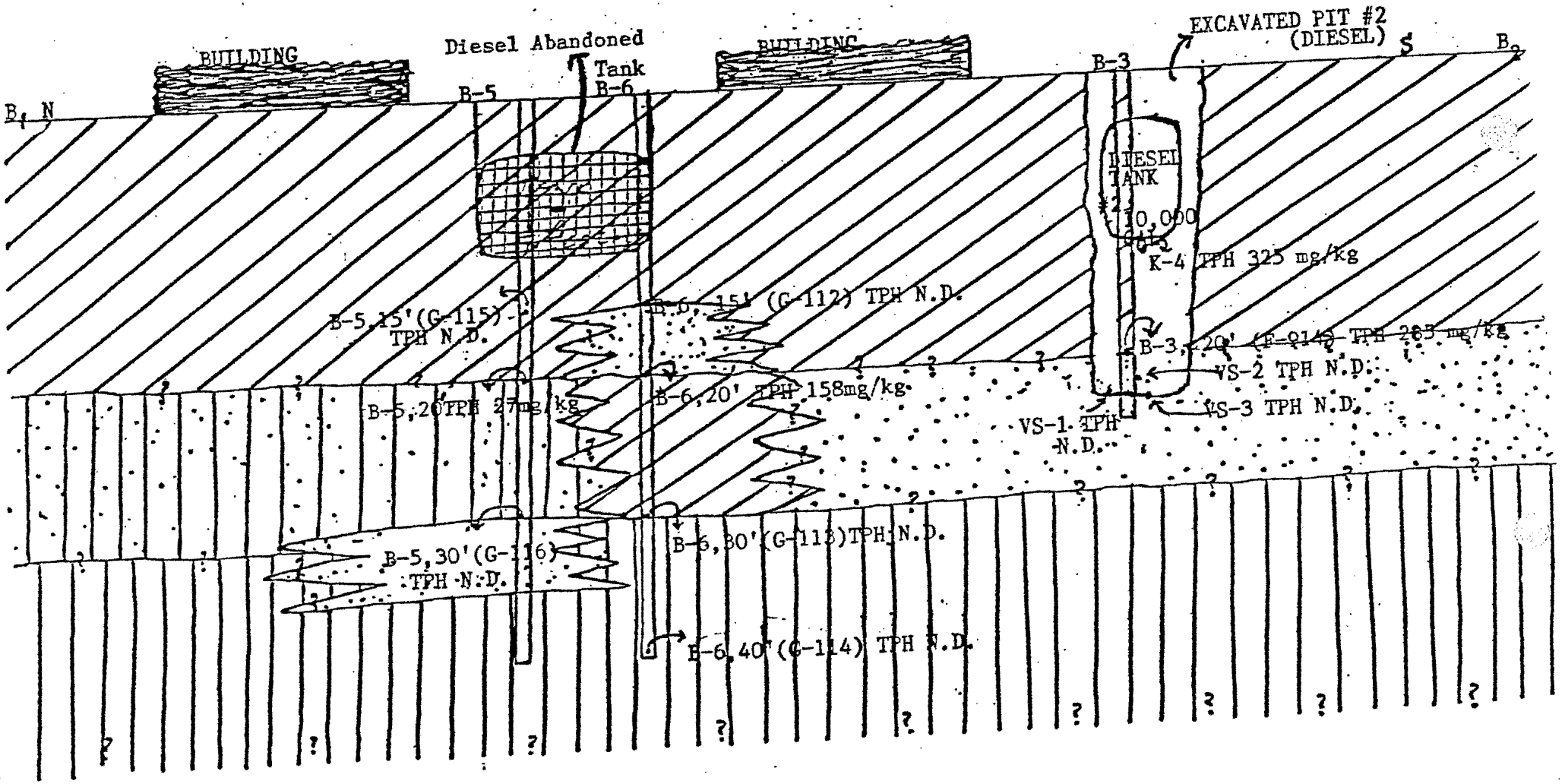
Notes: 1. NO Ground-ater Detected in Borings (Published Nearest Well Data Indicates Ground-ater at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were indicated in Parentesis.

Prepared by: R.P. Pandurthi, Staff Hydrogeologist RP.
Approved by: M.L. Leonard, Certified C.E. ML

FIGURE 5 - GEOLOGICAL CROSS-SECTION ALONG $B_1$-$B_2$ OF PLOTPLAN SHOWING SAMPLE LOCATION

Subject Site: Kirkhill, Inc.
12021 Woodruff
Downey, CA 90241

Contractor: Tank Protect Engineering
1963 North Main Street
Orange, CA 92665
Job File No. E90-1514




Notes: 1. NO Ground-ater Detected in Borings (Published Nearest Well Data Indicates Ground-ater at about 90').
2. Contaminated Soil Excavated and Disposed/Treated.
3. Special Numbers used in Laboratory Analyses were Indicated in Parenthesis.

Scale: 1" = 10' (H&V)
B-3, B-5, B-6: Bore Hole Names (Projected)
K__, B__, VS__: Sample Names
? = Interpreted Lithology

CLAY (CL)
SILTY SA (SM
SAND (SP)
SILTS (M

Prepared by: R.P. Pendurthi, Staff Hydrogeologist RPP.
Approved by: M.L. Leonard, Certified C.E. MLL

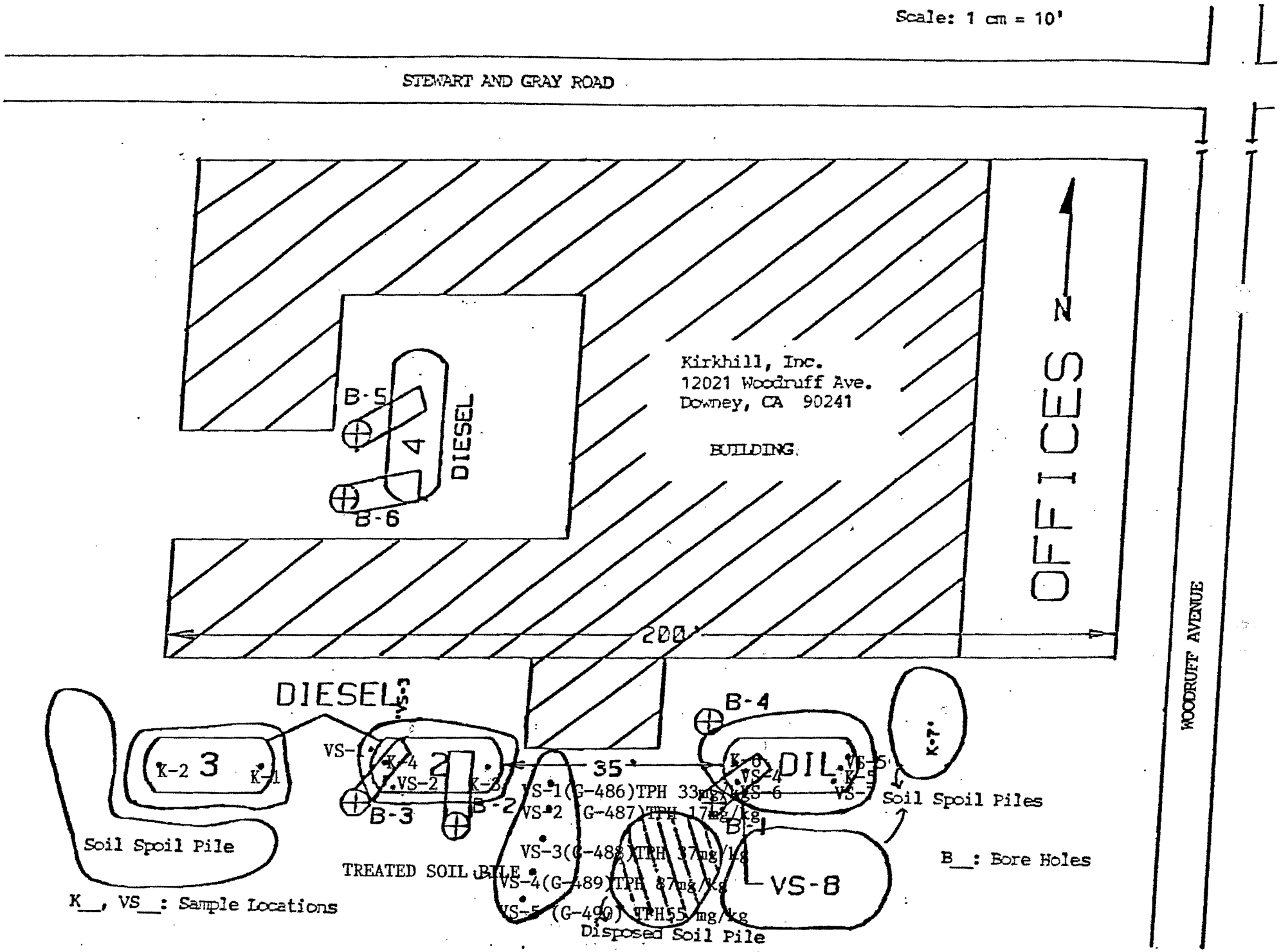


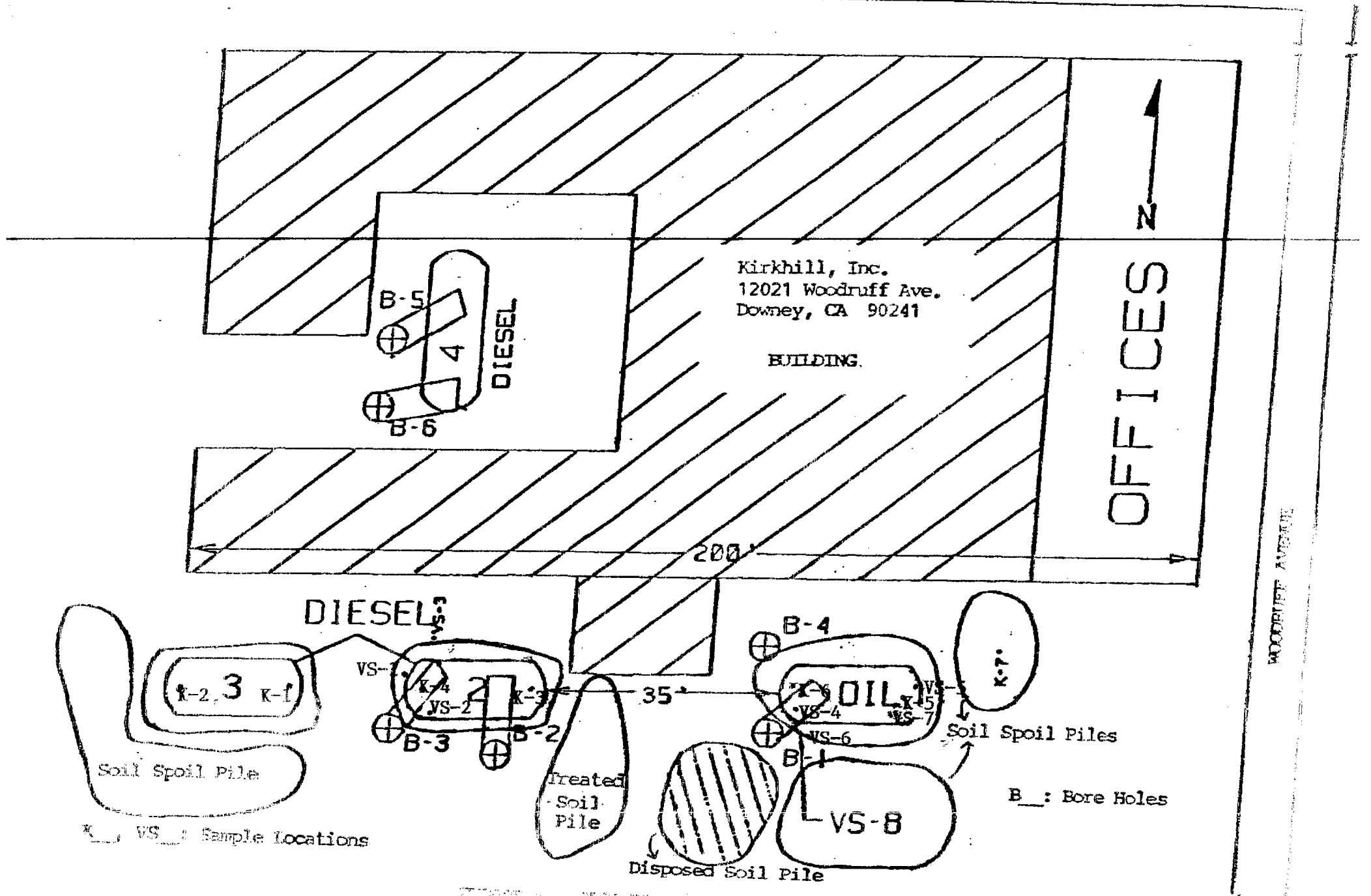

FIGURE 6 - PLOT PLAN SHOWING TREATMENT VERIFICATION SAMPLES

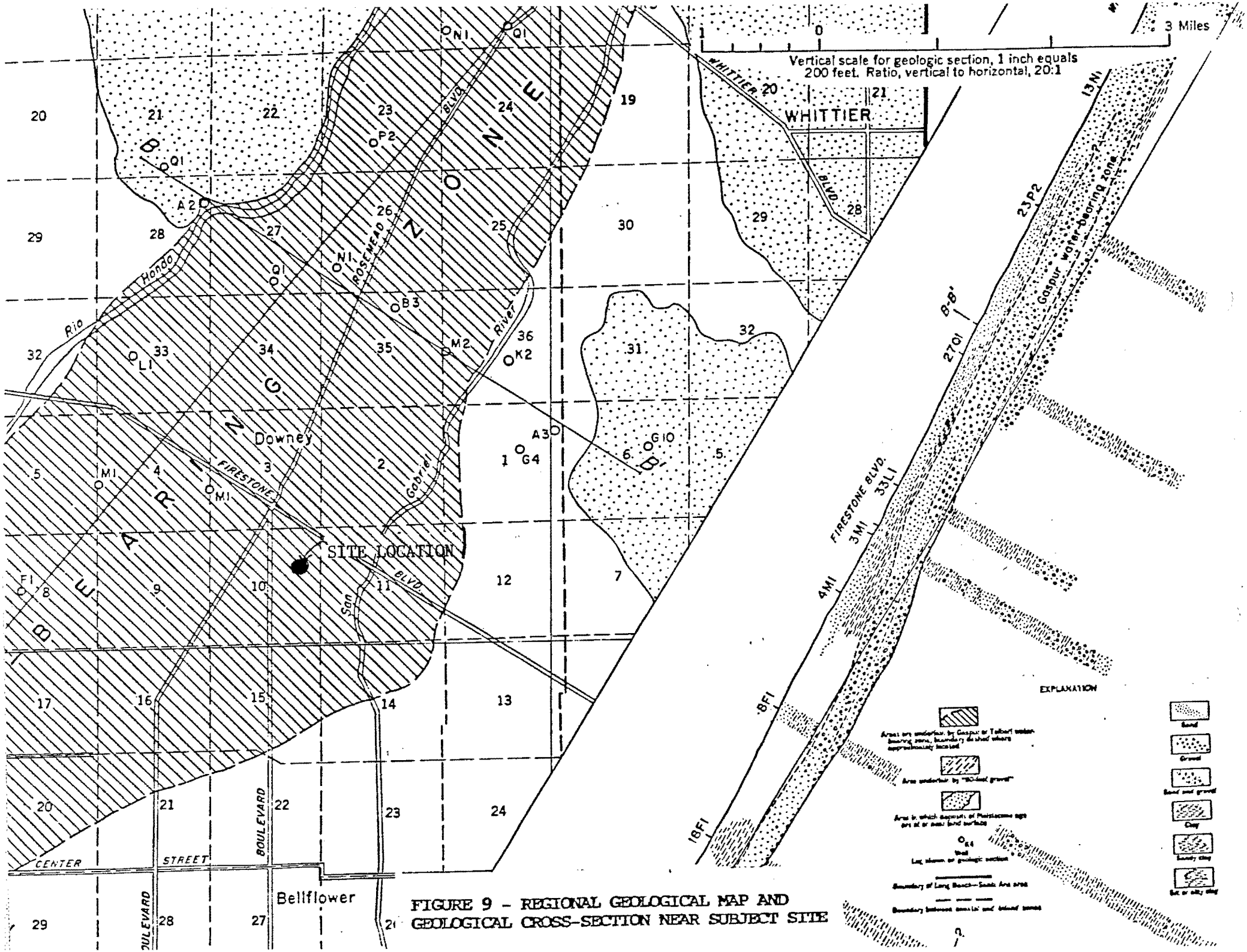



FIGURE 7 - SITE LOCATION MAP

Scale: 1 cm = 10'

STEWART AND GRAY ROAD




3 Miles
Vertical scale for geologic section, 1 inch equals 200 feet. Ratio, vertical to horizontal, 20:1
WHITTIER
WHITTIER BLVD.
ROSEMEAD BLVD.
Rio Hondo
San Gabriel River
Downey
FIRESTONE BLVD.
SITE LOCATION
SAN GABRIEL BASIN
CENTER STREET
BOULEVARD
Bellflower
Gaspur water-bearing zone
EXPLANATION
FIGURE 9 - REGIONAL GEOLOGICAL MAP AND GEOLOGICAL CROSS-SECTION NEAR SUBJECT SITE

Rec'd 8/7/90

12907

PP000600

# TANK CLOSURE ADDENDUM
# FOR
# KIRKHILL, INC.

**PRESENTED TO:**

**COUNTY OF LOS ANGELES**
**DEPARTMENT OF PUBLIC WORKS**
**PILOT PROGRAM**
**900 S. FREMONT AVENUE**
**ALHAMBRA, CA 91803-1331**

**ATTENTION: MR. OFARI AMOAH**

Aug 6, 1990

**SUBMITTED BY:**

**TANK PROTECT ENGINEERING**
**1963 NORTH MAIN STREET**
**ORANGE, CA 92665**

Tank Protect
Engineering

"ENVIRONMENTAL
MANAGEMENT"

August 6, 1990

County of Los Angeles
Department of Public Works
Pilot Program
900 S. Fremont Avenue
Alhambra, CA 91803-1331

Attention: Mr. Ofari Amoah

**Subject: Tank Closure Addendum**

Dear Mr. Ofari:

Enclosed please find the documents you requested. If you have any questions, please call the undersigned.

Sincerely,

**TANK PROTECT ENGINEERING**

Cyrus D. Namini
President

CDN:cdn/0369DN

Enclosures: Health & Safety Plan
Reinstate Manifest
Soil Mainifest

• 1963 N. Main St.
Orange, CA 92665
714/921-0888
213/592-4771
FAX: 714/921-1832
Engr. Contr. Lic.#
489994

TPE ENVIRONMENTAL SITE SAFETY PLAN

Site Kirkhill, Inc. Project Number E90-1514A

Original Site Safety Plan: Yes (XX) No ( ) Revision Number _____

Plan Prepared by Cyrus D. Namini Date 11-22-89

Plan Approved by Cyrus D. Namini Date 11-22-89

Please respond to each item as completely as possible. Where an item is not applicable, please mark "N/A".

## 1.0 FACILITY BACKGROUND

### 1.1 Site Description

Type: Spill ( ) Fire ( ) HW Site ( ) Industrial Facility ( )

Other Manufacturer

Physical Description Plant and Warehouse

Location _____

Size 85' x 120' Lot

History Manufacturer for 30 years

Status: Active(XX) Inactive ( )

Surrounding Population Commercial/Industrial

Surrounding Buildings/Homes _____

Have nearby people been evacuated: Yes ( ) No (XX) Not applicable ( )

Evacuation Distance _____

Evaluation Initiated By _____

Topography Flat

Receiving Waters N/A

TPEE SITE SAFETY PLAN

Site Plan/Sketch completed (next page): Yes (X) No ( )

The site sketch should include the following:

- Nearby roads and structures
- On-site roads and structures
- Sample locations if applicable
- Location of waste, if known or applicable
- Location of work, support and decontamination zones
- Location of:

  Emergency showers
  Emergency eye wash
  First aid kit
  Telephones
  Stretchers
  Fire extinguishers
  Binoculars
  Megaphone
  SCBA's and tanks
- Location of any other relevant Health & Safety or project-related equipment
- Escape routes from site

## SITE SKETCH

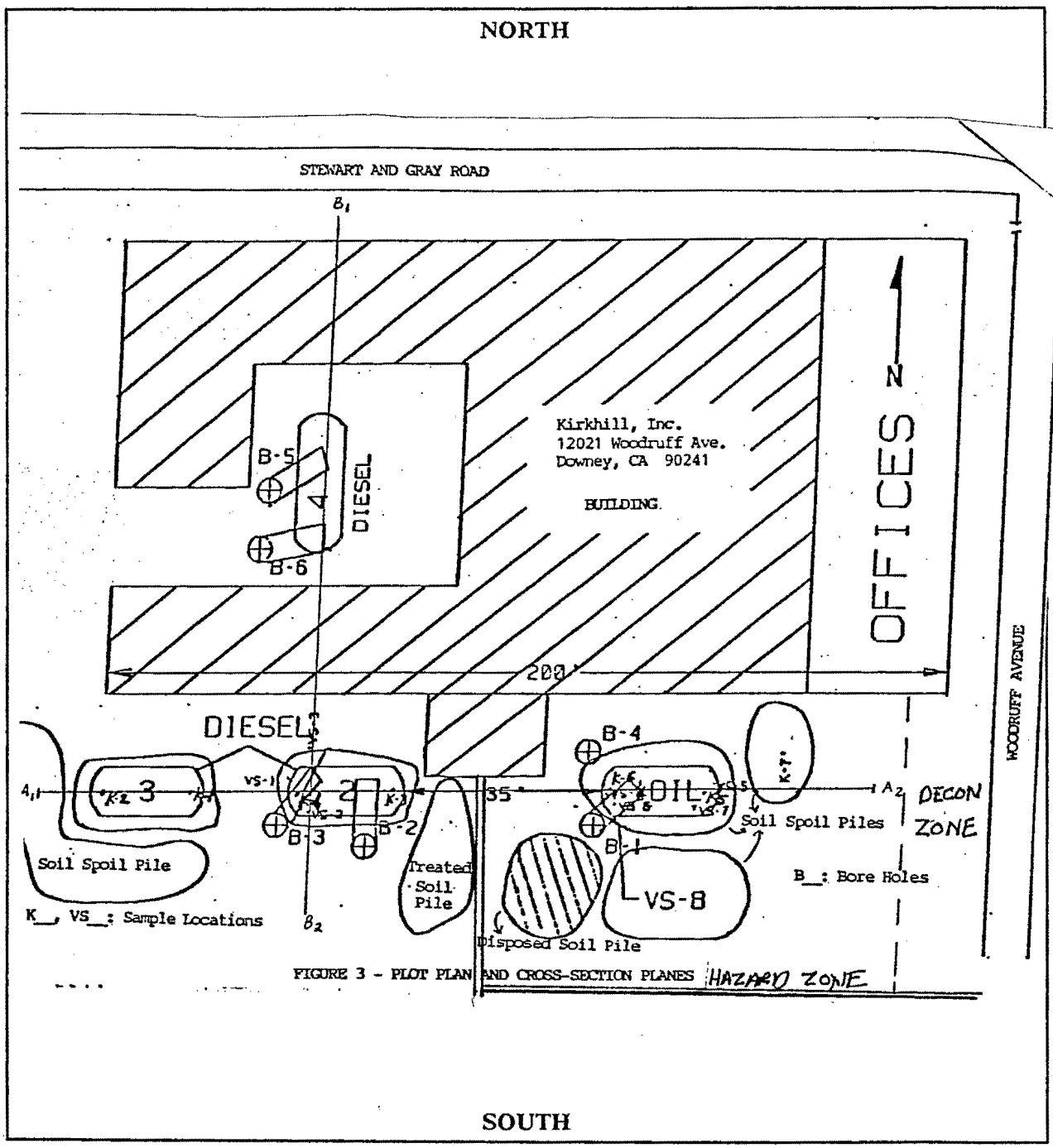



FIGURE 3 - PLOT PLAN AND CROSS-SECTION PLANES

## 2.0 KEY PERSONNEL AND RESPONSIBILITIES

(Include name, telephone number and health and safety responsibilities; i.e., Project Manager - Joe Smith - responsible for supervision of all site activities.)

Project Manager Cyrus Namini, 714/921-0888

Site Manager Cyrus Namini, 714/921-0888

Field Team Members

Federal Agency Reps

State Agency Reps

Local Agency Reps LACDPW - SCAQMD

Contractor(s)

## 3.0 JOB HAZARD ANALYSIS

### 3.1 Overall Hazard Evaluation

Hazard Level: High ( ) Moderate ( ) Low (XX) Unknown ( )

Hazard Type: Liquid (XX) Solid (XX) Sludge ( ) Vapor/Gas (XX)

Known or suspected hazardous materials present onsite Hydrocarbon Petroleum Products

#1 Diesel

#2 New Oil

Characteristics of hazardous materials included above (complete for each chemical present):

| | | | |
|---|---|---|---|
| **Material #1** | Corrosive ( ) | Ignitable ( ) | Toxic (XX) |
| | Reactive ( ) | Volatile (XX) | Radioactive ( ) |
| | Biological Agent ( ) | | |
| Exposure Routes: | Inhalation ( ) | Ingestion (XX) | Contact ( ) |
| **Material #2** | Corrosive ( ) | Ignitable ( ) | Toxic ( ) |
| | Reactive ( ) | Volatile (XX) | Radioactive ( ) |
| | Biological Agent ( ) | | |
| Exposure Routes: | Inhalation ( ) | Ingestion (XX) | Contact ( ) |
| **Material #3** | Corrosive ( ) | Ignitable ( ) | Toxic ( ) |
| | Reactive ( ) | Volatile ( ) | Radioactive ( ) |
| | Biological Agent ( ) | | |
| Exposure Routes: | Inhalation ( ) | Ingestion ( ) | Contact ( ) |
| **Material #4** | Corrosive ( ) | Ignitable ( ) | Toxic ( ) |
| | Reactive ( ) | Volatile ( ) | Radioactive ( ) |
| | Biological Agent ( ) | | |
| Exposure Routes: | Inhalation ( ) | Ingestion ( ) | Contact ( ) |

| | | | |
|---|---|---|---|
| Material #5 | Corrosive ( ) | Ignitable ( ) | Toxic ( ) |
| | Reactive ( ) | Volatile ( ) | Radioactive ( ) |
| | Biological Agent ( ) | | |
| Exposure Routes: | Inhalation ( ) | Ingestion ( ) | Contact ( ) |

3.2 Job-Specific Hazards

For each labor category (driller, project manager, etc.) involved on the project, delineate the possible hazards referencing the information contained in Section 1.3 (i.e., task-driller, Hazards-trauma from drill rig accidents, chemical exposure to PCB's, etc.) For each hazard, indicate steps to the taken to minimize the hazard.

Backhoe operator & Laborer

Slip, Trip,Fall, Noise, Working around backhoe

The following additional hazards are expected onsite (i.e., snake infested area, extreme heat, etc.):

Measures to minimize the effects of the additional hazards are:

## 4.0 RISK ASSESSMENT SUMMARY

Using any available analytical data for the site, along with published data on the suspected contaminants and consideration of all possible exposure routes, provide a summary of the potential risks to site workers and the nearby community during the project. This information may not be available during early stages of the project. However, this section must be updated as data becomes available.

Due to the size of the property and the amount of excavation possible the risk to the community is considered very low.

## 5.0 AIR MONITORING PLAN

5.1 Action levels for implementation of air monitoring. (Action levels should be based on published data available on contaminants of concern. Action levels should be set by persons experienced in industrial hygiene).

| Level (i.e., >5ppm) | Action Taken (i.e., commence perimeter monitoring) |
|---|---|
| Under 50 ppm | Level D |
| | |
| | |
| | |

5.2 Air Monitoring Equipment

Outline the specific equipment to be used, calibration method, frequency of monitoring, locations to be monitored, and analysis of samples (if applicable).

Gastecher

If air monitoring is not to be implemented for this site, explain why:

## 6.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

6.1 Rationale for selection of PPE. (Rationale should be based on available analytical data for, and familiarity with, the capabilities of the suggested PPE. The selection of PPE should be made by persons experienced in industrial hygiene.)

Hardhat, Gloves, Boots

6.2 Equipment

Be specific (i.e., hard hat, impact resistant goggles, fully encapsulating tyvek suit with hood, inner latex gloves, outer nitrile gloves, neoprene boots with steel toe, etc.). PPE should be specified for each job classification onsite.

Level of Protection: A ( ) B ( ) C (X) D (X)

Respiratory Protection: SCBA ( ) Airline ( ) Air-Purifying (X)
Dust Mask ( )

If Air-Purifying: Cannister ( ) Cartridge (X)
Half face(X) Full face ( )

Canister/Cartridge Type Organic

Protective Clothing:

Suit Type _____ Boot Type Rubber

Glove Type(s) Rubber Head Protection Type Plastic

Eye Protection Type Goggles Other Protective Clothing _____

Hearing Protection _____

Action levels for upgrade and downgrade of respiratory protection/PPE.

| Level (i.e., >5ppm) | Action Taken (i.e., commence perimeter monitoring) |
|---|---|
| Over 50 ppm | Go to Level C |
| | |
| | |
| | |

Rationale for upgrade/downgrade matrix (rationale should be based on published data for contaminants of concern and should be prepared by persons familiar with PPE).

The 50 ppm is SCAQMD Requirement

## 7.0 WORK ZONES AND SECURITY MEASURES

The site sketch included in Section 1.1 should indicate the work, support and decontamination zones.

The following general work zone and security guidelines should be implemented:

- Excavations shall be closed when drilling and sampling activities are not actually taking place.
- No excavation shall be left unattended. Visitors will not enter the work zone unless they have attended a project safety briefing.
- Visitors who do not have business related to the project will be excluded from the site.

List the requirements for moving between different zones and general site security measures, equipment and responsible personnel (i.e., persons will not leave the work zone without first passing through the decontamination zone).

All PPE and equipment is to be decontaminated before leaving the job site.

## 8.0 DECONTAMINATION PROCEDURES

List the procedures and specific steps to be taken to decontaminate equipment and PPE. A flow chart diagram may be utilized to show a step-wise decontamination line.

Wash or disgard PPE Pressure wash all equipment before leaving site.

Decontamination Line Sketch

The small site is the contaminated zone. Only the area in front of the gate is decon zone.

List the equipment which will be used in the decontamination procedure (i.e., water, steam cleaner, 5-gallon plastic buckets, etc.)

Water

Pressure washer

Buckets

Alconox

Brushes

Trash Bags

## 9.0 GENERAL SAFE WORK PRACTICES

Attach any available Standard Operating Procedures for activities that can be standardized due to their repetitive nature (i.e, instrument calibration, don and doff of PPE, etc.).

Schaefer Dixon Associates, Inc. is responsible for the safety of all Schaefer Dixon Associates employees onsite. Each contractor shall provide all the equipment necessary to meet safe operating practices and procedures for their personnel onsite (this includes respirators, cartridges, steel toed boots, eye protection, tyvek suits, hearing protectors, and neoprene latex, and viton gloves) and be responsible for the safety of their workers. All general safety guidelines and procedures will conform to:

- 29 CFR 1910.120
- Standard Operating Safety Guides (U.S.E.P.A., November 1984).

Schaefer Dixon Associates will update versions of these safety guidelines and procedures if changes in the Operations Plan occur.

Schaefer Dixon Associates will utilize a "three warning" system to enforce compliance with Health and Safety procedures as follows:

- First infraction - violator receives a verbal warning.
- Second infraction of same rule - violators receives a written warning.
- Third infraction of same rule - violator will be requested to leave the site.

The "three warning" system applies to the following safe work practices which will be implemented at the site for worker safety:

- Eating, drinking, chewing gum or tobacco, and smoking will be allowed only in designated areas.
- Wash facilities will be utilized by workers in the work areas before eating, drinking, or use of the toilet facilities.
- Containers will be labeled identifying them as waste, debris, or contaminated clothing.
- All excavation/drilling work will comply with Title 8, Article G of the California Administrative Code.
- Personnel at the site will use the "buddy system" when wearing any respiratory protective equipment. No one will be allowed to engage in drilling or sampling operations alone.
- No facial hair which interferes with a satisfactory fit of the mask-to-face seal will be allowed. (No beards, large mustaches, or long sideburns.)
- All respiratory protection selection, use, and maintenance will meet the requirements of established procedures, recognized consensus standards (AINA, ANSI, MSHA, and NIOSH), and will comply in all respects to the requirements set forth in 29 CFR 1910.134.
- All site personnel will be required to wear hard hats, protective glasses and adequate hand protection when in the work zone.
- Any other action which is determined to be unsafe by the Site Safety Officer.

## 10.0 EMERGENCY RESPONSE PLANS

Provide a list of site personnel certified in first aid and CPR:

Cyrus D. Namini

Relevant Phone Numbers:

| Person | Title | Phone # |
|---|---|---|
| Cyrus D. Namini | Project Manager | |
| | Fire | 911 or |
| | Police | 911 or |
| | Ambulance | 911 or |
| | Poison Control Center | |
| | Site Phone | |
| | Nearest Off-site Phone | |
| | Medical Advisor | |
| | Client Contact | |
| U.S. EPA - ERT | | (201) 321-6660 |
| Chemtrec | | (800) 424-9300 |
| Centers for Disease Control | | (day) (404) 329-3311<br>(night) (404) 329-2888 |
| National Response Center | | (800) 424-8802 |
| Superfund/RCRA Hotline | | (800) 424-9346 |
| TSCA Hotline | | (800) 424-9065 |
| National Pesticide Information Service | | (800) 845-7633 |
| Bureau of Alcohol, Tobacco, and Firearms (Explosives) | | (800) 424-9555 |

Indicate on the site sketch included in Section 1.1 the locations of the following emergency response equipment if available:

- Emergency Shower
- Emergency Eye Wash
- First Aid Kit
- Telephone
- Stretcher
- Fire Extinguisher(s)
- Binoculars
- Megaphone
- SCBA and Tanks

Include written and visual directions to the nearest hospital:

_____

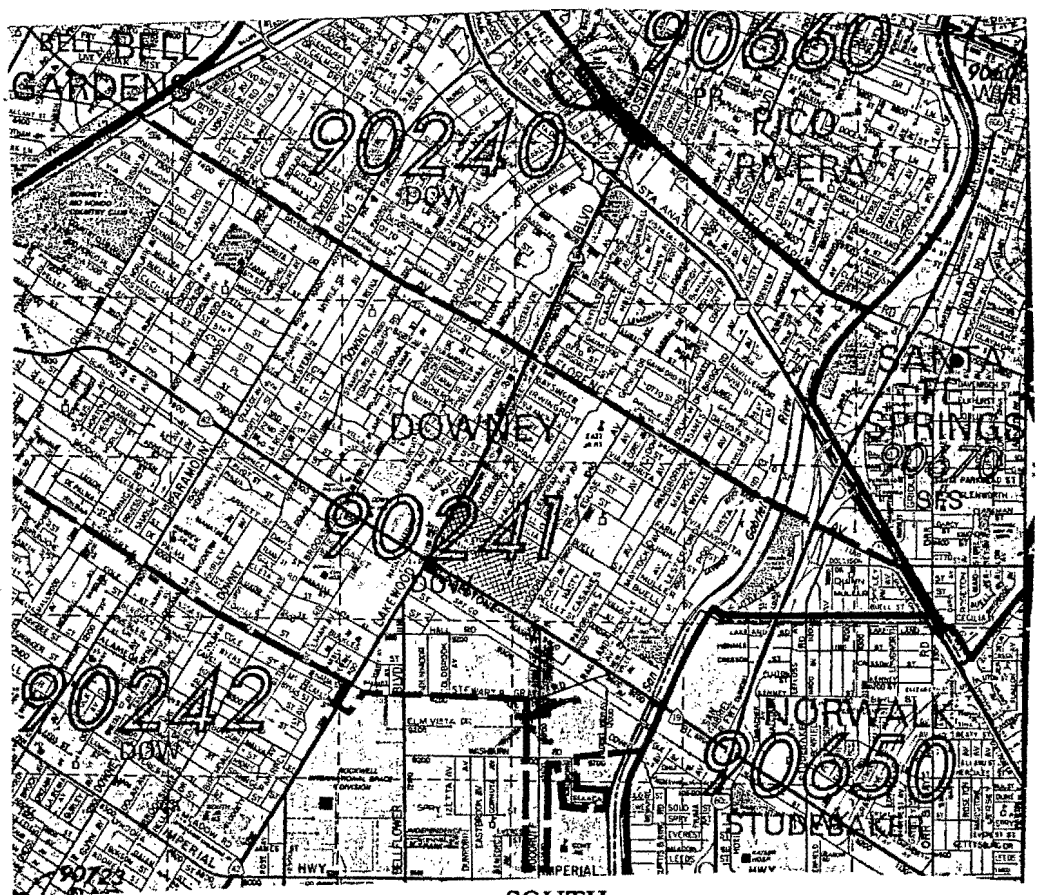
_____

_____

_____

Sketch of route to nearest hospital:

NORTH




SOUTH

Include arrows on the site sketch in Section 1.1 showing major escape routes from the site in case of an emergency.

Emergency Signals

The following communication signals will be utilized, if necessary, in case of emergency onsite.

| Gesture | | Meaning |
|---|---|---|
| Hand clutching throat | - | Out of air/can't breathe |
| Hands on top of head | - | Need assistance |
| Thumbs up | - | OK/I'm alright/I understand |
| Thumbs down | - | No/negative |
| Grip partner's wrists | - | Informing partner to leave area immediately |

**Emergency Decontamination** - In an emergency, the primary concern is to prevent the loss of life or severe injury to site personnel. If immediate medical treatment is required to save a life, decontamination should be delayed until the victim is stabilized. If decontamination can be performed without interfering with essential life-saving techniques or first aid, or if a worker has been contaminated with an extremely toxic or corrosive material that could cause severe injury or loss of life, decontamination must be performed immediately. If an emergency due to heat-related illness develops, protective clothing should be removed from the victim as soon as possible to reduce heat stress. All emergency decontamination procedures must be supervised by the Site Safety Officer and the Field Team Leader.

## 11.0 TRAINING REQUIREMENTS

prior to mobilization at the job site, all contractors shall submit evidence that site workers have completed a 40-hour course in hazardous waste site operations training as specified in 29 CFR part 1910.120, along with a letter from a physician stating that they have received a physical examination within one year and are physically capable of working on hazardous sites and wearing respiratory protection devices.

Prior involvement in any field program, all personnel will attend a safety briefing. The briefing will include the nature of the wastes at the site, donning personnel protection equipment, decontamination procedures, respirator fit testing, and emergency procedures. Included in the initial briefing will be training which will provide an understanding of:

- Use of visual emergency signals.
- The limitations and capabilities of the equipment.
- Proper use and maintenance of the selected PPE.
- The nature of the hazards and the consequences of not using the PPE.
- The human factor influencing PPE performance.

- Inspection, donning, checking, fitting, and using the PPE.
- Provide individualized respirator fit testing to ensure proper fit.
- The user's responsibility for decontamination, cleaning, maintenance, and repair (if any) of PPE.
- Emergency procedures and self-rescue in the event of PPE failure.
- The Site Safety Plan and the individual's responsibilities and duties in an emergency.

Daily, prior to commencement of operations, all personnel involved with the remedial investigations shall attend a short "tailgate" safety briefing which will cover:

- Expected conditions at the site.
- Daily activities.
- Safety deficiencies previously observed
- Any changes in the emergency procedure.

**Record of Training** - Upon completion of the project safety briefing, all personnel will sign a statement indicating that they have read and understand that they agree to abide by this project Health and Safety Plan. A record of attendance will be kept for all safety briefings. The Schaefer Dixon Associates compliance agreement is included as Attachment A.

## 12.0 MEDICAL SURVEILLANCE PROGRAM

Prior to assignment to any task requiring a level of personnel protection above Level D, personnel will submit evidence that they have received a physical examination within the previous twelve months which incorporates the following:

- An occupational and general physical history.
- Complete physical examination which incorporates the head, torso, abdomen, limbs, and musculo-skeletal system.
- Chest X-ray.
- Audiometric exam for persons working around drill rigs.
- Laboratory testing of blood and urine to include the following:

  C.B.C., albumin phosphates, total bilirubin, SGOT, SGPT, cholesterol, total protein, albumin, globulin, A/G ratio, BUN, and creatinin

- Vision test.
- Electrocardiogram.

To aid in the prevention of heat stress, the following will be provided for personnel working at the site:

- Potable Water
  - Potable water with 1% salt or commercial mix (such as Gatoraid) will be within easy access to all workers.
- Work Schedules
  - Work/rest regimens will be developed on recommendations by the Health & Safety Officer. The initial work schedule will consist of a 55-minute work regime followed by a 5-minute rest period. This work schedule will be modified as is necessary to conform with the heat stress monitoring criteria outlined below.

Personnel will be instructed to look for the following initial symptoms of heat stress:

- Heat Exhaustion:
  - pale, clammy skin
  - profuse perspiration
  - tiredness, weakness
  - headache, perhaps cramps
  - nausea, dizziness (possible vomiting)
  - possible fainting
- Heat Cramps:
  - cramping of muscles in legs and abdomen
- Heat Stroke:
  - high body temperature
  - skin is characteristically hot, red, and dry (the sweating mechanism is blocked).

Heat stress monitoring will commence when the ambient temperature reaches 70 degrees Fahrenheit if Tyvek or Saranek (Level C) garments are in use. Otherwise, heat stress monitoring will commence at an ambient temperature of 85 degrees Fahrenheit. The monitoring will consist of the following:

- Heart rate (HR) will be measured by the radial pulse during 30 seconds as early as possible in the resting period. The heart rate at the beginning of the rest period should not exceed 110 beats per minute. If the HR is in excess of the above value, the next work period will be shortened by 33% while the length of the rest period stays the same. If the pulse rate is in excess of 110 beats per minute at the beginning of the next rest period, the following work cycle will be further shortened by 33%.
- Workers will be asked to report any dizziness, faintness, cramps, or other symptoms of heat stress as discussed above.
- Workers will also be questioned about any history of asthma, or if currently taking asthma medications. Persons taking asthma medications are typically more susceptible to heat stress reactions.

First aid for heat stress will include the following:

- Heat Stress
  - Exposed person will be removed from the work zone and placed in a shaded area.
  - Person will be required to rest in a recumbent position.
  - Fluids will be administered (Gatorade).
  - Workload will be reduced to a level which will prevent heat stress symptoms from recurring.
- Heat Cramps and Heat Exhaustion
  - Same first aid procedures as described above except that exposed person will be requested to leave the site for the remainder of the day.
- Heat Stroke
  - Exposed person will be placed in a shaded area and medical attention (Paramedics) will be sought immediately.

## HEALTH AND SAFETY COMPLIANCE STATEMENT

I, _____, have received and read a copy of the project Health and Safety Plan.

I understand that I am required to have read the aforementioned document and have received proper training under the Occupational Safety and Health Act (29 CFR, Part 1910.120) prior to conducting site activities at the site.

_____ 11/22/87

Signature Date

# WASTE MANIFEST

Page 1 of 1 | Is not required by Federal law.

3. Generator's Name and Mailing Address
Kirkhill, Inc.
12021 Woodruff
Downey, Ca. 90241

4. Generator's Phone ( 714 ) 548-9009

A. State Manifest Document Number: 89809229

B. State Generator's ID: not state I.D. number

5. Transporter 1 Company Name: Roadwest Oil & Vacuum Co., Inc.

6. US EPA ID Number: CAT080012971

C. State Transporter's ID: [illegible]

D. Transporter's Phone: 213-693-9881

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
DeMenno/Kerdoon
2000 N. Alameda St.
Compton, Ca. 90222

10. US EPA ID Number: CAT080013352

G. State Facility's ID: CAT080013352

H. Facility's Phone: 213-537-7100

| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt/Vol | I. Waste No. |
|---|---|---|---|---|---|
| a. California Regulated Waste Only | 001 | TT | 00400 | G | State 223 / EPA/Other NONE |
| b. DOT-E 8822 | | | | | State / EPA/Other |
| c. | | | | | State / EPA/Other |
| d. | | | | | State / EPA/Other |

J. Additional Descriptions for Materials Listed Above
[illegible]

K. Handling Codes for Wastes Listed Above
a. 01
b.
c.
d.

15. Special Handling Instructions and Additional Information
Gloves & Goggles

16.
**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

| Printed/Typed Name | Signature | Month Day Year |
|---|---|---|
| Timothy R Moore | [signature] | 10 18 2 1989 |

17. Transporter 1 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month Day Year |
|---|---|---|
| [illegible] J. Gomez | [signature] | 10 18 2 1989 |

18. Transporter 2 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month Day Year |
|---|---|---|
| | | |

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

| Printed/Typed Name | Signature | Month Day Year |
|---|---|---|
| ARTURO P. PEREZ | [signature] | 10 18 2 1989 |

GENERATOR / TRANSPORTER / FACILITY

Do Not Write Below This Line

122 A (1/88)
700—22
9-88) Previous editions are obsolete.

GREEN: HAULER RETAINS

State of California—Health and Wellness Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type (Form designed for use on elite (12-pitch) typewriter)

See Instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Substances Control Division
Sacramento, California

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD 009179923 Manifest Document No. 000102
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: KIRKHILL INC 12021 WOODRUFF DOWNEY CA 90241
A. State Manifest Document Number: 8243329
B. State Generator's ID: HAZARDOUS WASTE
4. Generator's Phone: (714) 9210888
C. State Transporter's ID: 01-5747
D. Transporter's Phone: 562-944-1797
5. Transporter 1 Company Name: PACIFIC PETROLEUM
6. US EPA ID Number: CAD020718563
E. State Transporter's ID:
7. Transporter 2 Company Name
8. US EPA ID Number
F. Transporter's Phone:
9. Designated Facility Name and Site Address: CASMALIA RESOURCES NTV RD CASMALIA CA 93429
10. US EPA ID Number: CAD021074812
G. State Facility's ID: CAD
H. Facility's Phone: 805

| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt./Vol. |
|---|---|---|---|---|
| a. WASTE SOIL WITH HYDROCARBONS CALIFORNIA REGULATED WASTE ONLY | 001 | DT | 00018 | Y |
| b. | | | | |
| c. | | | | |
| d. | | | | |

J. Additional Descriptions for Materials Listed Above
K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
#362.03919KG

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Eric Taubin — Signature — Month Day Year: 11/12/1819

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: GASTIGER MARK — Signature — Month Day Year: 11/12/1819

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
CASMALIA RESOURCES — Signature — Month Day Year: 11/12/89

Do Not Write Below This Line

WHITE: TDS SENDS THIS COPY TO DOHS WITHIN 30 DAYS
To: P.O. Box 3000, Sacramento, CA 95812

GENERATOR — TRANSPORTER — FACILITY

IN CASE OF AN EMERGENCY OR SPILL CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

00243329

TPE
ENVIRONMENTAL
"ENVIRONMENTAL
& GEOTECHNICAL
CONSULTING"

E90-1514.D

August 30, 1990

12987

000773

Read

SEP 17 1990

Los Angeles County Department of Public Works
Waste Management Division
UST Pilot Program - Annex Building
P.O. Box 1460
Alhambra, CA 91802-1460

Attention: Mr. Ofori Amoah

**Subject: Addendum to Closure Site Assessment Soil Remediation Report for Kirkhill, Inc. 12021 Woodruff Avenue Downey, CA 90241**

Dear Mr. Amoah:

In accordance with our meeting of August 17, 1990, we have prepared for submittal this addendum to the subject site report.

The modifications/items requested included:

1. The attached table "Summary of Sample Reports" which lists all soil samples (post tank excavation, boring, post excavation verification, and post treatment verification samples). We have included the sample no., date sampled, type of sample (tube or grab), level or depth, location and chemical test results. The post treatment verification samples are labelled PVS. All sample locations are shown on the attached plot plan and cross-sections drawn to scale (Figures 1, 2 and 3).

2. Depth of excavation for each pit and correlation between the boring logs and the excavated pits are shown on Figures 2 and 3 attached. The pit excavation depths were as follows:

   Tank #1 (Cutting Oil) - 23ft. on S. end sloping to 25ft. on N. end
   Tank #2 (Diesel) - 23ft.
   Tank #3 (Diesel) - 15ft.

3. Five of the borings were drilled at an angle to place sampling points below the tanks. Vertical

1963 N. Main St.
Orange, CA 92665
714/921-0888
213/592-4771
FAX: 714/921-1832

depth below ground surface was calculated for each sample interval and recorded on the boring log under the column heading "V,ft.". Total vertical depth below ground surface for each boring was:

| | |
|---|---|
| B - 1 | 28.1ft. |
| B - 2 | 28.9ft. |
| B - 3 | 24.1ft. |
| B - 4 | 40.0 ft. |
| B - 5 | 39.3ft. |
| B - 6 | 39.3ft. |

These total depths (TD) are shown on the attached cross-sections along with the excavation pit depths and a vertical depth scale along the left margin.

4. Samples were obtained at all vertical depths shown on the boring logs except where "No Recovery Twice" is noted on Log of Boring B - 1. The "No Recovery" was due to very loose clean sand which would not stay in the sample tubes when the sampler was extracted. Samples were not obtained above the first sample depth shown on each log because the investigation was intended to sample below UST bottom depth for leakage. Samples to be laboratory tested were selected based on depth with respect to tank bottom depth, visual suspicion of contamination due to discoloration or moistness, and field organic vapor analyzer readings. Out of the 26 samples obtained, 10 were submitted for laboratory testing. Boring logs with Mr. Leonards' RCE stamp are attached.

5. Compaction of the backfill material was performed following our standard procedures, i.e. the material was placed in loose lifts not exceeding two feet, moistened with proper water to facilitate compaction, and compacted using a vibratory plate attached to a Case 580C backhoe.

With this information we understand you will be able to finish your review and issue a closure letter to Kirkhill, Inc.

Respectfully submitted,

**TPE ENVIRONMENTAL, INC.**

Michael L. Leonard, Sr., MSCE
Principal Engineer
RCE #31181, REA #01960

**TPE ENVIRONMENTAL GROUP**

Cyrus D. Namini, CE
President
REA #00639

MLL/mll:E90-1514.D

Attachments: Copy of Meeting Notes
Table 1 - Summary of Sample Reports
Figure 1 - Plot Plan
Figure 2 - Cross Section A1-A2
Figure 3 - Cross Section B1-B2
Borings Logs for B1-B6

Distribution: (1) Addressee (1) File
(1) Kirkhill, Inc.

| PREPARED BY | DATE | COUNTY OF LOS ANGELES PUBLIC WORKS DEPT. | PAGE NO. |
|---|---|---|---|
| eFOM | 5/17/90 | | |
| CHECKED BY | DATE | JOB KIRKHILL | SUBJECT meeting |

11+17"

(1) Boring Sample K's, dates, levels, locations. Submit legible points for samples legibly ~~drawn~~ drawn to scale.

(2) VS samples i.d. (post-excavation) levels, dates, depth obtained (Grab Sample)

(3) VS → you'll call it PVS (Post-treatment) samples, date, # of samples, levels

(4) Depth of excavation for each pit

(5) Correlation b/w the boring logs and the excavated depth of the pits.

(6) Show the depth on the X-section

(7) Clarify the depth of borings and the samples obtained or not obtained and the reason why.

(8) C.E license # on the Boring logs.

(9) Compaction (info. for proper compaction)

TABLE 1

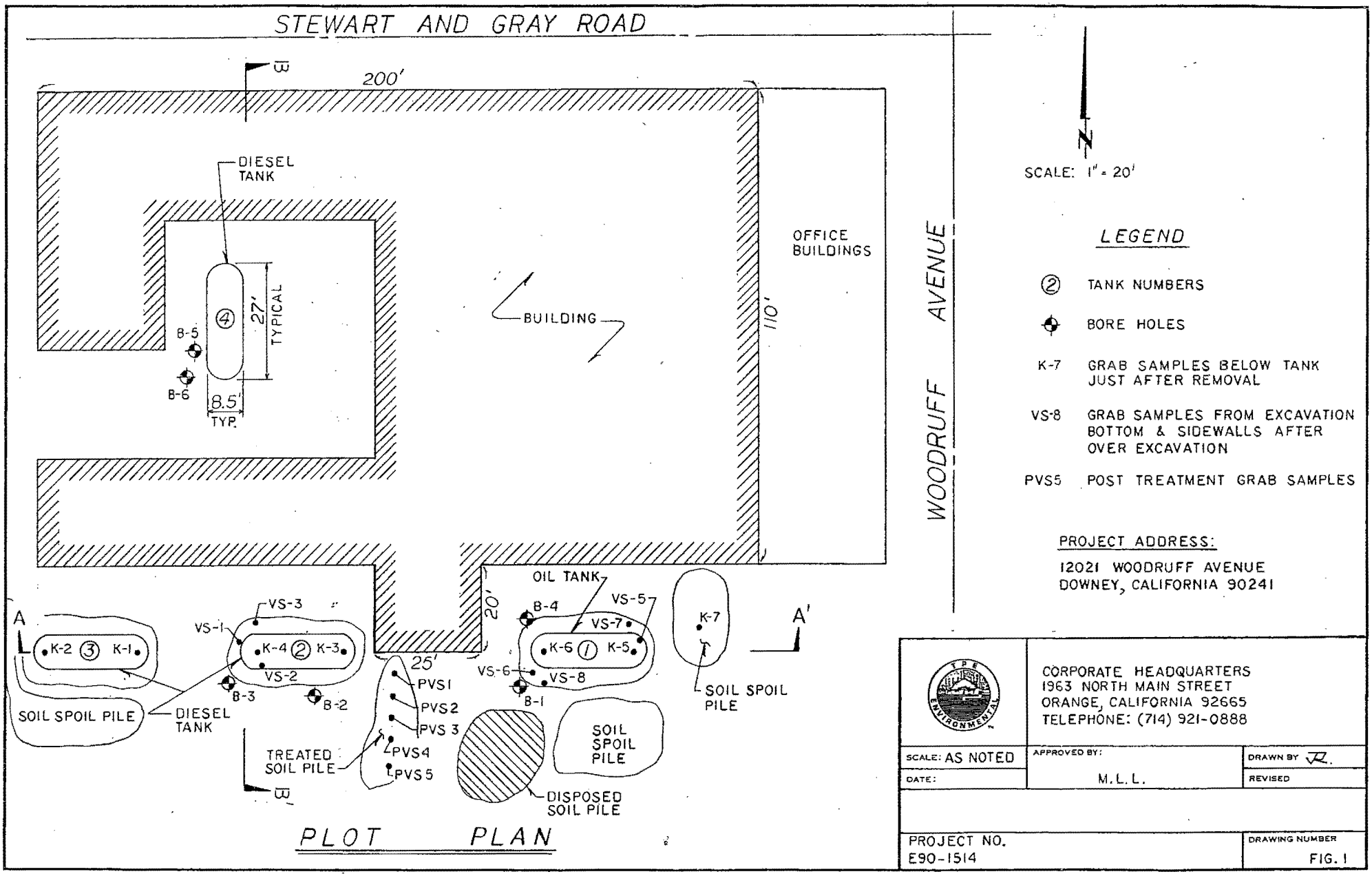
SUMMARY OF SAMPLE REPORTS

| Lab Sample No. | Field Sample No. | Date of Sampli-ing | Sample Location | Sample Depth | Sample Type | TPH (mg/kg) 8015 | TRPH (mg/kg) 418.1 |
|---|---|---|---|---|---|---|---|
| POST TANK | EXCAVATION | SAMPLES: | | | | | |
| F-404 | K-1 | 8/24/89 | East End of Tank # 3 | 3' Below Tank | Grab | ND < 20 | 52 |
| F-405 | K-2 | 8/24/89 | West End of Tank # 3 | 3' Below Tank | Grab | ND < 20 | 32 |
| F-406 | K-3 | 8/24/89 | East End of Tank # 2 | 3' Below Tank | Grab | ____ | 32 |
| F-407 | K-4 | 8/24/89 | West End of Tank # 2 | 3' Below Tank | Grab | ____ | 325 |
| F-408 | K-5 | 8/24/89 | East End of Tank # 1 | 3' Below Tank | Grab | ____ | 45,714 |
| F-409 | K-6 | 8/24/89 | West End of Tank # 1 | 3' Below Tank | Grab | ____ | 1 |
| F-410 | K-7 | 8/24/89 | Cutting Oil Tank Stockpile | 0' - 1' Below Surface | Grab | ____ | 5,030 |
| BOREHOLE | SAMPLES: | | | | | | |
| F-912 | B-1 | 9/26/89 | B-1, Angle Boring, West End of Tank #1 | 15' Below Surface | Tube | ____ | 10 |

| Lab Sample No. | Field Sample No. | Date of Sampli-ing | Sample Location | Sample Depth | Sample Type | TPH (mg/kg) 8015 | TRPH (mg/kg) 418.1 |
|---|---|---|---|---|---|---|---|
| F-913 | B-2 | 9/26/89 | B-2, Angle Boring, East End of Tank #2 | 20' Below Surface | Tube | ND < 10 | |
| F-914 | B-3 | 9/26/89 | B-3, Angle Boring, West End of Tank #2 | 20' Below Surface | Tube | ___ | 285 |
| F-915 | B-4 | 9/26/89 | B-4, Vertical Boring, West End of Tank #1 | 20' Below Surface | Tube | ___ | 12 |
| F-916 | B-4 | 9/26/89 | B-4 | 30' Below Surface | Tube | ___ | 14 |
| ___ | B-5 | 9/27/89 | B-5, Angle Boring, East Side/Center Tank # 4 | 15' Below Surface | Tube | ND < 10 | ___ |
| G-115 | B-5 | 9/27/89 | B-5 | 20' Below Surface | Tube | ___ | 27 |
| G-116 | B-5 | 9/27/89 | B-5 | 30' Below Surface | Tube | ND < 10 | ___ |
| ___ | B-6 | 9/27/89 | B-6, Angle Boring, South End of Tank #4 | 15' Below Surface | Tube | ND < 10 | ___ |
| G-112 | B-6 | 9/27/89 | B-6 | 20' Below Surface | Tube | ___ | 158 |
| G-113 | B-6 | 9/27/89 | B-6 | 30' Below Surface | Tube | ND < 10 | ___ |

| Lab Sample No. | Field Sample No. | Date of Sampli-ing | Sample Location | Sample Depth | Sample Type | TPH (mg/kg) 8015 | TRPH (mg/kg) 418.1 |
|---|---|---|---|---|---|---|---|
| **POST VERIFICA.** | **EXCAVATION SAMPLES:** | | | | | | |
| ---- | VS-1 | 10/31/ 89 | West End of Tank #2 Pit, Below K-1 | 23' Below Surface | Grab | ____ | ND < 10 |
| ---- | VS-2 | 10/31/ 89 | South Wall of Tank #2 Pit | 22' Below Surface | Grab | ____ | ND < 10 |
| ---- | VS-3 | 10/31/ 89 | North Wall of Tank #2 Pit | 23' Below Surface | Grab | ____ | ND < 10 |
| ---- | VS-5 | 10/31/ 89 | East End of Tank #1 Pit | 21' Below Surface | Grab | ____ | ND < 10 |
| ---- | VS-6 | 10/31/ 89 | West End of Tank #1 Pit, Below K-6 | 23' Below Surface | Grab | ____ | 27,100 |
| ---- | VS-7 | 10/31/ 89 | North-East Wall of Tank #1 Pit, Below K-5 | 23' Below Surface | Grab | ____ | ND < 10 |
| ---- | VS-8 | 11/6/89 | West End of Tank #1 Pit, Below VS-6 | 25' Below Surface | Grab | ____ | 55 |
| NOTE: | No sample #VS-4 | | | | | | |
| **POST VERIFICA.** | **TREATMENT SAMPLES:** | | | | | | |
| G-486 | PVS-1 | 11/22/ 89 | Treated Soil Pile | 1' Below Surface | Grab | ____ | 33 |

| Lab Sample No. | Field Sample No. | Date of Sampli-ing | Sample Location | Sample Depth | Sample Type | TPH (mg/kg) 8015 | TRPH (mg/kg) 418.1 |
|---|---|---|---|---|---|---|---|
| G-487 | PVS-2 | 11/22/89 | Treated Soil Pile | 2' Below Surface | Grab | ____ | 17 |
| G-488 | PVS-3 | 11/22/89 | Treated Soil Pile | 3' Below Surface | Grab | ____ | 37 |
| G-489 | PVS-3 | 11/22/89 | Treated Soil Pile | 1' Below Surface | Grab | ____ | 87 |
| G-490 | PVS-5 | 11/22/89 | Treated Soil Pile | 2' Below Surface | Grab | ____ | 55 |

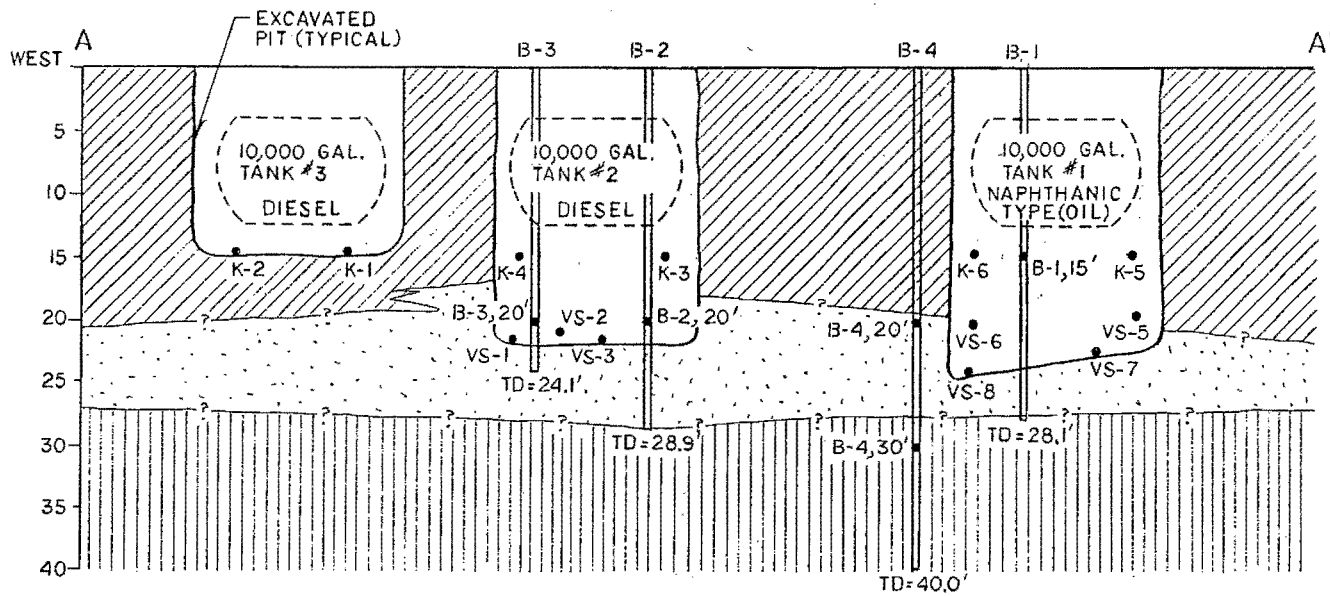



PLOT PLAN


CORPORATE HEADQUARTERS
1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
TELEPHONE: (714) 921-0888


| | | |
|---|---|---|
| SCALE: AS NOTED | APPROVED BY: M.L.L. | DRAWN BY JR. |
| DATE: | | REVISED |
| PROJECT NO. E90-1514 | | DRAWING NUMBER FIG. 1 |

11 X 17 PRINTED ON NO. 1000H CLEARPRINT ●




## LEGEND

B-4 PROJECTED BORE HOLE NAMES

K, B, VS: SAMPLE NAMES

? INTERPRETED LITHOLOGY

# CROSS SECTION A - A'

VERTICAL: 1" = 10' SCALE
HORIZONTAL: 1" = 20'

SOIL CLASSIFICATION

CLAY (CL)

SILTS (ML)

SAND (SP)

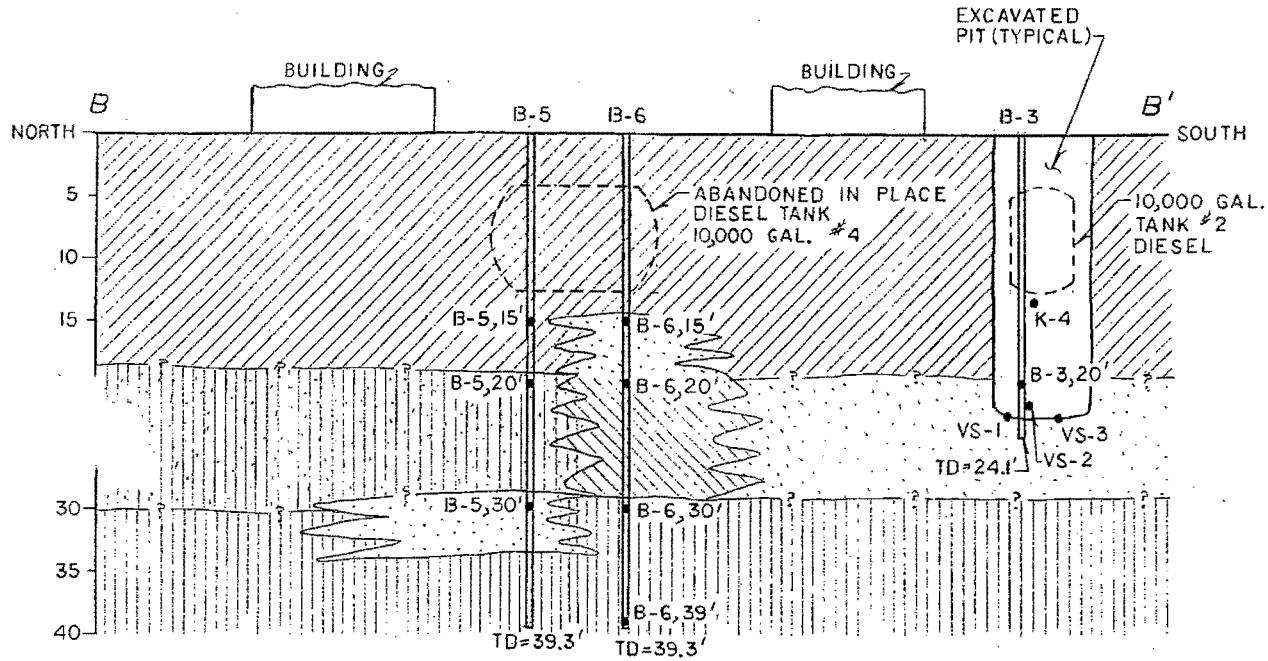

CORPORATE HEADQUARTERS
1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
TELEPHONE: (714) 921-0888


| | | |
|---|---|---|
| SCALE: AS NOTED | APPROVED BY: M.L.L. | DRAWN BY JEFF R. |
| DATE: | | REVISED |

KIRKHILL, INC. 12021 WOODRUFF, DOWNEY, CA.

| PROJECT NO. | DRAWING NUMBER |
|---|---|
| E90-1514 | FIG. 2 |

11 X 17 PRINTED ON NO. 1000H CLEARPRINT ®




## LEGEND

B-4 PROJECTED BORE HOLE NAMES

K, B, VS: SAMPLE NAMES

? INTERPRETED LITHOLOGY

## CROSS SECTION B-B'

VERTICAL: 1" = 10' SCALE
HORIZONTAL 1" = 20'

SILTS (ML)

SAND (SP)


CORPORATE HEADQUARTERS
1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
TELEPHONE: (714) 921-0888


| | | |
|---|---|---|
| SCALE: AS NOTED | APPROVED BY: M.L.L. | DRAWN BY JEFF R. |
| DATE: 9-15-90 | | REVISED |

KIRKHILL, INC. 12021 WOODRUFF, DOWNEY, CA.

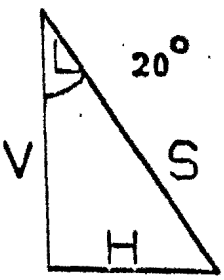
| | |
|---|---|
| PROJECT NO. E90-1514 | DRAWING NUMBER FIG. 3 |

TANK PROTECT ENGINEERING

# LOG OF BORING B-1

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | **Brown Clay, Plastic** (CH) | ND | 14.0 | 5.1 | **4-10-12** |
| 20 * | **No Recovery Twice** | | 18.7 | 6.8 | **4-12-20** |
| 25 * | **Yellow Sand (SP)** **Medium-grained** | ND | 23.4 | 8.5 | **22-45-50** |
| 30 * | Sand, Poorly Graded (SP) **Medium-grained** | ND | 28.1 | 10.2 | **12-32-45** |
| 35 | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

ND = No Detected Organic Vapors

REGISTERED PROFESSIONAL ENGINEER
MICHAEL L. LEONARD
NO. 31181
Exp. 12-31-92
CIVIL
STATE OF CALIFORNIA

Prepared By:
Eric Taubin

Reviewed By:
Ravi P. Pendurthi,
Staff Hydrogeologist

Approved By:
Michael L. Leonard,
Registered C.E.

PROJECT: **Kirkhill**

LOCATION: **12021 Woodruff**

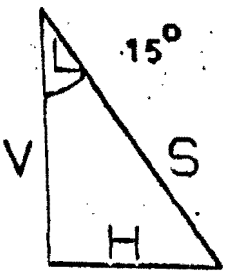
DRILLING DATE: **09/26/89**

TANK PROTECT ENGINEERING

# LOG OF BORING B- 2

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | **Brown Clay (CL)** | ND | 14.4 | 3.8 | **5-11-20** |
| 20 * | **Brown Clay (CL)** | ND | 19.3 | 5.1 | **6-10-13** |
| 25 * | **Yellow Sand** (SP) **Fine-grained** | ND | 24.1 | 6.4 | **10-33-40** |
| 30 * | Sand, Poorly Graded (SP) | ND | 28.9 | 7.7 | **13-21-50** |
| 35 | | | | | |
| 40 | | | | | |
| 45 | ND = No Detected Organic Vapors | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

REGISTERED PROFESSIONAL ENGINEER
MICHAEL L. LEONARD
NO. 31181
Exp. 12-31-92
CIVIL
STATE OF CALIFORNIA

Prepared By:
Eric Taubin
Reviewed By:
Ravi P. Pendurthi,
Staff Hydrogeologist
Approved By:
Michael L. Leonard
Registered C.E.

PROJECT: **Kirkhill**

LOCATION: **12021 Woodruff**

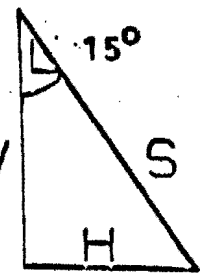
DRILLING DATE: 9/26/89

TANK PROTECT ENGINEERING

# LOG OF BORING B- 3

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | | | | | |
| 10 | | | | | |
| 15 * | **Brown Clay, Moist (CL)** | ND | 14.4 | 3.8 | **5-11-15** |
| 20 * | Brown Clay, Moist (CL) | ND | 19.3 | 5.1 | **12-20-35** |
| 25 * | **Yellow Sand (SP) Fine-grained** | ND | 24.1 | 6.4 | **5-17-20** |
| 30 | | | | | |
| 35 | | | | | |
| 40 | | | | | |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

REGISTERED PROFESSIONAL ENGINEER
MICHAEL L. LEONARD
NO. 31181
Exp. 12-31-92
CIVIL
STATE OF CALIFORNIA

ND: No Detected Organic Vapors

Prepared By:
Eric Taubin
Reviewed By:
Ravi P. Pendurthi
Staff Hydrogeologist
Approved By:
Michael L. Leonard
Registered C.E.

PROJECT: Kirkhill
LOCATION: 12021 Woodruff

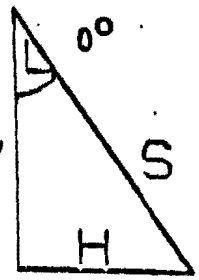
DRILLING DATE: 9/26/89

TANK PROTECT ENGINEERING

# LOG OF BORING B - 4

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| | 3" Asphaltic Concrete | | | | |
| 5 | | | | | |
| 10 | | | | | |
| 15 * | Brown Clay (CL) | ND | | | 4-6-9 |
| 20 * | Brown Clay (CL) | ND | | | 7-9-16 |
| 25 | | | | | |
| 30 * | Yellow Sand (SP) Fine Grained | ND | | | 13-23-3 |
| 35 | | | | | |
| 40 * | Silts (ML) Dense, Moist, Fine-grained | ND | | | 5-11-13 |
| 45 | | | | | |
| 50 | | | | | |
| 55 | ND: No Detected Organic V | | | | |
| 60 | | | | | |




Prepared By:
Eric Taubin
Reviewed By:
Ravi P. Pendurthi
Staff Hydrogeologist
Approved By: mLL
Michael L. Leonard
Registered C.E.

PROJECT: Kirkhill
LOCATION 12021 Woodruff

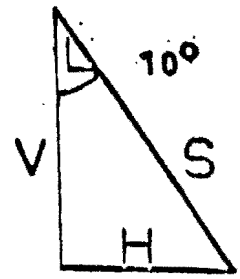
DRILLING DATE: 09/26/89

TANK PROTECT ENGINEERING

# LOG OF BORING B-5

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| | 3" Asphaltic Concrete | | | | |
| 5 | | | | | |
| 10 * | **Brown Silty Clay (CL)** | ND | 9.8 | 1.7 | 6-12-1 |
| 15 * | Brown Silty Clay (CL) | ND | 14.7 | 2.6 | 4-8-12 |
| 20 * | **Brown Sandy Clay (CL)** | LO 15 | 19.7 | 3.4 | 5-15-2 |
| 25 * | **Silty Sand (SM)** | ND | 24.6 | 4.3 | 6-7-23 |
| 30 * | Silty Sand (SM) | LO | 29.5 | 5.2 | 5-12-3 |
| 35 * | **Sand (SP)** | ND | 34.4 | 6.0 | 6-10-3 |
| 40 * | **Silts (ML)** Moist | ND | 39.3 | 6.9 | 12-18-2 |
| 45 | | | | | |
| 50 | | | | | |
| 55 | | | | | |
| 60 | | | | | |

ND: No Detected Organic Vapors

REGISTERED PROFESSIONAL ENGINEER
MICHAEL L. LEONARD
NO. 31181
Exp. 12-31-92
CIVIL
STATE OF CALIFORNIA

Prepared By:
Eric Taubin
Reviewed By:
Ravi P. Pendurthi
Staff Hydrogeologist
Approved By:
Michael L. Leonard
Registered C.E.

PROJECT: Kirkhill
LOCATION: 12021 Woodruff
Downey, CA 90242

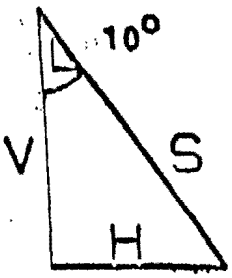
DRILLING DATE: 09/27/89

TANK PROTECT ENGINEERING

# LOG OF BORING B-6

V=S(cosL)

H=S(sinL)




| SAMPLE DEPTH FEET | GEOTECHNICAL DESCRIPTION AND CLASSIFICATION | HC Odor OVA PPM | V ft | H ft | BLOWS COUNT |
|---|---|---|---|---|---|
| 5 | 3" Asphalt Concrete<br>Brown Silty Clay (CL) | | | | |
| 10 * | **Brown Silty Clay (CL)** | ND | 9.8 | 1.7 | **3-6-10** |
| 15 * | Brown Silty Clay (CL) | ND | 14.7 | 2.6 | **6-15-18** |
| 20 * | **Poorly Graded Sands (SP)** | ND | 19.7 | 3.4 | **4-15-25** |
| 25 | | | | | |
| 30 * | **Brown Sandy Clays (CL)** | ND | 29.5 | 5.2 | **12-35-5** |
| 35 | | | | | |
| 40 * | **Silty Soils (ML)**<br>Moist | ND | 39.3 | 6.9 | **12-15-2** |
| 45 | | | | | |
| 50 | | | | | |
| 55 | ND: No Detected Organic Vapors | | | | |
| 60 | | | | | |

REGISTERED PROFESSIONAL ENGINEER
MICHAEL L. LEONARD
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Staff Hydrogeologist
Approved By:
Michael L. Leonard
Registered C.E.

PROJECT: Kirkhill

LOCATION: 12021 Woodruff
Downey, CA 90242

DRILLING DATE: 09/27/89

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CONSULTING"

RECEIVED
OCT 19 1990

**ADDENDUM TO REMEDIAL ACTION REPORT**
**FILE #I-12987, CLOSURE PERMITS #5999B, 6000B**
**FACILITY: KIRKHILL, INC.**
**12021 WOODRUFF AVE, DOWNEY 90241**

N 001043

**SUBMITTED TO:**

OCT 19, 1990

**L.A. COUNTY DEPT. OF PUBLIC WORKS**
**UST LOCAL OVERSIGHT PROG./ANNEX BLDG.**
**P.O. BOX 1460, ALHAMBRA, CA 91802-1460**
**ATTN: MR. SCOTT SMALL**

**SUBMITTED BY:**
**TPE ENVIRONMENTAL, INC.**
**1963 N. MAIN STREET**
**ORANGE, CA 92665**

• 1963 N. Main St.
Orange, CA 92665
714/921-0888
213/592-4771
FAX: 714/921-1832

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CONSULTING"

E90-1514.E

October 19, 1990

Los Angeles County Department of Public Works
UST Local Oversight Program
Annex Building
P.O. Box 1460
Alhambra, CA 91802-1460

Attention: Mr. Scott Small

**Subject: Addendum to Remedial Action Report**
**File No. I-12987**
**Closure Permit No. 5999B and 6000B**
**Facility: Kirkhill, Inc.**
**12021 Woodruff Ave., Downey**

Dear Mr. Small:

In response to your letter of October 11, 1990 the following information is submitted:

1. The estimated quantity of soil that was in each stockpile is shown on attached Figure 1.

2. The stockpile soil directly east of the oil tank excavation was transported under manifest to Casmalia for disposal.

3. Compaction tests and report were not required by permit and not included in Tank Protect Engineering's scope of work. Also, the client states that the backfill areas are so close to the property line that no building is allowed, therefore the area will only be used as parking lot or drives.

4. Samples from B5 and B6 as shown on Table 1 of our August 30, 1990 submittal were all drive tube samples.

5. The LUFT Manual Risk Assessment as detailed in the attached indicates a maximum allowable diesel TPH level of 1000 mg/kg can be left in place under the tank abandoned in place.

• 1963 N. Main St.
Orange, CA 92665
714/921-0888
213/592-4771
FAX: 714/921-1832

This information should satisfy your review needs. Please issue your closure letter to Kirkhill, Inc. as soon as possible.

Respectfully submitted,

**TPE ENVIRONMENTAL, INC.**

Michael L. Leonard, Sr., MSCE
Vice President-Engineering
RCE #31181, REA #01960

MLL:mll/wsE90-1514.E

Attachments: Letter of 10/11/90 by WMD
Figure 1
LUFT Manual Risk Assessment

Distribution: (1) Addressee
(1) Kirkhill, Inc.
(1) File



# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


October 11, 1190

IN REPLY PLEASE
REFER TO FILE:
I-12987

Mr. Raymond Ballanger
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballanger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**HAZARDOUS MATERIALS UNDERGROUND STORAGE**
**REMEDIAL ACTION REPORT**
**CLOSURE PERMIT NO. 5999B AND 6000B**
**FACILITY: 12021 WOODRUFF AVENUE, DOWNEY**

This office has reviewed the subject document(s) submitted on September 17, 1990, dated August 30, 1990. The comments in this letter must be addressed and submitted to this office by November 8, 1990.

In order to better evaluate the Remedial Action Report, the information listed below must be submitted:

Note: The estimated quantity of soil that was or is in each stockpile on the site.

The end use of the stockpiled soil directly east of the oil tank excavation.

Compaction test results.

Clarification of samples from borings B5 and B6 being designated as grab samples.

A risk assessment report must be submitted for leaving the contamination in place under the diesel tank that was abandoned in place.

You are cautioned that any contaminated soils or hazardous materials generated during the approved operation must be manifested and transported to a hazardous waste disposal facility as required by California Health and Safety Code, Division 20, Chapter 6.5, unless evidence is presented indicating that the material may be disposed of at a less restricted facility. Copies of all completed manifests shall be submitted to this office as part of the final report.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Scott Small at (818) 458-3996.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By Scott Small
Scott Small
UST Local Oversight Program
Waste Management Division

Reviewed P. A. Proano
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

Enc.

cc: California Regional Water Quality Control Board
Mr. Michael L. Leonard, Sr., TPE Environmental, Inc.

PP100 4/90

ts(7)/12987

## Kirkhill, Inc.
## Leaching Potential Analysis for Diesel

| Site Feature | Site Condition | Score | Remark |
|---|---|---|---|
| 1) Minimum Depth to Groundwater from the soil sample (ft) | 40 feet | 5 | Refer to Note #1 |
| 2) Fractures in subsurface | None | 10 | Refer to Note #2 |
| 3) Average Annual precipitation (inches) | Seasonal Normal Precipitation is 13.71" | 9 | Refer to Note #3 |
| 4) Man-Made Conduits which increase vertical migration of leachate | None | 10 | Within the excavated depth no conduit was observed. In addition, USA Service Alert didn't report any artificial conduits. |
| 5) Unique site features: Recharge area, coarse soil, nearby wells, etc. | None | 10 | Presence of low precipitation, clays, and fine grained silts & sands indicate no unique site features. The reference well is approximately 0.2 miles east of the subject site. |



Maximum allowable Diesel TPH for the subject site is 1000 ppm or mg/kg per 41-48 point range.

Soil sample G-112 indicated 158 ppm TPH.

Notes:

#1 The nearest recorded water well (LACFCD Well #1587) approximately 0.2 miles east of the subject site indicates groundwater depth at 89 feet from the surface (April, 1989 measurement). However, the top of the sandy/sand and gravel of the Gaspur water-bearing zone at the subject site is approximately 60 feet deep from the surface.

Considering the highest concentration, soil sample G-112 at 20 feet, and historical high, the minimum depth to groundwater from the soil sample at the subject site is

$$60'-20' = 40 \text{ feet}$$

Sample G-112 was collected at 20 feet depth from surface consisting of am EPA 418.1 Diesel TPH of 158 mg/kg:

#2 The subject site contains no reported consolidated formations. The subsurface contains relatively soft clays, silts, and fine sand soils. Therefore no fractures are expected.

#3 Nearest active rainfall station to the subject site is Downey-Fire Department Station (#107D) located in the coastal plain rainfall region according to Los Angeles County Department of Public Works, "Hydrologic Report 1980-1987". Historical seasonal normal precipitation for the coastal plain region was reported to be 13.71 inches (Hydrologic Report page number A-15).

Table 2-1
Leaching Potential Analysis for Gasoline and Diesel
Using Total Petroleum Hydrocarbons(TPH)
and Benzene, Toluene, Xylene and Ethylbenzene (BTX&E)

The following table was designed to permit estimating the concentrations of TPH and BTX&E that can be left in place without threatening ground water. Three levels of TPH and BTX&E concentrations were derived (from modeling) for sites which fall into categories of low, medium or high leaching potential. To use the table, find the appropriate description for each of the features. Score each feature using the weighting system shown at the top of each column. Sum the points for each column and total them. Match the total points to the allowable BTX&E and TPH levels.

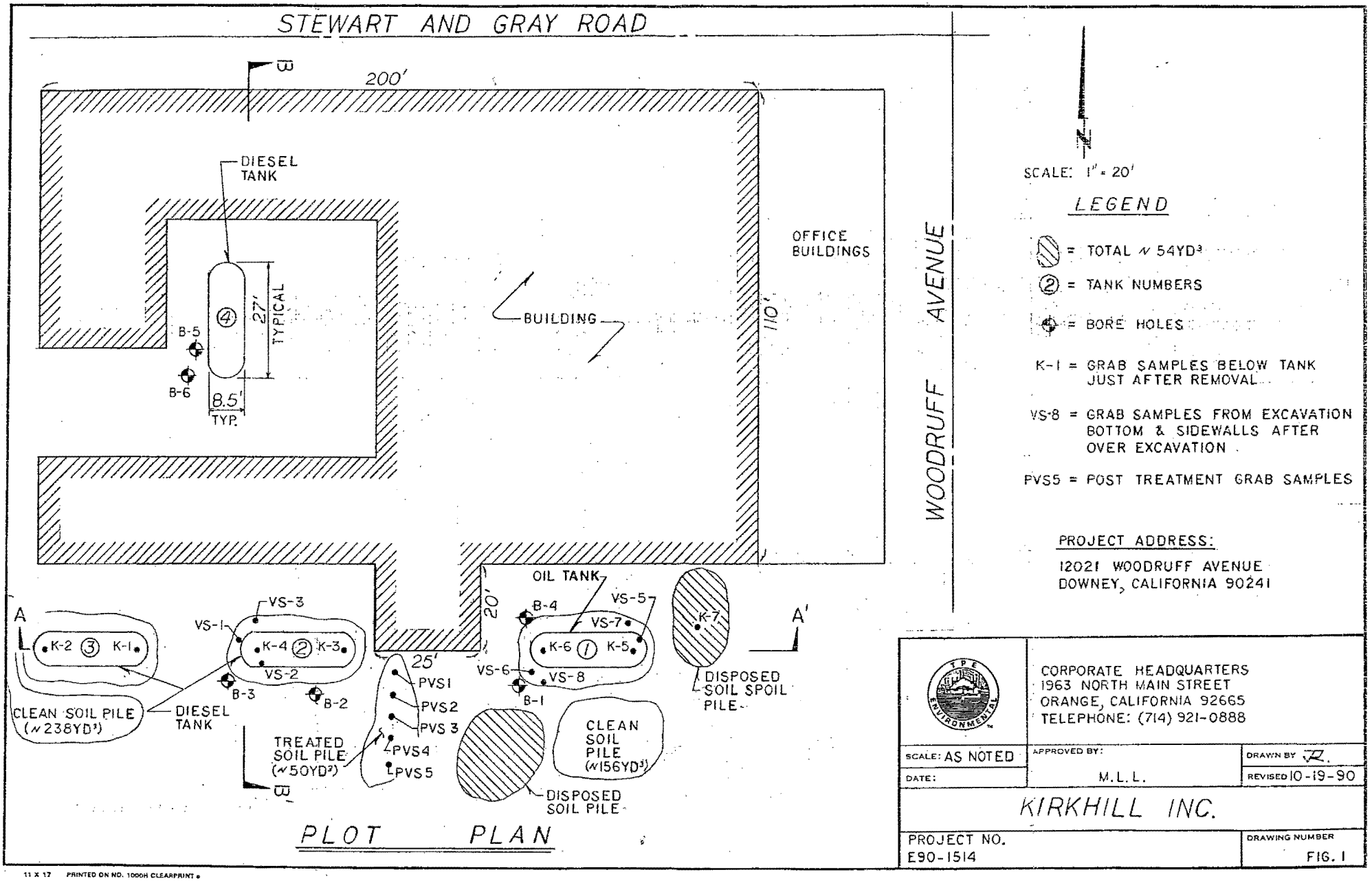
| SITE FEATURE | SCORE | SCORE 10 PTS IF CONDITION IS MET | SCORE | SCORE 9 PTS IF CONDITION IS MET | SCORE | SCORE 5 PTS IF CONDITION IS MET |
|---|---|---|---|---|---|---|
| Minimum Depth to Ground Water from the Soil Sample (feet) | | >100 | | 51-100 | | 25-50\1 |
| Fractures in subsurface (applies to foothills or mountain areas) | | None | | Unknown | | Present |
| Average Annual Precipitation (inches) | | <10 | | 10-25 | | 26-40\2 |
| Man-made conduits which increase vertical migration of leachate | | None | | Unknown | | Present |
| Unique site features: recharge area, coarse soil, nearby wells, etc | | None | | At least one | | More than one |
| COLUMN TOTALS→TOTAL PTS | | + | | + | | = |

| | | | | |
|---|---|---|---|---|
| RANGE OF TOTAL POINTS | | 49pts or more | 41 - 48 pts | 40pts or less |
| MAXIMUM ALLOWABLE B/T/X/E LEVELS (PPM) | | 1/50/50/50 | .3/.3/1/1 | NA\3 |
| MAXIMUM ALLOWABLE TPH LEVELS (PPM) | GASOLINE | 1000 | 100 | 10 |
| | DIESEL | 10000 | 1000 | 100 |

\1 If depth is greater than 5 ft. and less than 25 ft., score 0points.
If depth is 5 ft. or less, this table should not be used.

\2 If precipitation is over 40 inches, score 0 points.

\3 Levels for BTX&E are not applicable at a TPH concentration of 10ppm (gasoline) or 100ppm (diesel)




PLOT PLAN


CORPORATE HEADQUARTERS
1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
TELEPHONE: (714) 921-0888


| SCALE: AS NOTED | APPROVED BY: M.L.L. | DRAWN BY R. |
|---|---|---|
| DATE: | | REVISED 10-19-90 |

KIRKHILL INC.

| PROJECT NO. | DRAWING NUMBER |
|---|---|
| E90-1514 | FIG. 1 |

11 X 17 PRINTED ON NO. 1000H CLEARPRINT ®

1990-12987

TPE
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E90-1514.WP

January 9, 1991

Los Angeles County
Department of Public Works
Waste Management Division
UST Pilot Program - Annex Building
P.O. Box 1460
Alhambra, California 91802-1460

Attention: Mr. Scott Small

**SUBJECT: WORK PLAN FOR ADDITIONAL SITE ASSESSMENT Kirkhill, Inc. located at 12021 Woodruff Avenue, Downey, California 90241 (FILE NO. I-12987-1F)**

Dear Mr. Small:

TPE Environmental, Inc. ("TPEE") submits this work plan to conduct additional subsurface investigation work at Kirkhill, Inc. located in Downey, California (see Figures 1 and 2). This additional work is being requested by the Los Angeles County, Department of Public Works, Waste Management Division, UST Local Oversite Program (LACDPW). This additional work will be conducted in the area of closure of three underground storage tanks at the subject site.

The purpose of this investigation is to evaluate the extent of the hydrocarbon contamination which presently exists at the site.

This Work Plan is being submitted to the LACDPW for review and approval.

**PROPOSED SCOPE OF WORK**

The following outlines the proposed field work activities to be conducted at the subject site:

**Task 1** - TPEE personnel will meet on-site with the client to review site conditions, operations, traffic, utility locations, etc., and select and mark the initial boring locations to minimize impacts to site operations.

• 1071 N. Batavia St.
Orange, CA 92665
714/282-5642
800/464-8265
FAX: 714/282-5644

**Task 2 -** TPEE will contact Underground Service Alert and receive their report on known underground services at the property and review any available site plans showing utilities. Final locations of the initial borings will then be delineated.

**Task 3 -** Initially, drilling of four (4) vertical soil borings. Two borings (designated B-7 and B-8) are proposed to be drilled to depths of approximately 30 feet below grade. One boring (B-7) will be drilled immediately adjacent to Abandoned Tank No. 4. and the other (B-8) adjacent to the removed diesel Tank No. 2. Proposed borings B-9 and B-10 will be drilled adjacent to the removed Tank No.1 to depths of approximately 35 feet below grade. The proposed boring locations are shown in Figure 2. Each of the borings will be drilled using a truck-mounted drill rig equipped with either eight or ten-inch diameter continuous flight hollow stem augers, under the supervision of TPEE geologists. All borings will be logged in accordance with the Unified Soil Classification System.

TPEEs Health and Safety Plan procedures will be implemented prior to and during all field work activities associated with this project (see Attachment).

**Task 4 -** Obtain soil samples from each boring at approximately 5 feet below grade and every 5-foot intervals thereafter until termination depth. The samples will be collected by using 2-inch diameter by 6-inch long brass tubes mounted within a Californian Sampler used in advance of the augers. Prior to sampling, all brass tubes will be washed in a solution of Alconox detergent, rinsed with tap water, and then rinsed with distilled water. After sample recovery, the lowermost brass ring from each sample interval will be immediately end-wrapped with aluminum foil, polyethylene caps taped over the ends, labeled, placed into an ice chest chilled using frozen blue ice, and transported by a private vehicle to a State Certified Laboratory. All samples will be logged and accompanied by chain-of-custody record forms.

A portable Photo-ionization Detector will be used on the soil samples contained within the sampler at each sampling interval within the borings to determine whether volatile hydrocarbons (vapors) are being emitted directly from the soil.

In all cases, the sampling equipment will be decontaminated prior to each sampling. Clean auger flights will be used for each boring.

**Task 5 -** The drill cuttings generated during drilling from each boring will be placed and sealed in DOT approved 55-gallon drums and left on-site until laboratory testing results are made available at which time the appropriate disposal method(s) will be determined.

**Task 6 -** All of soil samples obtained from proposed borings B-7 and B-8 will be analytically tested for total petroleum hydrocarbons (TPH) using modified EPA Method 8015, for diesel, (Luft Manual Procedure, May 1989).

The soil samples obtained from proposed borings B-9 and B-10 will be analytically tested for TRPH using EPA Method 418.1.

**Task 7 -** Evaluate all the data and prepare a technical report describing our procedures and findings.

**Task 8 -** Meet with client to present our findings and discuss our recommendations, if required.

After review and approval of this plan by the LACDPW, TPEE will contact LACDPW at least forty-eight hours prior to initiating any field work activities.

If there are any questions please address them to Michael Leonard or Anthony Lizzi at 714/282-5642.

Respectfully submitted,

**TPE ENVIRONMENTAL, INC.**

Michael L. Leonard, Sr.
Vice President - Engineering
RCE #31181

Anthony Lizzi
Project Geologist

AL\MLL:dcr\E90-1514.WP

Attachments: Figures 1 and 2
Health and Safety Plan

Distribution: (3) LACDPW, UST Pilot Program
(1) Raymond Bellanger, Kirkhill, Inc.
(1) File

# FIGURES

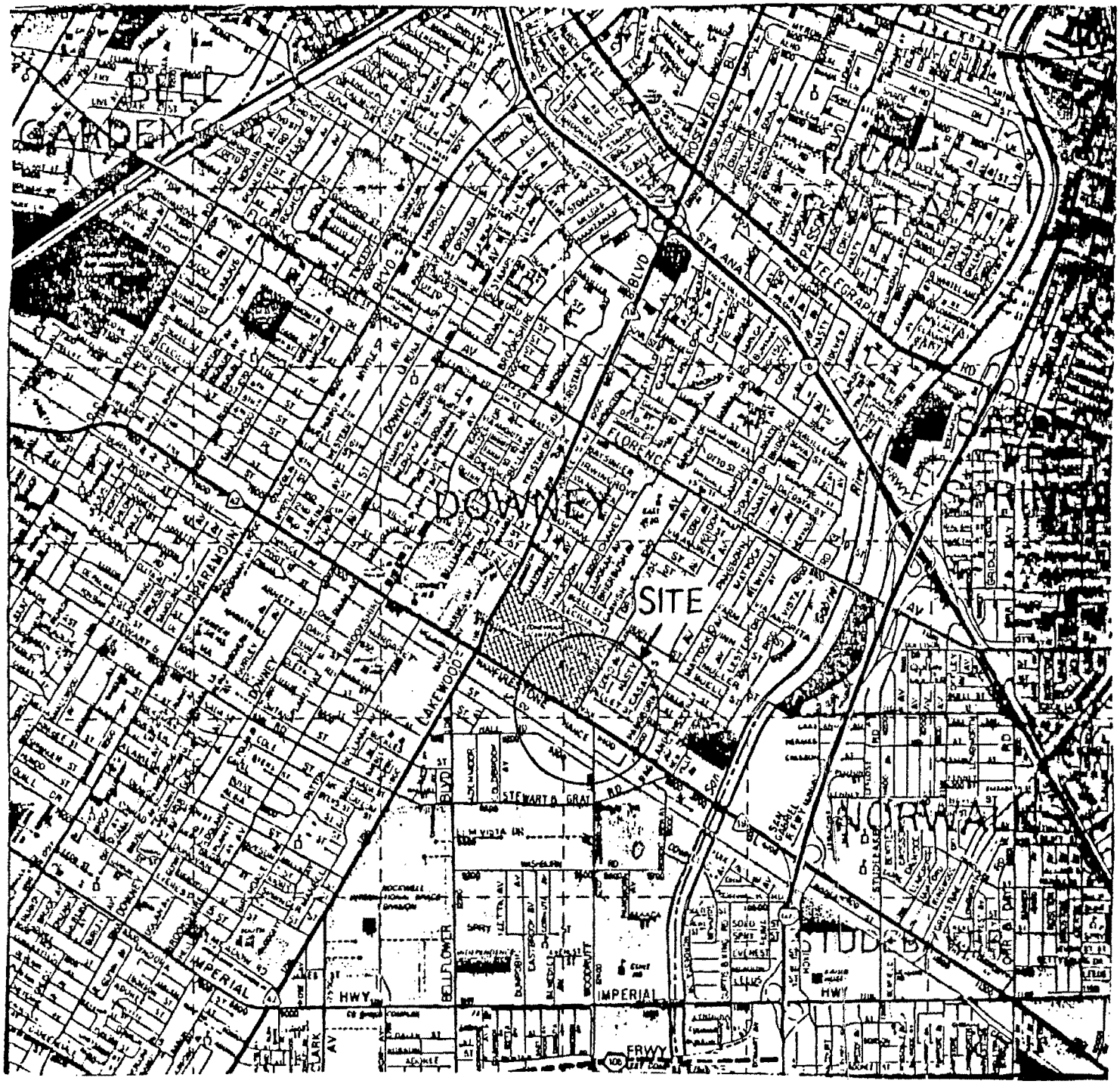
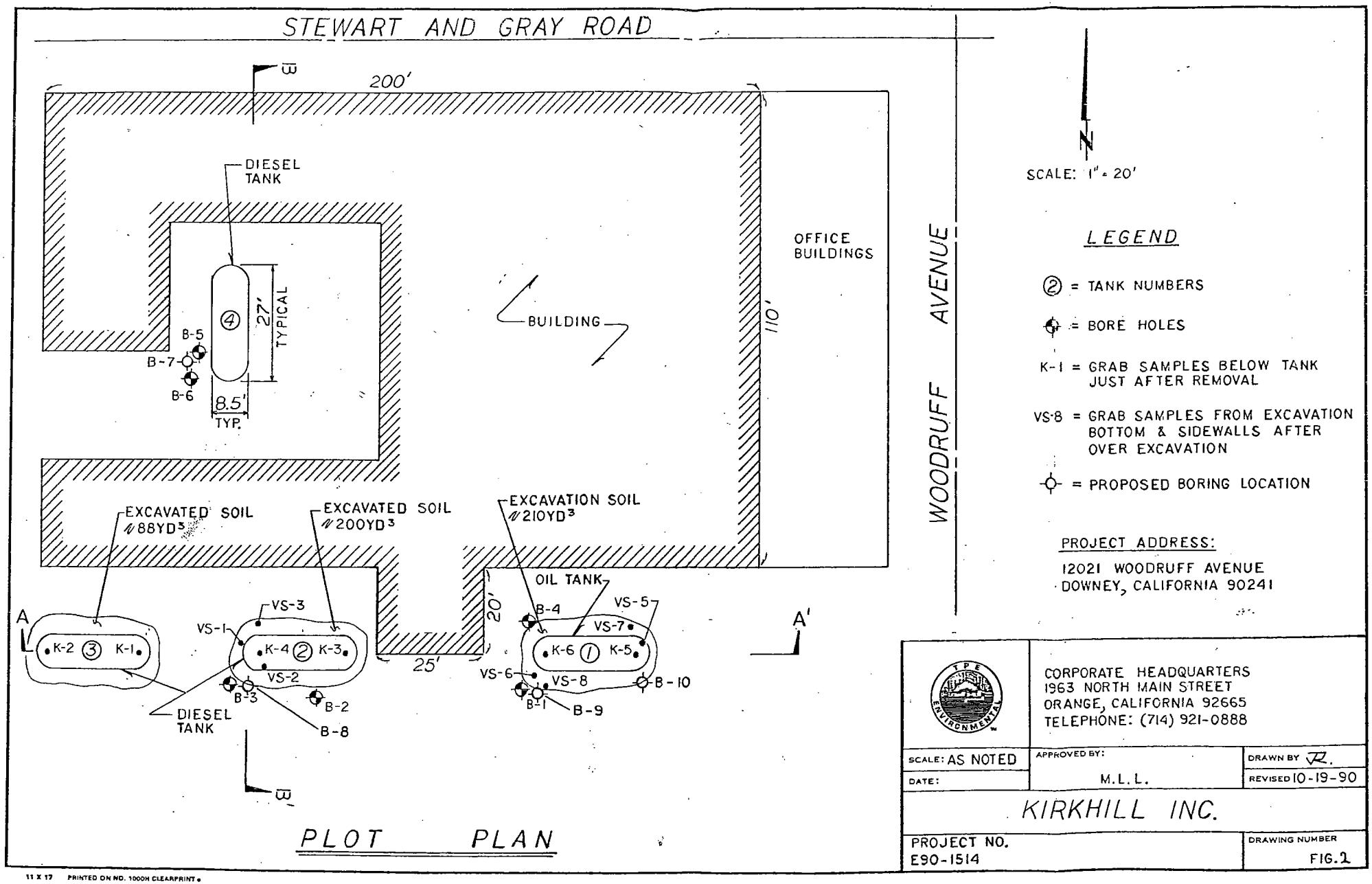



Figure 1: Site Location




PLOT PLAN


CORPORATE HEADQUARTERS
1963 NORTH MAIN STREET
ORANGE, CALIFORNIA 92665
TELEPHONE: (714) 921-0888


| | | |
|---|---|---|
| SCALE: AS NOTED | APPROVED BY: M.L.L. | DRAWN BY JR. |
| DATE: | | REVISED 10-19-90 |

KIRKHILL INC.

| | |
|---|---|
| PROJECT NO. E90-1514 | DRAWING NUMBER FIG. 2 |

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# ATTACHMENT A

# HEALTH AND SAFETY PLAN

# TPE ENVIRONMENTAL GROUP SITE SAFETY PLAN

Site: Kirkhill, Inc. Project Number: E90-1514

Original Site Safety Plan: Yes () No (X) Revision No.: One

Plan Prepared by: Anthony Lizzi Date: January 9, 1991

Plan Approved by: Michael L. Leonard Date: January 9, 1991

Please respond to each item as completely as possible. Where an item is not applicable, please mark "N/A".

## 1.0 FACILITY BACKGROUND

### 1.1 Site Description

Type: Spill () Fire () HW Site () Industrial Facility ()

Other (X)Manufacturer

Physical Description: The site is presently occupied by several plant and warehouses buildings, and is generally flat.

Location: 12021 Woodruff Avenue, Downey, CA at intersection of Stewart and Gray Road

Size: Approximately 200' X 220'

History: The facility was established as a manufacturer of?? for over 30 years.

Status: Active (X) Inactive ( )

Surrounding Population: People working/living in surrounding commercial and industrial facilities.

Surrounding Structures: Industrial and Commercial

Have nearby people been evacuated: Yes () No () N/A (X)

Evacuation Distance: N/A

Evacuation Initiated By: N/A

Topography: Gently Sloping

Site Plan/Sketch completed (next page): Yes (X) No()

The site sketch should include the following:

- Nearby roads and structures
- On-site roads and structures
- Sample location if applicable
- Location of waste, if known or applicable
- Location of work, support and decontamination zone

## 2.0 KEY PERSONNEL AND RESPONSIBILITIES

(Include name, telephone number and health and safety responsibilities;i.e., including Project Manager responsible for supervision of all site activities.)

Project Manager: Michael L. Leonard, responsible for supervision of all site activities.

Site Manager: Anthony Lizzi/Ravi Pendurthi, responsible for supervision of all on-site activities.

Field Team Members: John Simmer, Field Technician, responsible for sampling protocol procedures and sampling activities.

Federal Agency Reps.: N/A

State Agency Reps.: California Regional Water Quality Control Board - Los Angeles Region (CRWQCB) reps. responsible for inspecting the water regulatory compliance.

Local Agency Reps.: Los Angeles County, Department of Public Works, Waste Management Division, Scott Small, responsible for inspecting/regulating/previewing the investigation and remediation activities.

Contractor(s): West Hazmat Drilling Corp., responsible for borehole drilling and retrieving soil samples.

## 3.0 JOB HAZARD ANALYSIS

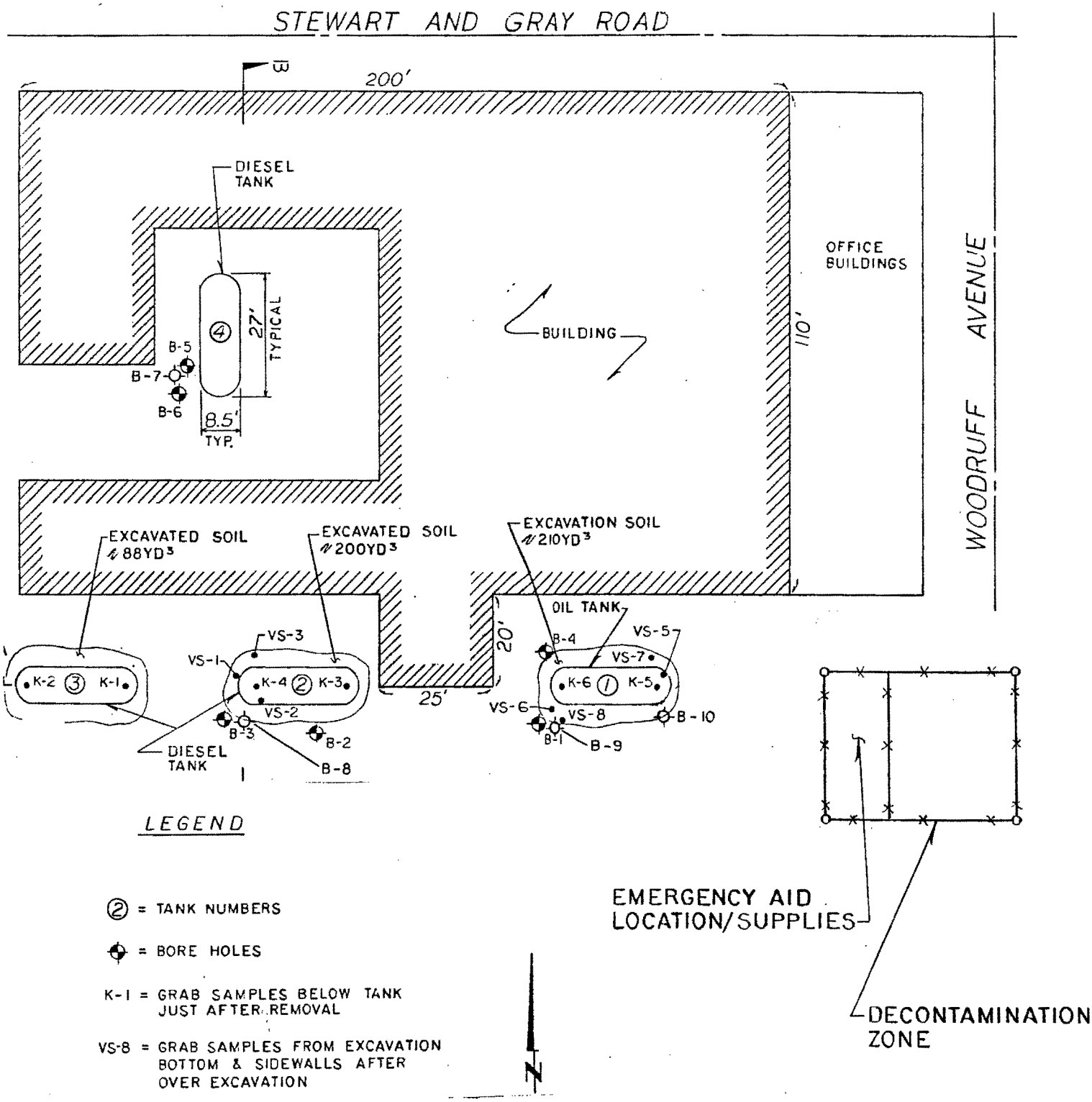
### 3.1 Overall Hazard Evaluation

Hazard Level: High () Moderate () Low (X) Unknown ()

Hazard Type: Liquid () Solid (X) Sludge () Vapor/Gas (X)

**TPEE SITE SAFETY PLAN**

Site Sketch:




LEGEND

② = TANK NUMBERS

⊕ = BORE HOLES

K-1 = GRAB SAMPLES BELOW TANK JUST AFTER REMOVAL

VS-8 = GRAB SAMPLES FROM EXCAVATION BOTTOM & SIDEWALLS AFTER OVER EXCAVATION

⊖ = PROPOSED BORING LOCATION



PROJECT ADDRESS:

12021 WOODRUFF AVENUE
DOWNEY, CALIFORNIA 90241

Known or suspected hazardous materials present on-site along with their hazardous characters:
Diesel fuel petroleum hydrocarbon and naphthalenic oil contaminated soil. Hazard associated with the chemicals is primarily ignitability and direct contact.

## 3.2 Job-Specific Hazards

For each labor category (driller, project manager,etc.) involved on the project, delineate the possible hazards referencing the information contained in Section 1.3 (i.e., task-driller, Hazards-trauma from drill rig accidents, chemical exposure to PCB's ect.) For each hazard, indicate steps to the taken to minimize the hazard.

All Field Personnel: Trauma from soil moving equipment accidents, slip, trip and fall. Direct contact of diesel contaminated soil may be harmful. To minimize the possibilities of hazards, precautions required to avoid equipment accidents, direct contact and fire accidents are to be taken. No smoking will be permitted within working area.

## 4.0 RISK ASSESSMENT SUMMARY

Using any available analytical data for the site, along with published data on the suspected contaminants and consideration of all possible exposure routes, provide a summary of the potential risks to site workers and the nearby community during the project. This information may not be available during early stages of the project. However, this section must be updated as data becomes available.

Potential risk to site activity personnel and surrounding populations is low from hazards associated with the project. The rating of low is relatively low risk in a scale ranging as low, moderate, and high.

No volatile organic compounds (VOCs) are expected to be encountered during the field work activities. The tanks previously stored diesel fuel and heavy oil. Therefore, no VOCs will be monitored. Further operations will be conducted only after personnel protection equipment (Level "C") is implemented.

## 5.0 AIR MONITORING PLAN

**5.1** Action levels for implementation of air monitoring. Action levels should be based on published data available on contaminants of concern. Action levels should be set by persons experienced in industrial hygiene.

| Level | Action Taken |
|---|---|
| > 50 ppm | Cease operations and evaluate for proper protection |

### 5.2 Air Monitoring Equipment

Outline the specific equipment to be used, calibration method, frequency of monitoring, locations to be monitored, and analysis of samples (if applicable).

During field activities, continuous air monitoring will be performed using a calibrated organic vapor meter (OVM), Model 580B (Thermo Environmental Instruments Inc.)

If air monitoring is not to be implemented for this site, explain why: Not Applicable

## 6.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

**6.1** Rationale for selection of PPE (Rationale should be based on available analytical data for, and familiarity with, the capabilities of the suggested PPE. The selection of PPE should be made by persons experienced in industrial hygiene).

Due to trauma from accidents related to remediation, toxic affects from direct contact of contaminated soil, and ignitability of hazardous materials at the site, following PPE are selected.

### 6.2 Equipment

Be specific (i.e., hard hat, impact resistant goggles, fully encapsulating tyvek suit, inner latex gloves, outer nitrile gloves, neoprene boots with steel toe, etc.). PPE should be specified for each job classification on-site.

**TPEE SITE SAFETY PLAN**

Level of Protection: A () B () C () D (X) and provision to go to "C" when required.

Respiratory Protection: SCBA () Airline ()
Air-Purifying (X) Dust Mask ()

If Air-Purifying: Canister () Cartridge (X)
Half Face (X) Full Face ()

Canister/Cartridge Type: Acid gas/organic vapor/HEPA

Protective Clothing:

Suit Type: Chemically resistant coveralls (Tyvek, Polyethylene coated)

Boot Type: Chemically resistent, steel toed

Glove Type(s): Chemically resistant (rubber gloves)

Head Protection Type: Hard hat

Eye Protection Type: Goggles

Hearing Protection: Ear plugs (if necessary)

Action levels for upgrade and downgrade of respiratory protection/PPE.

| Levels | Action Taken |
|---|---|
| > 50 ppm | Go to level 'C' PPE (Tyvek and air purifying equipment) |

Rationale for upgrade/downgrade matrix (rationale should be based on published data for contaminates of concern and should be prepared by persons familiar with PPE).

No gasoline fuel contaminated soils are expected. The time weighted average (TWA) exposure limit for gasoline constituent such as benzene is 10 ppm per American Conference of Governmental Industrial Hygienists. In the event that benzene concentration is detected in the air, a 50 ppm action level will be used. At this time respirators will be donned.

## 7.0 WORK ZONES AND SECURITY MEASURES

The site sketch included in Section 1.1 should indicate the work, support and decontamination zones.

The following general work zone security guidelines should be implemented:

- Excavations shall be closed when drilling and sampling activities are not actually taking place.
- No excavations shall be left unattended. Visitors will not enter the work zone unless they have attended a project safety briefing.
- Visitors who do not have business related to the project will be excluded from the site.

List the requirement for moving between different zones and general site security measures, equipment and responsible personnel (i.e., persons will not leave the work zone without first passing through the decontamination zone).

Step 1: Decontamination of earth moving tools prior to field activities with high pressure hot water.

Step 2: Decontamination of sampling devices before, during, and after acquisition of each soil sample with DSO or TSP/Distilled water triple rinse/wash.

Step 3: Decontaminate rubber boots, gloves, respirators (if used) at the end of each shift and prior to leaving the site with DSO or TSP/Distilled water triple rinse/wash.

## 8.0 DECONTAMINATION PROCEDURES

List the procedures and specific steps to be taken to decontaminate equipment and PPE. A flow chart diagram may be utilized to show a step-wise decontamination line.

At the end of each field activity, sampling equipment, drilling equipment and PPE will be decontaminated. Decontamination will include steam cleaning for drilling equipment and triple rinsing of sampling equipment and PPE.

**Decontamination Line:**

Steam cleaning will be conducted on site using steam cleaner according to set procedures.

PPE decontamination will include:

| Rinsing in Soap Water Bucket | Rinsing in Tap Water Bucket | Rinsing in Distilled Water Bucket |
|---|---|---|

The equipment which will be used in the decontamination procedure includes steam cleaner with trough, 5-gallon plastic buckets, a bristle brushes, a putty knife, and Alconox Detergent.

## 9.0 GENERAL SAFE WORK PRACTICES

Attach any available Standard Operating Procedures for activities that can be standardized due to their repetitive nature (i.e., instrument calibration, don and doff of PPE,etc.)

TPE Environmental Group is responsible for the safety of all TPE Environmental Group employees on-site. Each contractor shall provide all the equipment necessary to meet safe operating practices and procedures for their personnel on-site (this includes respirators, cartridges, steel toed boots, eye protection, tyvek suits, hearing protectors, and neoprene latex, and viton gloves) and be responsible for the safety of their workers. All general safety guidelines and procedures will conform to:

* 29 CFR 1910.120
* Standard Operating Safety Guides (U.S.E.P.A., Nov. 1984)

TPE Environmental Group will update versions of these safety guidelines and procedures if changes in the Operations Plan occur.

TPE Environmental Group will utilize a " three warning" system to enforce compliance with Health and Safety procedures as follows:

- First infraction - violator receives a verbal warning.
- Second infraction of same rule - violators receives a written warning.

- Third infraction of same rule - violators will be requested to leave the site.

The "three warning" system applies to the following safe work practices which will be implemented at the site for worker safety:

* Eating, drinking, chewing gum or tobacco, and smoking will be allowed only in designated areas.

* Wash facilities will be utilized by workers in the work areas before eating, drinking, or use of the toilet facilities.

* Containers will be labeled identifying them as waste, debris, or contaminated clothing.

* All excavation/drilling work will comply with Title 8, Article G of the California Administrative Code.

* Personnel at the site will use the "buddy system" when wearing any respiratory protective equipment. No one will be allowed to engage in drilling or sampling operations alone.

* No facial hair which interferes with a satisfactory fit of the mask-to-face seal will be allowed (no beards, large mustaches, or long sideburns.)

* All respiratory protection selection, use, and maintenance will meet the requirements of established procedures, recognized consensus standards (ANNA, ANSI, MSHA, and NIOSH), and will comply in all respects to the requirements set forth in 29 CFR 1910.134.

* All site personnel will be required to wear hard hats, protective glasses and adequate hand protection when in the work zone.

* Any other action which is determined to be unsafe by the Site Safety Officer.

## 10.0 EMERGENCY RESPONSE PLANS

Provide a list of site personnel certified in first aid and CPR:

Ravi. P. Pendurthi - certified in CPR

**TPEE SITE SAFETY PLAN**

**Relevant Phone Numbers:**

| Person | Title | Phone No. |
|---|---|---|
| Michael L. Leonard | Project Manager | (800) 464-8265 |
| | Fire | 911 |
| | Police | 911 |
| | Ambulance | 911 |
| | Poison Control Center | (213) 484-5151 |
| Rio Hondo Hospital | Medical Advisor | (213) 806-1821 |
| Raymond Bellanger | Client Contact | (213) 803-3421 |

U.S. EPA - ERT.....(201) 321-6660

Chemtrec.....(800)424-9300

Centers for Disease Control.....day(404) 329-3311
night(404)329-2888

National Response Center.....(800) 424-8802

Superfund/RCRA Hotline.....(800) 424-9346

TSCA Hotline.....(800) 424-9065

National Pesticide Information Service.....(800) 845-7633

Bureau of Alcohol, Tobacco, and Firearms.....(800) 424-9555
(Explosives)

The locations of the following emergency response equipment will be made available at the site:

- Fire Extinguisher(s)
- First Aid Kit
- Telephone

## Emergency Signals

The following communication signals will be utilized, if necessary, in case of emergency on-site.

| Gesture | Meaning |
|---|---|
| Hand clutching throat | - Out of air/can't breathe |
| Hands on top of head | - Need assistance |
| Thumbs up | - OK/I'm alright/I understand |
| Thumbs down | - No/negative |
| Grip partner's wrists | - Informing partner to leave area immediately |

Emergency Decontamination - In an emergency, the primary concern is to prevent the loss of life or severe injury to site personnel. If immediate medical treatment is required to save a life, decontamination should be delayed until the victim is stabilized. If decontamination can be performed without interfering with essential life-saving techniques or first aid, or ia a worker has been contaminated with an extremely toxic or corrosive material that could cause severe injury or loss of life, decontamination must be performed immediately. If an emergency due to heat-related illness develops, protective clothing should be removed from the victim as soon as possible to reduce heat stress. All emergency decontamination procedures must be supervised by the Site Safety Officer and the Field Team Leader.

## Emergency Medical Facility

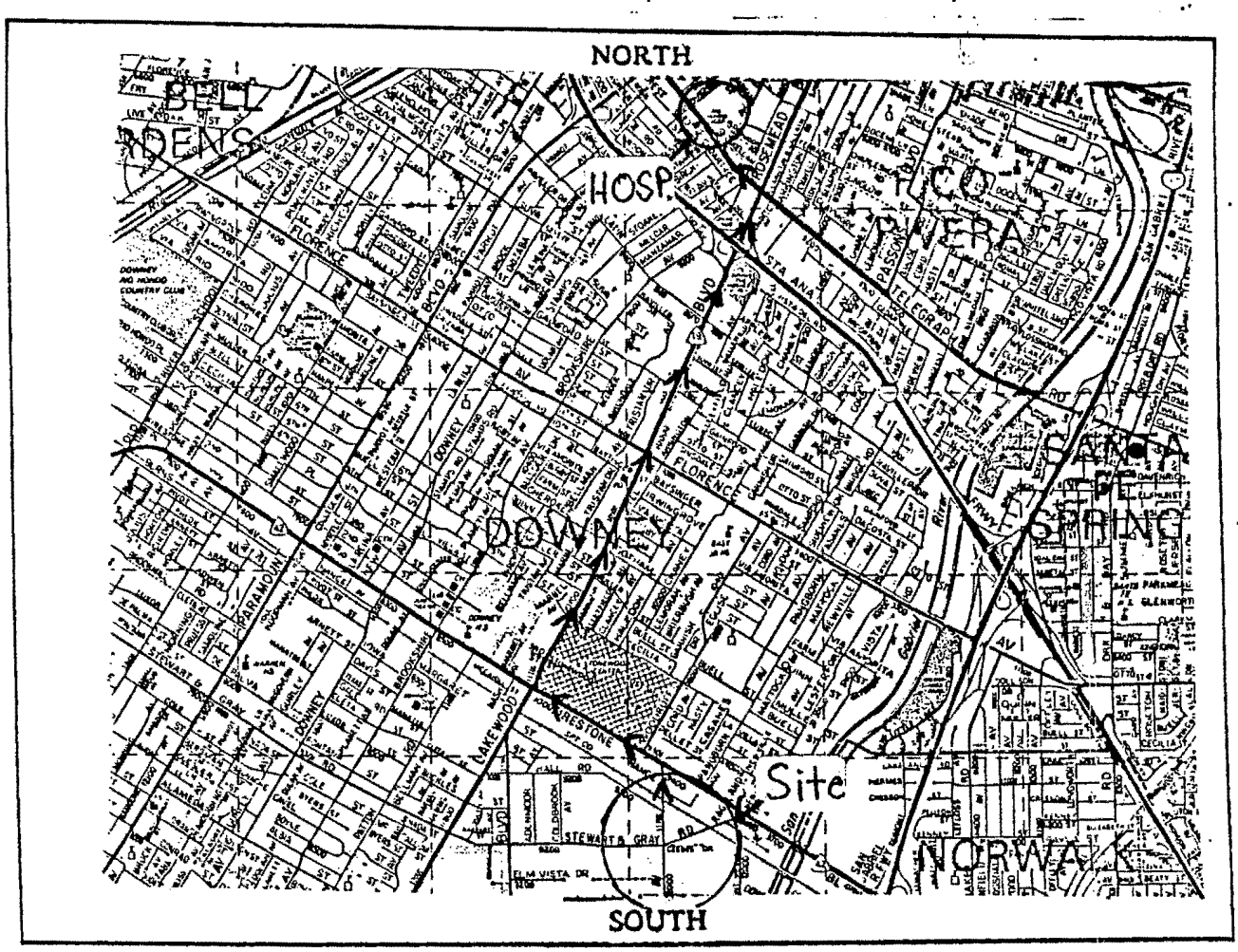
Include written and visual directions to the nearest hospital:

Go north on Woodruff Avenue, go west (left turn) on Firestone Boulevard, go north (right turn) on Lakewood Boulevard, then go west (left turn) on Telegraph Road. Rio Hondo Hospital is located on the south side of Telegraph Road.

Address: Rio Hondo Hospital
8300 E. Telegraph Road
Downey, CA

Refer to the attached map (from Thomas Brothers Guide) on the following page showing the major escape routes from the site in case of an emergency.

Sketch of Route to nearest Hospital:




## 11.0 TRAINING REQUIREMENTS

Prior to mobilization at the job site, all contractors shall submit evidence that site workers have completed a 40-hour course in hazardous waste site operations training as specified in 29 CFR part 1910.120, along with a letter from a physician stating that they have received a physical examination within one year and are physically capable of working on hazardous sites and wearing respiratory protection devices.

**TPEE SITE SAFETY PLAN**

Prior involvement in any field program, all personnel will attend a safety briefing. The briefing will include the nature of the wastes at the site, donning personnel protection equipment, decontamination procedures, respirator fit testing, and emergency procedures. Included in the initial briefing will be training which will provide an understanding of:

* Use of visual emergency signals
* The limitations and capabilities of the equipment.
* Proper use and maintenance of the selected PPE.
* The nature of the hazards and the consequences of not using the PPE.
* The human factor influencing PPE performance.
* Inspection, donning, checking, fitting, and using the PPE.
* Provide individualized respirator fit testing to ensure proper fit.
* The user's responsibility for decontamination, cleaning, maintenance, and repair (if any) of PPE.
* Emergency procedures and self-rescue in the event of PPE failure.
* The Site Safety Plan and the individual's responsibilities and duties in an emergency.

Daily, prior to commencement of operations, all personnel involved with the remedial investigations shall attend short "tailgate" safety briefing which will cover:

* Expected conditions at the site.
* Daily activities.
* Safety deficiencies previously observed.

* Any changes in the emergency procedure.

Record of Training - Upon completion of the project safety briefing, all personnel will sign a statement indicating that they have read and understand that they agree to abide by this project Health and Safety Plan. A record of attendance will be kept for all safety briefings. The TPE Environmental Group compliance agreement is included at the end.

## 12.0 MEDICAL SURVEILLANCE PROGRAM

Prior to assignment to any task requiring a level of personnel protection above Level D, personnel will submit evidence that they have received a physical examination within the previous twelve months which incorporates the following:

* An occupational and general physical history.
* Complete physical examination which incorporates the head, torso, abdomen, limbs, and musculo-skeletal system.
* Chest X-ray.
* Audiometric exam for persons working around drill rigs.
* Laboratory testing of blood and urine to include the following:
  C.B.C., albumin phosphates, total bilirubin, SGOT, SGPT, cholesterol, total protein, albumin, globulin, A/G ratio, BUN, and creatinin
* Vision test.
* Electrocardiogram

To aid in the prevention of heat stress, the following will be provided for personnel working at the site:

* Potable Water

  - Potable water with 1 per cent salt or commercial mix (such as Gatoraid) will be within easy access to all workers.

* Work Schedules

  - Work/rest regimens will be developed on recommendations by the Health & Safety Officer. The initial work schedule will consist of a 55-min. work regime followed by a 5-min. rest period. This work schedule will be modified as is necessary to conform with the heat stress monitoring criteria outlined below.

Personnel will be instructed to look for the following initial symptoms of heat stress:

* Heat Exhaustion:

  - pale, clammy skin
  - profuse perspiration

- tiredness, weakness
- headache, perhaps cramps
- nausea, dizziness (possible vomiting)
- possible fainting

* Heat Cramps:

  - cramping of muscles in legs and abdomen

* Heat Stroke:

  - High body temperature
  - skin is characteristically hot, red, and dry (the sweating mechanism is blocked).

Heat stress monitoring will commence when the ambient temperature reaches 70 degrees Fahrenheit if Tyvek or Saranek (Level C) garments are in use. Otherwise, heat stress monitoring will commence at an ambient temperature of 85 degrees Fahrenheit. The monitoring will consist of the following:

* Heart rate (HR) will be measured by the radial pulse in the resting period. The heart rate at the beginning of the rest period should not exceed 110 beats per minute. If the HR is in excess of the above value the next work period will be shortened by 33% while the length of the rest period stays the same. If the pulse rate is in excess of 110 beats per minute at the beginning of the nest rest period, the following work cycle will be further shortened by 33%.

* Workers will be asked to report any dizziness, faintness, cramps, or other symptoms of heat stress as discussed above.

* Workers will also be questioned about any history of asthma, or if currently taking asthma medications. Persons taking asthma medications are typically more susceptible to heat stress reactions.

First aid for heat stress will include the following:

* Heat Stress

  - Exposed person will be removed from the work zone and placed in a shaded area.

- Person will be required to rest in a recumbent position.
- Fluids will be administered (Gatorade).
- Workloads will be reduced to a level which will prevent heat stress symptoms from recurring.

* Heat Cramps and Heat Exhaustion

  - Same first aid procedures as described above except that exposed person will be requested to leave the site for the remainder of the day.

* Heat Stroke

  - Exposed person will be placed in a shaded area medical attention (Paramedics) will be sought immediately.

## HEALTH AND SAFETY COMPLIANCE STATEMENT

The undersigned certify that they have received, read and understood the procedues and requirements contained in the Health and Site Safety Plan prepared for this project.

Further, the undersigned have received proper training under the Occupational Safety and Health Act (29 CFR, Part 1910.120) prior to conducting any activities at the site.

| NAME/TITLE | SIGNATURE | DATE |
|---|---|---|
| | | |
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AL:E90-1514.HSP

Tank Protect Engineering

"ENVIRONMENTAL MANAGEMENT"

RECEIVED

JUL 2 1991

DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION

June 28, 1991

Los Angeles County
Department of Public Works
Waste Management Division
UST Local Oversight Program, Annex Building
P.O. Box 1460
Alhambra, California 91802-1460

Attention: Mr. Scott Small

101713

**SUBJECT: WORK PLAN FOR SITE ASSESSMENT**
**Kirkhill, Inc. located at 12021 Woodruff Avenue, Downey, California 90241**
**(FILE NO. I-12987-1F)**

Dear Mr. Small:

Tank Protect Engineering ("TPE") submits this work plan to conduct a subsurface investigation in area which previously contained one (1) 10,000 naphthalenic-type processing oil underground storage tank (UST). This site assessment in this area is being requested by the Los Angeles County Department of Public Works, Waste Management Division, Local Oversight Program ("LACDPW") in order to evaluate the extent of the hydrocarbon contamination which presently exists around the area which previously contained the 10,000 gallon oil UST at the subject site (see Figure 1).

In response to your letter dated May 9, 1991 (see Attachment), regarding a "missing" hazardous waste soil manifest form, the following information is submitted.

As stated on TPEs Tank Closure and Remediation report dated June 5, 1990, a total of approximately 54 cubic yards of non-treatable naphthenic type oil contaminated soil and clumps of diesel contaminated soil was transported and properly manifested to a state approved disposal facility. (i.e., three completed manifest forms each identified with a quantity of 18 cubic yards). In response to your comment No. 2, "According to the report dated March 9, 1990,...", (our Closure report is dated February 26, 1990 and not March 9, 1990) on the volume of contaminated soil, it stated 72 cubic yards of soil were hauled away for disposal. The figure indicated in the report should have read 72 tons. This discrepancy is clarified in TPEs site assessment report dated April 15, 1991, page 2. It was documented that approximately 73 tons of contaminated soil was hauled off to a disposal facility. A conversion factor was used to convert cubic yards into tons and the wrong unit of weight was inadvertently used. Therefore, a hazardous waste manifest form was definitely not "missing" in our report.

•1963 N. Main St.
Orange, CA 92667
714/282-5635
800/464-TANK
FAX: 714/282-5645

•3050 Fite Circle
Suite 108
Sacramento, CA 95827
916/366-9626
800/464-TANK
FAX: 916/366-9657

Engr. Contr. Lic.#
489994

The purpose of this investigation is to evaluate the extent of the hydrocarbon contamination which presently exists in the area formerly occupied by UST No.1.

This Work Plan is being submitted to the LACDPW for review and approval.

## PROPOSED SCOPE OF WORK

The following outlines the proposed field work activities to be conducted in the area which previously contained a 10,000 gallon oil UST at the subject site:

**Task 1 -** TPE personnel will meet on-site with the client to review site conditions, operations, traffic, utility locations, etc., and select and mark the initial boring locations to minimize impacts to site operations.

**Task 2 -** TPE will contact Underground Service Alert and receive their report on known underground services at the property and review any available site plans showing utilities. Final locations of the initial borings will then be delineated.

**Task 3 -** Drilling of three (3) vertical soil borings to depths of approximately 50 feet below grade. Proposed borings will be drilled around the area which previously contained UST No.1. The proposed boring locations are shown in Figure 2. Each of the borings will be drilled using a truck-mounted drill rig equipped with either eight or ten-inch diameter continuous flight hollow stem augers, under the supervision of TPE geologists. All borings will be logged in accordance with the Unified Soil Classification System.

TPEs Health and Safety Plan procedures will be implemented prior to and during all field work activities associated with this project. A copy of this plan will be left on-site.

**Task 4 -** Obtain soil samples from each boring at approximately 5 feet below grade and every 5-foot intervals thereafter until termination depth. In the event that contamination is still present at the termination depth then the borings will continue an additional 10 feet. The samples will be collected by using 2.5-inch diameter by 3-inch long brass tubes mounted within a Californian Sampler

used in advance of the augers. Prior to sampling, all brass tubes will be washed in a solution of Alconox detergent, rinsed with tap water, and then rinsed with distilled water. After sample recovery, the lowermost brass ring from each sample interval will be immediately end-wrapped with aluminum foil, polyethylene caps taped over the ends, labeled, placed into an ice-chest chilled using frozen blue ice, and transported by a private vehicle to a State Certified Laboratory. All samples will be logged on and accompanied by chain-of-custody record forms.

A portable Flame-ionization Detector calibrated against hexane or similar equipment will be used on the soil samples contained within the sampler at each sampling interval within each boring to monitor the volatile organic compounds (VOCs) which are being emitted directly from the soil.

In all cases, the sampling equipment will be decontaminated prior to each sampling. Clean auger flights will be used for each boring.

**Task 5** - The drill cuttings generated during drilling from each boring will be placed and sealed in DOT approved 55-gallon drums and left on-site pending analytical results for appropriate disposal.

**Task 6** - All of soil samples obtained from proposed borings will be analytically tested for total recoverable petroleum hydrocarbons (TRPH) using modified EPA Method 418.1

## PROPOSED PROCEDURE

After review and approval of this plan by the LACDPW, the procedures to be implemented will be as follows:

- Contact and notify LACDPW at least seventy-two (72) hours prior to initiating any field work activities;
- Drill, sample and test the soil samples for TRPH; and
- Evaluate data and prepare a report describing our procedures and findings.

If there are any questions or need additional information please call Anthony Lizzi at 714/282-5639.

Respectfully submitted,

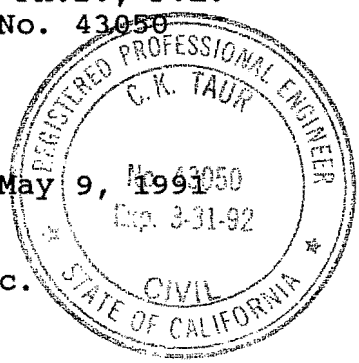
**TANK PROTECT ENGINEERING**

Prepared By:

Anthony Lizzi
Project Manager/Geologist

Reviewed By:

C.K. Taur, Ph.D., P.E.
CA R.C.E. No. 43050

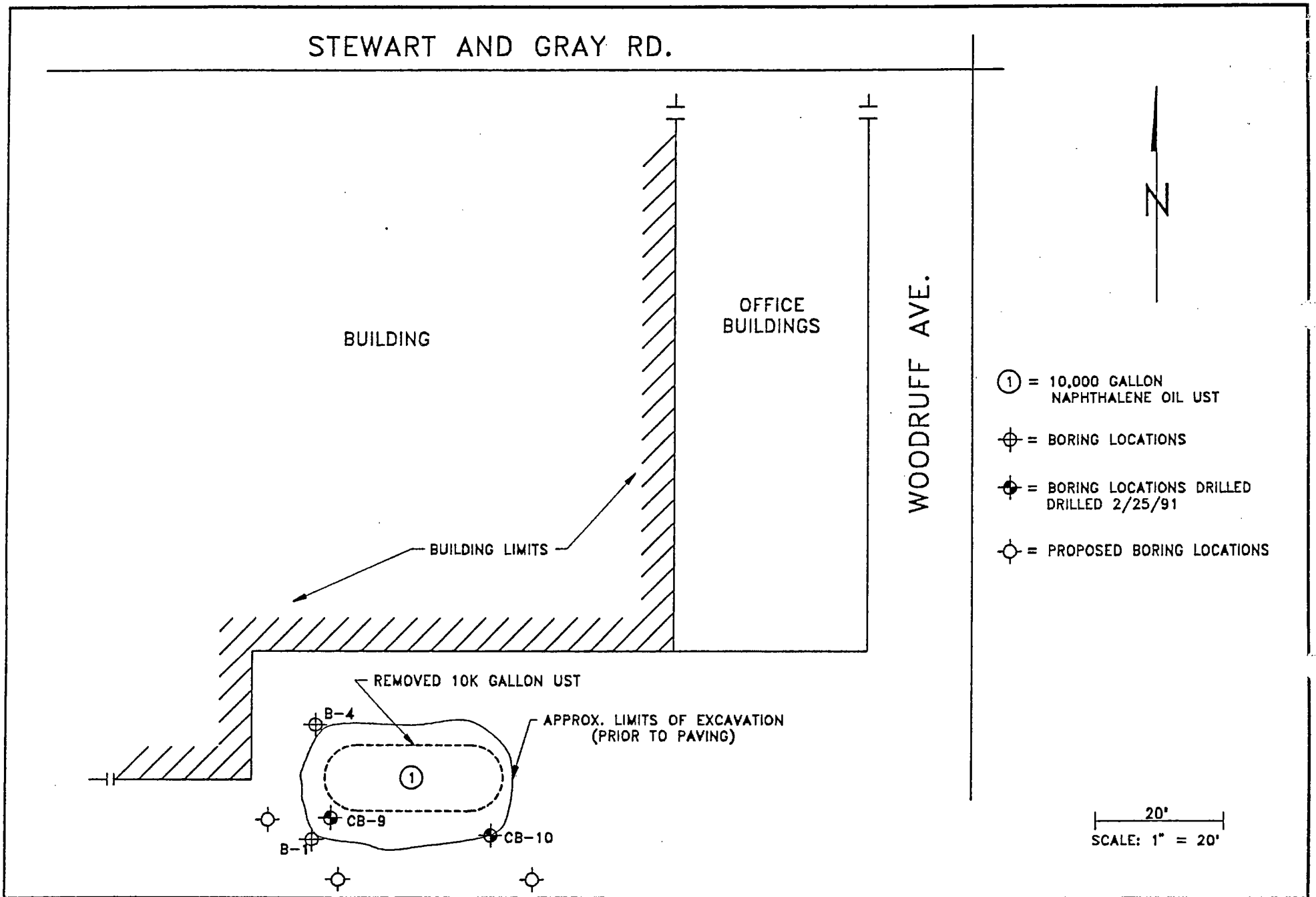



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enclosures: Figure 1
Attachment A - LACDPW letter dated May 9, 1991

Distribution: (3) Addressee
(1) Raymond Bellanger, Kirkhill, Inc.
(1) File

Att: 2




| | | | | | |
|---|---|---|---|---|---|
| TPE ENVIRONMENTAL GROUP<br>1071 N. BATAVIA<br>ORANGE, CA. 92665 | ADDRESS:<br>KIRKHILL INC.<br>12021 WOODRUFF AVENUE<br>DOWNEY, CA. 90241 | SITE PLAN | | DRAWN: P. LEWIS | |
| | | | | APPROVED: T. LIZZI | |
| | | DATE: 06-91 | JOB #/FILE: 1514/KRKHILL1 | SCALE: AS NOTED | FIGURE: 1 |

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

May 9, 1991

IN REPLY PLEASE
REFER TO FILE:
I-12987

Mr. Raymond Ballanger
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballanger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**HAZARDOUS MATERIALS UNDERGROUND STORAGE**
**SITE ASSESSMENT REPORT**
**CLOSURE PERMIT NOS. 5999B AND 6000B**
**FACILITY: 12021 WOODRUFF AVENUE, DOWNEY**

This office has reviewed the subject document(s) submitted on April 18, 1991, dated April 15, 1991.

In order to better evaluate the site status, the information indicated below must be submitted:

1. Based on the results of borings CB-9 and CB-10, a Site Assessment proposal must be submitted to define the extent of all remaining contamination.

2. According to the report dated March 9, 1990, there appears to be a missing hazardous waste soil manifest. The report states that 72 cubic yards were hauled away for disposal, but only 54 cubic yards are accounted for on the manifests (#88243329, #88243343, and # 89469174).

You are cautioned that any contaminated soils or hazardous materials generated during any operation must be manifested and transported to a hazardous waste disposal facility as required by California Health and Safety Code, Division 20, Chapter 6.5, unless evidence is presented indicating that the material may be disposed of at a less restricted facility. Copies of all completed manifests shall be submitted to this office as part of the final report.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Scott Small at (818) 458-3996.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By Scott Small
Scott Small
UST Local Oversight Program
Waste Management Division

Reviewed
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

SS:ts/12987

cc: California Regional Water Quality Control Board
Mr. Anthony Lizzi, Tank Protect Engineering

Tank Protect Engineering

"ENVIRONMENTAL MANAGEMENT"

RECEIVED
JUL 11 1991
DEPARTMENT OF PUBLIC WORKS
WASTE Management DIVISION

July 8, 1991

File No. 91004
Project No. 220

P101808

Los Angeles County
Department of Public Works
Waste Management Division
UST Local Oversight Program, Annex Building
P.O. Box 1460
Alhambra, California 91802-1460

Attention: Mr. Scott Small

**SUBJECT: ADDENDUM TO WORK PLAN DATED JUNE 28, 1991 Kirkhill, Inc. located at 12021 Woodruff Avenue, Downey, California 90241 (FILE NO. I-12987-1F)**

Dear Mr. Small:

Pursuant to our telephone conversation as of this date, Tank Protect Engineering ("TPE") submits this letter as an addendum to the work plan dated June 28, 1991. This addendum includes information you requested on additional borings to be drilled in the area which previously contained one (1) 10,000 naphthalenic-type processing oil underground storage tank (UST) at the subject site.

Per your request (in addition to the three borings proposed in TPEs workplan), two additional borings are proposed to be drilled to depths of approximately 50 feet below grade. Boring CB-9A will be drilled immediately beneath the location of boring CB-9; and one boring to be drilled at approximately 20 feet northwest of boring CB-9 (see Figure 1 for boring locations).

All proposed field work activities and procedures as outlined in TPEs workplan dated June 28, 1991, will be implemented as described therein.

If there are any questions or need additional information please call Anthony Lizzi at 714/282-5639.

•1963 N. Main St.
Orange, CA 92667
714/282-5635
800/464-TANK
FAX: 714/282-5645

•3050 Fite Circle
Suite 108
Sacramento, CA 95827
916/366-9626
800/464-TANK
FAX: 916/366-9657

Engr. Contr. Lic.#
489994

Respectfully submitted,

**TANK PROTECT ENGINEERING**

Prepared By:

Anthony Lizzi
Project Manager/Geologist

Reviewed By:

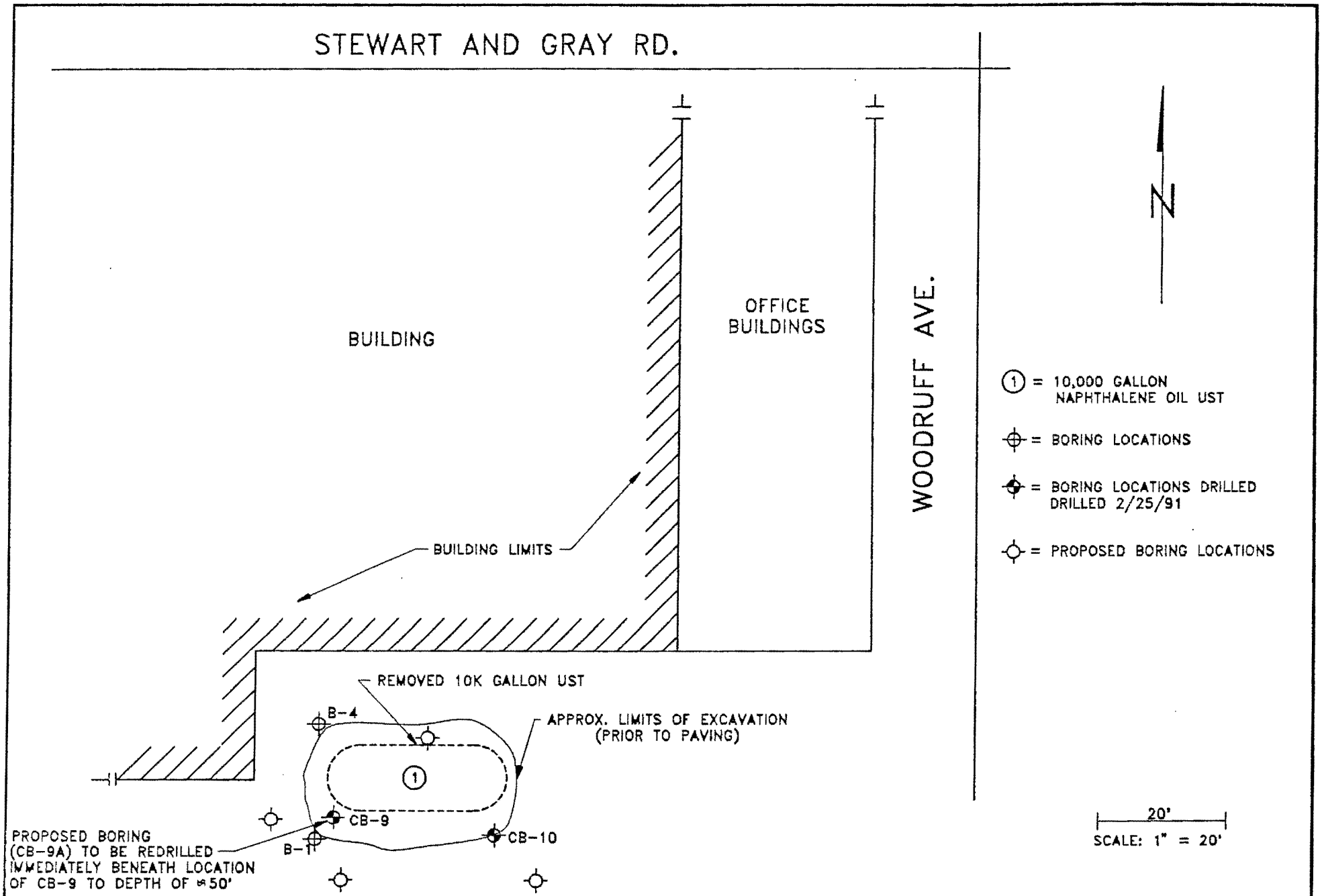
C.K. Taur, Ph.D., P.E.
CA R.C.E. No. 43050

REGISTERED PROFESSIONAL ENGINEER
C.K. TAUR
No. 43050
Exp. 3-31-92
CIVIL
STATE OF CALIFORNIA

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enclosure: Figure 1

Distribution: (1) Addressee
(1) Raymond Bellanger, Kirkhill, Inc.
(1) File

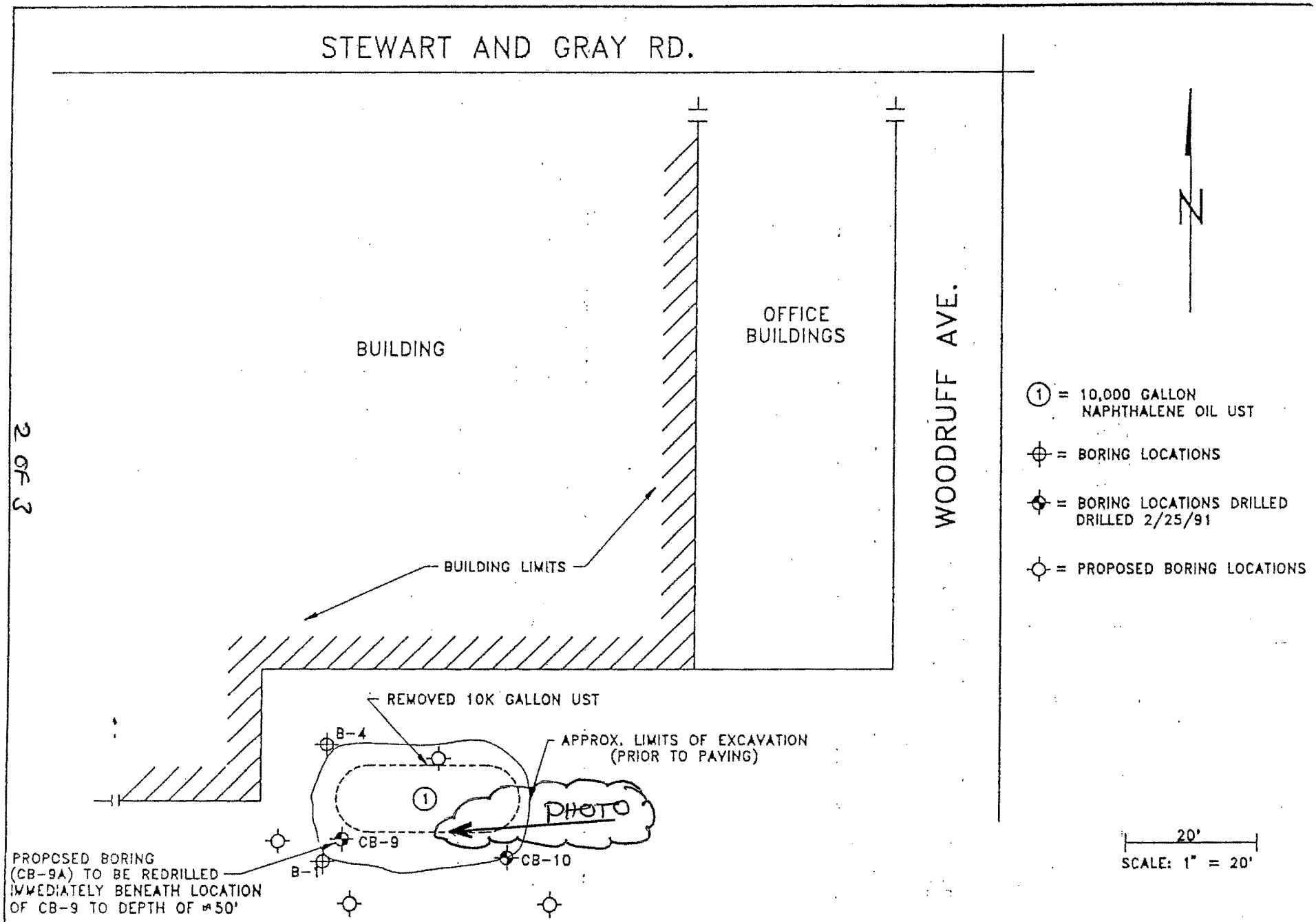



TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

ADDRESS:
KIRKHILL INC.
12021 WOODRUFF AVENUE
DOWNEY, CA. 90241

REVISED PROPOSED BORING LOCATION MAP

| | |
|---|---|
| DRAWN: | P. LEWIS |
| APPROVED: | T. LIZZI |
| DATE: | 06-91 |
| JOB #/FILE: | 1514/KRKHILL1 |
| SCALE: | AS NOTED |
| FIGURE: | 1 |




2 of 3

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

ADDRESS:
KIRKHILL INC.
12021 WOODRUFF AVENUE
DOWNEY, CA. 90241

REVISED PROPOSED BORING LOCATION MAP

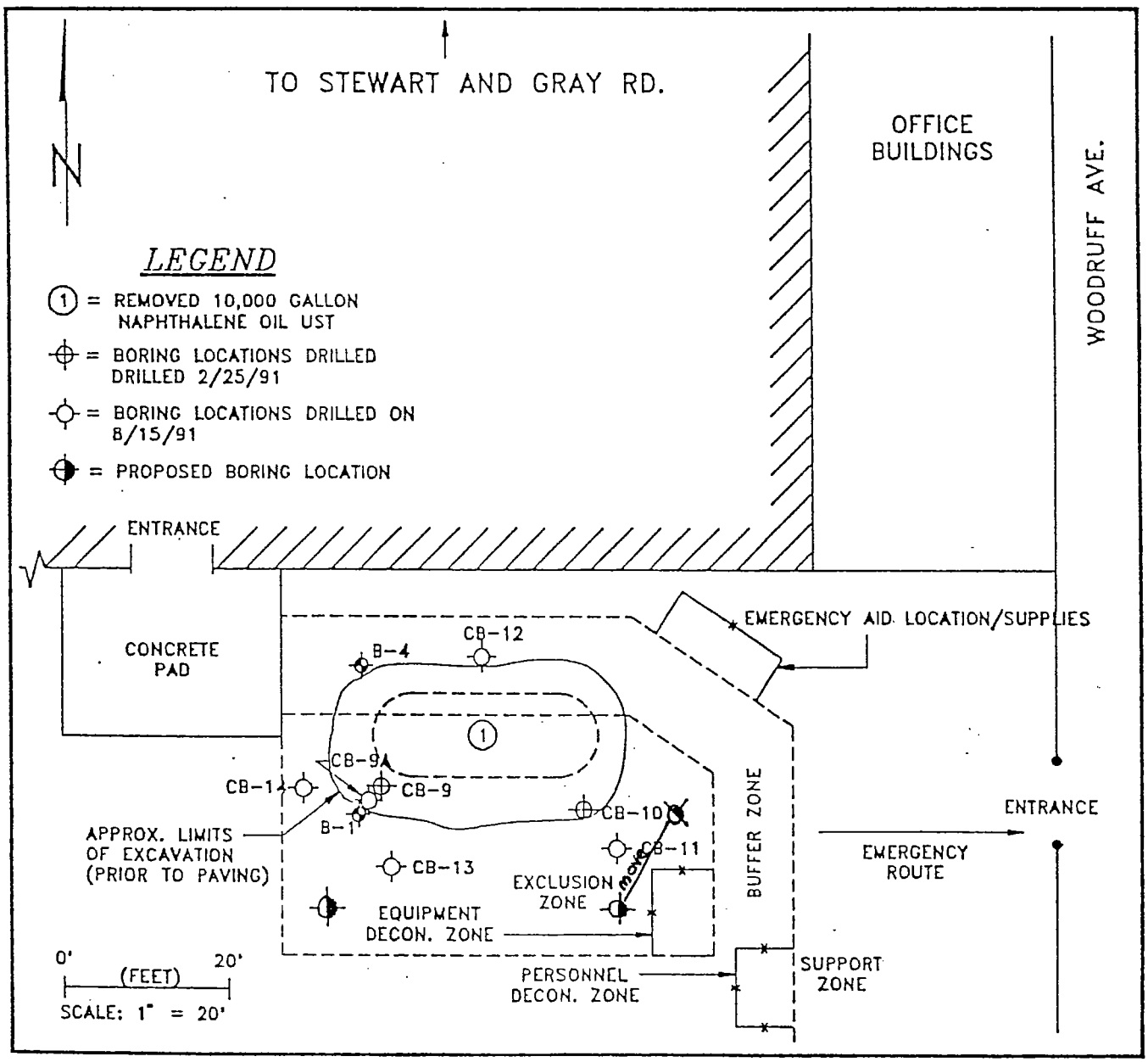
DRAWN: P. LEWIS
APPROVED: T. LIZZI

DATE: 06-91
JOB #/FILE: 1514/KRKHILL1
SCALE: AS NOTED
FIGURE: 1

The site sketch shown below includes the following:

- Nearby roads and structures;
- Boring(s) location, if applicable;
- Location of waste, if known or applicable;
- Location of exclusion, support and decontamination zones.

Site Sketch



Tank Protect Engineering

"ENVIRONMENTAL MANAGEMENT"

1990 - 1987

KIRK.220

April 15, 1991

Los Angeles County
Department of Public Works
Waste Management Division
UST Pilot Program - Annex Building
P.O. Box 1460
Alhambra, California 91802-1460

Attention: Mr. Scott Small

**SUBJECT: SITE ASSESSMENT FOR CONFIRMATION BORINGS KIRKHILL, INC., 12021 WOODRUFF AVENUE DOWNEY, CALIFORNIA 90241 (FILE NO. I-12987-1F)**

Dear Mr. Small:

Tank Protect Engineering ("TPE") is pleased to submit this site assessment report on additional field work activities pursuant to a request from Los Angeles County, Department of Public Works, Waste Management Divison ("LACDPW"), in order to determine that the backfilled treated soil within each excavation which contained an underground storage tank (UST) is clean to acceptable levels, and to address closure in the area of an abandoned UST at the subject site.

## BACKGROUND

On August 24, 1989, one (1) 10,000 gallon naphthalenic type processing oil UST (henceforth referred to as UST No. 1); and two (2) 10,000 diesel fuel USTs (henceforth referred to as USTs No. 2 and No. 3, respectively) were removed from the subject site.

In or about October 1989, a 7,500 diesel fuel UST located near the building, in an alley at the site was abandoned-in-place (henceforth referred to as UST No. 4); please refer to Figures 1 and 2.

Initial soil testing results indicated that contamination was present beneath the east end of the excavtion which contained UST No. 1 and the west end of the excavation which contained UST No. 2. The testing results of the soil samples obtained beneath the former location of UST No. 3 indicated TPH concentrations less than 100 parts per million (ppm). UST No. 4 was abandoned in-place (please refer to TPEs closure and site remediation report dated February 26, 1990 for details).

P.O. Box 7066
Orange, CA 92613
714/282-5635
800/464-TANK
FAX: 714/282-5645

•3050 Fite Circle
Suite 108
Sacramento, CA 95827
916/366-9626
800/464-TANK
FAX: 916/366-9657

Engr. Contr. Lic.#
489994

In September 1989, a site assessment was conducted in the previous USTs No. 1 and No. 2 locations, and in the area of the abandoned-in-place UST No. 4 to investigate the extent of the soil contamination. No additional field work was required in the previous UST No. 3 location. Six borings were drilled (B-1 through B-6) and sampled to depths of approximately between 25 to 40 feet below grade. The soil testing results indicated that only the soil samples obtained from borings B-3, drilled to about 20 feet below grade, in the previous location of UST No. 2, and boring B-6 drilled immediately adjacent to the abandoned diesel fuel UST each at about 20 feet below grade contained TPH concentrations greater than 100 ppm. No detectable TPH concentrations were present in the soil samples obtained at depths greater than 20 feet from boring B-6 drilled adjacent to the abandoned-in-place UST. Additional excavation work was needed beneath the former UST No. 2 location. On October 31, 1989, verification soil samples were obtained from the bottom of the excavation which contained UST No. 2, and testing results indicated that no detectable TPH concentrations were present.

The naphthalenic type oil contaminated soils removed from the excavation which contained UST No. 1 were transported off-site to a disposal facility (approximately 73 tons). The remaining contaminated soils were treated on-site using TPEs transportable treatment unit. The soils were mixed using hydrogen peroxide with silica catalyst. On November 22, 1989, following the treatment process, five soil samples were obtained from the stockpiled soil for verification of treatment process. The testing results indicated that the TPH concentrations were less than 100 ppm.

The excavations which contained the previous USTs were then backfilled with the treated soils and some imported material, and then compacted using standard procedures (please reference TPEEs UST Closure and Site Remediation Report dated June 5, 1990, and Addendum to Remedial Action Report dated October 19, 1990 for details).

## OBJECTIVE

The purpose of this site assessment was to investigate the areas of the backfilled excavation pits which consists of: 1) a removed 10,000 gallon processing oil storage UST No. 1; 2) a removed 10,000 gallon diesel fuel UST No. 2); and 3) an existing 7,500 gallon processing oil abandoned-in-place UST No. 4 located in an alley at the site. No additional work was required in the area of the excavation which contained a 10,000 gallon diesel fuel UST No. 3; please refer to Figure 2).

## FIELD WORK

Prior to conducting any field work activities TPE contacted Underground Service Alert to determine whether any subsurface obstructions were present in the vicinity of the proposed boring locations.

**Drilling and Sampling:**

On February 25 ,1991, four borings were drilled (CB-7 through CB-10). Borings CB-7 was a slant boring drilled immediately adjacent to the abandoned processing oil UST No. 4. This slant boring was drilled at approximately $12^{o}$ from the vertical to a depth of approximately 30 feet below grade. Borings CB-8 was drilled within the treated backfill material which contained UST No. 2 to a depth of approximately 30 feet below grade. CB-9 and CB-10 were drilled in the area formerly occupied by the UST No. 1 to depths of approximately 35 feet below grade (see Figure 2). All borings were drilled using a truck-mounted CME-75 drill rig equipped with eight-inch diameter continuous flight hollow stem augers, under the supervision of TPE geologists.

All borings were logged in accordance with the Unified Soil Classification System (see Attachment A). TPEs Site Health and Safety Plan was implemented during all field work activities.

Soil samples from borings CB-7 through CB-10 were obtained at approximately 5 feet below grade and at every 5 foot interval thereafter until termination depth. The samples were collected using six 2-inch diameter by 3-inch long brass tubes mounted within a Californian split-spoon sampler used in advance of the augers. Prior to sampling, the sampler and all brass tubes were washed in an aqueous solution of Alconox detergent, rinsed with tap water, and then rinsed with distilled water. After sample recovery, the lowermost brass ring from each sample interval was immediately end-wrapped with aluminum foil, polyethylene caps taped over the ends, labeled, placed into an ice chest chilled using frozen blue ice, and transported by a TPE vehicle to a State certified laboratory for analyses. The soil samples obtained from all borings were delivered to American Environmental Laboratories (AEL) located in Orange, California. All samples were logged on and accompanied by chain-of-custody record forms (see Attachment B).

A set of split samples were also obtained from borings CB-8 at 30 feet below grade and CB-9 at 35 feet below grade, at their respective termination depths. These two soil samples were requested by and relinquished to Mr. Dave Lobato from LACDPW.

A portable Flame-ionization Detector (FID) was used on the soil samples contained within the sampler at each sampling interval to monitor the volatile organic compounds (VOCs). Each sample was placed in an airtight "Ziploc" plastic bag. The samples were allowed to sit in the sun, and then the head space was monitored using the FID. No VOC readings were detected in any of the soil samples monitored (see Attachment A). Further, no soil contamination in any of the soil samples collected from borings was present based on visual evidence, FID monitoring, and lack of discoloration.

In all cases, the sampling equipment was decontaminated prior to each sampling. Auger flights were steam cleaned prior to drilling of each boring.

The drill cuttings generated during drilling borings CB-7 through CB-10 were placed and sealed in DOT approved 55-gallon drums and left on-site pending analytical results for appropriate disposal.

All borings were backfilled from total depth to surface grade using hydrated bentonite and then patched with asphalt.

**Site Geology:**

The subsurface conditions encountered in the soil borings is presented in Attachment A. The following is a summary of the soil types encountered.

In borings CB-7 the native soil horizon encountered consisted of a brown, fine grain size, poorly graded, loose, dry, micaceous-bearing silty sand. At approximately between 12 to 20 feet below grade, a brown, micaceous-bearing, dry sandy silt was present, with minor sand lenses.

The next soil horizons encountered in boring CB-7, at approximately 20 feet below grade consisted of a light grey to brown, fine to medium grain size, well to poorly sorted, loose, dry sands. These sandy horizons were present until termination depth at about 30 feet below grade.

Within borings CB-8 through CB-10 the initial soil encountered consisted of backfill material. The backfill material in these borings existed until depths of approximately 22 feet below grade. This fill material consisted of pea gravel with sand, poorly sorted gravelly sands, coarse grain sands and sandy silts with coarse grain size sand fraction. The native soil beneath the backfill material consisted of brown to grey, medium to coarse grain size, poorly sorted, loose, dry sand. No contamination (i.e.,

discoloration) was present based on field observation, and instrument readings.

Site Hydrogeology:

No groundwater was encountered during drilling activities at the site. According to LACDPW - Ground Water Records (Dora Herrera, personal communication, February 1991), the nearest well in the vicinity of the subject site is well #1587Y, located approximately 0.20 miles east of the site at an elevation of approximately 107 feet above mean sea level (MSL). The depth to groundwater based on measurement obtained on April 30, 1990, was approximately 97 feet below grade. The site elevation is at approximately 105 feet above MSL based on U.S.G.S. topographic map, Los Angeles Quadrangle. Based on interpretation and extrapolation of the well data at the subject site from the above referenced data, the groundwater depth may be encountered at approximately 95 feet below grade. The upper portion of the Gaspur water-bearing zone at the subject site is at approximately 60 feet below grade. This does not necessarily imply that the upper portion of this aquifer is saturated. Thus, the information obtained from well #1587Y will be used as the ground water depth for the site.

## ANALYTICAL RESULTS

The soil samples obtained from borings CB-7 through CB-10 were delivered to AEL for analyses, a California DOHS certified laboratory (Certification No. 1224) located in Orange, California. All samples were accompanied by proper chain of custody record forms (see Attachment B).

Soil samples obtained from borings CB-7 and CB-8 were analyzed for total petroleum hydrocarbons (TPH) using EPA Method 8015, modified for diesel.

The soil samples obtained from borings CB-9 through CB-10 were analyzed for TRPH using EPA Method 418.1. The results of the testing are shown in Table 1. The laboratory reports are contained in Attachment C.

**TABLE 1**

**CONCENTRATIONS OF TPH AND TRPH IN SOIL SAMPLES OBTAINED ON FEBRUARY 25, 1991**

Parts per Million (ppm)

| Sample I.D. # | TPH | TRPH |
|---|---|---|
| CB-7 @ 5′ | ND | NA |
| CB-7 @ 10′ | ND | NA |
| CB-7 @ 15′ | ND | NA |
| CB-7 @ 20′ | ND | NA |
| CB-7 @ 25′ | ND | NA |
| CB-7 @ 30′ | ND | NA |
| CB-8 @ 5′ | ND | NA |
| CB-8 @ 10′ | ND | NA |
| CB-8 @ 15′ | ND | NA |
| CB-8 @ 20′ | ND | NA |
| CB-8 @ 25′ | ND | NA |
| CB-8 @ 30′ | ND | NA |
| CB-9 @ 5′ | NA | ND |
| CB-9 @ 10′ | NA | ND |
| CB-9 @ 15′ | NA | 745 |
| CB-9 @ 20′ | NA | ND |
| CB-9 @ 25′ | NA | 303 |
| CB-9 @ 30′ | NA | ND |
| CB-9 @ 35′ | NA | 800 |
| CB-10 @ 5′ | NA | 781 |
| CB-10 @ 10′ | NA | 25 |
| CB-10 @ 15′ | NA | 852 |
| CB-10 @ 20′ | NA | ND |
| CB-10 @ 25′ | NA | ND |
| CB-10 @ 30′ | NA | ND |
| CB-10 @ 35′ | NA | ND |

* ND = Not Detected
** NA = Not Analyzed for this compound

Discussion:

General

Based on the LACDPW, USTLOP guidelines for report submittal issued in September 1990, the maximum acceptable level of contamination in

soil or ground water is determined on a site by site basis. For diesel and gasoline fuel contamination, most southern California regulatory agencies are following the guidelines contained in the "Leaking Underground Fuel Tank (LUFT) Field Manual", dated October 1990, prepared by the State Water Resources Control Board. According to Table 2-1, in the LUFT manual a calculation format may be used to determine that the TPH and BTXE concentrations could be left in place without threatening ground water. This calculation takes into account such factors as depth to ground water, average annual precipitation, subsurface fractures and man-made conduits. Given the conditions that presently exist at the site, i.e., sampling depth to ground water is at approximately 60 feet below grade, no fractures in subsurface, no man-made conduits, no unique site features, etc, the total score for the subject site obtained from Table 2-1 is 48 points, which indicates that the TPH concentrations (for diesel) may be left at the site is 1000 ppm. Table 2-1 is attached for reference.

Soil

The analytical results of the soil samples obtained from borings show that: 1) no detectable TPH concentrations were present in soil samples collected from borings CB-7 and CB-8; and 2) the samples obtained from borings CB-9 and CB-10 contained detectable concentrations of TRPH ranging from 25 ppm to 852 ppm.

Analytical results of soil samples from borings CB-9 indicated that detectable TPH concentration were present in samples collected at approximately 15, 25, and 35 feet below grade with concentrations of 745, 303, and 800 ppm, respectively.

Boring CB-9 was terminated at 35 feet below grade since no signs of contamination was present based on field instrumentation (see boring logs) and visual evidence (i.e., no discoloration or odor was encountered in this boring).

Based on the soil testing results from boring CB-10, only the samples obtained at 5, 10, and 15 feet below grade contained TRPH concentrations of 781, 25, and 852 ppm, respectively. No detectable TPH concentrations were present in the remaining soil samples obtained from this boring.

**Conclusions:**

Based on above discussion and the information contained herein the following are concluded:

- Based on Table 2-1 in LUFT manual, the maximum allowable level of TPH concentration that could be left in place is 1,000 ppm.
- The analytical results of all soil samples indicate that the TPH concentrations are less than 1000 ppm TPH);

- Ground water has not been encountered during drilling and sampling activities;

- The sample collected from boring CB-9 at approximately 35 feet below grade which contained 800 ppm (about 70 feet above MSL) is about 60 feet from ground water depth.

It is TPEs opinion that the data presented herein has characterized the treated backfill material within the excavations which contained UST NO. 2 and No. 4 and additional actions may not be warranted at this time. Further, the soil testing results obtained from boring CB-9 at termination depth indicates that contamination exists at about 35 feet below grade (800 ppm). Based on LUFT manual (Table 2-1), the contamination present may not pose a serious threat to ground water.

## LIMITATIONS

The findings and conclusions presented in this report were based solely upon the scope of work described above, upon our interpretation of the information described above, and are intended to address closure of the areas which contained UST No. 1 and No. 2, and the area which contains an abandoned-in-place UST No. 4 in accordance with the regulatory requirements.

This report should be used solely for its intended purpose and within the limitations of our scope of work. Prior to use for other than its intended purpose or beyond the limitations described herein, sufficient and thorough studies should be performed to confirm the findings presented in this report.

Changes in conditions at a property can occur with the passage of time whether they be due to acts of man or natural causes. In addition, the broadening of knowledge or legislative or regulatory actions relative to hazardous materials could result in varying standards concerning the presence of hazardous materials at the site.

If there are any questions or need additional information please call Anthony Lizzi at 714/282-5639. Thank you.

Respectfully submitted,

**TANK PROTECT ENGINEERING**

Prepared By:

Anthony Lizzi
Project Manager/Geologist

Reviewed By:

C.K. Taur, Ph.D., P.E.
CA R.C.E. No. 43050

REGISTERED PROFESSIONAL ENGINEER
C.K. TAUR
No. 43050
Exp. 3-31-92
CIVIL
STATE OF CALIFORNIA

AL\CKT\KIRK.220

enclosures: Figures 1 and 2
Attachment A - Boring Logs
Attachment B - Chain of Custody Record Forms
Attachment C - Laboratory Reports
Table 2-1

Distribution: (3) Addressee
(2) Ray Bellanger, Kirkhill, Inc.,
(1) File

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


February 14, 1991

IN REPLY PLEASE
REFER TO FILE: I-12987

Mr. Raymond Ballenger
Kirkhill, Inc.
P.O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballenger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**HAZARDOUS MATERIALS UNDERGROUND STORAGE**
**CONFIRMATION PROPOSAL**
**CLOSURE PERMIT NOS. 5999B AND 6000B**
**FACILITY: 12021 WOODRUFF AVENUE, DOWNEY**

This office has reviewed the subject document(s) submitted on January 15, 1991, dated January 9, 1991. The comments in this letter must be addressed and submitted to this office by April 25, 1991.

The Confirmation Proposal has been reviewed and found adequate, and must incorporate the comment below. You may proceed with the plan as proposed.

> Boring B-7 should be drilled at the same angle and direction as the previously drilled borings B-5 and B-6. Samples must be taken and analyzed every five feet. The borings should extend at least ten feet below non-detectable levels. Detection limits for the lab analyses must comply with the Los Angeles County Guidelines.

You are cautioned that any contaminated soils or hazardous materials generated during the approved operation must be manifested and transported to a hazardous waste disposal facility as required by California Health and Safety Code, Division 20, Chapter 6.5, unless evidence is presented indicating that the material may be disposed of at a less restricted facility. Copies of all completed manifests shall be submitted to this office as part of the final report.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Scott Small at (818) 458-3996.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By Scott Small
Scott Small
UST Local Oversight Program
Waste Management Division

OK X

Reviewed P. A. Proano
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

SS:ts(11)/12987

cc: California Regional Water Quality Control Board
Mr. Michael L. Leonard Sr., TPE Environmental

# FIGURES

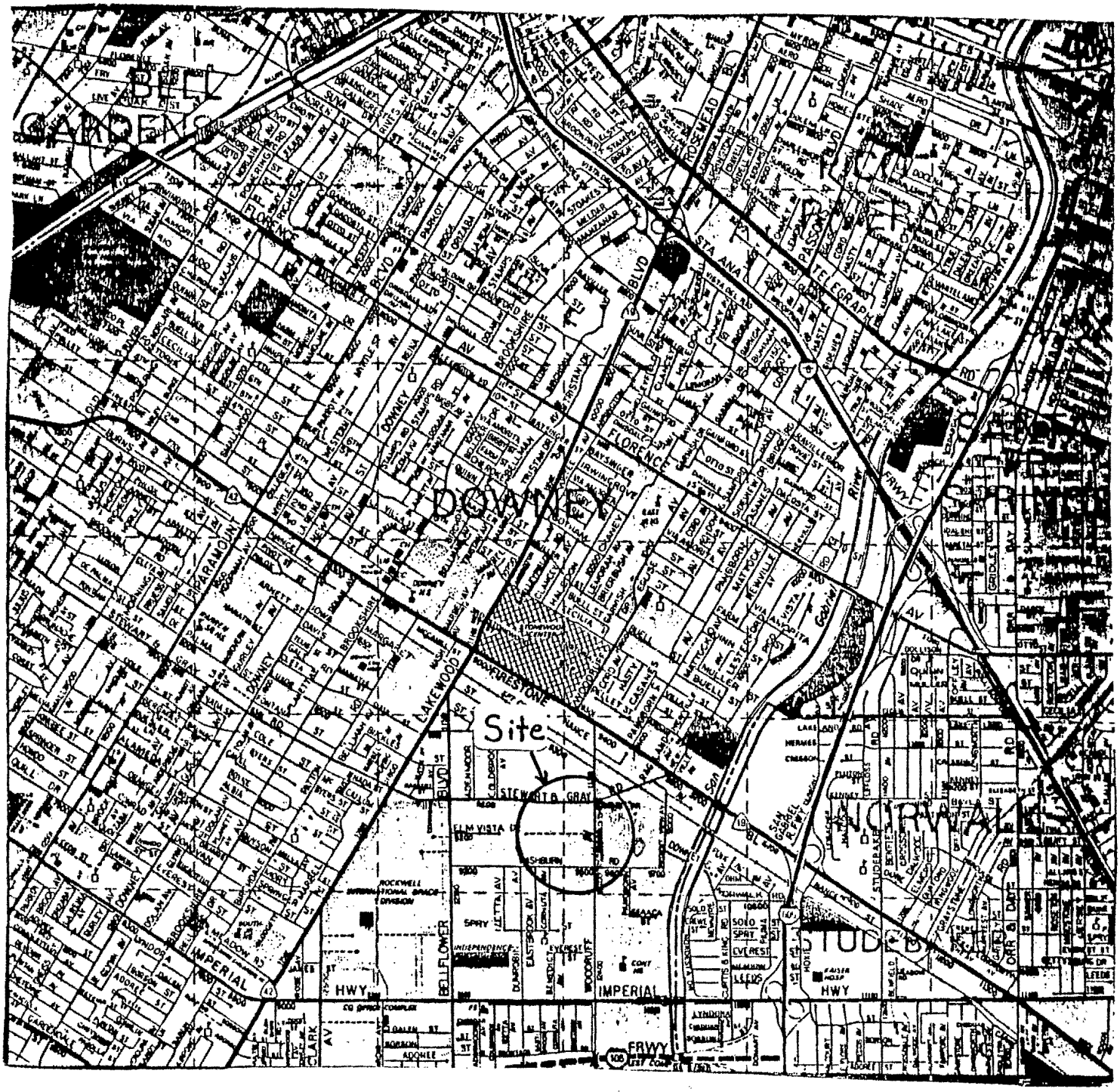
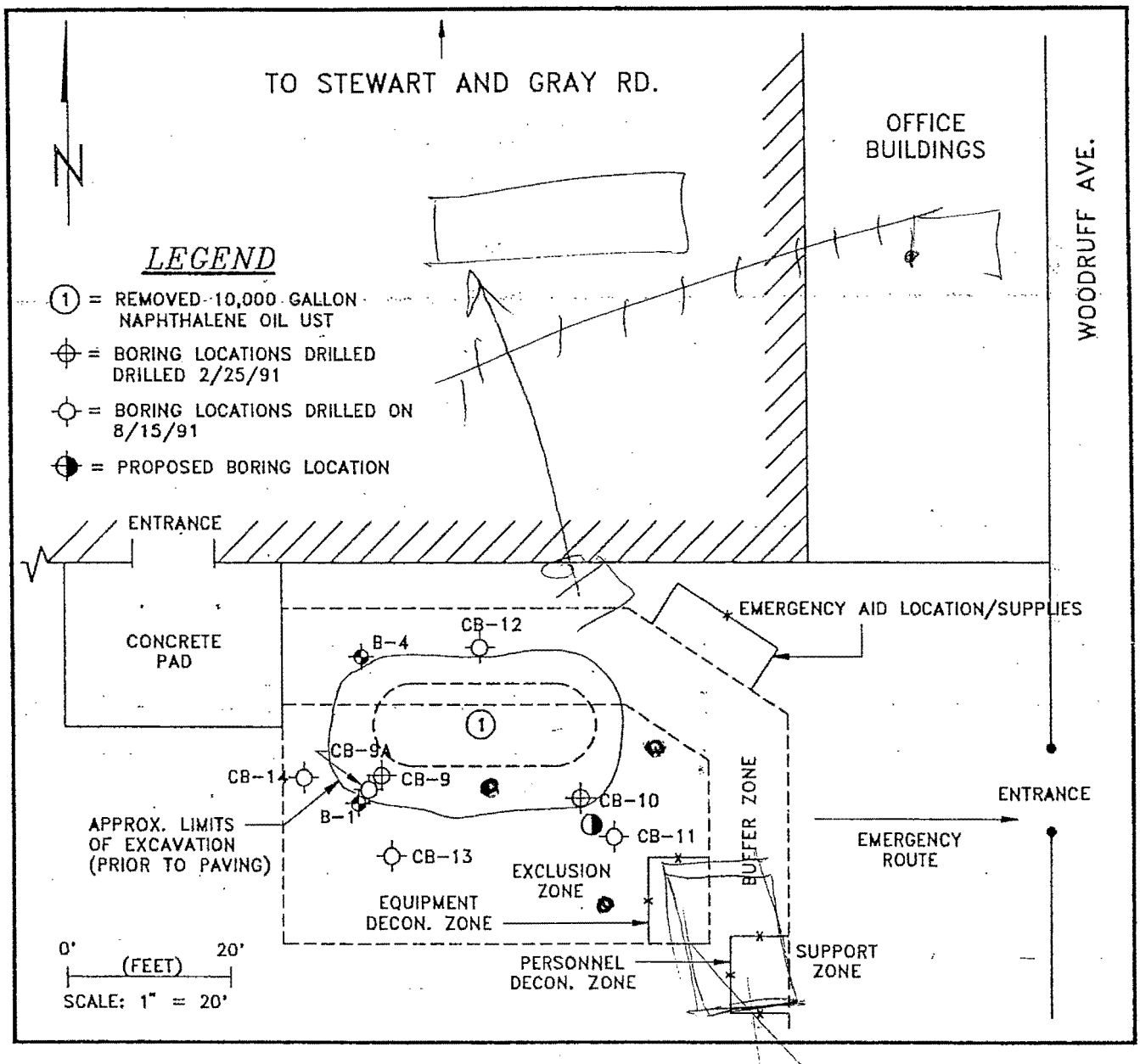



Figure 1: Site Location

The site sketch shown below includes the following:

- Nearby roads and structures;
- Boring(s) location, if applicable;
- Location of waste, if known or applicable;
- Location of exclusion, support and decontamination zones.

Site Sketch



**ATTACHMENT A**

BORING LOGS

TANK PROTECT ENGINEERING

1963 N. Main St., Orange, CA 92665

PROJECT # 220

# BORING LOG

SITE LOCATION: Kirkhill Inc. 12021 Woodruff Ave., Downey

| Logged By: A. Lizzi | Date Drilled: 02/25/91 | Drill Rig: CME 75 | Boring Diameter: HSA 8" O.D. | Boring Number: CB-7 |
|---|---|---|---|---|
| Descriptions on this boring log apply only at the specific boring location and at the time the boring was made. The descriptions on this log are not warranted to be representative of subsurface conditions at other locations or times. | | | Boring Elevation: | Weight: 140# 30" drop |

Boring drilled at 12° from vertical

| DEPTH, FT | SAMPLES | BLOWS/FOOT | LITHOLOGY | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | TIME OF SAMPLING | FID (PPM) READING | RECOVERY |
|---|---|---|---|---|---|---|---|
| | | | | 0-4" Concrete | | | |
| 5 | | 6<br>6<br>9 | SM | 4"-12' Silty Sand, brown, fine grain size, poorly graded, loose, minor sand, micaceous, dry. | 0845 | 0 | |
| 10 | | 9<br>10<br>11 | | | 0900 | 0 | |
| 15 | | 6<br>9<br>45 | ML | 12-19.5' Sandy Silt, brown, fine minor sand lense at 15', micaceous, subcompact, dry. | 0910 | 0 | |
| 20 | | 25<br>45<br>50/3" | SW | 19.5-27' Sand, light grey to grey brown, fine to medium grain size, poorly sorted, loose, minor silt, dry. | 0915 | 0 | |
| 25 | | 16<br>34<br>35 | SP | 27-30.5' Sand, brown, medium grain size, well sorted, loose, micaseous, dry. | 0920 | 0 | |
| 30 | | 18<br>32<br>50 | | Notes: TD 30'<br>Boring immediately backfilled with hydrated bentonite from TD to surface grade. | 0925 | 0 | |

REGISTERED PROFESSIONAL ENGINEER
C. K. TAUR
No. 43050
Exp. 3-31-92
STATE OF CALIFORNIA

TANK PROTECT ENGINEERING

1963 N. Main St., Orange, CA 92665

PROJECT # 220

# BORING LOG

SITE LOCATION: Kirkhill, Inc. 12021 Woodruff Ave., Downey

| Logged By: | Date Drilled: | Drill Rig: | Boring Diameter: | Boring Number: |
|---|---|---|---|---|
| A. Lizzi | 02/25/91 | CME 75 | HSA 8" O.D. | CB-8 |

Descriptions on this boring log apply only at the specific boring location and at the time the boring was made. The descriptions on this log are not warranted to be representative of subsurface conditions at other locations or times.

Boring Elevation:

Weight: 140# 30"drop

| DEPTH, FT | SAMPLES | BLOWS/FOOT | LITHOLOGY | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | TIME OF SAMPLING | FID (PPM) READING | RECOVERY |
|---|---|---|---|---|---|---|---|
| | | | | 0-3" Asphalt | | | |
| | | 5 | | | | | |
| 5 | | 5 | | 3"-6' Backfill. Pea gravel with sand, dry. | 1010 | 0 | |
| | | 6 | | | | | |
| | | | | | | | |
| | | 8 | | | | | |
| 10 | | 8 | | 6-14' Backfill. Pea gravel with sand. | 1015 | 0 | |
| | | 8 | | | | | |
| | | | | | | | |
| | | 5 | | | | | |
| 15 | | 6 | | | | | |
| | | 7 | | 14-22' Backfill. Pea gravel with sand. | 1025 | 0 | |
| | | | | | | | |
| | | 27 | | | | | |
| 20 | | 18 | | | 1030 | 0 | |
| | | 25 | | | | | |
| | | | | | | | |
| | | 27 | | | | | |
| 25 | | 18 | sw | 22-30.5' Sand, brown to grey, medium to coarse grain size, poorly sorted, loose, various mineral grains present, dry. | 1035 | 0 | |
| | | 27 | | | | | |
| | | | | | | | |
| | | 26 | | | | | |
| | | 50 | | | | | |
| 30 | | 50/5" | | | 1045 | 0 | |

Notes: TD 30'
Boring immediately backfilled with hydrated bentonite from TD to surface grade.

PROFESSIONAL ENGINEER
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Exp. 3-31-92
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STATE OF CALIFORNIA

1963 N. Main St., Orange, CA 92665

# BORING LOG

PROJECT # 220

SITE LOCATION: Kirkhill, Inc. 12021 Woodruff Ave., Downey

| Logged By: | Date Drilled: | Drill Rig: | Boring Diameter: | Boring Number: |
|---|---|---|---|---|
| A. Lizzi | 02/25/91 | CME 75 | HSA 8" O.D. | CB-9 |

Descriptions on this boring log apply only at the specific boring location and at the time the boring was made. The descriptions on this log are not warranted to be representative of subsurface conditions at other locations or times.

Boring Elevation:

Weight: 140# 30"drop

| DEPTH, FT | SAMPLES | BLOWS/FOOT | LITHOLOGY | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | TIME OF SAMPLING | FID(PPM) READING | RECOVERY |
|---|---|---|---|---|---|---|---|
| | | | | 0-3" Asphalt | | | |
| 5 | | 14<br>13<br>14 | ML | 3"-7' Backfill. Sandy silt | 1240 | 0 | |
| 10 | | 15<br>25<br>27 | GW | 7-16' Backfill. Gravely sand, minor silt. | 1245 | 0 | |
| 15 | | 4<br>5<br>5 | | | 1250 | 0 | |
| 20 | | 12<br>15<br>28 | ML | BACKFILL<br>16-22.5' Sandy silt, brown mottled grey-green color, micaceous, dry, subcompact. | 1300 | 0 | |
| 25 | | 26<br>36<br>42 | SW | 22.5-35' Sand, greyish brown, medium to coarse grain size, poorly sorted, loose, minor silt, micaceous, dry. | 1305 | 0 | |
| 30 | | 35<br>50<br>60/5" | | | 1310 | 0 | |

1963 N. Main St., Orange, CA 92665

PROJECT # 220

# BORING LOG

SITE LOCATION: Kirkhill, Inc. 12021 Woodruff Ave., Downey

| Logged By: A. Lizzi | Date Drilled: 02/25/91 | Drill Rig: CME 75 | Boring Diameter: HSA 8" O.D. | Boring Number: CB-9 |
|---|---|---|---|---|
| Descriptions on this boring log apply only at the specific boring location and at the time the boring was made. The descriptions on this log are not warranted to be representative of subsurface conditions at other locations or times. | | | Boring Elevation: | Weight: 140# 30"drop |

| DEPTH, FT | SAMPLES | BLOWS/FOOT | LITHOLOGY | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | TIME OF SAMPLING | FID (PPM) READING | RECOVERY |
|---|---|---|---|---|---|---|---|
| | | | | Same as above. | | | |
| | | 35<br>71<br>85 | | | 1320 | 0 | |
| 35 | | | | | | | |
| | | | | Notes: TD 35 feet<br>Boring immediately backfilled with hydrated bentonite from TD to surface grade. | | | |
| 40 | | | | | | | |
| 45 | | | | | | | |
| 50 | | | | | | | |
| 55 | | | | | | | |
| 60 | | | | | | | |

REGISTERED PROFESSIONAL ENGINEER
C.K. TAUR
No. 43050
Exp. 3-31-92
CIVIL
STATE OF CALIFORNIA

TANK PROTECT ENG.
1963 N. Main St., Orange, CA 92665

PROJECT #220

# BORING LOG

SITE LOCATION: Kirkhill, Inc.
12021 Woodruff Ave., Downey

| Logged By | Date Drilled | Drill Rig | Boring Diameter | Boring Number |
|---|---|---|---|---|
| A. Lizzi | 02/25/91 | CME 75 | HSA 8" O.D. | CB-1 (CB-10) |

Descriptions on this boring log apply only at the specific boring location and at the time the boring was made. The descriptions on this log are not warranted to be representative of subsurface conditions at other locations or times.

Boring Elevation:

140# 30"drop

| DEPTH, FT | SAMPLES | BLOWS/FOOT | LITHOLOGY | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | PID(PPM) READING | FID(PPM) READING | RECOVERY |
|---|---|---|---|---|---|---|---|
| | | | | 0-3" Asphalt | | | |
| 5 | | 5<br>5<br>6 | ML | 3"-9' Backfill. Sandy Silt, brown, dry. | 1400 | 0 | |
| 10 | | 3<br>4<br>5 | GP | 9-13' Backfill. Gravely sand. | 1402 | 0 | |
| 15 | | 4<br>5<br>5 | SW | 13-15.5' Backfill, Sand, grey-brown, medium to coarse grain size, poorly sorted, loose, minor silt. | 1405 | NR | |
| 20 | | 44<br>39<br>50 | SW | 19-23' Backfill, sand, grey-brown, same as above. | 1410 | 0 | |
| 25 | | 24<br>32<br>36 | SW | 23-25.5' Sand, grey, coarse grain size, poorly sorted, loose, dry. | 1415 | 0 | |
| 30 | | 24<br>35<br>50 | SW | 29-30.5' Same as above. | 1420 | 0 | |

TANK PROTECT ENG.
1963 N. Main St., Orange, CA 92665

PROJECT # 220

# BORING LOG

SITE LOCATION: Kirkhill, Inc.
12021 Woodruff Ave., Downey

| Logged By | Date Drilled | Drill Rig | Boring Diameter | Boring Number |
|---|---|---|---|---|
| A. Lizzi | 02/25/91 | CME 75 | HSA 8" O.D. | CB-1 (CB-10) |

Descriptions on this boring log apply only at the specific boring location and at the time the boring was made. The descriptions on this log are not warranted to be representative of subsurface conditions at other locations or times.

Boring Elevation:

140# 30" drop

| DEPTH, FT | SAMPLES | BLOWS/FOOT | LITHOLOGY | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | PID (PPM) READING | FID (PPM) READING | RECOVERY |
|---|---|---|---|---|---|---|---|
| 35 | | 27<br>45<br>50 | SW | 34-35.5' Same as above | 1425 | 0 | |

Notes: TD 35.5 feet.
Boring immediately backfilled with hydrated bentonite from TD to surface grade.
NR = No Recovery.

REGISTERED PROFESSIONAL ENGINEER
C.K. TAUR
No. 43050
Exp. 3-31-92
CIVIL
STATE OF CALIFORNIA

**ATTACHMENT B**

**CHAIN OF CUSTODY RECORD FORMS**

AMERICAN ENVIRONMENTAL LABORATORIES
1963 North Main Street
Orange, California 92655
714/921-0888 213/592-4771
FAX: 714/921-1832

(582

# CHAIN OF CUSTODY RECORD

SITE

CONTACT PERSON/~~PROJECT~~ NAME: Tony - L1221

~~CLIENT~~'S NAME AND ADDRESS: KIRKHILL, INC. Job# 220
12021 Woodruff Ave. Downey, CA

SAMPLERS (SIGNATURE): Tony Lizzi

| LAB NUMBER | FIELD NUMBER | DATE | TIME (HRS) | TYPE OF SAMPLING | DESCRIPTION | NUMBER OF CONTAINERS | ANALYSES REQUIRED: TPH EPA Method 8015, diesel | ANALYSES REQUIRED: TPH EPA Method 418.1 | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| AC-798-S | CB-7@ 5-5.5' | 2-25-91 | 0845 | HSA Split Spoon | Soil, brass rings | 1 | X | | Test all samples |
| AC-799-S | CB-7@ 10-10.5' | | 0900 | | | 1 | X | | according to |
| AC-800-S | CB-7@ 15-15.5' | | 0910 | | | 1 | X | | LACDPW's detect. |
| AC-801-S | CB-7@ 20-20.5' | | 0915 | | | 1 | X | | limits guideline |
| AC-802-S | CB-7@ 25-25.5' | | 0920 | | | 1 | X | | |
| AC-803-S | CB-7@ 30-30.5' | | 0925 | | | 1 | X | | |
| AC-804-S | CB-8@ 5-5.5' | | 1010 | | | 1 | X | | |
| AC-805-S | CB-8@ 10-10.5' | | 1015 | | | 1 | X | | |
| AC-806-S | CB-8@ 15-15.5' | | 1025 | | | 1 | X | | |
| AC-807-S | CB-8@ 20-20.5' | | 1030 | | | 1 | X | | |
| AC-808-S | CB-8@ 25-25.5' | | 1035 | | | 1 | X | | |
| AC-809-S | CB-8@ 30-30.5' | | 1045 | | | 1 | X | | |
| AC-810-S | CB-9@ 5-5.5' | | 1240 | | | 1 | | X | Subtotal: 15 Samp |
| AC-811-S | CB-9@ 10-10.5' | | 1245 | | | 1 | | X | |
| AC-812-S | CB-9@ 15-15.5' | | 1250 | | | 1 | | X | |

| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
|---|---|---|---|
| Tony Lizzi | 2-26-91 | 3:00 pm | |
| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |

| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
|---|---|---|---|
| | | | |
| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |

SAMPLE(S) CONDITION (PLEASE CHECK) ☐ CHILLED ☐ SEALED

CONTAINER IN GOOD CONDITION? YES

AMERICAN ENVIRONMENTAL LABORATORIES
1963 North Main Street
Orange, California 92655
714/921-0888 213/592-4771
FAX: 714/921-1832

C82

# CHAIN OF CUSTODY RECORD

CONTACT PERSON/~~PROJECT~~ NAME: TONY LIZZI

~~CLIENT~~'S NAME AND ADDRESS: SITE — KIRKHILL, INC. Job # 220, 12021 Woodruff Ave, Downey, CA

SAMPLERS (SIGNATURE): Tony Lizzi

| LAB NUMBER | FIELD NUMBER | DATE | TIME (HRS) | TYPE OF SAMPLING | DESCRIPTION | NUMBER OF CONTAINERS | ANALYSES REQUIRED: TPH, EPA Method #18.1 | REMARKS |
|---|---|---|---|---|---|---|---|---|
| AC-813-S | CB-9@ 20-20.5' | 2-25-91 | 1300 | HSA Split-spoon | SOIL, brass ring | 1 | X | Test all sample |
| AC-814-S | CB-9@ 25-25.5' | | 1305 | | | 1 | X | according to LACDP |
| AC-815-S | CB-9@ 30-30.5' | | 1310 | | | 1 | X | detection limit gu |
| AC-816-S | CB-9@ 35-35.5' | | 1320 | | | 1 | X | lines |
| AC-817-S | CB-10@ 5-5.5' | | 1400 | | | 1 | X | |
| AC-818-S | CB-10@ 10-10.5' | | 1402 | | | 1 | X | |
| AC-819-S | CB-10@ 15-15.5' | | 1405 | | | 1 | X | |
| AC-820-S | CB-10@ 20-20.5' | | 1410 | | | 1 | X | |
| AC-821-S | CB-10@ 25-25.5' | | 1415 | | | 1 | X | |
| AC-822-S | CB-10@ 30-30.5' | | 1420 | | | 1 | X | |
| AC-823-S | CB-10@ 35-35.5' | ↓ | 1425 | ↓ | ↓ | 1 | X | |
| | | | | | | | | Total: 26 Samples |

| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
|---|---|---|---|
| Tony Lizzi | 2-26-91 | 3:00 pm | |
| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |

| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
|---|---|---|---|
| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |

SAMPLE(S) CONDITION (PLEASE CHECK): ☑ CHILLED ☐ ~~SEALED~~

CONTAINER IN GOOD CONDITION? YES

# ATTACHMENT C

# LABORATORY REPORTS

"ENVIRONMENTAL TESTING"

**CA DOHS Certification #1224**

March 12, 1991

**Clients P.O.#:** 40568

**Clients Job#:** 220

**Client:**
Tank Protect Engineering
1963 N. Main St.
Orange, CA 92655

**Project:**
Kirkhill, Inc.
12021 Woodruff Ave.
Downey, CA

**Sample:** Soil

**Date sampled:** 02/25/91
**Date submitted:** 02/26/91
**Date anaylzed:** 03/11/91

**EPA Method 418.1 - Total Recovearble Petroleum Hydrocarbon (mg/kg)**

| Lab # | Field # | Conc. (mg/kg) | Dectection Limit (mg/kg) |
|---|---|---|---|
| AC-810-S | CB-9 @ 5-5.5 | ND | 1 |
| AC-811-S | CB-9 @ 10-10.5 | ND | 1 |
| AC-812-S | CB-9 @ 15-15.5 | 745 | 1 |
| AC-813-S | CB-9 @ 20-20.5 | ND | 1 |
| AC-814-S | CB-9 @ 25-25.5 | 303 | 1 |
| AC-815-S | CB-9 @ 30-30.5 | ND | 1 |
| AC-816-S | CB-9 @ 35-35.5 | 800 | 1 |
| AC-817-S | CB-10 @ 5-5.5 | 781 | 1 |
| AC-818-S | CB-10 @ 10-10.5 | 25 | 1 |
| AC-819-S | CB-10 @ 15-15.5 | 852 | 1 |
| AC-820-S | CB-10 @ 20-20.5 | ND | 1 |
| AC-821-S | CB-10 @ 25-25.5 | ND | 1 |
| AC-822-S | CB-10 @ 30-30.5 | ND | 1 |
| AC-823-S | CB-10 @ 35-35.5 | ND | 1 |

**AMERICAN ENVIRONMENTAL LABORATORIES**

Emdadul H. Khan
Laboratory Supervisor

EHK:dcr/A91-1304

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714/282-5640
800/464-AEL1
FAX: 714/282-5644

"ENVIRONMENTAL TESTING"

CA DOHS Certification #1224

March 12, 1991

**Client P.O.#** 40568

**Client Job#** 220

**Client:**
Tank Protect Eng.
1963 N. Main St.
Orange, CA 92665

**Project:**
Kirkhill, Inc.
12021 Woodruff Avenue
Downey, CA

**Sample:** Soil

**Date sampled:** 02/25/91
**Date submitted:** 02/26/91
**Date analyzed:** 02/27/91

**Method of Extraction:** Sample was extracted using Methylene Chloride
**Method of Analysis:** EPA Method 8015 - Total Petroleum Hydrocarbons - Diesel

| LAB# | FIELD# | CONC. (mg/kg) | DETECTION LIMIT (mg/kg) |
|---|---|---|---|
| AC-798-S | CB-7 @ 5-5.5 | ND | 1 |
| AC-799-S | CB-7 @ 10-10.5 | ND | 1 |
| AC-800-S | CB-7 @ 15-15.5 | ND | 1 |
| AC-801-S | CB-7 @ 20-20.5 | ND | 1 |
| AC-802-S | CB-7 @ 25-25.5 | ND | 1 |
| AC-803-S | CB-7 @ 30-30.5 | ND | 1 |
| AC-804-S | CB-8 @ 5-5.5 | ND | 1 |
| AC-805-S | CB-8 @ 10-10.5 | ND | 1 |
| AC-806-S | CB-8 @ 15-15.5 | ND | 1 |
| AC-807-S | CB-8 @ 20-20.5 | ND | 1 |
| AC-808-S | CB-8 @ 25-25.5 | ND | 1 |
| AC-809-S | CB-8 @ 30-30.5 | ND | 1 |

**AMERICAN ENVIRONMENTAL LABORATORIES**

Emdadul H. Khan
Laboratory Supervisor

EHK:dcr\A91-1303

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**TABLE 2-1**

Table 2-1
Leaching Potential Analysis for Gasoline and Diesel
Using Total Petroleum Hydrocarbons(TPH)
and Benzene, Toluene, Xylene and Ethylbenzene (BTX&E)

The following table was designed to permit estimating the concentrations of TPH and BTX&E that can be left in place without threatening ground water. Three levels of TPH and BTX&E concentrations were derived (from modeling) for sites which fall into categories of low, medium or high leaching potential. To use the table, find the appropriate description for each of the features. Score each feature using the weighting system shown at the top of each column. Sum the points for each column and total them. Match the total points to the allowable BTX&E and TPH levels.

| SITE FEATURE | SCORE | SCORE 10 PTS IF CONDITION IS MET | SCORE | SCORE 9 PTS IF CONDITION IS MET | SCORE | SCORE 5 PTS IF CONDITION IS MET |
|---|---|---|---|---|---|---|
| Minimum Depth to Ground Water from the Soil Sample (feet) | | >100 | 9 | 51-100 | | 25-50\1 |
| Fractures in subsurface (applies to foothills or mountain areas) | 10 | None | | Unknown | | Present |
| Average Annual Precipitation (inches) | | <10 | 9 | 10-25 | | 26-40\2 |
| Man-made conduits which increase vertical migration of leachate | 10 | None | | Unknown | | Present |
| Unique site features: recharge area, coarse soil, nearby wells, etc | 10 | None | | At least one | | More than one |
| COLUMN TOTALS→TOTAL PTS | 30 | + | 18 | + | 0 | = 48 |
| RANGE OF TOTAL POINTS | 49pts or more | | 41 - 48 pts | | 40pts or less | |
| MAXIMUM ALLOWABLE B/T/X/E LEVELS (PPM) | 1/50/50/50 | | .3/.3/1/1 | | NA\3 | |
| MAXIMUM ALLOWABLE TPH LEVELS (PPM) GASOLINE | 1000 | | 100 | | 10 | |
| MAXIMUM ALLOWABLE TPH LEVELS (PPM) DIESEL | 10000 | | 1000 | | 100 | |

\1 If depth is greater than 5 ft. and less than 25 ft., score 0 points.
If depth is 5 ft. or less, this table should not be used.

\2 If precipitation is over 40 inches, score 0 points.

\3 Levels for BTX&E are not applicable at a TPH concentration of 10ppm (gasoline) or 100ppm (diesel) (For explanation see step 6, page 27.)

Tank Protect Engineering

"ENVIRONMENTAL CONSULTING & ENGINEERING SERVICES"

October 30, 1991

File No. 91106
Project No. 220

RECEIVED
NOV 04 1991
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION

Los Angeles County
Department of Public Works
Waste Management Division
UST Pilot Program - Annex Building
P.O. Box 1460
Alhambra, California 91802-1460

Attention: Mr. Scott Small

References:
(a) Tank Closure and Site Remediation Report, dated June 5, 1990

(b) Addendum to Tank Closure and Site Remediation Report, dated August 30, 1990

(c) Addendum to Remedial Action Report, dated October 19, 1990

(d) Site Assessment for Confirmation Borings Report, dated April 15, 1991

**SUBJECT: ADDITIONAL SITE ASSESSMENT FOR KIRKHILL, INC., 12021 WOODRUFF AVENUE DOWNEY, CALIFORNIA 90241 (FILE NO. I-12987-1F)**

Dear Mr. Small:

Tank Protect Engineering ("TPE") is pleased to submit this report on additional site assessment activities pursuant to a request from Los Angeles County, Department of Public Works, Waste Management Division ("LACDPW"), in order to define the extent of the contamination in the immediate vicinity of the removed 10,000 gallon underground naphthalene oil storage tank (UST) at the subject site (see Figures 1 and 2).

## BACKGROUND

On August 24, 1989, one (1) 10,000 gallon naphthalenic type processing oil UST (henceforth referred to as UST No. 1); and two (2) 10,000 diesel fuel USTs (henceforth referred to as USTs No. 2 and No. 3, respectively) were removed from the subject site.

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Orange, CA 92667
714/282-5635
800/464-TANK
FAX: 714/282-5644

• 1963 N. Main St.
Orange, CA 92665

• 3050 Fite Circle
Suite 108
Sacramento, CA 95827

Engr. Contr. Lic.#
489994

In or about October 1989, a 7,500 gallon diesel fuel UST located near the building, in an alley at the site was abandoned-in-place (henceforth referred to as UST No. 4); please refer to Figures 2 and 3.

Initial soil testing results indicated that contamination was present beneath the east end of the excavation which contained UST No. 1 and the west end of the excavation which contained UST No. 2. The testing results of the soil samples obtained beneath the former location of UST No. 3 indicated TPH concentrations less than 100 parts per million ("ppm"). UST No. 4 was abandoned in-place (please refer to TPEs closure and site remediation report dated February 26, 1990 for details).

In September 1989, a site assessment was conducted in the previous USTs No. 1 and No. 2 locations, and in the area of the abandoned-in-place UST No. 4 to investigate the extent of the soil contamination. No additional field work was required in the previous UST No. 3 location. Six borings were drilled (B-1 through B-6) and sampled to depths of approximately between 25 to 40 feet below grade. The soil testing results indicated that only the soil samples obtained from borings B-3, drilled to about 20 feet below grade, in the previous location of UST No. 2, and boring B-6 drilled immediately adjacent to the abandoned diesel fuel UST at about 20 feet below grade contained TPH concentrations greater than 100 ppm. No detectable TPH concentrations were present in the soil samples obtained at depths greater than 20 feet from boring B-6 drilled adjacent abandoned-in-place UST. Additional excavation work was completed beneath the former UST No. 2 location.

On October 31, 1989, verification soil samples were obtained from the bottom of the excavation which contained UST No. 2, and testing results indicated that no detectable TPH concentrations were present.

The naphthalenic type oil contaminated soil removed from the excavation which contained UST No. 1 were transported off-site to a disposal facility. Approximately 73 tons of soil was hauled off. The remaining contaminated soil was treated on-site using TPEs transportable treatment unit. The soil was mixed using hydrogen peroxide with silica catalyst. On November 22, 1989, following the treatment process, five soil samples were obtained from the stockpiled soil for verification of treatment process. The testing results indicated that the TPH concentrations were less than 100 ppm.

The excavations which contained the previous USTs were then backfilled with the treated soil and some imported material, and then compacted using standard procedures (please reference TPEEs UST Closure and Site Remediation Report dated June 5, 1990, and Addendum to Remedial Action Report dated October 19, 1990 for details).

Mr. S. Small
LACDPW
October 30, 1991

On February 25, 1991, two test borings CB-9 and CB-10 were drilled to depths of approximately 35 feet below grade within the excavation which previously contained a 10,000 gallon oil UST (UST No. 1).

Analytical results of soil samples from boring CB-9 indicated that detectable TRPH concentration were present in samples collected at approximately 15, 25, and 35 feet below grade with concentrations of 745, 303, and 800 ppm, respectively.

Based on the soil testing results from boring CB-10, only the samples obtained at 5, 10, and 15 feet below grade contained TRPH concentrations of 781, 25, and 852 ppm, respectively. No detectable TRPH concentrations were present in the remaining soil samples obtained from borings CB-9 and CB-10.

Based on the above results, LACDPW requested additional investigation be conducted in the area of the removed UST No. 1 to define the extent of the contamination.

## OBJECTIVE

The purpose of this site assessment was to investigate the area in and around the backfilled excavation pit area which previously contained UST No. 1 in order to define the extent of the TRPH contamination.

## FIELD WORK

### Drilling and Sampling:

On August 15, 1991, five test borings were drilled (CB-11 through CB-14, and CB-9A). All test borings were drilled in and around the area which formerly contained the 10,000 gallon UST. The borings were drilled to depths of approximately 50 feet below grade (see Figure 3). All borings were drilled using a truck-mounted CME-75 drill rig equipped with eight-inch diameter continuous flight hollow stem augers, under the supervision of TPE geologists. All borings were logged in accordance with the Unified Soil Classification System (see Attachment A).

TPEs Site Health and Safety Plan was implemented prior to and during all field work activities.

Soil samples from all borings (CB-11 through CB-14), except boring CB-9A, were obtained at approximately 5 feet below grade and at

every 5 foot interval thereafter until termination depth. Samples from boring CB-9A were collected at every 5 feet commencing at 30 feet below ground surface until termination depth. The samples were collected using six 2-inch diameter by 3-inch long brass tubes mounted within a Californian split-spoon sampler used in advance of the augers. Prior to sampling, the sampler and all brass tubes were washed in an aqueous solution of Alconox detergent, rinsed with tap water, and then rinsed with distilled water. After sample recovery, the lowermost brass ring from each sample interval was immediately end-wrapped with aluminum foil, polyethylene caps taped over the ends, labeled, placed into an ice chest chilled using frozen blue ice, and transported by a TPE vehicle to State certified laboratories for analyses. The soil samples obtained from all borings were delivered to American Environmental Laboratories ("AEL") and to Chemtek, Inc. located in located in Orange and Santa Fe Springs, California, respectively. All samples were logged on and accompanied by chain-of-custody record forms (see Attachment B).

The drilling activities of boring CB-9A were witnessed by Mr. Dave Lobato with LACDPW.

A Baccharach Sniffer Model No. 503A was used on the soil samples contained within the sampler at each sampling interval to monitor the volatile organic compounds ("VOCs"). Each sample was placed in an airtight "Ziploc" plastic bag. The samples were allowed to sit in the sun, and then the head space was monitored using the FID. No VOC readings were detected in any of the soil samples monitored (see Attachment A). Further, no soil contamination in any of the soil samples collected from borings was present based on visual evidence, instrument monitoring, and lack of discoloration. A very dark grey organic soil type was encountered in all borings at about 35 to 45 feet below grade (see Attachment A for boring log descriptions).

In all cases, the sampling equipment was decontaminated prior to each sampling interval. Auger flights were steam cleaned prior to drilling of each boring. The water effluent was stored in 55-gallon drums. A water sample (W-1) was collected from the drums for TPH and BTXE testing. The sample was sealed in two 40 ml VOA vials. No detectable TPH or BTXE concentrations were present in the water sample (see Attachment C for laboratory reports).

The drill cuttings generated during drilling all borings were placed and sealed in DOT approved 55-gallon drums and left on-site pending analytical results for appropriate disposal.

All borings were backfilled from total depth to surface grade using

hydrated bentonite and then patched with asphalt.

**Site Geology:**

The subsurface conditions encountered in the soil borings is presented in Attachment A. The following is a summary of the soil types encountered.

In all borings the soil was covered by a 3-inch layer of asphalt.

Within borings CB-9A the initial soil encountered consisted of backfill material. The backfill material in this boring existed until depths of approximately 23 feet below ground surface ("bgs"). This fill material consisted of a brown, dry sandy silt with minor sand.

In the remaining borings the native soil horizon encountered consisted of a brown to grey-brown, dry, micaceous-bearing sandy silt/silt and clayey silt to a depth of approximately 18 feet bgs.

The next soil horizon encountered in all borings, at approximately 18 feet below grade consisted of a brown to grey, medium grain size, moderately sorted, loose, dry sands. These sandy horizons were present until about 28 feet bgs.

At approximately 28 feet bgs, the soil horizon consisted of a light to medium grey, medium to coarse grain size, poorly sorted, loose, dry sand.

At approximately between 35 to 39 feet bgs the next soil type encountered was a grey to dark grey, compact, micaceous-bearing, cohesive, moderate to highly plastic, dry to slightly moist clayey silt and/or silty clay. These soil horizons were present to a depth of approximately 47 feet bgs and possessed a dark appearance consisting of organic matter.

At about 47 feet bgs to termination depth of about 50 feet bgs, the soil consisted of grey, coarse grain size, poorly sorted, loose, slightly moist, sand with some pebbles present.

**Site Hydrogeology:**

No groundwater was encountered during drilling activities at the site. According to LACDPW - Ground Water Records (Dora Herrera, personal communication, September 1991), the nearest well in the vicinity of the subject site is well #1587Y, located approximately 0.20 miles east of the site at an elevation of approximately 107 feet above mean sea level (MSL). The depth to groundwater based on

measurement obtained on April 30, 1991, was approximately 103.3 feet below grade. The site elevation is at approximately 105 feet above MSL based on U.S.G.S. topographic map, Los Angeles Quadrangle. Based on interpretation and extrapolation of the well data at the subject site from the above referenced data, the groundwater depth may be encountered at approximately 95 feet below grade. The upper portion of the Gaspur water-bearing zone at the subject site is at approximately 60 feet below grade. This does not necessarily imply that the upper portion of this aquifer is saturated. Thus, the information obtained from well #1587Y will be used as the ground water depth for the site.

## ANALYTICAL RESULTS

The soil samples obtained from all borings were delivered to AEL and Chemtek, Inc. for analyses, both California DOHS certified laboratories (Certification Nos. 1580 and 1435, respectively). All samples were accompanied by proper chain of custody record forms (see Attachment B).

The soil samples obtained from all borings were analyzed for TRPH using EPA Method 418.1. The results of the testing are shown in Table 1. The laboratory reports are contained in Attachment C.

**TABLE 1**

**CONCENTRATIONS OF TRPH IN SOIL SAMPLES OBTAINED ON AUGUST 15, 1991**

Parts per Million (ppm)

| Sample I.D. # | TRPH |
|---|---|
| CB-9A/30' | 28 |
| CB-9A/35' | ND* |
| CB-9A/40' | ND |
| CB-9A/45' | ND |
| CB-9A/50' | ND |
| CB-11/ 5' | 252 |
| CB-11/10' | 183 |
| CB-11/15' | ND* |
| CB-11/20' | 315 |

**TABLE 1 (Cont'd)**

**CONCENTRATIONS OF TRPH IN SOIL SAMPLES OBTAINED ON AUGUST 15, 1991**

| Sample I.D. # | TRPH (ppm) |
|---|---|
| CB-11/25' | ND |
| CB-11/30' | ND |
| CB-11/35' | 12.1 |
| CB-11/40' | ND |
| CB-11/45' | ND |
| CB-11/50' | ND |
| CB-12/ 5' | 11.1 |
| CB-12/10' | 138 |
| CB-12/15' | ND |
| CB-12/20' | ND |
| CB-12/25' | ND |
| CB-12/30' | ND |
| CB-12/35' | ND |
| CB-12/40' | ND |
| CB-12/45' | ND |
| CB-12/50' | ND |
| CB-13/ 5' | ND |
| CB-13/10' | ND |
| CB-13/15' | 29 |
| CB-13/20' | ND |
| CB-13/25' | ND |
| CB-13/30' | ND |
| CB-13/35' | ND |
| CB-13/40' | ND |
| CB-13/45' | 92 |
| CB-13/50' | ND |
| CB-14/ 5' | ND* |
| CB-14/10' | ND |
| CB-14/15' | ND |
| CB-14/20' | 85 |
| CB-14/25' | ND |
| CB-14/30' | ND |
| CB-14/35' | ND |
| CB-14/40' | 72 |
| CB-14/45' | 76 |
| CB-14/50' | ND |

*ND = Not Detected; see Attachment C for detection limits

## DISCUSSION

Based on the analytical results of soil samples collected from the tank removal on September 26, 1989 and from the test borings conducted on February 25, and August 15, 1991, the TRPH concentrations discovered around the previous naphthalene type oil tank are summarized as follows:

**TABLE 2**

**SUMMARY OF TRPH CONCENTRATIONS DISCOVERED AROUND THE EXCAVATION PIT AREA OF UST NO. 1**

Parts per Million (ppm)

| Sampling Depth | UST Removed on 09-26-89 | Borings Drilled on 02-15-91 CB-9 | CB-10 | 08-15-91 CB-9A | CB-11 | CB-12 | CB-13 | CB-14 |
|---|---|---|---|---|---|---|---|---|
| 5′ | | ND* | 781 | | 252 | 11.1 | ND | ND |
| 10′ | | ND | 25 | | 183 | 138 | ND | ND |
| 15′ | 10 | 745 | 852 | | ND | ND | 29 | ND |
| 20′ | | ND | ND | | 315 | ND | ND | 85 |
| 25′ | | 303 | ND | | ND | ND | ND | ND |
| 30′ | | ND | ND | 28 | ND | ND | ND | ND |
| 35′ | | 800 | ND | ND | 12.1 | ND | ND | ND |
| 40′ | | | | ND | ND | ND | ND | 72 |
| 45′ | | | | ND | ND | ND | ND | 76 |
| 50′ | | | | ND | ND | ND | ND | ND |

* ND = Not Detected.

The location of each boring is shown in Figure 3. The boring CB-9A was drilled immediately next to the boring CB-9 to verify the contamination (800 ppm TRPH) discovered at the completion depth of about 35 bgs in boring CB-9. Based on the analytical results of soil samples collected from the boring CB-9A (all less than 100 ppm), it seems that the 800 ppm TRPH concentration discovered in boring CB-9 may belong to an independent contamination pocket (i.e., localized).

Also, according to the tank closure report, it is indicated that the excavation was completed at 25 feet below ground surface in the previous tank pit. It is obvious that the concentration of 800 ppm TRPH has not originated from the backfill soil.

Mr. S. Small
LACDPW
October 30, 1991

The site assessment has adequately defined the possible contamination left on the job site after the UST removal. The soil contamination may have resulted from the leakage of the previous naphthalene oil UST No. 1. The major components in the naphthalene type oil consists promarily of naphthenic and paraffinic petroleum hydrocarbons, according to the MSDS data sheet included in the tank closure report.

Based on the LACDPW, USTLOP guidelines for report submitted issued in March 1991, the maximum acceptable level of contamination in soil or groundwater is determined on a site by site basis. According to the Table 2-1 of LUFT manual (October, 1989), given the conditions that presently exist at the site, i.e.,

Sampling depth to groundwater - 45 feet;
No fractures in subsurface;
No man-made conduits; and
No unique site feature.

The total score for the subject site obtained from Table 2-1 is 44 points, which indicates that the TPH concentrations (for diesel) which may be left in place at the site is 1,000 ppm (see Attached Table). However, the Table 2-1 was developed for the diesel and gasoline fuel contamination. Since the naphthenic and paraffinic petroleum hydrocarbons (naphthalene oil) are heavier hydrocarbon compounds and, are less mobile and volatile than diesel, the Table 2-1 could be applicable to the leaching potential analysis for naphthalene type oil contamination. Also, it should be noted that all soil samples were analyzed for TRPH by EPA Method 418.1 which detects all hydrocarbon compounds containing carbon chain higher than C12.

The area which previously contained the UST No. 1 is protected against leaching since the area is paved with asphalt and used as a parking lot. In consideration of the four potential exposure pathways, namely: eye contact, skin absorption, inhalation and ingestion, the probability of the abovementioned routes of exposure for the contaminated soil is minimal to humans and/or animals.

## CONCLUSIONS

Based on above discussion and the information contained herein the following are concluded:

- Based on Table 2-1 in LUFT manual, the maximum allowable level of TPH concentration that could be left in place is 1,000 ppm;

- The analytical results of all soil samples indicate that the TRPH concentrations are less than 1,000 ppm;

- Ground water has not been encountered during drilling and sampling activities. The groundwater depth is approximately 95 feet below ground at the site (45 feet from sampling depth); and

- The site assessment has completely defined the contamination left after the UST removal. Based on the naphthalene oil characters and site situations, it is TPE's opinion that the contamination present may not pose a threat to groundwater and additional actions may not be warranted at this time.

TPE suggests that a meeting be scheduled at your facility with yourself, Mr. Dave Lobato and TPE personnel to discuss the site closure.

## LIMITATIONS

The findings and conclusions presented in this report were based solely upon the scope of work described above, upon our interpretation of the information described above, and are intended to address closure of the areas which contained UST No. 1 and No. 2, and the area which contains an abandoned-in-place UST No. 4 in accordance with the regulatory requirements.

This report should be used solely for its intended purpose and within the limitations of our scope of work. Prior to use for other than its intended purpose or beyond the limitations described herein, sufficient and thorough studies should be performed to confirm the findings presented in this report.

Changes in conditions at a property can occur with the passage of time whether they be due to acts of man or natural causes. In addition, the broadening of knowledge or legislative or regulatory actions relative to hazardous materials could result in varying standards concerning the presence of hazardous materials at the site.

Mr. S. Small
LACDPW
October 30, 1991

If there are any questions or need additional information please call the undersigned at 714/282-5639.

Respectfully submitted,

**TANK PROTECT ENGINEERING**

Prepared By:

Anthony Lizzi
Project Manager/Geologist

Reviewed By:

C.K. Taur, Ph.D., P.E.
CA R.C.E. No. 43050

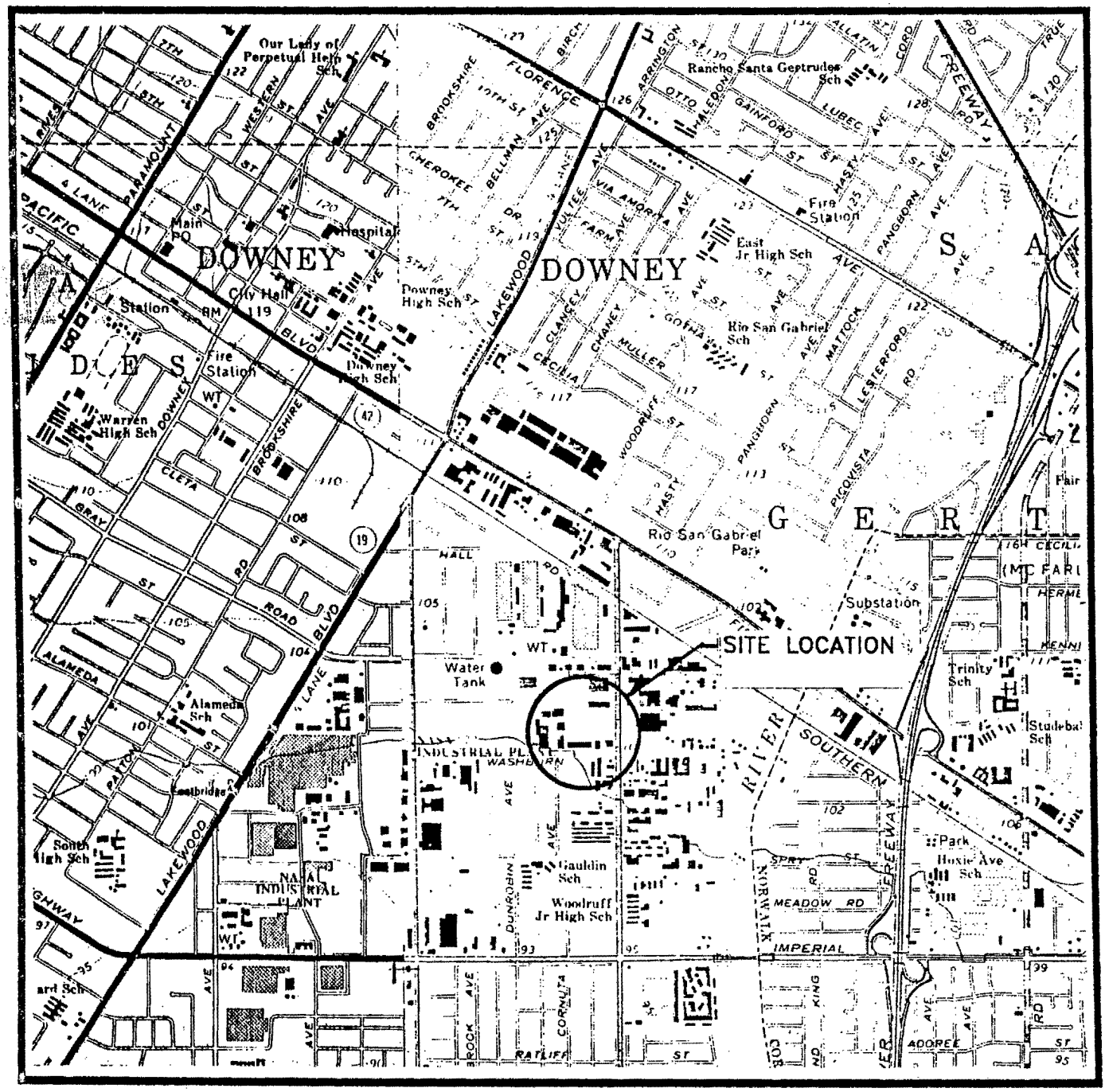
REGISTERED PROFESSIONAL ENGINEER
C.K. TAUR
No. 43050
Exp. 3-31-92
CIVIL
STATE OF CALIFORNIA

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enclosures: Figures 1 through 3
Attachment A - Boring Logs
Attachment B - Chain of Custody Record Forms
Attachment C - Laboratory Reports
Table 2-1

Distribution: (3) Addressee
(1) Ray Bellanger, Kirkhill, Inc.,
(1) File

# FIGURES

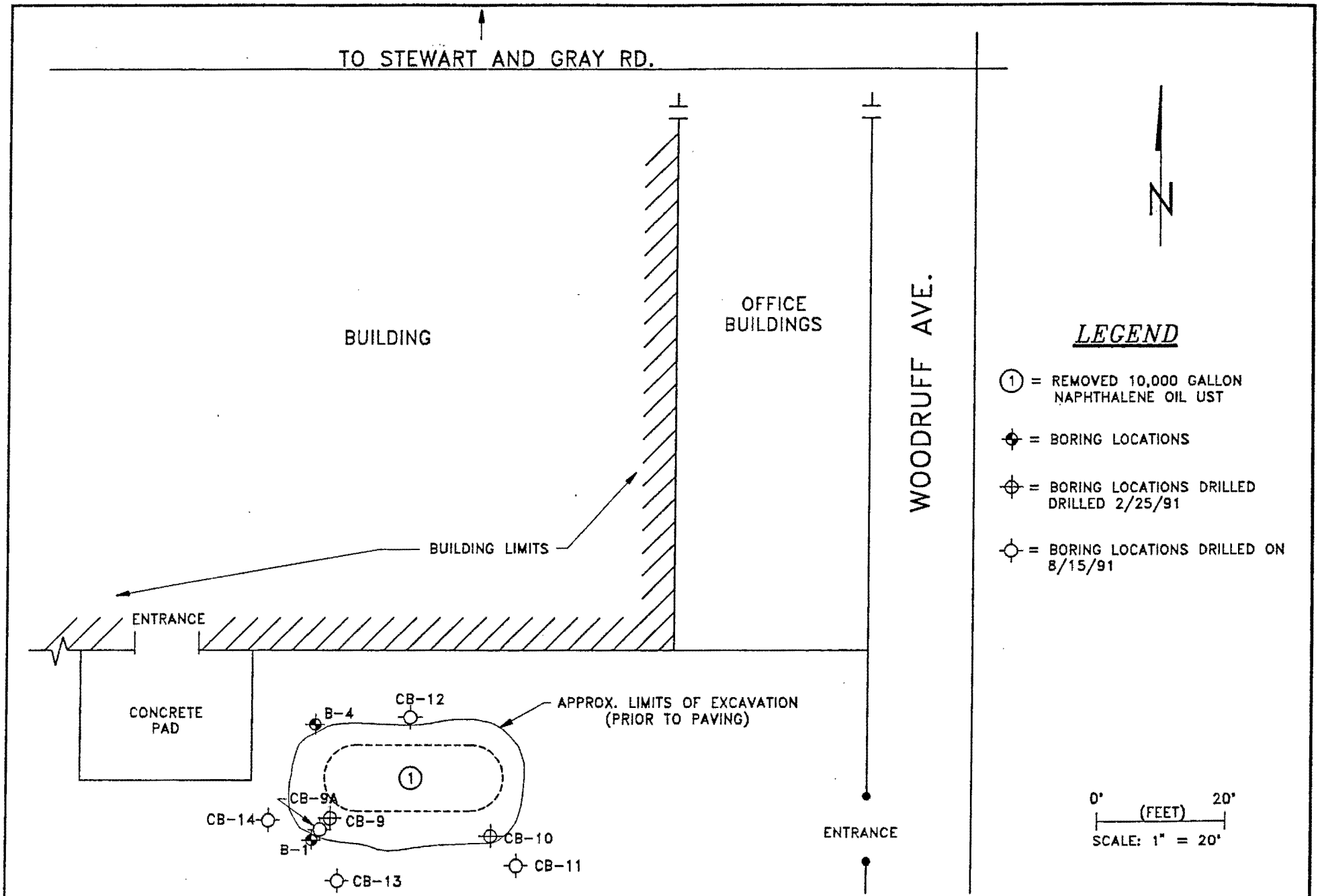



SOURCE: U.S.G.S. TOPOGRAPHIC MAPS: WHITTIER, CA., SOUTH GATE, CA. (PHOTOREVISED-1981)

N

# SITE VICINITY MAP

| | | | | |
|---|---|---|---|---|
| TPE ENVIRONMENTAL GROUP<br>1071 N. BATAVIA<br>ORANGE, CA. 92665 | SITE ADDRESS: KIRKHILL, INC.<br>12021 WOODRUFF AVE.<br>DOWNEY, CA. | | | |
| DATE:<br>09/91 | JOB NO.<br>220 | DRAWN BY:<br>P. LEWIS | APPROVED BY:<br>T. LIZZI | FIGURE NO.<br>1 |




TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

ADDRESS:
KIRKHILL, INC.
12021 WOODRUFF AVENUE
DOWNEY, CA. 90241

SITE LOCATION MAP

| | |
|---|---|
| DRAWN: | P. LEWIS |
| APPROVED: | T. LIZZI |
| DATE: 06-91 | JOB #/FILE: 220/KRKHILL2 |
| SCALE: AS NOTED | FIGURE: 3 |

**ATTACHMENT A**

BORING LOGS

# —BORING LOG—



| PROJECT NO.: 220 | PROJECT NAME: KIRKHILL, INC. | SITE LOCATION: 12021 WOODRUFF AVE. DOWNEY, CA. | |
|---|---|---|---|
| LOGGED BY: A. LIZZI | DRILL CO.: WEST HAZMAT DRILLING CORP. | DRILLER: BOB NIX | DRILL RIG: CME 75 | BORING NO.: CB-9A |
| DATE DRILLED: 8/15/91 | BORING ELEV. | REF./DATUM: GROUND SURFACE | BORING DIAMETER: 8" O.D. | DRIVE WEIGHT: 140# 30" DROP |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES.

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION: LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | | | 0–3" ASPHALT PAVEMENT | |
| | | | | | 3"–23' SANDY SILT/SILT. BROWN. MINOR SAND. DRY. | |
| 5 | | — | NS | | | NMR |
| 10 | | — | NS | ML | | NMR |
| 15 | | — | NS | | | NMR |
| 20 | | — | NS | | | NMR |
| | | | | | 23–34' SAND. GREY. MEDIUM GRAIN SIZE, POORLY SORTED, LOOSE, DRY. | |
| 25 | | — | NS | | | NMR |
| 30 | | 17<br>28<br>42 | 1425 | SW | | 0 |
| 35 | | 48<br>62 | 1430 | | 34–39' SAND. GREY. MOTTLED TO ORANGE–BROWN. MEDIUM GRAIN SIZE, MODERATELY SORTED, LOOSE, DRY. | 0 |
| 40 | | 20<br>23<br>27 | 1435 | | | 0 |
| | | | | ML | 39–47' CLAYEY SILT. DARK GREY. SUBCOMPACT, MICACEOUS, DRY. | |
| 45 | | 29<br>52 | 1440 | | | 0 |
| | | | | SW | | |

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNATURE: A. Lizzi

\KRKLOG5A

# —BORING LOG—



| PROJECT NO.: 220 | PROJECT NAME: KIRKHILL, INC. | SITE LOCATION: 12021 WOODRUFF AVE. DOWNEY, CA. | |
|---|---|---|---|
| LOGGED BY: A. LIZZI | DRILL CO.: WEST HAZMAT DRILLING CORP. | DRILLER: BOB NIX | DRILL RIG: CME 75 | BORING NO.: CB-9A |
| DATE DRILLED: 8/15/91 | BORING ELEV. | REF./DATUM: GROUND SURFACE | BORING DIAMETER: 8" O.D. | DRIVE WEIGHT: 140# 30" DROP |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES.

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION: LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 45 | | | | | | |
| | | | | SW | 47–50.5' SAND. GREY, COARSE GRAIN SIZE. POORLY SORTED, SLIGHTLY MOIST. PEBBLES PRESENT. LOOSE. | |
| 50 | | 81/6" | 1445 | TD | | 0 |

NOTES:

TD = 49'; DROVE SAMPLER UNTIL 50.5'

BORING IMMEDIATELY BACKFILLED WITH HYDRATED BENTONITE CHIPS FROM TOTAL DEPTH TO SURFACE GRADE

NO GROUNDWATER ENCOUNTERED DURING DRILLING OF BORING

NS = NOT SAMPLED

NMR = NO MEASUREMENT RECORDED

REGISTERED PROFESSIONAL ENGINEER C. K. TAN No. [illegible] Exp. [illegible] STATE OF CALIFORNIA

C. K. Tan

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNATURE: A. Lizzi

\KRKLOG5B

# —BORING LOG—



| PROJECT NO.: 220 | PROJECT NAME: KIRKHILL, INC. | SITE LOCATION: 12021 WOODRUFF AVE. DOWNEY, CA. | |
|---|---|---|---|
| LOGGED BY: A. LIZZI | DRILL CO.: WEST HAZMAT DRILLING CORP. | DRILLER: BOB NIX | DRILL RIG: CME 75 | BORING NO.: CB-11 |
| DATE DRILLED: 8/15/91 | BORING ELEV. | REF./DATUM: GROUND SURFACE | BORING DIAMETER: 8" O.D. | DRIVE WEIGHT: 140# 30" DROP |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES.

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | | | 0–3" ASPHALT PAVEMENT | |
| 5 | ◢ | 9<br>12<br>13 | 0825 | ML | 3"–17' SANDY SILT. BROWN. MICACEOUS, MINOR SAND. DRY. | 0 |
| 10 | ◢ | 9<br>15<br>17 | 0830 | | | 0 |
| 15 | ◢ | 10<br>13<br>16 | 0835 | | | 0 |
| 20 | ◢ | 17<br>32<br>40 | 0840 | SP | 17–28' SAND. MEDIUM GREY. MEDIUM GRAIN SIZE. MODERATELY SORTED, LOOSE, DRY, MICACEOUS. DRY. | 0 |
| 25 | ◢ | 17<br>25<br>27 | 0845 | | | 0 |
| 30 | ◢ | 29<br>60<br>13 | 0850 | SW | 28–34.5' SAND. MEDIUM GREY. MEDIUM GRAIN SIZE. MODERATELY SORTED, LOOSE, DRY, MICACEOUS. | 0 |
| 35 | ◢ | 17<br>23<br>35 | 0855 | ML | 34.5–43' CLAYEY SILT. GREY, COMPACT, COHESIVE. SLIGHTLY MOIST. | 0 |
| 40 | ◢ | 17<br>23<br>35 | 0900 | | 43–47' CLAYEY SILT/SILT, GREY–BLACK, HIGHLY PLASTIC, SLIGHTLY MOIST. | 0 |
| 45 | ◢ | 18<br>25<br>23 | 0905 | SW | | 0 |

TPE
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GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNATURE: A. Lizzi

\KRKLOG1A

# —BORING LOG—



| PROJECT NO.: 220 | PROJECT NAME: KIRKHILL, INC. | SITE LOCATION: 12021 WOODRUFF AVE., DOWNEY, CA. | |
|---|---|---|---|
| LOGGED BY: A. LIZZI | DRILL CO.: WEST HAZMAT DRILLING CORP. | DRILLER: BOB NIX | DRILL RIG: CME 75 | BORING NO.: CB-11 |
| DATE DRILLED: 8/15/91 | BORING ELEV. | REF./DATUM: GROUND SURFACE | BORING DIAMETER: 8" O.D. | DRIVE WEIGHT: 140# 30" DROP |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION: LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 45 | | | | | | |
| | | | | SW | 47–50.5' SAND. LIGHT GREY. COARSE GRAIN SIZE. POORLY SORTED, MICACEOUS, DRY. | |
| 50 | | 38 50/6" | 0915 | TD | NOTES: | 0 |

TD = 49'; DROVE SAMPLER UNTIL 50.5'
BORING IMMEDIATELY BACKFILLED WITH HYDRATED BENTONITE CHIPS FROM TOTAL DEPTH TO SURFACE GRADE
NO GROUND WATER ENCOUNTERED DURING DRILLING OF BORING

REGISTERED PROFESSIONAL ENGINEER C. K. TAJIR No. 43550 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

C. K. Tajir

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNATURE: A. Lizzi

\KRKLOG1B

# —BORING LOG—



| | | | |
|---|---|---|---|
| PROJECT NO.: 220 | PROJECT NAME: KIRKHILL, INC. | SITE LOCATION: 12021 WOODRUFF AVE. DOWNEY, CA. | |
| LOGGED BY: A. LIZZI | DRILL CO.: WEST HAZMAT DRILLING CORP. | DRILLER: BOB NIX | DRILL RIG: CME 75 | BORING NO.: CB-12 |
| DATE DRILLED: 8/15/91 | BORING ELEV. | REF./DATUM: GROUND SURFACE | BORING DIAMETER: 8" O.D. | DRIVE WEIGHT: 140# 30" DROP |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES.

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION: LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | | | 0-3" ASPHALT PAVEMENT | |
| 5 | | 10<br>10<br>9 | 0950 | ML | 3"-18' SILT. BROWN, LOOSE, MINOR FINE GRAINED SAND PRESENT, BROWN. DRY, @ 10' 3" LAYER OF SILTY SAND HORIZON. | 0 |
| 10 | | 15<br>16<br>22 | 0955 | | | 0 |
| 15 | | 10<br>13<br>16 | 1000 | | | 0 |
| 20 | | 12<br>16<br>21 | 1002 | SP | 18-28' SAND. BROWN TO LIGHT GREY. MEDIUM GRAIN SIZE, MODERATELY SORTED, MICACEOUS, DRY. | 0 |
| 25 | | 11<br>16<br>23 | 1004 | | | 0 |
| 30 | | 18<br>57<br>50/3 | 1005 | SW | 28-39.5' SAND. LIGHT GREY, MEDIUM TO COARSE GRAIN SIZE, POORLY SORTED, DRY. | 0 |
| 35 | | 17<br>27<br>50/3 | 1010 | | | 0 |
| 40 | | 14<br>23<br>46 | 1015 | CL | 39.5-44' SILTY CLAY, GREY, COMPACT, HIGHLY PLASTIC, SLIGHTLY MOIST. | 0 |
| 45 | | 18<br>25<br>23 | 1020 | ML<br>SW | 44-47' CLAYEY SILT. GREY. SUBCOMPACT, SLIGHTLY MOIST, MINOR SAND. | 0 |

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNATURE: A. Lizzi

\KRKLOG2A

# —BORING LOG—



| PROJECT NO.: 220 | PROJECT NAME: KIRKHILL, INC. | | SITE LOCATION: 12021 WOODRUFF AVE. DOWNEY, CA. | |
|---|---|---|---|---|
| LOGGED BY: A. LIZZI | DRILL CO.: WEST HAZMAT DRILLING CORP. | DRILLER: BOB NIX | DRILL RIG: CME 75 | BORING NO.: CB-12 |
| DATE DRILLED: 8/15/91 | BORING ELEV. | REF./DATUM: GROUND SURFACE | BORING DIAMETER: 8" O.D. | DRIVE WEIGHT: 140# 30" DROP |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES.

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION: LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 45 | | | | | | |
| | | | | SW | 47–50' SAND. GREY, COARSE GRAIN SIZE. POORLY SORTED, SLIGHTLY MOIST. PEBBLES PRESENT. LOOSE. | |
| 50 | | 117/6 | 1025 | TD | NOTES: | 0 |
| | | | | | TD = 49'; DROVE SAMPLER UNTIL 50.5' | |
| | | | | | BORING IMMEDIATELY BACKFILLED WITH HYDRATED BENTONITE CHIPS FROM TOTAL DEPTH TO SURFACE GRADE | |
| | | | | | NO GROUND WATER ENCOUNTERED DURING DRILLING OF BORING | |

REGISTERED PROFESSIONAL ENGINEER
C.K. TAUR
No. 43050
Exp. 3-31-92
CIVIL
STATE OF CALIFORNIA

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNATURE: A. Lizzi

\KRKLOG2B

# —BORING LOG—



| PROJECT NO.: 220 | PROJECT NAME: KIRKHILL, INC. | SITE LOCATION: 12021 WOODRUFF AVE., DOWNEY, CA. | | |
|---|---|---|---|---|
| LOGGED BY: A. LIZZI | DRILL CO.: WEST HAZMAT DRILLING CORP. | DRILLER: BOB NIX | DRILL RIG: CME 75 | BORING NO.: CB-13 |
| DATE DRILLED: 8/15/91 | BORING ELEV. | REF./DATUM: GROUND SURFACE | BORING DIAMETER: 8" O.D. | DRIVE WEIGHT: 140# 30" DROP |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES.

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | | | 0–3" ASPHALT PAVEMENT | |
| 5 | | 10<br>14<br>18 | 1055 | ML | 3"–14' SILT. BROWN. MINOR SAND. DRY. | 0 |
| 10 | | 18<br>22<br>23 | 1100 | | | 0 |
| 15 | | 14<br>23<br>36 | 1105 | | 14–18' CLAYEY SILT. BROWN TO GREY–BROWN, MOTTLED TEXTURE. MICACEOUS, DRY. | 0 |
| 20 | | 14<br>27<br>32 | 1107 | SP | 18–28' SAND. GREY. MEDIUM GRAIN SIZE. MODERATELY SORTED, LOOSE, MICACEOUS, DRY. | 0 |
| 25 | | 18<br>27<br>45 | 1110 | | | 0 |
| 30 | | 39<br>12/6" | 1115 | SW | 28–39' SAND. GREY, MEDIUM TO COARSE GRAIN SIZE. POORLY SORTED LOOSE. DRY. | 0 |
| 35 | | 27<br>81/6" | 1117 | | | 0 |
| 40 | | 25<br>29<br>41 | 1120 | CL | 39–44' SILTY/CLAYEY. GREY. MODERATELY PLASTIC, SUBCOMPACT MINOR SAND, SLIGHTLY MOIST. | 0 |
| 45 | | 13<br>33<br>52 | 1122 | ML | 44–47' CLAYEY SILT. GREY, COMPACT. DRY. | 0 |
| | | | | SW | | |

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNATURE: A. Lizzi

\KRKLOG3A

# —BORING LOG—



| PROJECT NO.: 220 | PROJECT NAME: KIRKHILL, INC. | | SITE LOCATION: 12021 WOODRUFF AVE., DOWNEY, CA. | |
|---|---|---|---|---|
| LOGGED BY: A. LIZZI | DRILL CO.: WEST HAZMAT DRILLING CORP | DRILLER: BOB NIX | DRILL RIG: CME 75 | BORING NO.: CB-13 |
| DATE DRILLED: 8/15/91 | BORING ELEV. | REF./DATUM: GROUND SURFACE | BORING DIAMETER: 8" O.D. | DRIVE WEIGHT: 140# 30" DROP |

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| | | | | | NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES. | |
| 45 | | | | | LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | |
| | | | | SW | 47–50' SAND. GREY, COARSE GRAIN SIZE. POORLY SORTED, SLIGHTLY MOIST. PEBBLES PRESENT. LOOSE. | |
| 50 | | 81/6" | 1130 | TD | | 0 |

NOTES:

TD = 49'; DROVE SAMPLER UNTIL 50.5'

BORING IMMEDIATELY BACKFILLED WITH HYDRATED BENTONITE CHIPS FROM TOTAL DEPTH TO SURFACE GRADE

NO GROUND WATER ENCOUNTERED DURING DRILLING OF BORING

REGISTERED PROFESSIONAL ENGINEER
C. K. TAUR
No. 43950
Exp. 3-31-92
CIVIL
STATE OF CALIFORNIA

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNATURE: A. Lizzi

\KRKLOG3B

# —BORING LOG—



| | | | |
|---|---|---|---|
| PROJECT NO.: 220 | PROJECT NAME: KIRKHILL, INC. | SITE LOCATION: 12021 WOODRUFF AVE., DOWNEY, CA. | |
| LOGGED BY: A. LIZZI | DRILL CO.: WEST HAZMAT DRILLING CORP. | DRILLER: BOB NIX | DRILL RIG: CME 75 | BORING NO.: CB-14 |
| DATE DRILLED: 8/15/91 | BORING ELEV. | REF./DATUM: GROUND SURFACE | BORING DIAMETER: 8" O.D. | DRIVE WEIGHT: 140# 30" DROP |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES.

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | | | 0–3" ASPHALT PAVEMENT | |
| 5 | | 10<br>13<br>18 | 1220 | ML | 3"–18' SANDY SILT. BROWN, MINOR SAND, DRY. | 0 |
| 10 | | 18<br>37<br>42 | 1225 | | | 0 |
| 15 | | 15<br>21<br>22 | 1230 | | | 0 |
| 20 | | 15<br>29<br>36 | 1235 | SP | 18'–29' SAND. GREY. MEDIUM GRAIN SIZE. MODERATELY SORTED, LOOSE, DRY MICACEOUS. | 0 |
| 25 | | 21<br>33<br>52 | 1240 | | | 0 |
| 30 | | 29<br>52 | 1245 | SW | 29–34' SAND. GREY, MEDIUM TO COARSE GRAIN SIZE. POORLY SORTED LOOSE. DRY. | 0 |
| 35 | | 27<br>51/6" | 1247 | CL | 34–38' SILTY/CLAY. GREY. COMPACT. MODERATELY PLASTIC, MINOR SAND, SLIGHTLY MOIST. | 0 |
| 40 | | 12<br>18<br>32 | 1330 | ML | 38–46' CLAYEY SILT. DARK GREY. SUBCOMPACT, MINOR SAND, DRY. | 0 |
| 45 | | 16<br>22<br>37 | 1332 | | | 0 |
| | | | | SW | | |

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNATURE: A. Lizzi

\KRKLOG4A

# —BORING LOG—



| | | | |
|---|---|---|---|
| PROJECT NO.: 220 | PROJECT NAME: KIRKHILL, INC. | SITE LOCATION: 12021 WOODRUFF AVE., DOWNEY, CA. | |
| LOGGED BY: A. LIZZI | DRILL CO.: WEST HAZMAT DRILLING CORP. | DRILLER: BOB NIX | DRILL RIG: CME 75 | BORING NO.: CB-14 |
| DATE DRILLED: 8/15/91 | BORING ELEV. | REF./DATUM: GROUND SURFACE | BORING DIAMETER: 8" O.D. | DRIVE WEIGHT: 140# 30" DROP |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 45 | | | | | | |
| | | | | SW | 47–50' SAND. GREY, COARSE GRAIN SIZE. POORLY SORTED, SLIGHTLY MOIST. PEBBLES PRESENT. LOOSE. | |
| 50 | | 81/6" | 1130 | TD | NOTES:<br>TD = 49'; DROVE SAMPLER UNTIL 50.5'<br>BORING IMMEDIATELY BACKFILLED WITH HYDRATED BENTONITE CHIPS FROM TOTAL DEPTH TO SURFACE GRADE<br>NO GROUND WATER ENCOUNTERED DURING DRILLING OF BORING | 0 |

REGISTERED PROFESSIONAL ENGINEER
C. K. TAUR
No. 43050
Exp. 3-31-92
CIVIL
STATE OF CALIFORNIA

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNATURE: A. Lizzi

\KRKLOG4B

# ATTACHMENT B

# CHAIN OF CUSTODY RECORD FORMS

AMERICAN ENVIRONMENTAL LABORATORIES
1071 N. BATAVIA ST.
ORANGE, CA 92667
714/282-5640 • 1-800-464-AEL-1
FAX: 714/282-5644

J# 220
P.O.# 40583



# CHAIN OF CUSTODY RECORD

CONTACT PERSON/PROJECT NAME: Tony Lizzi

CLIENT'S NAME AND ADDRESS: KIRKHILL, INC 12021 Woodruff Ave, Downey, CA

SAMPLERS (SIGNATURE): Tony Lizzi

| LAB NUMBER | FIELD NUMBER | DATE | TIME | TYPE OF SAMPLING | DESCRIPTION | NUMBER OF CONTAINERS | ANALYSES REQUIRED: TRPH using EPA Method 418.1 | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 91-871-S | CB-11/5' | 8-15-91 | 0825 | HSA auger Split-Spoon | Soil - brass ring | 1 | X | Test according |
| 91-872-S | CB-11/10' | | 0830 | | | 1 | X | to LACDPW |
| 91-873-S | CB-11/15' | | 0835 | | | 1 | X | detection limit |
| 91-874-S | CB-11/20' | | 0840 | | | 1 | X | |
| 91-875-S | CB-11/25' | | 0845 | | | 1 | X | |
| 91-876-S | CB-11/30 | | 0850 | | | 1 | X | |
| 91-877-S | CB-11/35' | | 0855 | | | 1 | X | |
| 91-878-S | CB-11/40' | | 0900 | | | 1 | X | |
| 91-879-S | CB-11/45' | | 0905 | | | 1 | X | |
| 91-880-S | CB-11/50' | | 0915 | | | 1 | X | |
| 91-881-S | CB-12/5' | | 0950 | | | 1 | X | |
| 91-882-S | CB-12/10' | | 0955 | | | 1 | X | |
| 91-883-S | CB-12/15' | | 1000 | | | 1 | X | |
| 91-884-S | CB-12/20' | | 1002 | | | 1 | X | |
| 91-885-S | CB-12/25' | | 1004 | | | 1 | X | 15 |

| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) | RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
|---|---|---|---|---|---|---|---|
| Tony Lizzi | 8-16-91 | 8:55 | | | | | |
| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) | RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
| | | | | | | | |

SAMPLE(S) CONDITION (PLEASE CHECK): ☑ CHILLED ☑ SEALED

CONTAINER IN GOOD CONDITION? YES

AMERICAN ENVIRONMENTAL LABORATORIES
1071 N. BATAVIA ST.
ORANGE, CA 92667
714/282-5640 • 1-800-464-AEL-1
FAX: 714/282-5644

J#220
P.O.#40583

# CHAIN OF CUSTODY RECORD

CONTACT PERSON/PHONE: Tony Lizzi
CLIENT'S NAME AND ADDRESS: KIRKHILL, INC 12021 Woodruff Ave. Downey, CA
SAMPLERS (SIGNATURE): Tony Lizzi

| LAB NUMBER | FIELD NUMBER | DATE | TIME | TYPE OF SAMPLING | DESCRIPTION | NUMBER OF CONTAINERS | ANALYSES REQUIRED: TCPH using EPA Method 418.1 | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 91-886-S | CB-12/30' | 8-15-91 | 1005 | HS Auger Split-Spoon | SOIL-brass ring | 1 | X | Test accordin |
| 91-887-S | CB-12/35' | | 1010 | | | 1 | X | to LACDPW |
| 91-888-S | CB-12/40' | | 1015 | | | 1 | X | detection limi |
| 91-889-S | CB-12/45' | | 1020 | | | 1 | X | |
| 91-890-S | CB-12/50' | | 1025 | | | 1 | X | |
| 91-891-S | CB-13/5' | | 1220 | | | 1 | X | |
| 91-892-S | CB-13/10' | | 1225 | | | 1 | X | |
| 91-893-S | CB-13/15' | | 1230 | | | 1 | X | |
| 91-894-S | CB-13/20' | | 1235 | | | 1 | X | |
| 91-895-S | CB-13/25' | | 1240 | | | 1 | X | |
| 91-896-S | CB-13/30' | | 1245 | | | 1 | X | |
| 91-897-S | CB-13/35' | | 1247 | | | 1 | X | |
| 91-898-S | CB-13/40' | | 1330 | | | 1 | X | |
| 91-899-S | CB-13/45' | | 1332 | | | 1 | X | |
| 91-900-S | CB-13/50' | | 1335 | | | 1 | X | 15 |

| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) | RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
|---|---|---|---|---|---|---|---|
| Tony Lizzi | 8-16-91 | 8:55 | | | | | |
| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) | RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
| | | | | | | | |

SAMPLE(S) CONDITION (PLEASE CHECK): ☑ CHILLED ☑ SEALED

CONTAINER IN GOOD CONDITION? YES

AMERICAN ENVIRONMENTAL LABORATORIES
1071 N. BATAVIA ST.
ORANGE, CA 92667
714/282-5640 • 1-800-464-AEL-1
FAX: 714/282-5644

J#22,

P.O. #40583



# CHAIN OF CUSTODY RECORD

CONTACT PERSON/~~RESPONSIBLE NAME~~: Tony. Lizzi

CLIENT'S NAME AND ADDRESS: KIRKHILL, INC 12021 Woodruff Ave. Downey, CA

SAMPLERS (SIGNATURE): Tony Lizzi

| LAB NUMBER | FIELD NUMBER | DATE | TIME | TYPE OF SAMPLING | DESCRIPTION | NUMBER OF CONTAINERS | ANALYSES REQUIRED: TEPH using Modified 418.1 | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 91-901-S | CB-14/5' | 8-15-91 | | ~~HS Auger~~ ~~Split Spoon~~ | Soil - brass ring | 1 | X | Test according |
| 91-902-S | CB-14/10' | | | | | 1 | X | to LACDPW |
| 91-903-S | CB-14/15' | | | | | 1 | X | detection limit |
| 91-904-S | CB-14/20' | | | | | 1 | X | |
| 91-905-S | CB-14/25' | | | | | 1 | X | |
| 91-906-S | CB-14/30' | | | | | 1 | X | |
| 91-907-S | CB-14/35' | | | | | 1 | X | |
| 91-908-S | CB-14/40' | | | | | 1 | X | |
| 91-909-S | CB-14/45' | | | | | 1 | X | |
| 91-910-S | CB-14/50' | | | | | 1 | X | |
| 91-911-S | CB-9A/30' | | | | | 1 | X | |
| 91-912-S | CB-9A/35' | | | | | 1 | X | |
| 91-913-S | CB-9A/40' | | | | | 1 | X | |
| 91-914-S | CB-9A/45' | | | | | 1 | X | Subtotal: 15 |
| 91-915-S | CB-9A/50' | ✓ | | ✓ | ✓ | 1 | X | Gr. Total = 45 |

| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) | RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
|---|---|---|---|---|---|---|---|
| Tony. Lizzi | 8-16-91 | 08:55 | | | | | |
| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) | RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
| | | | | | | | |

SAMPLE(S) CONDITION (PLEASE CHECK) ☑ CHILLED ☑ SEALED

CONTAINER IN GOOD CONDITION? YES

AMERICAN ENVIRONMENTAL LABORATORIES
1071 N. BATAVIA ST.
ORANGE, CA 92667
714/282-5640 • 1-800-464-AEL-1
FAX: 714/282-5644

# CHAIN OF CUSTODY RECORD

CONTACT PERSON/~~PROJECT NAME~~: Tony Lizzi

CLIENT'S NAME AND ADDRESS: KIRKHILL, INC 12021 Woodruff Ave, Downey, CA

SAMPLERS (SIGNATURE): Tony Lizzi

| LAB NUMBER | FIELD NUMBER | DATE | TIME | TYPE OF SAMPLING | DESCRIPTION | NUMBER OF CONTAINERS | ANALYSES REQUIRED: EPA Method 8015 | ANALYSES REQUIRED: EPA Method 602 | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 91-870-W | W-1 | 8-15-91 | 1600 | Grab | water 2x40mlVia | 2 | X | X | |

| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) | RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
|---|---|---|---|---|---|---|---|
| Tony Lizzi | 8-16-91 | 8:55 | [signature] | | | | |
| RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) | RELINQUISHED BY (SIGNATURE) | DATE | TIME | RECEIVED BY (SIGNATURE) |
| | | | | | | | |

SAMPLE(S) CONDITION (PLEASE CHECK) ☒ CHILLED ☒ SEALED

CONTAINER IN GOOD CONDITION? YES

# ATTACHMENT C

# LABORATORY REPORTS

**CHEMTEK**
i n c.

ENVIRONMENTAL
LABORATORIES

14140 Alondra Boulevard
Suite A Santa Fe Springs
California 90670

Telephone 213 - 926-9848
Telefax 213 - 926-8324

## CERTIFICATE OF ANALYSIS

Job No: 108019 Date: 08-22-91

This is the Certificate of Analysis for the following samples:

Client Work ID: American Environmental Laboratories
Date Received: 08-19-91
Number of Samples: 35
Sample Type: soil

Samples were labeled as follows:

| SAMPLE IDENTIFICATION | LABORATORY NUMBER |
|---|---|
| CB-11/5 | 108019-01A |
| CB-11/10 | 108019-02A |
| CB-11/15 | 108019-03A |
| CB-11/20 | 108019-04A |
| CB-11/25 | 108019-05A |
| CB-12/10 | 108019-06A |
| CB-12/30 | 108019-07A |
| CB-12/40 | 108019-08A |
| CB-12/45 | 108019-09A |
| CB-12/50 | 108019-10A |
| CB-13/5 | 108019-11A |
| CB-13/10 | 108019-12A |
| CB-13/15 | 108019-13A |
| CB-13/20 | 108019-14A |
| CB-13/25 | 108019-15A |
| CB-13/30 | 108019-16A |
| CB-13/35 | 108019-17A |
| CB-13/40 | 108019-18A |

Reviewed and Approved:

Michael C.C. Lu
Laboratory Director

**CHEMTEK**
inc.
ENVIRONMENTAL
LABORATORIES

14140 Alondra Boulevard
Suite A Santa Fe Springs
California 90670

Telephone 213 - 926-9848
Telefax 213 - 926-8324

**CERTIFICATE OF ANALYSIS**


Job No: 108019 Date: 08-22-91

This is the Certificate af Analysis for the following samples:

Client Work ID: American Environmental Laboratories
Date Received: 08-19-91
Number of Samples: 35
Sample Type: soil

The samples were labeled as follows:

| SAMPLE IDENTIFICATION | LABORATORY NUMBER |
|---|---|
| CB-13/45 | 108019-19A |
| CB-13/50 | 108019-20A |
| CB-14/5 | 108019-21A |
| CB-14/10 | 108019-22A |
| CB-14/15 | 108019-23A |
| CB-14/20 | 108019-24A |
| CB-14/25 | 108019-25A |
| CB-14/30 | 108019-26A |
| CB-14/35 | 108019-27A |
| CB-14/40 | 108019-28A |
| CB-14/45 | 108019-29A |
| CB-14/50 | 108019-30A |
| CB-9A/30 | 108019-31A |
| CB-9A/35 | 108019-32A |
| CB-9A/40 | 108019-33A |
| CB-9A/45 | 108019-34A |
| CB 9A/50 | 108019-35A |

Reviewed and Approved:
Michael C.C. Lu
Laboratory Director

**CHEMTEK**
i n c.

ENVIRONMENTAL
LABORATORIES

14140 Alondra Boulevard
Suite A Santa Fe Springs
California 90670

Telephone 213 - 926-9848
Telefax 213 - 926-8324

Client: American Environmental
Job No: 108019 Date: 08-22-91

Analysis: SCL 418 (EPA 418.1)

Sample ID: See Below
Lab Sample ID: See Below
Sample Date: 08-15-91
Analysis Date: 08-21-91

| Sample ID | Lab Sample ID | TRPH Results (mg/kg) | Detection Limit (mg/kg) |
|---|---|---|---|
| CB-11/5 | 108019-01A | 252 | 10 |
| CB-11/10 | 108019-02A | 183 | 10 |
| CB-11/15 | 108019-03A | ND | 10 |
| CB-11/20 | 108019-04A | 315 | 10 |
| CB-11/25 | 108019-05A | ND | 10 |
| CB-12/10 | 108019-06A | 138 | 10 |
| CB-12/30 | 108019-07A | ND | 10 |
| CB-12/40 | 108019-08A | ND | 10 |
| CB-12/45 | 108019-09A | ND | 10 |
| CB-12/50 | 108019-10A | ND | 10 |
| CB-13/5 | 108019-11A | ND | 10 |
| CB-13/10 | 108019-12A | ND | 10 |
| CB-13/15 | 108019-13A | 29 | 10 |
| CB-13/20 | 108019-14A | ND | 10 |
| CB-13/25 | 108019-15A | ND | 10 |
| CB-13/30 | 108019-16A | ND | 10 |
| CB-13/35 | 108019-17A | ND | 10 |
| CB-13/40 | 108019-18A | ND | 10 |
| CB-13/45 | 108019-19A | 92 | 10 |
| CB-13/50 | 108019-20A | ND | 10 |

COMMENTS: 'ND' INDICATES THAT THE COMPOUND IS NOT DETECTED AT THE SPECIFIED LIMIT.

**CHEMTEK**
i n c.

ENVIRONMENTAL
LABORATORIES

14140 Alondra Boulevard
Suite A Santa Fe Springs
California 90670

Telephone 213 - 926-9848
Telefax 213 - 926-8324

Client: American Environmental
Job No: 108019 Date: 08-22-91

Analysis: SCL 418 (EPA 418.1)

Sample ID: See Below
Lab Sample ID: See Below
Sample Date: 08-15-91
Analysis Date: 08-21-91

| Sample ID | Lab Sample ID | TRPH Results (mg/kg) | Detection Limit (mg/kg) |
|---|---|---|---|
| CB-14/5 | 108019-21A | ND | 10 |
| CB-14/10 | 108019-22A | ND | 10 |
| CB-14/15 | 108019-23A | ND | 10 |
| CB-14/20 | 108019-24A | 85 | 10 |
| CB-14/25 | 108019-25A | ND | 10 |
| CB-14/30 | 108019-26A | ND | 10 |
| CB-14/35 | 108019-27A | ND | 10 |
| CB-14/40 | 108019-28A | 72 | 10 |
| CB-14/45 | 108019-29A | 76 | 10 |
| CB-14/50 | 108019-30A | ND | 10 |
| CB-9A/30 | 108019-31A | 28 | 10 |
| CB-9A/35 | 108019-32A | ND | 10 |
| CB-9A/40 | 108019-33A | ND | 10 |
| CB-9A/45 | 108019-34A | ND | 10 |
| CB-9A/50 | 108019-35A | ND | 10 |

COMMENTS: 'ND' INDICATES THAT THE COMPOUND IS NOT DETECTED AT THE SPECIFIED LIMIT.

"ENVIRONMENTAL TESTING"

**CA DOHS Certification #1580**

September 12, 1991

**Client P.O.#** 40583

**Client Job#** 220

**Client:**
Tank Protect Engineering
1071 North Batavia Street
Orange, CA 92667

**Project:**
Kirkhill, Inc.
12021 Woodruff Avenue
Downey, CA

**Date sampled:** 8-15-91
**Date submitted:** 8-15-91
**Date anaylzed:** 8-16-91

**Sample:** Soil

**EPA Method 418.1 - Total Recoverable Petroleum Hydrocarbon (mg/kg)**

| Lab# | Field# | Conc. (mg/kg) | Detection Limit (mg/kg) |
|---|---|---|---|
| 91-876-S | CB-11/30 | ND | 10 |
| 91-877-S | CB-11/35 | 12.1 | 10 |
| 91-878-S | CB-11/40 | ND | 10 |
| 91-879-S | CB-11/45 | ND | 10 |
| 91-880-S | CB-11/50 | ND | 10 |
| 91-881-S | CB-12/5 | 11.1 | 10 |
| 91-883-S | CB-12/15 | ND | 10 |
| 91-884-S | CB-12/20 | ND | 10 |
| 91-885-S | CB-12/25 | ND | 10 |
| 91-887-S | CB-12/35 | ND | 10 |

**AMERICAN ENVIROMENTAL LABORATORIES**

Clifton J. Kiser
Laboratory Manager

AEL/A91-1730

• 1071 N. Batavia St.
Orange, CA 92667
714/282-5640
800/464-AELi
FAX: 714/282-5644

"ENVIRONMENTAL TESTING"

**CA DOHS Certification #1580**

September 6, 1991

**Client P.O.#** 40583

**Client Job#** 220

**Client:**
Tank Protect Engineering
1071 North Batavia Street
Orange, CA 92667

**Project:**
Kirkhill, Inc.
12021 Woodruff Avenue
Downey, CA

**Date sampled:** 8-16-91
**Date submitted:** 8-16-91
**Date analyzed:** 8-16-91

**Sample:** Water

**Method of Extraction:** Purge and Trap - EPA 5030

**Method of Analysis:** EPA Method 8015 - Total Petroleum Hydrocarbons - Gasoline

| Lab# | Field# | Conc. (mg/L) | Detection Limit (mg/L) |
|---|---|---|---|
| 91-870-W | W-1 | ND | .5 |

**AMERICAN ENVIRONMENTAL LABORATORIES**

Clifton J. Kiser
Laboratory Manager

AEL/A91-1726

• 1071 N. Batavia St.
Orange, CA 92667
714/282-5640
800/464-AEL1
FAX: 714/282-5644

"ENVIRONMENTAL TESTING"

**CA DOHS Certification #1580**

September 6, 1991

**Client P.O.#** 40583

**Client Job#** 220

**Client:**
Tank Protect Engineering
1071 North Batavia Street
Orange, CA 92667

**Project:**
Kirkhill, Inc.
12021 Woodruff Avenue
Downey, CA

**Date sampled:** 8-16-91
**Date submitted:** 8-16-91
**Date analyzed:** 8-16-91

**Sample:** Water

**Method of Extraction:** Purge and Trap - EPA Method 5030

**Method of Analysis:** EPA Method 602 - BTEX

| Lab# | Field# | Conc. (mg/l) | Detection Limit (mg/l) |
|---|---|---|---|
| 91-870-W | W-1 | | |
| **Benzene (mg/l)** | | ND | .0003 |
| **Toluene (mg/l)** | | ND | .0003 |
| **Ethyl Benzene (mg/l)** | | ND | .0003 |
| **Total Xylenes (mg/l)** | | ND | .0006 |

**AMERICAN ENVIRONMENTAL LABORATORIES**

Clifton J. Kiser
Laboratory Manager

AEL/A91-1727

• 1071 N. Batavia St.
Orange, CA 92667
714/282-5640
800/464-AEL1
FAX: 714/282-5644

**TABLE 2-1**

Table 2-1
Leaching Potential Analysis for Gasoline and Diesel
Using Total Petroleum Hydrocarbons(TPH)
and Benzene, Toluene, Xylene and Ethylbenzene (BTX&E)

The following table was designed to permit estimating the concentrations of TPH and BTX&E that can be left in place without threatening ground water. Three levels of TPH and BTX&E concentrations were derived (from modeling) for sites which fall into categories of low, medium or high leaching potential. To use the table, find the appropriate description for each of the features. Score each feature using the weighting system shown at the top of each column. Sum the points for each column and total them. Match the total points to the allowable BTX&E and TPH levels.

| SITE FEATURE | SCORE | SCORE 10 PTS IF CONDITION IS MET | SCORE | SCORE 9 PTS IF CONDITION IS MET | SCORE | SCORE 5 PTS IF CONDITION IS MET |
|---|---|---|---|---|---|---|
| Minimum Depth to Ground Water from the Soil Sample (feet) | | >100 | | 51-100 | 5 | 25-50\1 |
| Fractures in subsurface (applies to foothills or mountain areas) | 10 | None | | Unknown | | Present |
| Average Annual Precipitation (inches) | | <10 | 9 | 10-25 | | 26-40\2 |
| Man-made conduits which increase vertical migration of leachate | 10 | None | | Unknown | | Present |
| Unique site features: recharge area, coarse soil, nearby wells, etc | 10 | None | | At least one | | More than one |
| COLUMN TOTALS→TOTAL PTS | 30 | + | 9 | + | 5 | = 44 |
| RANGE OF TOTAL POINTS | 49pts or more | | 41 - 48 pts | | 40pts or less | |
| MAXIMUM ALLOWABLE B/T/X/E LEVELS (PPM) | 1/50/50/50 | | .3/.3/1/1 | | NA\3 | |
| MAXIMUM ALLOWABLE TPH LEVELS (PPM) GASOLINE | 1000 | | 100 | | 10 | |
| MAXIMUM ALLOWABLE TPH LEVELS (PPM) DIESEL | 10000 | | 1000 | | 100 | |

\1 If depth is greater than 5 ft. and less than 25 ft., score 0 points.
If depth is 5 ft. or less, this table should not be used.

\2 If precipitation is over 40 inches, score 0 points.

\3 Levels for BTX&E are not applicable at a TPH concentration of 10ppm (gasoline) or 100ppm (diesel) (For explanation see step 6, page 27.)

Source: LUFT Manual, October 1989

I-12987-1F

200044

ORIGINAL

Tank Protect Engineering

"ENVIRONMENTAL CONSULTING & ENGINEERING SERVICES"

February 5, 1992

File No. 92018
Project No. 220

County of Los Angeles
Department of Public Works
Waste Management Division
UST Local Oversight Program, Annex Building
P.O. Box 1460
Alhambra, California 91802-1460

RECEIVED
FEB 10 1992
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION

Attention: Mr. Scott Small

Reference: (a) Los Angeles County Department of Public Works Letter dated December 4, 1991

**SUBJECT: WORK PLAN FOR CONFIRMATION BORING Kirkhill, Inc. 12021 Woodruff Avenue, Downey, California 90241 (FILE NO. I-12987-1F)**

Dear Mr. Small:

Per our telephone conversation on January 27, 1992, Tank Protect Engineering ("TPE") submits this work plan to further investigate the area between previously drilled borings CB-10 and CB-11 around the excavation which used to contain one (1) 10,000 naphthalenic-type processing oil underground storage tank (UST). This additional work is being requested by the Los Angeles County Department of Public Works, Waste Management Division, Local Oversight Program ("LACDPW") in Reference (a) in order to determine whether the hydrocarbon contamination exists around the southeast corner of the excavation which previously contained the 10,000 gallon UST at the subject site (see Figure 1).

In response to the four items of concern addressed in Reference (a), the following information is presented:

1) As we discussed, it is our understanding that a Remedial Action Plan is not warranted at the present time.

2) The additional work for an additional test boring is described in the proposed workplan below. Figure 2 illustrates a cross-section which shows the subsurface conditions encountered in the borings along with the total petroleum hydrocarbon ("TPH") contaminant levels detected at each sampling interval, based on 100 ppm TPH concentration contour. The isolated "plumes" seem to be very discontinuous and quite uncommon to occur under natural conditions within the same soil lithology. The "plumes" do not continually extend laterally nor vertically.

• 1071 N. Batavia
Orange, CA 92667
714/282-5635
800/464-TANK
FAX: 714/282-5644

• 1963 N. Main St.
Orange, CA 92665

• 3050 Fite Circle
Suite 108
Sacramento, CA 95827

Engr. Contr. Lic.#
489994

3) In response to the item No. 3, "...Specify the location and reason why this sample was obtained". TPEs Site Assessment report dated October 30, 1991, clearly states that the water sample was obtained from the steam cleaning effluent which was stored in a drum. This water sample was collected for analysis to determine whether the rinseate should be disposed of to a recycling facility if it contained dissolved TPH and BTXE contaminants.

The analytical report of the water sample obtained from the rinseate indicated non-detection for TPH at a detection limit of 0.5 ppm and for BTE and xylenes at detection limits of 0.3 ppb amd 0.6 ppb, respectively. This may provide additional evidence that the soil is probably not contaminated based on the testing results of rinse water generated from the steam cleaning activities of the drilling augers.

4) Pursuant to our telephone conversation TPE is proposing to test the soil samples for TPH using EPA Method 8015, with full carbon range analysis, which characterizes the entire hydrocarbon chain spectrum (gas, diesel to oil and grease) in lieu of using EPA Method 418.1. Analyzing future samples for Polynuclear Aromatic Hydrocarbons ("PNA") using EPA Method 8100 is a more suitable testing method. Naphthalene typically consists of hydrocarbon chain, $C_{10,}$ which is a medium boiling hydrocarbon within a low end diesel fuel range. Further, it was agreed that only the sample collected from boring with the highest TPH concentration will be tested for BTXE.

The purpose of this workplan is to determine whether contamination actually exists or whether it is attributed to organic matter in the soil in the area formerly occupied by the 10,000 gallon UST.

This Work Plan is being submitted to the LACDPW for review and approval.

## PROPOSED SCOPE OF WORK

The following outlines the proposed field work activities to be conducted in the area which previously contained a 10,000 gallon UST at the subject site:

**Task 1** - Drilling of one (1) vertical soil boring to a depth of approximately 30 feet below grade. Proposed boring will be drilled in between previously drilled borings CB-10 and CB-11. The proposed boring location is shown in Figure 1. The boring will be drilled using a truck-mounted drill rig equipped with either eight or ten-inch

diameter continuous flight hollow stem augers, under the super- vision of TPE geologists. The boring will be logged in accordance with the Unified Soil Classification System. TPEs Health and Safety Plan procedures will be implemented prior to and during all field work activities associated with this project. A copy of this plan will be left on-site (see Attachment A).

**Task 2 -** Obtain soil samples from boring at approximately 5 feet below grade and every 5-foot intervals thereafter until termination depth. In the event that contamination is still present at the termination depth, based on visual evidence and instrument field screening, then the boring will be advanced an additional 10 feet. The samples will be collected using 2.5-inch diameter by 3-inch long brass tubes mounted within a Californian split-spoon sampler used in advance of the augers. Prior to sampling, all brass tubes will be washed in an aqueous solution of Alconox detergent, rinsed with tap water, and then triple rinsed with distilled water. After sample recovery, the lowermost brass ring from each sample interval will be immediately end-wrapped with aluminum foil, polyethylene caps taped over the ends, labeled, placed into an ice-chest chilled using frozen blue ice, and transported by a private vehicle to a State Certified Laboratory. All samples will be logged on and accompanied by a chain-of-custody record form.

A portable Flame-ionization Detector calibrated against hexane or similar equipment will be used on the soil samples contained within the sampler at each sampling interval within the boring to monitor the volatile organic compounds (VOCs) which are being emitted directly from the soil (if any). No VOC concentrations were ever detected in the soil samples from previous drilled borings.

In all cases, the sampling equipment will be decontaminated prior to each sampling. Clean auger flights will be used for the boring.

**Task 5 -** The drill cuttings generated during drilling of boring will be placed and sealed in DOT approved 55-gallon drums and left on-site pending analytical results for appropriate disposal.

**Task 6 -** All of soil samples obtained from proposed boring will be analytically tested for total petroleum hydrocarbons

(TPH) using modified EPA Method 8015 full hydrocarbon chain, for PNA using EPA Method 8100. The sample with the highest TPH concentration will be analyzed for BTXE.

**PROPOSED PROCEDURE**

After review and approval of this plan by the LACDPW, the procedures to be implemented will be as follows:

- Contact and notify LACDPW at least seventy-two (72) hours prior to initiating any field work activities;
- Drill, sample and test the soil sample(s) for TPH, PNA and BTXE; and
- Evaluate data and prepare a report describing our procedures and findings.

TPE has not received a copy of the latest correspondence letter from LACDPW, dated December 4, 1991. TPE would appreciate if LACDPW can forward copies of any future correspondence regarding the subject site to our office.

If there are any questions or need additional information please call the undersigned at 714/282-5639.

Respectfully submitted,

**TANK PROTECT ENGINEERING**

Prepared By:

Anthony Lizzi
Project Manager/Geologist

Reviewed By:

C.K. Taur, Ph.D., P.E.
CA R.C.E. No. 43050

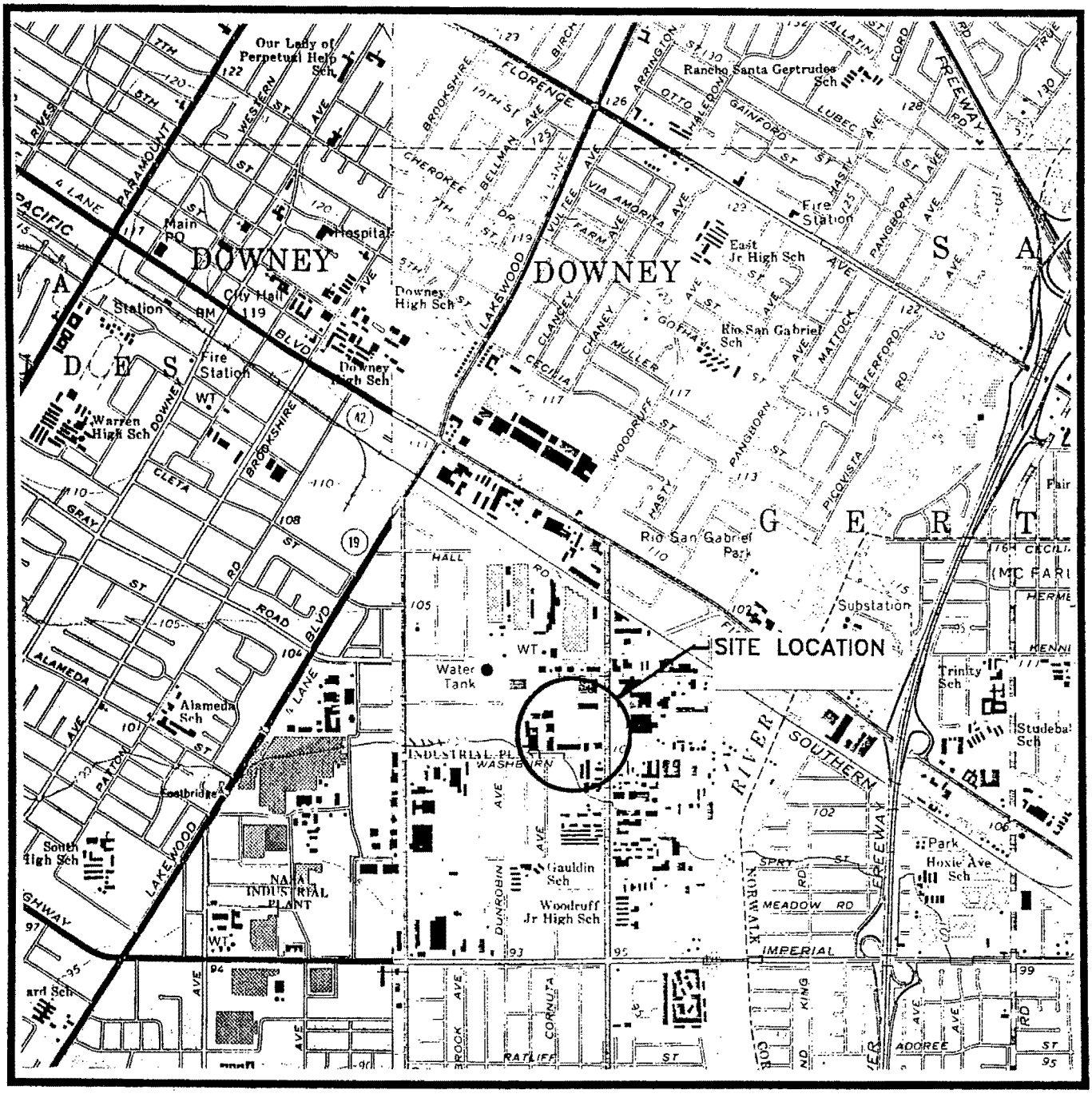
REGISTERED PROFESSIONAL ENGINEER
C.K. TAUR
No. 43050
Exp. 3-31-92
CIVIL
STATE OF CALIFORNIA

AL\CKT\e:\wp51\tony\kirk1992

enclosures: Figures 1 and 2
Attachment A - Health and Safety Plan

Distribution: (2) Addressee
(1) Raymond Bellanger
Kirkhill, Inc.
P.O. Box 7012, Downey, CA 90241-0030
(1) File

# FIGURES




SOURCE: U.S.G.S. TOPOGRAPHIC MAPS: WHITTIER, CA., SOUTH GATE, CA. (PHOTOREVISED-1981)

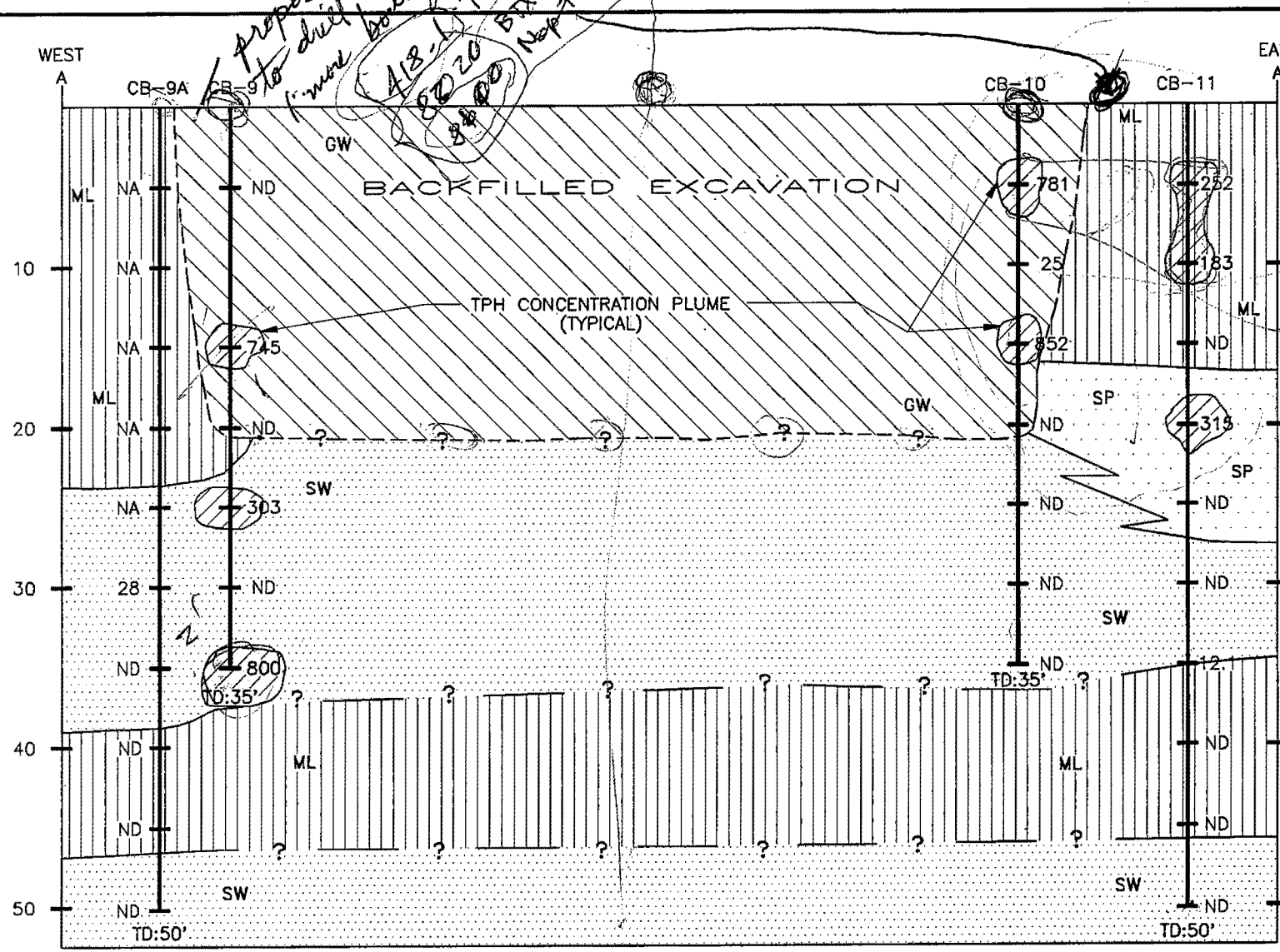
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# SITE VICINITY MAP

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

SITE ADDRESS: KIRKHILL, INC.
12021 WOODRUFF AVE.
DOWNEY, CA.

| DATE: | JOB NO. | DRAWN BY: | APPROVED BY: | FIGURE NO. |
|---|---|---|---|---|
| 09/91 | 220 | P. LEWIS | T. LIZZI | 1 |




Lateral extent. Shallow contamination

Naphaline

MSD

Adverse effects on nervous system

Suspect Carcinogen

TIE. I

Elec

LEGEND

- ML — SANDY SILT/SILT/CLAYEY SILT
- SP — SAND, GREY, MEDIUM GRAIN SIZE MODERATELY SORTED
- SW — SAND, GREY, MEDIUM GRAINED AND POORLY SORTED
- GW — GRAVELLY SAND w/MINOR SILT

ND = NOT DETECTED

NA = NOT ANALYZED

SCALE: 1" = 10'

SCALE: 1" = 5'

NOTE: TPH CONCENTRATIONS ARE EXPRESSED IN PARTS PER MILLION. (PPM)

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

SITE ADDRESS
KIRKHILL, INC.
12021 WOODRUFF AVE.
DOWNEY, CA.

EAST-WEST CROSS-SECTION ALLONG A-A'

DRAWN BY: P. LEWIS

APPROVED: T. LIZZI

| DATE: | JOB No. | FILE NAME | SCALE | FIGURE No. |
|---|---|---|---|---|
| 01/92 | 220 | 220.1 | AS NOTED | 2 |

# ATTACHMENT A

# HEALTH AND SAFETY PLAN

Tank Protect Engineering

"ENVIRONMENTAL CONSULTING & ENGINEERING SERVICES"

April 21, 1992

20124

File No. 92066
Project No. 220

Mr. Pat Proano
UST Local Oversight Program, Annex Building
Waste Management Division
Department of Public Works
County of Los Angeles
P.O. Box 1460
Alhambra, California 91802-1460

Reference: (a) Los Angeles County Department of Public Works Letter dated December 4, 1991

(b) Tank Protect Engineering Work Plan for Confirmation Boring dated February 5, 1992

**SUBJECT: REVISED WORK PLAN FOR CONFIRMATION BORING**
**Kirkhill, Inc. 12021 Woodruff Avenue, Downey, California 90241**
**(FILE NO. I-12987-1F)**

Dear Mr. Proano:

Pursuant to the conclusion of our meeting on April 6, 1992, Tank Protect Engineering ("TPE") is pleased to submit this revised work plan for further site and risk assessment at the subject site. This revised work plan will replace the previous work plan addressed in Reference (b).

## REVISED SCOPE OF WORK

As discussed in the meeting, TPE will drill two 30 foot depth borings between a previous naphthalenic-type processing oil underground storage tank (UST) and the property line to define the extent of contamination and characterize the contaminants. Also a risk assessment will be conducted to evaluate hazardous potential of the contaminant to human and animals. The following outlines the revised scope of work for the subject site:

1. Site Assessment

Two soil borings (FB-1 &FB-2) will be drilled around the area of the previous naphthalenic-type processing oil UST. The location of two borings are shown in the attached Figure 1.

Each borings will be drilled down to 30 feet below grade

• 1071 N. Batavia
Orange, CA 92667
714/282-5635
800/464-TANK
FAX: 714/282-5644

• 1963 N. Main St.
Orange, CA 92665

• 3050 Fite Circle
Suite 108
Sacramento, CA 95827

Engr. Contr. Lic.#
489994

using a truck-mounted drill rig equipped with eight or ten inch diameter continuous flight hollow stem augers. Soil samples will be obtained every 5-foot interval starting 5 feet below grade until the termination depth. In the event that contamination is still present at the termination depth, based on visual evidence and instrument field screening, then the boring will be advanced an additional 10 feet.

The samples will be collected using 2.5-inch diameter by 3-inch long brass tubes mounted within a Californian split-spoon sampler used in advance of the augers. Prior to sampling, all brass tubes will be washed in an aqueous solution of Alconox detergent, rinsed with tap water, and then triple rinsed with distilled water. After sample recovery, the lowermost brass ring from each sample interval will be immediately end-wrapped with aluminum foil, polyethylene caps taped over the ends, labeled, placed into an ice-chest chilled using frozen blue ice, and transported by a private vehicle to a State Certified Laboratory. All samples will be logged on and accompanied by a chain-of-custody record form.

A portable flame-ionization detector or photo-ionization detector calibrated against hexane or similar equipment will be used on the soil samples contained within the sampler at each sampling interval within the boring to monitor the volatile organic compounds (VOCs).

The sampling equipment will be decontaminated prior to and between each sampling. The drilling augers will be environmentally cleaned before the drilling process.

The soil cuttings generated during drilling will be placed and sealed in DOT approved 55-gallon drums and left on-site pending analytical results for appropriate disposal.

The soil samples will be analyzed by EPA Method 8015 for total petroleum hydrocarbon (TPH) with full hydrocarbon chain analysis and by EPA Method 8100 for polynuclear aromatics hydrocarbon (PNA). The sample of the highest TPH concentration will also be analyzed by EPA Method 8020 for benzene, toluenes, ethylbenzene and xylenes (BTEX).

2. Risk Assessment

As we discussed in the meeting, TPE will conduct a full-scale risk assessment for the subject site. The risk assessment includes the following outlines:

* Chemical characterization of the UST site

* Characterization of chemical concerns
    - Transport and fate evaluation
    - Hazard evaluation

* Exposure assessment
  - Eye contact
  - Skin contact
  - Inhalation
  - Ingestion

* Risk evaluation

Based on the above findings, the risk assessment report will evaluate the potential risks caused by the chemical to human and animals and finalize the conclusions.

**PROPOSED PROCEDURE**

After approval of this revised plan by the LACDPW, the procedures to be implemented will be as follows:

- Contact and notify LACDPW at least seventy-two (72) hours prior to initiating any field work activities;
- Drill, sample and test the soil sample(s) for TPH, PNA and BTXE; and
- Prepare the site and risk assessment report.

The same health and safety plan proposed in Reference (b) will be conducted for the site assessment. If there are any questions or need additional information please call the undersigned at 714/282-5639.

Respectfully submitted,

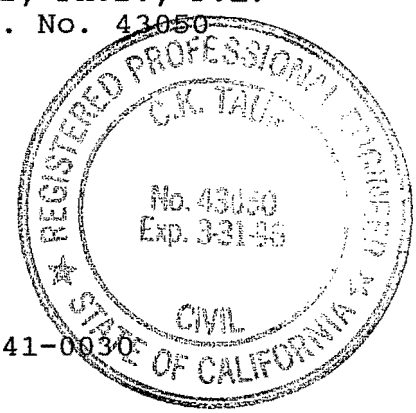
**TANK PROTECT ENGINEERING**

Prepared By:

Ravi Pendurthi
Project Manager/Geologist

Reviewed By:

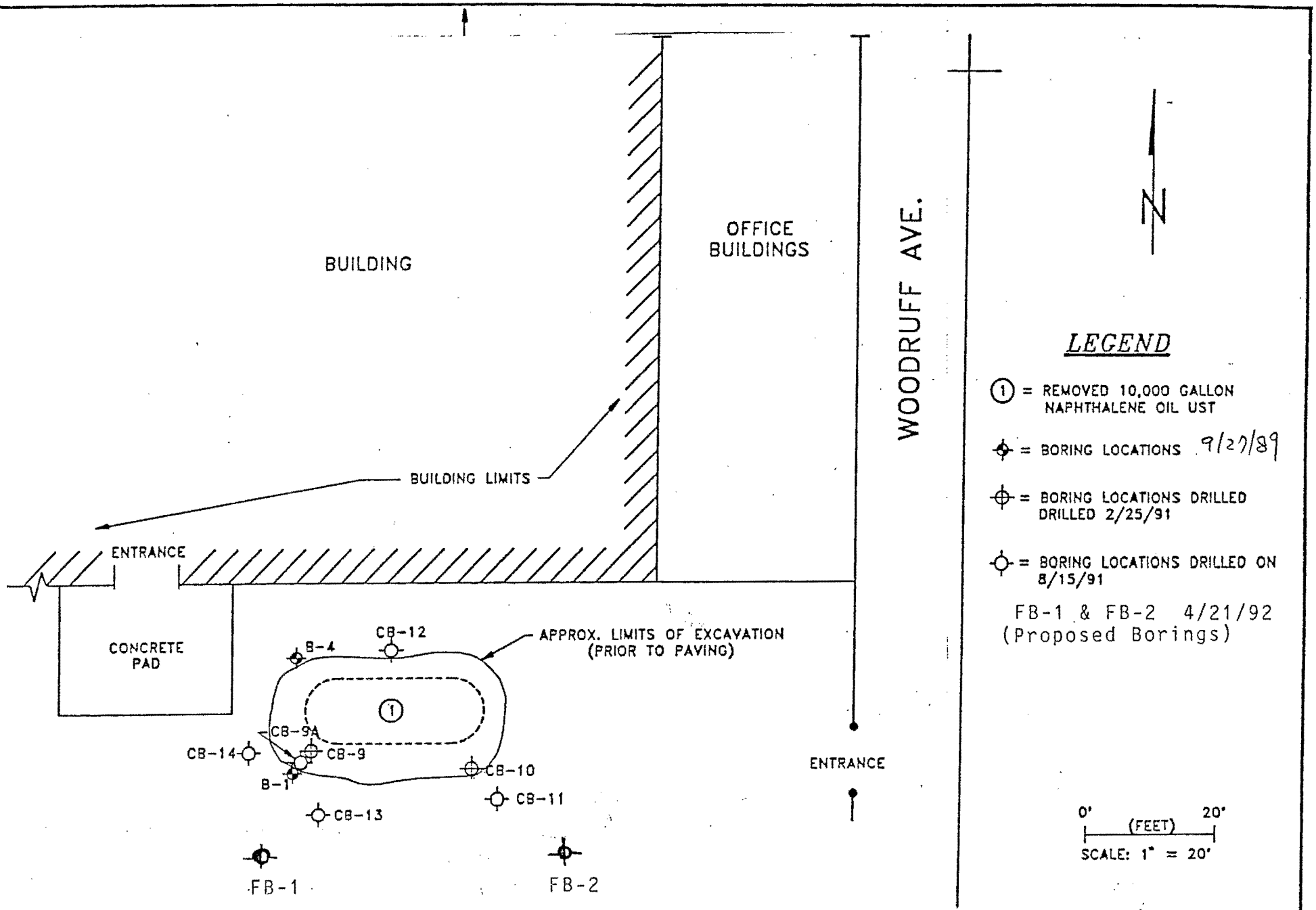
C.K. Taur, Ph.D., P.E.
CA R.C.E. No. 43050




AL\CKT\e:\wp51\tony\kirkrp

enclosures: Figures 1
Health & Safety Plan

Distribution: (2) Addressee
(1) Raymond Bellanger
Kirkhill, Inc.
P.O. Box 7012, Downey, CA 90241-0030
(1) File




| | | | |
|---|---|---|---|
| TPE ENVIRONMENTAL GROUP<br>1071 N. BATAVIA<br>ORANGE, CA. 92665 | ADDRESS: KIRKHILL, INC.<br>12021 WOODRUFF AVENUE<br>DOWNEY, CA. 90241 | SITE LOCATION MAP | DRAWN: P. LEWIS<br>APPROVED: |
| | | DATE: | JOB #/FILE: 220/KRKHILL2 |
| | | SCALE: AS NOTED | FIGURE: |

Tank Protect Engineering

"ENVIRONMENTAL CONSULTING & ENGINEERING SERVICES"

July 30, 1992

File No. 92129
Project No. 220

AUG 3 5 1992
PUBLIC WORKS
WASTE MANAGEMENT DIVISION

202307

UST Local Oversight Program, Annex Building
Waste Management Division
Department of Public Works
County of Los Angeles
P.O. Box 1460
Alhambra, California 91802-1460

Attn: Mr. Pat Proano

Reference: (a) TPE Revised Workplan for Confirmation Boring dated April 21, 1992

(b) UST Local Oversight Program Review Sheet dated May 12, 1992

**Subject:** **FINAL CONFIRMATION BORINGS REPORT**
**Kirkhill, Inc.**
**12021 Woodruff Avenue**
**Downey, California 90241**
**(File No. I-12987-1F)**

Dear Mr. Proano:

Pursuant to Tank Protect Engineering's ("TPE's") revised workplan and your review sheet referenced above, TPE conducted the final confirmation borings, soil sampling and analyses between July 7 and July 24, 1992.

In accordance with the workplan, a total of 12 samples from two 30-foot soil borings were collected and analyzed for total recoverable petroleum hydrocarbons (TRPH) using EPA Method 418.1, for benzene, toluene, xylenes and ethylbenzene (BTXE) using EPA Method 8020, and for polynuclear aromatic hydrocarbons (PAHs) using EPA Method 8100. The soil samples indicated TRPH concentrations ranging from non-detectable (<10 parts per million (ppm)) to 91 ppm, and non-detectable (ND) levels of BTXE (<0.001 ppm) and PAHs (<0.005 ppm).

In addition to the soil sample analyses, a liquid sample of Edgiflex-200® (source liquid) provided by Kirkhill, Inc. was analyzed for aromatic compounds (BTXE) using EPA Method 8020 and for PAHs using EPA Method 8100. The source liquid samples indicated non-detectable levels of targeted compounds. According to the reasoning provided by the analytical laboratory (refer to Appendix A), the lowest detection limits that could be achieved without sacrificing the accuracy of the method for analyzing Edgiflex-200 was 1 ppm for BTXE and 50 ppm for PAHs. The analytical laboratory also indicated that the compound has a carbon range which will match the diesel or heavier range.

• 1071 N. Batavia
Orange, CA 92667
714/282-5635
800/464-TANK
FAX: 714/282-5644

• 1963 N. Main St.
Orange, CA 92665

• 3050 Fite Circle
Suite 108
Sacramento, CA 95827

Engr. Contr. Lic.#
489994

An inquiry to the supplier and manufacturer of Edgiflex-200 to better define the chemical composition of the compound revealed the following:

"Edgiflex-200 general use oil was a blend of two oils each carefully refined from segregated, single source, virgin crude. The Edgiflex series oils were considered specialty products by Edgington. Edgiflex-200 was not, nor did it contain, reused petroleum oils or substances thought to be 'toxic'. Its boiling range was typically 550°F to above 900°F. This boiling range effectively excludes BTXE compounds.

"The flash point of Edgiflex-200 is well over 300°F, making the product safe at ambient and most elevated temperatures."

According to the president of Kirkhill, Inc., Mr. Gary Riopelle, "Edgiflex-200 was used by Kirkhill and other rubber manufacturers in the compounding of gaskets and washers for use with potable water in industry and homes."

No aromatics (BTXE) or PAHs were detected either in the soil samples collected at the site or in the source liquid that warrants a toxicologic risk assessment. Therefore, risk assessment to determine the acute or chronic toxic affects could not be performed for the site.

The UST under question was used to store Edgiflex-200. According to the MSDS sheet of the stored product, the common name is Naphthenic-type oil, generic name is Naphthenic distillate, chemical name is Petroleum Distillate, chemical family name is Petroleum Hydrocarbon and DOT proper shipping name is Petroleum Distillate. The product ingredients are a complex mixture of naphthenic, paraffinic and aromatic petroleum hydrocarbons.

In the past correspondence regarding the project, Los Angeles County Department of Public Works, Waste Management Division, UST Local Oversight Program (the County) expressed or implied that Edgiflex-200 contained naphthalene. Due to typographical errors made by TPE in past reports, TPE referenced 'naphthalene'. However, it is clarified that based on the available information on the compound, Edgiflex-200 contained **no** naphthalene.

The maximum TRPH detected and left in-place near the underground storage tank (UST) in question to date are 852 ppm at a depth of 15 feet below ground surface. Assuming that the Edgiflex-200 contained hydrocarbons in the range of diesel or heavier, and according to the leaching potential analysis conducted for the site (please refer to TPE reports dated June 5, 1990, April 15, 1991 and October 30, 1991), a total of 1,000 ppm of diesel could be left in-place. Therefore, it is requested that the County allow Kirkhill to leave the maximum detected 852 ppm of TRPH detected in a soil sample at 15 feet below ground surface (BGS) be left-in place and the site file be closed.

Following are the details on the field procedures and findings of the site assessment.

## DRILLING AND SOIL SAMPLING

Per the revised workplan and the County approved sampling locations, on July 14, 1992, TPE supervised drilling two 30-foot depth borings near the former Edgiflex-200 (naphthenic-type oil) UST using a mobile B-53 drill rig. Please refer to Figure 1 for the sampling locations.

As described in the workplan, soil samples were properly collected at five-foot intervals starting from five feet below ground surface (BGS) until the termination depth. Based on the field indications such as visual observations and field screening instrument (Flame Ionization Detector (FID)) readings, evidence of contamination was not observed. Therefore, drilling and sampling past 30 feet BGS in each boring was discontinued. Bore logs prepared for the site based on the soil sample description are provided in Appendix B.

According to the workplan, soil samples were collected using 2.5-inch-diameter by 3-inch-long brass tubes mounted within a Californian split-spoon sampler used in advance of the augers. Prior to sampling, all brass tubes were washed in an aqueous solution of Alconox detergent, rinsed with tap water, and then triple rinsed with distilled water. After sample recovery, the lowermost brass ring from each sample interval was immediately end-wrapped with aluminum foil, polyethylene caps taped over the ends, labeled, placed into an ice chest chilled using frozen blue ice, and relinquished to Redi Express, Rancho Cucamonga, CA, a courier service, to transportation to Applied P & Ch Laboratory (APCL), Pomona, CA, a State-certified laboratory. All the samples were logged and accompanied by a chain-of-custody record form.

A portable flame-ionization detector (FID) calibrated against hexane was used on the soil samples contained within the sampler at each sampling interval within the boring to monitor the volatile organic compounds (VOCs).

The sampling equipment was decontaminated prior to and between each sampling. The drilling augers were environmentally cleaned before the drilling process.

The soil cuttings generated during drilling were placed and sealed in four 17H DOT-approved 55-gallon drums. Based on the analytical results of the soil samples, it is determined that the soil cuttings could be disposed of by handling as a non-hazardous material.

## SAMPLE ANALYSES

According to the County review sheet on the workplan and a telephone conversation with Mr. Ofari Amoah on July 15, 1992, all twelve soil samples collected from the two borings were analyzed for TRPH using EPA Method 418.1. All samples with detectable TRPH were analyzed for BTXE using EPA Method 8020. One soil sample from each boring with highest TRPH was analyzed for PAHs using EPA Method 8100. In addition, a sample of the source liquid (Edgiflex-200) supplied by Kirkhill, Inc. was analyzed for BTXE and PAHs using EPA Method 8100. A summary of the analytical results is provided in Table 1. Copies of detailed analytical result reports and chain-of-custody record are provided in Appendix C. Per Mr. Amoah's request, a copy of the SDOHS certification on the methods to be performed at APCL are also provided in Appendix C.

TABLE 1: SUMMARY OF SAMPLE (COLLECTED ON 7/14/92) ANALYSES

| SAMPLE # | TRPH (mg/kg) | BTXE ug/kg | PAHs ug/kg |
|---|---|---|---|
| FB-1/5' | 13 | ND | ND |
| FB-1/10' | ND | - | - |
| FB-1/15' | 17 | ND | - |
| FB-1/20' | ND | - | - |
| FB-1/25' | 21 | ND | - |
| FB-1/30' | 25 | ND | ND |
| FB-2/5' | ND | - | - |
| FB-2/10' | 13 | ND | - |
| FB-2/15' | ND | - | - |
| FB-2/20' | 21 | ND | - |
| FB-2/25' | 91 | ND | ND |
| FB-2/30' | ND | - | - |
| Edgiflex-200* | - | ND* | ND* |
| DETECTION LIMIT | 10 | 1 | 50 |

* = Measurements are in mg/L. ND = Not detected - = Not analyzed

As shown in the table, the soil samples indicated TRPH concentrations in the range of ND (< 10 ppm) and 91 ppm. None of the samples indicated detectable levels of either BTXE or PAHs.

## RISK ASSESSMENT

As proposed in the revised workplan, a full-scale risk assessment for the subject site could not be conducted, as there were no detectable levels of suspected toxic chemicals in the subsurface soil or the source liquid (Edgiflex-200). However, based on the previously conducted leaching potential analysis, it is TPE's opinion that the maximum concentration of 852 ppm TRPH previously discovered in the previous investigation at the site could be left in-place.

## NOTIFICATION PROCEDURES

Upon obtaining the County review sheet on the TPE revised workplan, Kirkhill, Inc. authorized TPE to proceed with the plan in first week of July to implement the plan. Per the requirement, TPE notified Mr. Dave Lobato at (818) 458-4374 on the site assessment on July 8, 1992.

## SITE HEALTH AND SAFETY PLAN

The health and safety plan prepared for the site was implemented during the site assessment. Air monitoring near the drilling operations did not warrant level "C" personnel protection. Therefore the assess-

ment was conducted under level "D" protection. A statement on the health and safety plan implementation and compliance from the site personnel is provided in Appendix D.

## CLOSURE

It is TPE's opinion that the information provided in this report and in the previous site assessment conducted at the site adequately defines the problem and there is no imminent threat to environment or human health based on the compounds discovered near the location of the site under investigation. Therefore, it is requested that the County allow the maximum detected 852 ppm of TRPH be left in-place and to close the subject site file.

## LIMITATIONS

This report should be used solely for its intended purpose and within the limitations of our scope of work. Prior to use for other than its intended purpose or beyond the limitations described herein, sufficient and thorough studies should be performed to confirm the findings presented in this report.

Changes in conditions at a property can occur with the passage of time whether they be due to acts of man or natural causes. Due to increased knowledge, concerning hazardous materials, and subsequent code alterations by legislative or regulatory agencies, standards concerning the presence of hazardous material on the site could change.

If you have any questions and/or need further information, regarding this matter, please feel free to contact the undersigned.

Respectfully submitted,

**TANK PROTECT ENGINEERING**

Prepared by:

Ravi P. Pendurthi, REA
Project Manager/Hydrogeologist

Reviewed by:

Keith E. Green, R.G. 1413
Registered California State Geologist

REGISTERED GEOLOGIST
KEITH E. GREEN
1413
STATE OF CALIFORNIA

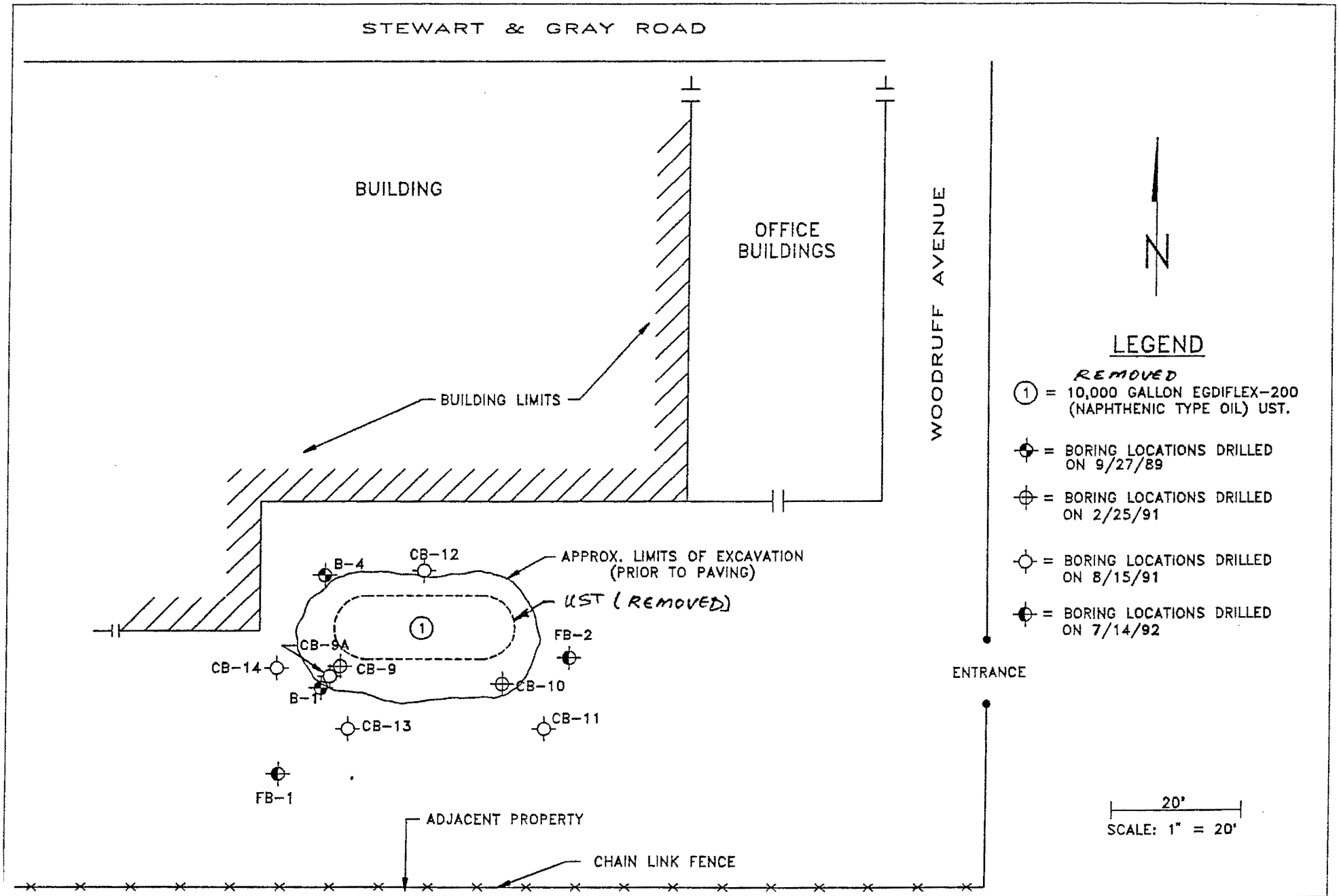
Enclosures: Figure 1
Appendices A - D

Distribution: (2) Addressee
(2) Kirkhill, Inc., Attn: Mr. Raymond Bellanger
(1) File

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# FIGURE 1

# SITE LOCATION MAP




| | | | |
|---|---|---|---|
| TPE ENVIRONMENTAL GROUP<br>1071 N. BATAVIA<br>ORANGE, CA. 92665 | ADDRESS:<br>KIRKHILL INC.<br>12021 WOODRUFF AVENUE<br>DOWNEY, CA. 90241 | SITE LOCATION MAP | DRAWN: P. LEWIS<br>APPROVED: R. PENDURTHI |
| | | DATE: 07/92<br>JOB #/FILE: 220/KRKHILL1 | SCALE: AS NOTED<br>FIGURE: 1 |

# APPENDIX A

# APPLIED P & Ch LABORATORY LETTER

RECEIVED JUL 27 1992

APCL *Applied P & Ch Laboratory*

4066 E. Mission Blvd.
Pomona, CA 91766
Tel. (714) 622-5148
Fax (714) 622-3199

24 July 1992

TPE Environmental Group
1963 N. Main St. PO Box 7066
Orange , CA 92613-7066
Attn: Ravi Pendurthi

Re: Laboratory Analyses

Dear Mr. Pendurthi:

Our analysis for your sample EDGIFLEX-200 from Kirkhill, Inc. indicates that the sample is diesel fuel or a type of lubrication oil. The sample is a mixture of organics (hydrocarbons) which mask the presence of polynuclear aromatic hydrocarbons (PAH). As a result, it cannot be concentrated to achieve a lower detection limit and, in fact, has to be diluted in order to get the response to your sample into the operating range of the GC. Consequently, we have 50ppm of MDL for your sample EDGIFLEX-200.

Sincerely,

George Zhou, Ph.D.
Service Manager
Applied P & Ch Laboratory

# APPENDIX B

# BORING LOGS

# —BORING LOG—



| PROJECT NO.: | PROJECT NAME: | SITE LOCATION |
|---|---|---|
| 220 | KIRKHILL INC. | 12021 WOODRUFF AVE. DOWNEY, CA. |

| LOGGED BY: | DRILL CO.: | DRILLER: | DRILL RIG: | BORING NO. |
|---|---|---|---|---|
| R. PENDURTHI | DRILL-LINE | JUNIOR/CHUCK | B-53 | FB-1 |

| DATE DRILLED: | BORING ELEV. | REF./DATUM | BORING DIAMETER | DRIVE WEIGHT: |
|---|---|---|---|---|
| 7/14/92 | | GROUND SURFACE | 6" | 140 LBS/6" |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES.

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION — LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | 1035 | ML | 3" ASPHALT, 3" BASE | 0 |
| 5 | ◀ | 6/10/12 | 1045 | | SILTY SAND: DARK BROWN, FINE, POORLY GRADED, COMPACT, BRITTLE SLIGHTLY MOIST. | 0 |
| 10 | ◀ | 8/14/18 | 1050 | ML | SILTY SAND: DARK BROWN, FINE, POORLY GRADED, COMPACT, BRITTLE SLIGHTLY MOIST. | 0 |
| 15 | ◀ | 5/7/15 | 1055 | ML | SILTY CLAY: BROWN, FINE, POORLY GRADED, COMPACT, SLIGHTLY PLASTIC, MOIST. | 0 |
| 20 | ◀ | 15/25/30 | 1058 | SM | FINE SAND: BROWN TO LIGHT BROWN, FINE, POORLY GRADED, LOOSE, BRITTLE, SLIGHTLY MOIST. | 0 |
| 25 | ◀ | 25/35/45 | 1102 | SM | FINE SAND: BROWN TO LIGHT BROWN, FINE, POORLY GRADED, LOOSE, BRITTLE, SLIGHTLY MOIST. | 0 |
| 30 | ◀ | 25/35 50 | 1107 | SP | SAND: SAME AS ABOVE — EXCEPT MORE COARSE GRAINS. | 0 |
| 35 | | | | | NOTES:<br>TOTAL DEPTH: 30'<br>NO VISIBLE INDICATION OF CONTAMINANTS<br>NO FIELD READINGS ON CONTAMINANTS | |
| 40 | | | | | | |
| 45 | | | | | | |
| 50 | | | | | | |

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNITURE: Raja. P. Pendurthi

\FB1LOG

# —BORING LOG—



| PROJECT NO.: | PROJECT NAME: | SITE LOCATION |
|---|---|---|
| 220 | KIRKHILL INC. | 12021 WOODRUFF AVE. DOWNEY, CA. |

| LOGGED BY: | DRILL CO.: | DRILLER: | DRILL RIG: | BORING NO. |
|---|---|---|---|---|
| R. PENDURTHI | DRILL-LINE | JUNIOR/CHUCK | B-53 | FB-2 |

| DATE DRILLED: | BORING ELEV. | REF./DATUM | BORING DIAMETER | DRIVE WEIGHT: |
|---|---|---|---|---|
| 7/14/92 | | GROUND SURFACE | 6" | 140 LBS/6" |

NOTE: THIS BORING LOG APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE TIME THE BORING WAS DRILLED. THE DESCRIPTIONS ON THIS LOG ARE NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT ANY OTHER LOCATIONS OR TIMES.

| DEPTH (FT.) | SAMPLE LOCATION | BLOWS/FOOT | TIME | LITHOLOGY U.S.C.S. | DESCRIPTION<br>LITHOLOGY, COLOR, GRAIN SIZE, SORTING/GRADING, DENSITY, HARDNESS, MOISTURE. | FID/PID VAPOR READING (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | 0935 | | 2.5" ASPHALT, 2" BASE | 0 |
| | | | | ML | | |
| 5 | | 8/10/18 | 0940 | | SILTY SAND: DARK BROWN, FINE, POORLY GRADED, COMPACT, BRITTLE SLIGHTLY MOIST. | 0 |
| 10 | | 7/12/20 | 0945 | ML | SILTY SAND: DARK BROWN, FINE, POORLY GRADED, COMPACT, BRITTLE SLIGHTLY MOIST. | 0 |
| 15 | | 5/10/20 | 0952 | ML | SILTY CLAY: BROWN, FINE, POORLY GRADED, COMPACT, SLIGHTLY PLASTIC, MOIST. | 0 |
| 20 | | 20/30 /40 | 1000 | SM | FINE SAND: BROWN TO LIGHT BROWN, FINE, POORLY GRADED, LOOSE, BRITTLE, SLIGHTLY MOIST. | 0 |
| 25 | | 20/30 /40 | 1007 | SM | FINE SAND: BROWN TO LIGHT BROWN, FINE, POORLY GRADED, LOOSE, BRITTLE, SLIGHTLY MOIST. | 0 |
| 30 | | 25/45 /50 | 1015 | SP | SAND: SAME AS ABOVE – EXCEPT MORE COARSE GRAINS. | 0 |
| 35 | | | | | NOTES:<br>TOTAL DEPTH: 30'<br>NO VISIBLE INDICATION OF CONTAMINANTS<br>NO FIELD READINGS ON CONTAMINANTS | |
| 40 | | | | | | |
| 45 | | | | | | |
| 50 | | | | | | |

TPE ENVIRONMENTAL GROUP
1071 N. BATAVIA
ORANGE, CA. 92665

LOGGERS SIGNITURE: Rad. P. Pendurthi

\FBLOG2

# APPENDIX C

# ANALYTICAL RESULTS & CHAIN-OF-CUSTODY

Applied P & Ch Laboratory
4066 E. Mission Blvd., Pomona CA 91766
Tel: (714) 622-5148 Fax: (714) 622-3199

RECEIVED JUL 2 2 1992

# APCL Analytical Report

Submitted to:
TPE Environmental Group
Attention: Ravi
1963 N. Main St. PO Box 7066
Orange, CA 92613
Tel: (714)282-5635 Fax: (714)282-5644

Service ID #: 801-922464
Collected by: Ravi P.
Collected on: 07/14/92
Sample description:
Soil Samples (FB-1, FB-2) from Kirichill, Inc.
(Job# 220, PO# 09567)

Received : 07/14/92
Tested : 07/17-20/92
Reported : 07/20/92

## Analysis of Soil



| Component Analyzed | Method | Unit | MDL | Concentration FB-1/10' 92-2464-2 | FB-1/20' 92-2464-4 | FB-2/ 5' 92-2464-7 | FB-2/15' 92-2464-9 | FB-2/30' 92-2464-12 | FB-1/ 5' 92-2464-1 |
|---|---|---|---|---|---|---|---|---|---|
| **TRPH** | 418.1 | mg/kg | 10 | N.D. | N.D. | N.D. | N.D. | N.D. | 13 |
| **Benz. Tolu. Xylen. Ethylbenz. (BTXE)** | | | | | | | | | |
| Benzene | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |
| Toluene | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |
| Ethylbenzene | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |
| m-Xylene | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |
| o-Xylene/p-Xylene | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |
| **BTXE, Total** | 8020 | µg/kg | 1 | — | — | — | — | — | N.D. |

| Component Analyzed | Method | Unit | MDL | FB-1/15' 92-2464-3 | FB-1/25' 92-2464-5 | FB-2/10' 92-2464-8 | FB-2/20' 92-2464-10 | FB-1/30' 92-2464-6 | FB-2/25' 92-2464-11 |
|---|---|---|---|---|---|---|---|---|---|
| **TRPH** | 418.1 | mg/kg | 10 | 17 | 21 | 13 | 21 | 25 | 91 |
| **Benz. Tolu. Xylen. Ethylbenz. (BTXE)** | | | | | | | | | |
| Benzene | 8020 | µg/kg | 1 | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Toluene | 8020 | µg/kg | 1 | N.D. | N.D. | N.D | N.D. | N.D. | N.D. |
| Ethylbenzene | 8020 | µg/kg | 1 | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| m-Xylene | 8020 | µg/kg | 1 | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| o-Xylene/p-Xylene | 8020 | µg/kg | 1 | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| **BTXE, Total** | 8020 | µg/kg | 1 | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| **Polynuclear Aromatic Hydrocarbons** | | | | | | | | | |
| Acenaphthene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Acenaphthylene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Anthracene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Benzo(a)anthracene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Benzyl(a)pyrene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Benzo(b)fluoranthene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Benzo(k)fluoranthene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Benzo(ghi)perylene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |

Applied P & Ch Laboratory
4066 E. Mission Blvd., Pomona CA 91766
Tel: (714) 622-5148 Fax: (714) 622-3199

# APCL Analytical Report

## Analysis of Soil



| Component Analyzed | Method | Unit | MDL | Concentration FB-1/15' 92-2464-3 | FB-1/25' 92-2464-5 | FB-2/10' 92-2464-8 | FB-2/20' 92-2464-10 | FB-1/30' 92-2464-6 | FB-2/25' 92-2464-11 |
|---|---|---|---|---|---|---|---|---|---|
| Chrysene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Dibenzo(a,h)anthracene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Fluoranthene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Fluorene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Indeno(1,2,3-cd)pyrene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Naphthalene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Phenanthrene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |
| Pyrene | 8100 | µg/kg | 50 | — | — | — | — | N.D. | N.D. |

MDL : Method Detection Limit
— : The analysis has not been required for that sample.
N.D. : Not Detected in this analysis, or less than the method detection limit.

Respectfully submitted,

Jack Zhang

Jack Y. Zhang, Ph. D.,
Director
Applied P & Ch Laboratory

# APCL

## Applied P & Ch Laboratory

4066 E. Mission Blvd., Pomona CA 91766
Tel: (714) 622-5148 Fax: (714) 622-3199

# Chain of Custody

Please Print in pen

Page _____ of _____

| | | | |
|---|---|---|---|
| Client: TPE Environmental Inc. | Contact: Ravi | Tel: (714) 282-5635 | Fax: (714) 282-5644 |
| Address: 1963 E. Main St., PO Box 7066 | City: Orange | State: CA | Zip code: 92613-7066 |
| Project Title/Code KIRKHILL, INC. | Job# 220 | PO# 09567 | Sampler RAVI PENDURTHI |
| Project Address 12021 WOODRUFF AVENUE, DOWNEY, CA 90241 | | | |
| Due date ☒ regular ☐ rush days | Client signature Ravi P. Pendurthi | Date 7/14/92 | |

| Field NO. | Sample Desc. | Date Collected | Time | Soil/Water | Analysis items | Remark |
|---|---|---|---|---|---|---|
| FB-1/5' | FROM BORING FB-1 | 7/14/92 | 10:45 | SOIL, CAL. SPLIT SPOON SAMPLING | 418.1 (TRPH) | ANALYZE HIGHEST TPH SAMPLES |
| FB-1/10' | ↓ | ↓ | 10:50 | ↓ | ↓ | FOR 8100 PNA AND 8020 (BTXE) |
| FB-1/15' | | | 10:55 | | | — ONE FROM EACH BOREHOLE. |
| FB-1/20' | | | 11:02 | | | IF TRPH IS NON DETECT, |
| FB-1/25' | | | 11:07 | | | PLEASE ANALYZE THE SAMPLE |
| FB-1/30' | ↓ | | 11:12 | | | AT 30' DEPTH FROM EACH |
| FB-2/5' | FROM BORING FB-2 | | 9:30 | | | BORING (TOTAL TWO). |
| FB-2/10' | ↓ | | 9:35 | | | DETECTION LIMITS LER LA |
| FB-2/15' | | | 9:40 | | | COUNTY (TRPH 10 MG/KG) |
| FB-2/20' | | | 9:45 | | | |
| FB-2/25' | | | 9:50 | | | |
| FB-2/30' | ↓ | ↓ | 10:00 | ↓ | ↓ | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Sample Conditions: Seal ☒ Intact ☒ Broken ☐ None; Temperature ☒ Cold ☐ Room; Other

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by | Ravi P. Pendurthi | Date/Time 7/14/92 3:20 pm | Received by | Ravi Courtney | Date/Time 7/14/92 3:20 p.m |
| Relinquished by | Ravi Courtney | Date/Time 7/14/92 4:05 | Received by | Colleen Neal | Date/Time 7/14/92 4:05p |
| Relinquished by | | Date/Time | Received by | | Date/Time |
| Relinquished by | | Date/Time | Received by | | Date/Time |

APCL USE ONLY Service # № 24054 Note:

Note: Samples are discarded 30 days after received unless prearrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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Applied P & Ch Laboratory
4066 E. Mission Blvd., Pomona CA 91766
Tel: (714) 622-5148 Fax: (714) 622-3199

# APCL Analytical Report

Submitted to:
TPE Environmental Group
Attention: Ravi
1963 N. Main St. PO Box 7066
Orange, CA 92613
Tel: (714)282-5635 Fax: (714)282-5644

Service ID #: 801-922467 Received : 07/14/92
Collected by: R. P. Tested : 07/18-19/92
Collected on: 07/14/92 Reported : 07/19/92
Sample description:
EDGIFLEX - 200 (Source Liquid) from Kirkhill Inc.

## Analysis of Liquid

801-922467 Page 1 of 1

| Component Analyzed | Method | Unit | MDL | Concentration EDGIFLEX-200 92-2467-1 |
|---|---|---|---|---|
| **Polynuclear aromatics** | | | | |
| Acenaphthene | 8100 | mg/L | 50 | N.D. |
| Acenaphthylene | 8100 | mg/L | 50 | N.D. |
| Anthracene | 8100 | mg/L | 50 | N.D. |
| Benzo(a)anthracene | 8100 | mg/L | 50 | N.D. |
| Benzyl(a)pyrene | 8100 | mg/L | 50 | N.D. |
| Benzo(b)fluoranthene | 8100 | mg/L | 50 | N.D. |
| Benzo(k)fluoranthene | 8100 | mg/L | 50 | N.D. |
| Benzo(ghi)perylene | 8100 | mg/L | 50 | N.D. |
| Chrysene | 8100 | mg/L | 50 | N.D. |
| Dibenzo(a,h)anthracene | 8100 | mg/L | 50 | N.D. |
| Fluoranthene | 8100 | mg/L | 50 | N.D. |
| Fluorene | 8100 | mg/L | 50 | N.D. |
| Indeno(1,2,3-cd)pyrene | 8100 | mg/L | 50 | N.D. |
| Naphthalene | 8100 | mg/L | 50 | N.D. |
| Phenanthrene | 8100 | mg/L | 50 | N.D. |
| Pyrene | 8100 | mg/L | 50 | N.D. |
| **Benz. Tolu. Xylen. Ethylbenz. (BTXE)** | | | | |
| Benzene | 8020 | mg/L | 1 | N.D. |
| Toluene | 8020 | mg/L | 1 | N.D. |
| Ethylbenzene | 8020 | mg/L | 1 | N.D. |
| m-Xylene | 8020 | mg/L | 1 | N.D. |
| o-Xylene/p-Xylene | 8020 | mg/L | 1 | N.D. |
| **BTXE, Total** | 8020 | mg/L | 1 | N.D. |

MDL : Method Detection Limit
N.D. : Not Detected in this analysis, or less than the method detection limit.

Respectfully submitted,

Jack Y. Zhang, Ph. D.,
Director
Applied P & Ch Laboratory

# APCL

## Applied P & Ch Laboratory

4066 E. Mission Blvd., Pomona CA 91766
Tel: (714) 622-5148 Fax: (714) 622-3199

# Chain of Custody

Please Print in pen
Page 1 of 1

| | | | | |
|---|---|---|---|---|
| Client: TPE Environmental Inc. | | Contact: Ravi | Tel: (714) 282-5635 | Fax: (714) 282-5644 |
| Address: 1963 E. Main St., PO Box 7066 | | City: Orange | State: CA | Zip code: 92613-7066 |
| Project Title/Code | KIRKHILL, INC. | Job# 220 | PO# 09567 | Sampler RAVI PENDURTHI |
| Project Address | 12021 WOODRUFF AVENUE, DOWNEY, CA 90241 | | | |
| Due date ☒ regular ☐ rush days | | Client signature | Ravi P. Pendurthi | Date 7/14/92 |

| Field NO. | Sample Desc. | Date Collected | Time Collected | Soil/Water | Analysis items | Remark |
|---|---|---|---|---|---|---|
| EDGIFLEX-200 | SOURCE LIQUID | 7/14/92 | 11:00am | LIQUID | 8100 PNA AND 8020 BTXE | |
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Sample Conditions: Seal ☒ Intact ☒ Broken ☐ None; Temperature ☒ Cold ☐ Room; Other

| | | | |
|---|---|---|---|
| Relinquished by | Ravi P. Pendurthi Date/Time 7/14/92 3:20pm | Received by | Date/Time 7/14 3:20pm |
| Relinquished by | Date/Time | Received by | Date/Time |
| Relinquished by | Date/Time | Received by | Date/Time |
| Relinquished by | Date/Time | Received by | Date/Time |
| APCL USE ONLY Service # | 9207 | Note: | #2467 |

Note: Samples are discarded 30 days after received unless prearrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

# APPENDIX D

# SITE HEALTH & SAFETY COMPLIANCE STATEMENT

## HEALTH AND SAFETY COMPLIANCE STATEMENT

The undersigned certify that they have received, read and understood the procedues and requirements contained in the Health and Site Safety Plan prepared for this project.

Further, the undersigned have received proper training under the Occupational Safety and Health Act (29 CFR, Part 1910.120) prior to conducting any activities at the site.

| NAME/TITLE | SIGNATURE | DATE |
|---|---|---|
| Chuck Parra (Driller) | | 7-14-92 |
| Luapo F. Sefo. Jr (Helper) | Luapo F. Sefo. Jr. | 071492 |
| Adam Pudlicki | | 7-14-92 |
| RAVI PENDURTHI/SSOG Pm | Ravi P. Pendurthi | 7/14/92 |
| | | |
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| | | |

# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460


May 12, 1992

IN REPLY PLEASE REFER TO FILE. I-12987

Mr. Ray Ballenger
Kirkhill, Inc.
P. O. Box 7012
Downey, CA 90241-0030

Dear Mr. Ballenger:

**UST LOCAL OVERSIGHT PROGRAM REVIEW SHEET**
**CLOSURE PERMIT NO. 5999B**
**LOCATION: 12021 WOODRUFF AVENUE, DOWNEY**

The proposal to drill additional borings has been reviewed and approved. Borings must be drilled to 30 feet at the locations shown in the attached plot plan. If contamination is encountered at 30 feet borings must be drilled to five and 15 feet below the last detected contamination. Analyze all soil samples collected at every five feet using a State certified laboratory. Using the highest levels of total recoverable petroleum hydrocarbons by EPA 418.1 Method, analyze for naphthalene using EPA methods 8100 and 8020. As discussed at the meeting of April 6, 1992 based on the highest levels of contamination prepare a health-based risk assessment report demonstrating that the contaminants left in place will not cause a threat to human health and/or groundwater.

Use all necessary precautions and comply with all NIOSH requirements of Health and Safety for the protection of all personnel during the drilling operations.

Submit a Site Assessment Report and Risk Assessment Report on/before July 30, 1992.

Notify Dave Lobato at (818) 458-4374 a minimum of 72 hours prior to commencing any significant investigation, remediation, or assessment activities on site. The Los Angeles County Department of Public Works may disregard the work performed if the County was not properly notified.

Correspondence should be submitted in duplicate to the Los Angeles County Department of Public Works, UST Local Oversight Program, Annex Building, P. O. Box 1460, Alhambra, CA 91802-1460.

If you have any questions regarding this matter, please contact Ofori Amoah at (818) 458-3573.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

By _____
Ofori Amoah
UST Local Oversight Program
Waste Management Division

Reviewed _____
Pat Proano, P. E.
Supervising Civil Engineer II
Waste Management Division

OKA:rm
WP/12987

cc: California Regional Water Quality Control Board
Tank Protect Engineering

# ENVIRONMENTAL LIEN & AUL REPORT

**Order # 18-220634.1**
**AFX Reference # 79-82127-47**

**KIRKHILL**
**12021 WOODRUFF AVENUE**
**DOWNEY, CA 90241**

**Completed 08/29/2018**


**AFX RESEARCH, LLC**

*A Quarter-Century of Title Document Research Expertise*

999 Monterey St. Suite 380, San Luis Obispo, CA 93401

(877) 848-5337 / www.afxllc.com

# ENVIRONMENTAL LIEN & AUL SEARCH REPORT (pg. 2)

Order # 18-220634.1 | Reference # 79-82127-47 | Completed 08/29/2018

## SOURCES SEARCHED

| | |
|---|---|
| Source 1: | LOS ANGELES COUNTY RECORDER'S OFFICE |
| Source 2: | CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY |
| Source 3: | UNITED STATES ENVIRONMENTAL PROTECTION AGENCY |

## TARGET PROPERTY

| | |
|---|---|
| Site Name: | KIRKHILL |
| Current Owner(s): | FELCHCO INVESTMENT GROUP LLC |
| Street Address: | 12021 WOODRUFF AVENUE |
| City, State Zip Code: | DOWNEY, CA 90241 |
| APN/Parcel/PIN: | 6284-025-018 County: LOS ANGELES |
| Legal Description: | RANCHO SANTA GERTRUDES SECTIONS, TOWNSHIP AND RANGE LOT (EX OF ST) COM N 175 FT FROM SE COR OF NE 1/4 OF SEC 10 T 3S R 12W TH N 432.15 FT TH W 686.27 FT TH S TO A LINE PARALLEL 1/4 OF NE 1/4 OF LOT 10 |

## PROPERTY OWNERSHIP

### GRANT DEED

| | | | |
|---|---|---|---|
| Date Recorded: | 12/20/2013 | Instrument: | 1792289 |
| Dated: | 11/04/2013 | | |
| Grantor(s): | FREEWAY DRIVE LLC AND PAINTER AVENUE LLC | | |
| Grantee(s): | FELCHCO INVESTMENT GROUP LLC | | |

## ENVIRONMENTAL LIENS

NO ENVIRONMENTAL LIENS WERE FOUND FOR SUBJECT PROPERTY.

## ACTIVITY AND USE LIMITATIONS (AUL)

NO AUL WERE FOUND FOR SUBJECT PROPERTY.

## LEASES AND MISCELLANEOUS INSTRUMENTS

NO LEASES OR MISCELLANEOUS INSTRUMENTS FOUND FOR SUBJECT PROPERTY.

## THANK YOU FOR YOUR ORDER

## For questions, please contact our office at 1-877-848-5337.

**Order # 18-220634.1**

**AFX Reference # 79-82127-47**

Our Environmental Lien and AUL report provides a summary of recorded information on a specific property from the time the current owner purchased the property, to present time. The report is intended to assist in the search for environmental liens filed in land title records. The report will verify property ownership and provide information on recorded environmental liens and/or Activity and Use Limitations that have been recorded from the time the current owner purchased the property, forward.

Our professional network of trained researchers follow established industry protocols and use client-supplied property information to complete this Environmental Lien and AUL report. The research is conducted at all appropriate government offices based on the location of the subject property. This would include city, county, state, federal and tribal offices as needed. The report includes:

- Current deed information (i.e. grantor, grantee, recording dates)
- Legal Description
- Environmental Lien information
- Activity and Use Limitation information
- Copies of any Environmental Liens and/or documents referencing AULs that are listed within our summary report


**-Disclaimer-**

This report was prepared for the use of **AFX Research LLC** (AFX), exclusively. This report is neither a guarantee of title, a commitment to insure, nor a policy of title insurance. **NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT.** AFX specifically disclaims the making of any such warranties, including without limitation, merchantability or fitness for a particular use or purpose. The information contained in this report is retrieved as it is recorded from the various agencies that make it available. The total liability is limited to the fee paid for this report.

# Division of Oil, Gas & Geothermal Resources - Well Finder

Find By Location

Find My Current Location

or

Street: 12023 Woodruff Avenue

City: Downey

Zip: 90241 Find

Display a 1500 foot buffer

Buffer radius is limited to 10 mi (52800ft).

Find By API

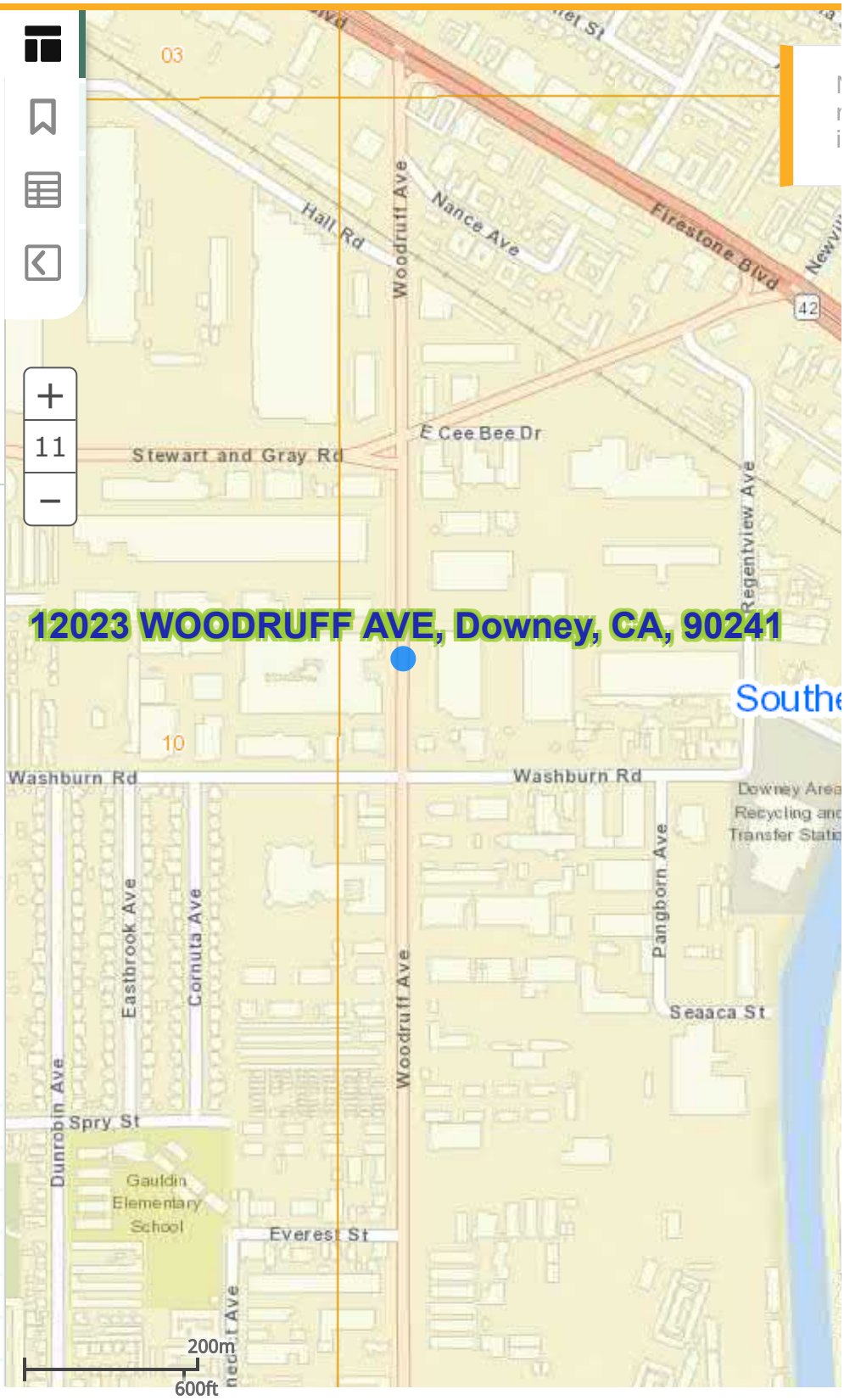
Find By Lat, Long

Find By PLSS

Find By Oil/Gas Field

Data (Layers):

- Notices & Permits
- DOGGR Wells
  - Label: API# Well# Detailed
  - EPA Wells for Aquifer Exemption Review
    - Enhanced Oil Recovery Wells
    - Disposal Wells
- TR26 Onshore Seeps
- Oil/Gas Fields
- California Geologic Map
- DOGGR Districts
- Public Land Survey System
- Cities
- State Assembly Districts

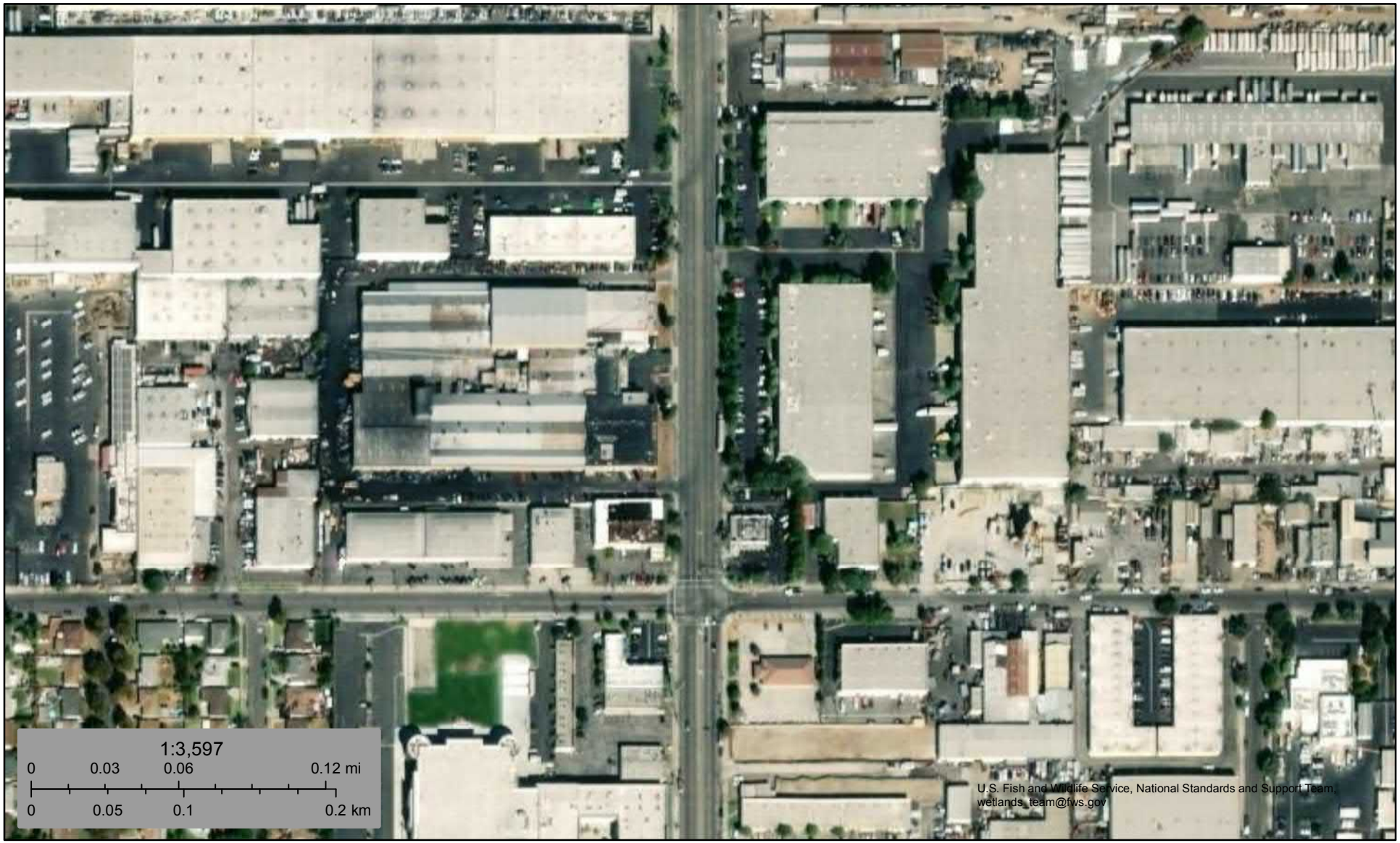



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U.S. Fish and Wildlife Service

# National Wetlands Inventory

## Kirkhill




September 19, 2018

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Soil Map—Los Angeles County, California, Southeastern Part
(Kirkhill)




Map Scale: 1:1,290 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Los Angeles County, California, Southeastern Part
Survey Area Data: Version 4, Sep 12, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 13, 2015—Mar 28, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| 1000 | Urban land-Hueneme, drained-San Emigdio complex, 0 to 2 percent slopes | 8.1 | 100.0% |
| **Totals for Area of Interest** | | **8.1** | **100.0%** |

# Los Angeles County, California, Southeastern Part

## 1000—Urban land-Hueneme, drained-San Emigdio complex, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 2lts5
*Elevation:* 10 to 300 feet
*Mean annual precipitation:* 12 to 16 inches
*Mean annual air temperature:* 64 to 66 degrees F
*Frost-free period:* 350 to 365 days
*Farmland classification:* Prime farmland if irrigated and drained

### Map Unit Composition

*Urban land:* 45 percent
*Hueneme, drained, and similar soils:* 20 percent
*San emigdio and similar soils:* 15 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Urban Land

#### Setting

*Landform:* Alluvial fans

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* 0 inches to manufactured layer
*Runoff class:* Very high
*Frequency of flooding:* Rare

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 8
*Hydric soil rating:* No

### Description of Hueneme, Drained

#### Setting

*Landform:* Alluvial fans
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Discontinuous human-transported material over mixed alluvium derived from granite and/or sedimentary rock

#### Typical profile

*A - 0 to 5 inches:* sandy loam
*C1 - 5 to 16 inches:* sandy loam
*C2 - 16 to 22 inches:* loamy fine sand
*C3 - 22 to 31 inches:* very fine sandy loam
*C4 - 31 to 53 inches:* fine sandy loam

*C5 - 53 to 77 inches:* silt loam
*C6 - 77 to 79 inches:* loamy sand

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Natural drainage class:* Somewhat poorly drained
*Runoff class:* Very low
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* Rare
*Frequency of ponding:* None
*Calcium carbonate, maximum in profile:* 5 percent
*Salinity, maximum in profile:* Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
*Sodium adsorption ratio, maximum in profile:* 8.0
*Available water storage in profile:* Moderate (about 8.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* B
*Hydric soil rating:* No

## Description of San Emigdio

**Setting**

*Landform:* Alluvial fans
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Discontinuous human-transported material over mixed alluvium derived from granite and/or sedimentary rock

**Typical profile**

*A - 0 to 4 inches:* fine sandy loam
*C1 - 4 to 16 inches:* fine sandy loam
*C2 - 16 to 20 inches:* silt loam
*C3 - 20 to 39 inches:* sandy loam
*C4 - 39 to 67 inches:* loamy sand

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Natural drainage class:* Well drained
*Runoff class:* Very low
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* Rare
*Frequency of ponding:* None
*Calcium carbonate, maximum in profile:* 5 percent

*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water storage in profile:* Moderate (about 6.5 inches)

**Interpretive groups**
*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 3e
*Hydrologic Soil Group:* B
*Hydric soil rating:* No

**Minor Components**

**Pico**
*Percent of map unit:* 10 percent
*Landform:* Alluvial fans
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Xerorthents**
*Percent of map unit:* 5 percent
*Landform:* Alluvial fans
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Metz**
*Percent of map unit:* 5 percent
*Landform:* Alluvial fans
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

# Data Source Information

Soil Survey Area: Los Angeles County, California, Southeastern Part
Survey Area Data: Version 4, Sep 12, 2017

# National Flood Hazard Layer FIRMette

FEMA




Feet

0 250 500 1,000 1,500 2,000

1:6,000

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

**OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

**GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**
- Digital Data Available
- No Digital Data Available
- Unmapped

N

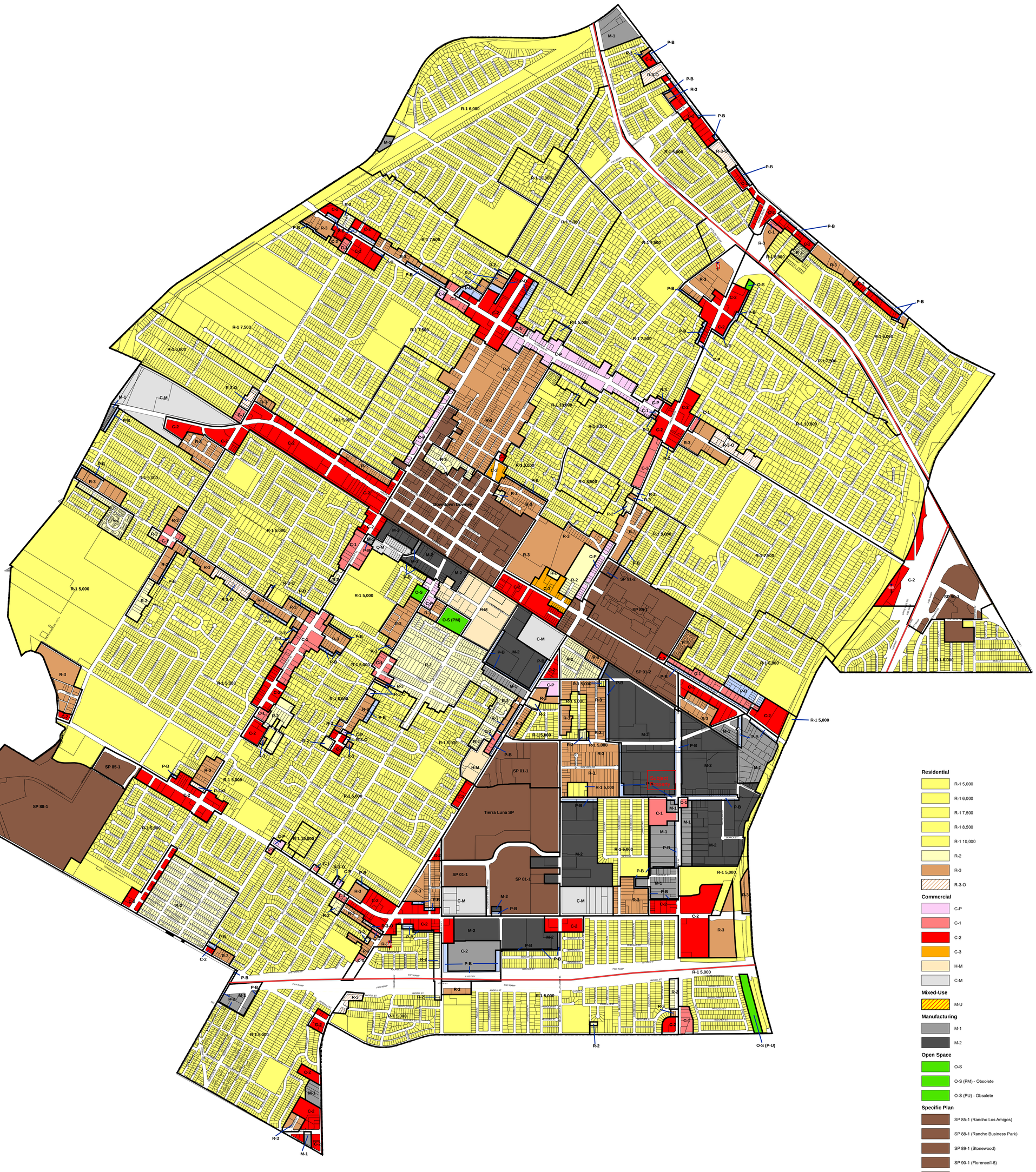
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/17/2018 at 9:24:06 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# City of Downey




**Residential**
- R-1 5,000
- R-1 6,000
- R-1 7,500
- R-1 8,500
- R-1 10,000
- R-2
- R-3
- R-3-O

**Commercial**
- C-P
- C-1
- C-2
- C-3
- H-M
- C-M

**Mixed-Use**
- M-U

**Manufacturing**
- M-1
- M-2

**Open Space**
- O-S
- O-S (PM) - Obsolete
- O-S (PU) - Obsolete

**Specific Plan**
- SP 85-1 (Rancho Los Amigos)
- SP 88-1 (Rancho Business Park)
- SP 89-1 (Stonewood)
- SP 90-1 (Florence/I-5)
- SP 91-2 (Lakewood/Firestone)
- SP 01-1 (Downey Landing)
- DDSP (Downtown Downey)
- TLSP (Tierra Luna)

**Other**
- P
- PUD
- P-B - Obsolete
- Parcels

This is not the official zoning map. The official zoning map is on file with the City of Downey Planning Division. While every effort has been made to ensure the accuracy of this map the data contained herein was compiled from various sources, which may contain inaccurate information. Furthermore, zoning designations are subject to periodic changes, which may not be reflected on this map. As such, this map should only be used as a general purpose map.

You are advised to confirm the zoning designation of any particular parcel prior to proceeding with a land use decision or development project.

The City of Downey Planning Division may be contact at:

City of Downey - City Hall
First Floor
11111 Brookshire Avenue
Downey, CA 90241

Phone - (562) 904-7154

# Zoning Map

## Community Development Department - Planning Division

Updated By: D. Blumenthal on October 3, 2012 (up to Ord. 12-1303)

1,000 500 0 1,000 2,000 3,000 4,000

Feet

City of Downey

# 2017 Annual Water Quality Report



## A Message from the Downey Utilities Division

The City's water supply and distribution system is operated by the City of Downey Department of Public Works. Our water supply and distribution system is composed of 20 groundwater wells located throughout the City and approximately 276 miles of distribution pipeline with diameters ranging from 4 to 24 inches. Our groundwater wells provide one hundred percent of our domestic water supply. As a result, City of Downey residents are able to enjoy one of the least expensive water rates in Southern California.

In 2017, the City of Downey water system delivered more than 4.7 billion gallons of potable (i.e. drinking) water to approximately 112,500 residential, commercial, and industrial customers via 23,500 metered connections. In an effort to conserve water, the City utilizes recycled water to offset potable water needs by as much as 5.1% of the City's overall water demand through the application of recycled water for landscaping irrigation, dual-plumbed buildings, lakes, and ponds at 96 sites located throughout the City. Trained water distribution system operators, operate, inspect, repair, and replace these critical components of our drinking water infrastructure.

## Committed to Providing Quality Water

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2017. Over the years, we have dedicated ourselves to producing drinking water that meets all State and Federal standards. As new challenges to drinking water quality emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. This report summarizes information regarding water sources used, any detected contaminants, compliance, and educational information.

During 2017, as in years past, your tap water met all U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Water Board) health standards. There were no violations of a contaminant level or of any other water quality standard during 2017. We are always available to assist you with any questions or concerns you may have about your water by calling us at (562) 904-7202.

## Source Water Assessment

An assessment of the City's drinking water sources was completed in 2003 by the State Department of Drinking Water. The sources are considered most vulnerable to the following activities: automobile gas stations, dry cleaners, injection wells, dry wells, sumps, metal plating, finishing, fabricating, fleet truck, bus terminals, furniture repair, manufacturing, machine shops, and National Pollutant Discharge Elimination System (NPDES)/Waste Discharge Requirement permitted discharges. A copy of the complete assessment is available by contacting the SWRCB-DDW at (818) 551-2004 or by calling the City of Downey Utilities Division at (562) 904-7202.

## Contaminants That May Be Present in Source Water Include

**Microbial contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**Inorganic contaminants,** such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and herbicides,** that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

**Organic chemical contaminants,** including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

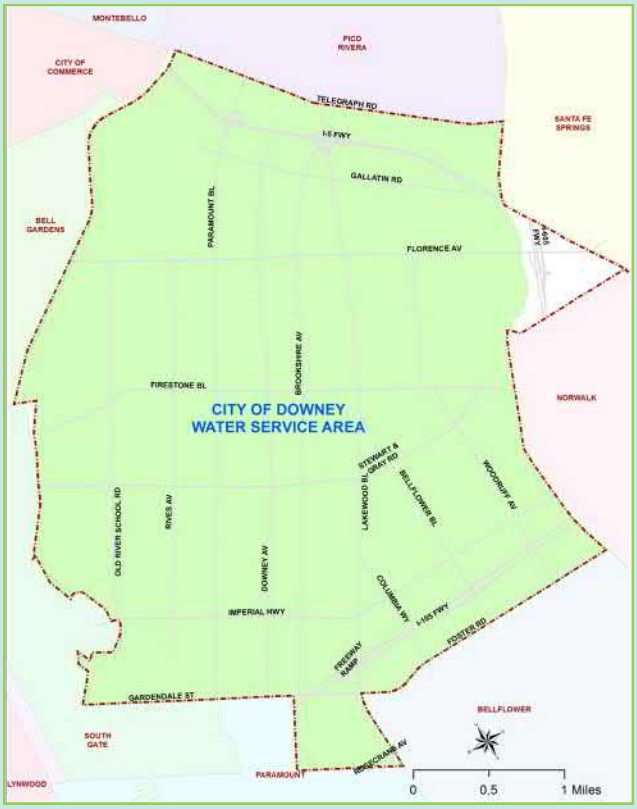
**Radioactive contaminants,** that can be naturally-occurring or be the result of oil and gas production and mining activities.

## *Your Water Supply*

Downey's groundwater is pumped from the Central Groundwater Basin. The Central Basin is a series of large natural aquifers below the ground that stretch from Los Angeles to Orange County.

The City of Downey conveniently overlies the Central Basin. Groundwater from the Central Basin is pumped from 20 wells located within the City's boundaries and provides the City with its principal source of potable water. The City's service area is shown on the map to the right.

The Central Basin receives natural inflows from the conservation of rainfall and snow melt, artificial inflows from imported and recycled water, as well as groundwater underflow from adjacent basins. Surface water slowly percolates through the ground to the aquifers and the ground acts as a natural filter to clean the water.




## *Spreading Grounds*

Spreading grounds located at the major inflows from the Rio Hondo and San Gabriel Rivers of the Montebello Forebay, allow water from various sources to artificially seep down into the Central Basin aquifers. The ground acts as a natural filter to clean the water as it percolates to the aquifer.



***Thank you for doing your part in conserving water and helping to protect our local groundwater!***



During the past year over, we tested our water for over 100 regulated contaminants in order to determine the presence of any biological, inorganic, volatile organic or synthetic organic, and radioactive contaminants. The following table includes those contaminants that were detected in the water. Both Federal and State regulations require us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included.

## Lead and Copper

Lead can cause serious health problems if present at elevated levels, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Lead can be released when your tap water comes in contact with pipes and plumbing fixtures containing lead. The City of Downey is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (1-800-426-4791) or at http://www.epa.gov/safewater/lead

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. U.S. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (1-800-426-4791)



## Federal and State Water Quality Regulations

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Water Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The State Water Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling U.S. EPA's Safe Drinking Water Hotline at (1-800-426-4791). The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

Additional information regarding bottled water is available on the California Department of Public Health website https://www.cdph.ca.gov/Programs/CEH/DFDCS/Pages/FDBPrograms/FoodSafetyProgram/Water.aspx

## Substances that Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

## Water Conservation Tips

As California continues to deal with the effects of the drought, the City of Downey encourages everyone to look closely at their water usage habits and for ways to use less water and help meet the State's latest conservation requirements.

### Use Drought Tolerant Landscaping

For every square foot of grass lawn replaced with attractive drought tolerant landscaping, 40-60 gallons of water can be saved annually.



### Mulch Around your Plants

Mulch helps retain maximum moisture. Mulch reduces water lost to evaporation. Up to 80% of rainwater will evaporate where no mulch is used.

### Find and Fix Leaks

Locate your water meter and check the leak indicator. Make sure no water is being used inside or outside your home at this time. If the leak indicator is spinning, this means you may have found a leak. Leaks should be repaired within 48 hours.

### Low Flow Fixtures

By installing low-flow aerators that utilize a maximum of 1.5 gallons per minute you can help reduce a sink's water used by 30% or more from the standard flow of 2.2 gallons per minute.

# Only Water What Is Necessary

| CITY OF DOWNEY OUTDOOR WATER SCHEDULE | |
|---|---|
| **FALL/WINTER** October 1-April 30 | **SPRING/SUMMER** May 1-September 30 |
| NO MORE THAN 2 DAYS PER WEEK | NO MORE THAN 3 DAYS PER WEEK |
| ODD Numbered Addresses: (Ending in 1, 3, 5, 7, 9)<br>Mondays, Wednesdays and/or Fridays | |
| EVEN Numbered Addresses: (Ending in 0, 2, 4, 6, 8)<br>Tuesday, Thursday, and/or Saturdays | |
| NO WATERING BETWEEN 8AM AND 7 PM<br>*PENALTIES UP TO $500 PER DAY FOR NON-COMPLIANCE MAY BE ENFORCED | |

# City of Downey 2017 Water Quality Analyses Results

## Primary Standards (Monitored for Health Concerns)

| Substance (Unit) | MCL (SMCL) | PHG (MCLG) | Average | Range (Low-High) | Violation | Typical Source of Contaminant |
|---|---|---|---|---|---|---|
| **Microbiological** | | | | | | |
| Total Coliform Bacteria (%) (State Total Coliform Rule) | 5 | (0) | Highest Monthly Average= (2.2%) | Water System Range = (0 - 2.2) | NO | Naturally present in the environment |
| **Radiologicals** | | | | | | |
| Gross Alpha Particle Activity (pCi/L) | 15 | (0) | ND | ND - 4.54 | NO | Erosion of natural deposits |
| Uranium (pCi/L) | 20 | 0.43 | 2.1 | ND - 3.8 | NO | Erosion of natural deposits |
| **Volatile Organic Compounds** | | | | | | |
| Tetrachloroethylene (PCE) (ppb) | 5 | 0.06 | ND | ND - 3.0 | NO | Discharge from factories, dry cleaners, and auto shops (metal degreaser) |
| Trichloroethylene (TCE) (ppb) | 5 | 1.7 | ND | ND - 1.0 | NO | Discharge from metal degreasing sites and other factories |
| cis-1,2- Dichloroethylene (ppb) | 6 | 100 | ND | ND - 0.3 | NO | Discharge from industrial chemical factories; major biodegradation byproduct of TCE & PCE groundwater contamination |
| **Inorganic Compounds** | | | | | | |
| Arsenic (ppb) | 10 | 0.004 | ND | ND - 3.5 | NO | Erosion of natural deposits; runoff from orchards; glass and electronics production wastes |
| Barium (ppm) | 1 | 2 | ND | ND - 0.12 | NO | Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits |
| Fluoride (ppm) | 2 | 1 | 0.35 | 0.25 -0.43 | NO | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate as N (ppm) | 10 | 10 | 2.2 | ND - 3.7 | NO | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| **Secondary Standards (Monitored for aesthetic qualities)** | | | | | | |
| Chloride (ppm) | (500) | n/a | 68 | 31 - 91 | NO | Runoff and leaching from natural deposits |
| Copper (ppm) | (1) | 0.3 | ND | ND - 0.2 | NO | Erosion of natural deposits; leaching from wood preservatives |
| Iron (ppb) | (300) | n/a | ND | ND- 260 | NO | Leaching from natural deposits; industrial wastes |
| Specific Conductance (µS/cm) | (1600) | n/a | 739 | 290 - 920 | NO | Substances that form ions when in water; seawater influence |
| Sulfate (ppm) | (500) | n/a | 105 | 33 -150 | NO | Runoff/leaching from natural deposits; industrial wastes |
| Total Dissolved Solids (ppm) | (1000) | n/a | 480 | 220 - 660 | NO | Runoff/leaching from natural deposits |
| **Water Characteristics (No MCL or MRDL but state or federal monitoring required)** | | | | | | |
| Alkalinity (ppm) | n/a | n/a | 163 | 49 - 230 | NO | Naturally occurring soluble mineral |
| Calcium (ppm) | n/a | n/a | 74 | 15 - 120 | NO | Abundant naturally occurring element |
| Magnesium (ppm) | n/a | n/a | 15 | 3.3 - 23 | NO | Abundant naturally occurring element |
| pH (units) | (6.5 - 8.5) | n/a | 7.5 | 7.2 - 8.1 | NO | Hydrogen ion concentration |
| Potassium (ppm) | n/a | n/a | 4 | 2.8 - 6.1 | NO | Runoff or leaching from natural deposits |
| Sodium (ppm) | n/a | n/a | 56 | 37 - 79 | NO | Erosion of natural deposits |
| Total Hardness (grains per gallon) | n/a | n/a | 14.4 | 3.0 - 22.8 | NO | "Hardness" is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring |
| **State Unregulated Contaminants with No MCL** | | | | | | |
| Hexavalent Chromium (ppb) | n/a | 0.02 | ND | ND -1.1 | NO | Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits |
| **Federal Unregulated Contaminants Rule UCMR3 Data** | | | | **(Unregulated contaminant monitoring helps USEPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated)** | | |
| 1, 4 Dioxane (ppb) | n/a | n/a | 1.75 | 0.54 - 2.8 | NA | Used in many products including paint strippers, dyes, greases, varnishes, and waxes; also found as an impurity antifreeze and aircraft deicing fluids and in some consumer products (deodorants, shampoos, and cosmetics) |
| Chlorate (ppb) | n/a | n/a | 21.3 | ND - 54 | NA | Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide |
| Chromium, Total (ppb) | 50 | (100) | 0.7 | 0.43 - 1.2 | NO | Discharge from steel and pulp mills and chrome planting; Erosion of natural deposits |
| Molybdenum (ppb) | n/a | n/a | 1.92 | ND - 2.4 | NA | Naturally present in the environment |
| Perfluoro-1-octanesulfonate (PFOS) (ppb) | n/a | n/a | 0.01 | ND - 0.05 | NA | Surfactant or emulsifier; used in fire-fighting foam, circuit board etching acids, alkaline cleaners, floor polish, and as a pesticide active ingredient for insect bait traps |
| Strontium (ppb) | n/a | n/a | 524 | 410 - 620 | NA | Naturally present in the environment |
| Vanadium (ppb) | n/a | n/a | 2.65 | 2.3 - 3.4 | NA | Naturally present in the environment |

## Tap water samples were collected for lead and copper analyses from sample sites throughout the community

| Substance (Unit) | Action Level (AL) | PHG | 90th Percentile | Above AL | Violation | Typical Source |
|---|---|---|---|---|---|---|
| Lead (ppb) | 15 | 0.2 | 3.4 | 0 out of 52 | NO | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |
| Copper (ppm) | 1.3 | 0.3 | 0.26 | 0 out of 52 | NO | Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives |

## Number of Schools that requested lead sampling in 2017

**A total of 21 schools submitted requests to be sampled for lead during 2017. Up to 5 samples were collected at each school.**

# Glossary of Terms/Abbreviations

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect odor, taste, and appearance of drinking water.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

**Detection Limits for Purposes of Reporting (DLR):** The DLR is a parameter that is set by regulation by each reportable analyte. It is not laboratory specific and it is independent of the analytical method used (in cases where several methods are approved). It is expected that a laboratory can achieve a Reporting Limit that is lower than or equal to the DLR set by the State. This is also known as the Minimum Reporting Level (MRL).

**Primary Drinking Water Standard (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**Units of Measurement:**
ppm= parts per million
ppb= parts per billion
pCi/L = picocuries per liter
µS/cm=micro Siemens per centimeter
% = percent

**NA:** Contaminant or property was not analyzed.
**ND:** Contaminant was not detected. The contaminant is less than the DLR.
**n/a:** Not applicable

## *Questions About Your Water? We are available to assist you!*

For Rebates & Conservation tips:
bewaterwise.com® (888) 376-3314
SoCal Water$mart | Residential Rebates

To Report Water Waste
Public Works Utilities Division
(562) 904-7202

USEPA Safe Drinking Water Hotline
https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline
(800) 426-4791

For Information on Water Resources, Drinking Water Issues, and Public Health
www.epa.gov/watrhome
www.cdc.gov

State Water Resources Control Board
http://www.waterboards.ca.gov/drinking_water/
(818) 551-2004

City of Downey Water Conservation & Restrictions:
http://www.downeyca.org/depts/pw/utilities/water_conservation.asp

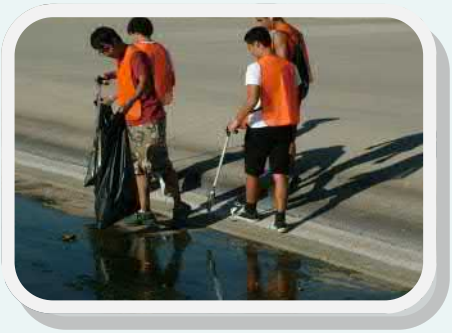
You are welcome to attend the following public meetings at City Hall, 11111 Brookshire Ave.
City Council Meetings on the second and fourth Tuesday of each month at 6:30 p.m.
Public Works Committee meetings on the third Thursday of each month at 4:00 p.m.



Visit us at www.downeyca.org
For Additional questions about your water quality please contact:
Bridgeth Tapia at (562) 904-7202
9252 Stewart & Gray Rd,
Downey, CA 90241

## *Prevent Pollution*

Polluted runoff flows to storm drains directly into our rivers, bays, beaches, and the ocean. Contaminated runoff can pollute our beaches, and also harm fish and wildlife. As a community it is important to prevent chemicals, automobile fluid, and trash from entering our storm drains.



City of Downey

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito

이 안내는 매우 중요합니다.
본인을 위해 번역인을 사용하십시요.

**This report is available for electronic viewing at**
**http://www.downeygis.org/wqr/2017.pdf**
**If you would like a paper copy of the 2017 report mailed to your home, please call (562) 904-7202.**

# City of Downey

Department of Public Works
Utilities Division
9252 Stewart & Gray Rd
Downey, CA 90241

Important Information Inside

# APPENDIX C: REGULATORY DATABASE REPORT

PARTNER

**Kirkhill**
12021 Woodruff Avenue
Downey, CA  90242

Inquiry Number: 5408632.2s
August 29, 2018

# The EDR Radius Map™  Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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**GEOCHECK ADDENDUM**

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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.


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# EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

## TARGET PROPERTY INFORMATION

### ADDRESS

12021 WOODRUFF AVENUE
DOWNEY, CA 90242

### COORDINATES

| | |
|---|---|
| Latitude (North): | 33.9253950 - 33° 55' 31.42'' |
| Longitude (West): | 118.1179030 - 118° 7' 4.45'' |
| Universal Tranverse Mercator: | Zone 11 |
| UTM X (Meters): | 396669.1 |
| UTM Y (Meters): | 3754252.5 |
| Elevation: | 104 ft. above sea level |

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

| | |
|---|---|
| Target Property Map: | 5633777 WHITTIER, CA |
| Version Date: | 2012 |
| West Map: | 5633765 SOUTH GATE, CA |
| Version Date: | 2012 |

### AERIAL PHOTOGRAPHY IN THIS REPORT

| | |
|---|---|
| Portions of Photo from: | 20140513 |
| Source: | USDA |

# MAPPED SITES SUMMARY

Target Property Address:
12021 WOODRUFF AVENUE
DOWNEY, CA 90242

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| A1 | KIRKHILL INC | 12021 WOODRUFF AVE | RCRA-SQG, LUST, HIST UST, FINDS, ECHO, HIST... | | TP |
| A2 | KIRKHILL INC | 12021 WOODRUFF AVENU | HIST UST, HAZNET | | TP |
| A3 | CAL CONDUIT PRODUCTS | 12021 WOODRUFF AVE | HAZNET | | TP |
| A4 | KIRKHILL INC | 12021 WOODRUFF ST | EMI | | TP |
| A5 | KIRKHILL INC | 12021 WOODRUFF AVE S | CIWQS | | TP |
| A6 | KIRKHILL RUBBER INC | 12021 WOODRUFF AVE | LOS ANGELES CO. HMS | | TP |
| A7 | KIRKHILL INC. | 12021 WOODRUFF AVE | RGA LUST | | TP |
| A8 | KIRKHILL INC. | 12021 WOODRUFF AVE. | RGA LUST | | TP |
| B9 | APTOS ESPLANADE PUMP | 12007 WOODRUFF | HIST CORTESE | Higher | 1 ft. |
| C10 | CLASSIC GRAPHIX | 9459 WASHBURN RD | RCRA-SQG, FINDS, ECHO, HAZNET, LOS ANGELES CO. HMS | Lower | 93, 0.018, WSW |
| B11 | FUJI PHOTO FILM U S | 12010 WOODRUFF AVE S | RCRA NonGen / NLR, FINDS, ECHO, HAZNET | Higher | 97, 0.018, ENE |
| B12 | DARNELL CORP | 12000 WOODRUFF AVE | SWEEPS UST, RCRA NonGen / NLR, FINDS, ECHO, LOS... | Higher | 113, 0.021, ENE |
| C13 | STUD WELDING PRODUCT | 9455 WASHBURN ROAD | RCRA-SQG, FINDS, ECHO, HAZNET, LOS ANGELES CO. HMS | Lower | 164, 0.031, SW |
| C14 | RITE ENGINEERING AND | 9441 WASHBURN RD | RCRA NonGen / NLR, FINDS, ECHO, EMI, HAZNET | Lower | 265, 0.050, WSW |
| D15 | RAFFAELE UNION SERVI | 12101 WOODRUFF AVENU | SWEEPS UST, HIST UST | Lower | 268, 0.051, SSE |
| D16 | BOB & DON'S SIGNAL S | 12101 WOODRUFF AVE | EDR Hist Auto | Lower | 268, 0.051, SSE |
| E17 | INCO EXPRESS INC | 11941 SOUTH WOODRUFF | LUST, HIST UST | Higher | 280, 0.053, NNE |
| E18 | INCO EXPRESS INC | 11941 WOODRUFF AVE | UST, SWEEPS UST | Higher | 280, 0.053, NNE |
| E19 | INCO EXPRESS, INC. | 11941 WOODRUFF AVE | HIST UST | Higher | 280, 0.053, NNE |
| E20 | METALSOURCE | 11939 WOODRUFF AVE | SWEEPS UST, LOS ANGELES CO. HMS | Higher | 293, 0.055, NNE |
| D21 | SAFARI KAR INTL | 12126 WOODRUFF AVE | RCRA NonGen / NLR, FINDS, ECHO | Lower | 479, 0.091, SSE |
| F22 | | 9645 E WASHBURN RD | AST | Higher | 483, 0.091, ESE |
| F23 | ASSOCIATED READY MIX | 9645 E WASHBURN RD | RCRA-SQG, SWEEPS UST, HIST UST, FINDS, ECHO, LOS... | Higher | 483, 0.091, ESE |
| F24 | ASSOCIATED READY MIX | 9645 E WASHBURN RD | HIST UST, HAZNET | Higher | 483, 0.091, ESE |
| G25 | SOUTHERN CALIFORNIA | 9407 WASHBURN RD | UST | Lower | 491, 0.093, WSW |
| G26 | SO CALIF GAS CO/DOWN | 9407 WASHBURN RD | RCRA-SQG, FINDS, ECHO | Lower | 491, 0.093, WSW |
| G27 | DOWNEY | 9407 WASHBURN RD | SWEEPS UST, HIST UST | Lower | 491, 0.093, WSW |
| E28 | NORTHERN TRUST BANK | 11911 WOODRUFF AVE | RCRA-SQG, FINDS | Higher | 513, 0.097, NNE |
| E29 | INDUSTRIAL BUILDING | 11908 12 WOODRUFF AV | RCRA-SQG, FINDS, ECHO | Higher | 541, 0.102, NNE |
| H30 | HOLM INDUSTRIES | 9368 STEWART AND GRA | LUST | Higher | 624, 0.118, NW |
| H31 | COAST POLYMERS INC | 9368 STEWART AND GRA | UST | Higher | 624, 0.118, NW |
| F32 | VIMAR INC | 9650 WASHBURN RD | LUST, HIST CORTESE, LOS ANGELES CO. HMS | Higher | 647, 0.123, ESE |
| I33 | MCGEAN-ROHCO, INC. | 9520 CEEBEE DR E | LUST, HIST CORTESE | Higher | 716, 0.136, NE |
| I34 | MCCEAN-ROMCO INC | 9520 E CEE DEE DRIVE | HIST UST | Higher | 722, 0.137, NE |
| I35 | MCGEAN-ROHCO INC | 9520 E CEE BEE DRIVE | RCRA-SQG, SWEEPS UST, LOS ANGELES CO. HMS | Higher | 722, 0.137, NE |
| I36 | MCGEAN CHEM CO INC | 9520 E CEE BEE DR | RCRA-SQG, HIST UST, FINDS, ECHO | Higher | 722, 0.137, NE |
| F37 | STOUT ROOFING CO | 9705 WASHBURN RD | RCRA-SQG | Higher | 736, 0.139, ESE |
| F38 | STOUT ROOFING INC | 9705 WASHBURN ROAD | HIST UST | Higher | 736, 0.139, ESE |
| J39 | A.C. PETERSON CO. IN | 12207 WOODRUFF AVE | HIST UST | Lower | 751, 0.142, SSE |

MAPPED SITES SUMMARY

Target Property Address:
12021 WOODRUFF AVENUE
DOWNEY, CA 90242

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| J40 | A C PETERSON COMPANY | 12207 WOODRUFF AVE S | LUST, HIST CORTESE | Lower | 751, 0.142, SSE |
| J41 | TERRY PETERSON | 12207 WOODRUFF AVE | SWEEPS UST, HIST UST, CA FID UST, LOS ANGELES CO.... | Lower | 751, 0.142, SSE |
| K42 | SO CAL PERFORMANCE I | 9723 WASHBURN RD | RCRA-CESQG, HAZNET | Higher | 924, 0.175, ESE |
| K43 | SO-CAL PERFORMANCE I | 9723 WASHBURN RD | UST, SWEEPS UST | Higher | 924, 0.175, ESE |
| K44 | SO-CAL PERFORMANCE I | 9723 WASHBURN RD | CA FID UST, HAZNET, LOS ANGELES CO. HMS | Higher | 924, 0.175, ESE |
| K45 | SO-CAL NITROUS AND R | 9723 E WASHBURN RD | UST | Higher | 924, 0.175, ESE |
| L46 | SR MAINTENANCE & MAN | 11814 WOODRUFF AVE | DRYCLEANERS, HAZNET | Higher | 965, 0.183, NNE |
| J47 | SUN RAY TESTING INTE | 12221 WOODRUFF AVE | RCRA-SQG, MLTS, FINDS, ECHO, HAZNET | Lower | 968, 0.183, SSE |
| J48 | COMPRESSOR COMPONENT | 12223 S WOODRUFF UNI | RCRA-SQG, FINDS, ECHO | Lower | 1002, 0.190, SSE |
| J49 | WESTWERK PORSCHE-AUD | 12223 WOODRUFF AVE | RCRA-SQG | Lower | 1002, 0.190, SSE |
| 50 | ROSECRANS AVE. / WOO | LINDALE AVE/CORNUTA | SWF/LF | Higher | 1027, 0.195, NNW |
| M51 | CUMMINS PACIFIC, LLC | 9520 STEWART AND GRA | AST | Higher | 1038, 0.197, NE |
| M52 | REGENT JACK MFG CO., | 11905 REGENTVIEW | HIST UST, EMI, WDS | Higher | 1070, 0.203, NE |
| N53 | CITY OF DOWNEY | 9252 STEWART RD | SWEEPS UST, CA FID UST | Higher | 1116, 0.211, WNW |
| N54 | WATER YARD | 9252 STEWART AND GRA | HIST UST | Higher | 1116, 0.211, WNW |
| 55 | SR MAINTENANCE & MAN | 9525 STEWART AND GRA | DRYCLEANERS, HAZNET | Higher | 1140, 0.216, NE |
| L56 | GOLDEN W PIPE & SUPP | 11700 WOODRUFF AVE | SWEEPS UST | Higher | 1172, 0.222, NNE |
| O57 | GENERAL PAVING CO/JO | 9316 WASHBURN RD | LUST, HIST CORTESE | Lower | 1194, 0.226, WSW |
| O58 | GENERAL PAVING COMPA | 9316 WASHBURN RD | HIST UST | Lower | 1194, 0.226, WSW |
| O59 | JOMIT EQUIPMENT RENT | 9316 WASHBURN RD | SWEEPS UST, HIST UST, CA FID UST | Lower | 1194, 0.226, WSW |
| 60 | GOULD-BROWN BOVERI | 11711 WOODRUFF AVE | RCRA-SQG, FINDS, ECHO | Higher | 1226, 0.232, North |
| P61 | PARK WATER CO | 9750 WASHBURN RD | SWEEPS UST, EMI | Higher | 1229, 0.233, ESE |
| P62 | PARK WATER CO | 9750 WASHBURN RD | AST, HAZNET | Higher | 1229, 0.233, ESE |
| Q63 | SHAWNAN | 12240 S WOODRUFF AVE | UST | Lower | 1279, 0.242, SSE |
| Q64 | SHAWNAN | 12240 WOODRUFF AVE | SWEEPS UST, LOS ANGELES CO. HMS | Lower | 1279, 0.242, SSE |
| Q65 | SEQUEL CONTRACTORS I | 12240 WOODRUFF AVE | UST | Lower | 1279, 0.242, SSE |
| Q66 | SEQUEL CONTRACTORS I | 12240 WOODRUFF AVE | LUST, LOS ANGELES CO. HMS | Lower | 1279, 0.242, SSE |
| P67 | PPG IND INC HUGHES P | 12049 REGENTVIEW AVE | RCRA-SQG, SWEEPS UST, CA FID UST, FINDS, ECHO, LOS.. | Higher | 1306, 0.247, East |
| P68 | HUGHES PRODUCTS | 12049 REGENTVIEW AVE | HIST UST | Higher | 1306, 0.247, East |
| P69 | HUGHES PRODUCTS | 12045 S REGENTVIEW A | HIST UST | Higher | 1319, 0.250, East |
| R70 | CRESCENT TRUCK LINES | 11937 REGENTVIEW AVE | LUST, LOS ANGELES CO. HMS | Higher | 1325, 0.251, ENE |
| 71 | ASTRO PAK FACILITY | 12201 PANGBORN | CPS-SLIC | Lower | 1343, 0.254, SE |
| R72 | LEXINGTON CHEMICALS | 11916 REGENTVIEW AVE | LUST | Higher | 1465, 0.277, ENE |
| R73 | LEXINGTON CHEMICALS | 11916 REGENTVIEW | LUST, HIST CORTESE | Higher | 1465, 0.277, ENE |
| S74 | SITE 24, TANK #2 | 9821 DOWNEYNORWALK | HIST CORTESE | Higher | 1549, 0.293, East |
| S75 | CALSAN INC | 9821 DOWNEY NORWALK | RCRA-SQG, LUST, UST, SWEEPS UST, HIST UST, FINDS,... | Higher | 1549, 0.293, East |
| 76 | DOWNEY AREA RECYCLIN | 9770 WASHBURN RD | SWF/LF, WMUDS/SWAT, CHMIRS, NPDES, CIWQS | Higher | 1577, 0.299, ESE |
| T77 | WESTERN PACIFIC PULP | 9350 HALL RD | LUST, SWEEPS UST, HAZNET, HIST CORTESE | Higher | 1605, 0.304, North |
| T78 | DOWNEY INDUSTRIAL CE | 9300-9400 HALL ROAD | CPS-SLIC | Higher | 1605, 0.304, North |

## MAPPED SITES SUMMARY

Target Property Address:
12021 WOODRUFF AVENUE
DOWNEY, CA 90242

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| 79 | ALPASE, INC. | 9750 SEAACA | CPS-SLIC, WDS | Lower | 1676, 0.317, SE |
| 80 | MANUFACTURERS WIRE C | 12320 WOODRUFF AVE. | RCRA-SQG, ENVIROSTOR, FINDS, ECHO, HAZNET, WDS | Lower | 1775, 0.336, SSE |
| U81 | ARROW TRANSPORTATION | 12328 WOODRUFF AVE S | LUST | Lower | 1832, 0.347, SSE |
| U82 | ARROW TRANSPORTATION | 12328 WOODRUFF | ENVIROSTOR, CHMIRS, HIST CORTESE | Lower | 1832, 0.347, SSE |
| 83 | US RENTALS INC | 9606 FIRESTONE BLVD | LUST, SWEEPS UST, HIST CORTESE, LOS ANGELES CO.... | Higher | 1834, 0.347, NE |
| V84 | DAVID LUBER @ M CHEM | 9236 HALL RD | ENVIROSTOR, CPS-SLIC, HAZNET, LOS ANGELES CO. HMS | Higher | 2126, 0.403, NNW |
| V85 | PRIMEX TECHNOLOGIES | 9236 HALL RD | CPS-SLIC, UST | Higher | 2126, 0.403, NNW |
| 86 | YALE ENGINEERING COM | 12405 WOODRUFF AVENU | RCRA-SQG, LUST, SWEEPS UST, HIST UST, CA FID UST,... | Lower | 2269, 0.430, South |
| 87 | QM BULK STORAGE FAC | | ENVIROSTOR | Lower | 2356, 0.446, SE |
| W88 | SHELL SERVICE STATIO | 9305 FIRESTONE BLVD. | LUST | Higher | 2422, 0.459, North |
| W89 | SHELL | 9305 FIRESTONE BLVD | LUST, HIST CORTESE, LOS ANGELES CO. HMS | Higher | 2422, 0.459, North |
| 90 | DOWNEY DUMP | 11014 PANGHORN | WMUDS/SWAT | Higher | 2567, 0.486, NNE |
| X91 | VULTEE TRAINING FIEL | | ENVIROSTOR | Lower | 3079, 0.583, West |
| X92 | AIR FORCE PLANT #16 | | ENVIROSTOR | Lower | 3079, 0.583, West |
| X93 | AIR FORCE PLANT #16 | | FUDS | Lower | 3098, 0.587, West |
| 94 | PEACOCK ENGINEERING | 10620 EAST FIRESTONE | ENVIROSTOR, CPS-SLIC | Higher | 3153, 0.597, East |
| 95 | VULTEE AIRCRAFT CO | | ENVIROSTOR | Lower | 3401, 0.644, WSW |
| 96 | STORM DRAIN | BELLFLOWER&IMPERIAL | Notify 65 | Lower | 3428, 0.649, SW |
| 97 | DOWNEY FAMILY HOUSIN | | ENVIROSTOR | Higher | 3794, 0.719, WNW |
| 98 | COSTCO WHOLESALE # 4 | 12324 HOXIE AVENUE | RCRA-LQG, ENVIROSTOR, US AIRS, HAZNET, NPDES,... | Lower | 4397, 0.833, ESE |
| 99 | NASA INDUSTRIAL PLAN | 12214 LAKEWOOD | ENVIROSTOR, CPS-SLIC, VCP, HIST CORTESE | Lower | 4565, 0.865, WSW |
| 100 | UNIVERSAL MOLDING EX | 9151 E. IMPERIAL HIG | ENVIROSTOR | Lower | 4790, 0.907, SW |
| 101 | PIH HEALTH HOSPITAL | 11500 BROOKSHIRE AVE | ENVIROSTOR, LUST, CHMIRS, LOS ANGELES CO. HMS | Higher | 4816, 0.912, NW |

# EXECUTIVE SUMMARY

**TARGET PROPERTY SEARCH RESULTS**

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

| Site | Database(s) | EPA ID |
|---|---|---|
| KIRKHILL INC<br>12021 WOODRUFF AVE<br>DOWNEY, CA 90241 | RCRA-SQG<br>EPA ID:: CAD008255648<br>LUST<br>Database: LUST REG 4, Date of Government Version: 09/07/2004<br>Database: LUST, Date of Government Version: 06/11/2018<br>Global ID: T0603704020<br>Status: Completed - Case Closed<br>Facility Id: I-12987<br>Status: Case Closed<br>Global Id: T0603704020<br>HIST UST<br>Facility Id: 00000064445<br>FINDS<br>Registry ID:: 110002631000<br>Registry ID:: 110055849872<br>ECHO<br>Registry ID: 110002631000<br>HIST CORTESE<br>Reg Id: I-12987 | CAD008255648 |
| KIRKHILL INC<br>12021 WOODRUFF AVENU<br>DOWNEY, CA 90241 | HIST UST<br>HAZNET<br>GEPAID: CAL000348524 | N/A |
| CAL CONDUIT PRODUCTS<br>12021 WOODRUFF AVE<br>DOWNEY, CA 90241 | HAZNET<br>GEPAID: CAC002641805 | N/A |
| KIRKHILL INC<br>12021 WOODRUFF ST<br>DOWNEY, CA 90241 | EMI<br>Facility Id: 3736 | N/A |
| KIRKHILL INC<br>12021 WOODRUFF AVE S<br>DOWNEY, CA 90241 | CIWQS | N/A |
| KIRKHILL RUBBER INC<br>12021 WOODRUFF AVE<br>DOWNEY, CA 90241 | LOS ANGELES CO. HMS<br>Facility ID: 002968-I03070<br>Facility ID: 012790-012987 | N/A |
| KIRKHILL INC.<br>12021 WOODRUFF AVE<br>DOWNEY, CA | RGA LUST | N/A |

# EXECUTIVE SUMMARY

KIRKHILL INC.
12021 WOODRUFF AVE.
DOWNEY, CA

RGA LUST

N/A

**DATABASES WITH NO MAPPED SITES**

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

**STANDARD ENVIRONMENTAL RECORDS**

***Federal NPL site list***

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

***Federal Delisted NPL site list***

Delisted NPL ---------- National Priority List Deletions

***Federal CERCLIS list***

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

***Federal CERCLIS NFRAP site list***

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

***Federal RCRA CORRACTS facilities list***

CORRACTS ---------- Corrective Action Report

***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

***Federal RCRA generators list***

RCRA-LQG ---------- RCRA - Large Quantity Generators

***Federal institutional controls / engineering controls registries***

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

***Federal ERNS list***

ERNS ---------- Emergency Response Notification System

***State- and tribal - equivalent NPL***

RESPONSE State Response Sites

***State and tribal leaking storage tank lists***

INDIAN LUST Leaking Underground Storage Tanks on Indian Land

***State and tribal registered storage tank lists***

FEMA UST Underground Storage Tank Listing
INDIAN UST Underground Storage Tanks on Indian Land

***State and tribal voluntary cleanup sites***

INDIAN VCP Voluntary Cleanup Priority Listing
VCP Voluntary Cleanup Program Properties

***State and tribal Brownfields sites***

BROWNFIELDS Considered Brownfieds Sites Listing

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS A Listing of Brownfields Sites

***Local Lists of Landfill / Solid Waste Disposal Sites***

SWRCY Recycler Database
HAULERS Registered Waste Tire Haulers Listing
INDIAN ODI Report on the Status of Open Dumps on Indian Lands
ODI Open Dump Inventory
DEBRIS REGION 9 Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS Open Dumps on Indian Land

***Local Lists of Hazardous waste / Contaminated Sites***

AOCONCERN San Gabriel Valley Areas of Concern
US HIST CDL Delisted National Clandestine Laboratory Register
HIST Cal-Sites Historical Calsites Database
SCH School Property Evaluation Program
CDL Clandestine Drug Labs
Toxic Pits Toxic Pits Cleanup Act Sites
US CDL National Clandestine Laboratory Register
CERS HAZ WASTE CERS HAZ WASTE

***Local Lists of Registered Storage Tanks***

CERS TANKS California Environmental Reporting System (CERS) Tanks

***Local Land Records***

LIENS Environmental Liens Listing

| | |
|---|---|
| LIENS 2 | CERCLA Lien Information |
| DEED | Deed Restriction Listing |

***Records of Emergency Release Reports***

| | |
|---|---|
| HMIRS | Hazardous Materials Information Reporting System |
| CHMIRS | California Hazardous Material Incident Report System |
| LDS | Land Disposal Sites Listing |
| MCS | Military Cleanup Sites Listing |
| SPILLS 90 | SPILLS 90 data from FirstSearch |

***Other Ascertainable Records***

| | |
|---|---|
| DOD | Department of Defense Sites |
| SCRD DRYCLEANERS | State Coalition for Remediation of Drycleaners Listing |
| US FIN ASSUR | Financial Assurance Information |
| EPA WATCH LIST | EPA WATCH LIST |
| 2020 COR ACTION | 2020 Corrective Action Program List |
| TSCA | Toxic Substances Control Act |
| TRIS | Toxic Chemical Release Inventory System |
| SSTS | Section 7 Tracking Systems |
| ROD | Records Of Decision |
| RMP | Risk Management Plans |
| RAATS | RCRA Administrative Action Tracking System |
| PRP | Potentially Responsible Parties |
| PADS | PCB Activity Database System |
| ICIS | Integrated Compliance Information System |
| FTTS | FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) |
| MLTS | Material Licensing Tracking System |
| COAL ASH DOE | Steam-Electric Plant Operation Data |
| COAL ASH EPA | Coal Combustion Residues Surface Impoundments List |
| PCB TRANSFORMER | PCB Transformer Registration Database |
| RADINFO | Radiation Information Database |
| HIST FTTS | FIFRA/TSCA Tracking System Administrative Case Listing |
| DOT OPS | Incident and Accident Data |
| CONSENT | Superfund (CERCLA) Consent Decrees |
| INDIAN RESERV | Indian Reservations |
| FUSRAP | Formerly Utilized Sites Remedial Action Program |
| UMTRA | Uranium Mill Tailings Sites |
| LEAD SMELTERS | Lead Smelter Sites |
| US AIRS | Aerometric Information Retrieval System Facility Subsystem |
| US MINES | Mines Master Index File |
| ABANDONED MINES | Abandoned Mines |
| DOCKET HWC | Hazardous Waste Compliance Docket Listing |
| UXO | Unexploded Ordnance Sites |
| FUELS PROGRAM | EPA Fuels Program Registered Listing |
| CA BOND EXP. PLAN | Bond Expenditure Plan |
| Cortese | "Cortese" Hazardous Waste & Substances Sites List |
| CUPA Listings | CUPA Resources List |
| ENF | Enforcement Action Listing |
| Financial Assurance | Financial Assurance Information Listing |
| ICE | ICE |
| HWP | EnviroStor Permitted Facilities Listing |
| HWT | Registered Hazardous Waste Transporter Database |

MINES Mines Site Location Listing
MWMP Medical Waste Management Program Listing
NPDES NPDES Permits Listing
PEST LIC Pesticide Regulation Licenses Listing
PROC Certified Processors Database
LA Co. Site Mitigation Site Mitigation List
UIC UIC Listing
WASTEWATER PITS Oil Wastewater Pits Listing
WDS Waste Discharge System
WIP Well Investigation Program Case List
OTHER OIL GAS OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS PROD WATER PONDS (GEOTRACKER)
CERS CERS
PROJECT PROJECT (GEOTRACKER)
NON-CASE INFO NON-CASE INFO (GEOTRACKER)
SAMPLING POINT SAMPLING POINT (GEOTRACKER)
UIC GEO UIC GEO (GEOTRACKER)
WELL STIM PROJ Well Stimulation Project (GEOTRACKER)
MILITARY PRIV SITES MILITARY PRIV SITES (GEOTRACKER)

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner EDR Exclusive Historical Cleaners

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

RGA LF Recovered Government Archive Solid Waste Facilities List

**SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

**STANDARD ENVIRONMENTAL RECORDS**

***Federal RCRA generators list***

# EXECUTIVE SUMMARY

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/01/2018 has revealed that there are 14 RCRA-SQG sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***ASSOCIATED READY MIX***<br>EPA ID:: CAD981574015 | ***9645 E WASHBURN RD*** | ***ESE 0 - 1/8 (0.091 mi.)*** | ***F23*** | ***44*** |
| ***NORTHERN TRUST BANK***<br>EPA ID:: CAD981620883 | ***11911 WOODRUFF AVE*** | ***NNE 0 - 1/8 (0.097 mi.)*** | ***E28*** | ***60*** |
| ***INDUSTRIAL BUILDING***<br>EPA ID:: CAD982323818 | ***11908 12 WOODRUFF AV*** | ***NNE 0 - 1/8 (0.102 mi.)*** | ***E29*** | ***62*** |
| ***MCGEAN-ROHCO INC***<br>EPA ID:: CAD981457864 | ***9520 E CEE BEE DRIVE*** | ***NE 1/8 - 1/4 (0.137 mi.)*** | ***I35*** | ***71*** |
| ***MCGEAN CHEM CO INC***<br>EPA ID:: CAD072949365 | ***9520 E CEE BEE DR*** | ***NE 1/8 - 1/4 (0.137 mi.)*** | ***I36*** | ***77*** |
| STOUT ROOFING CO<br>EPA ID:: CAR000152850 | 9705 WASHBURN RD | ESE 1/8 - 1/4 (0.139 mi.) | F37 | 80 |
| ***GOULD-BROWN BOVERI***<br>EPA ID:: CAD062061973 | ***11711 WOODRUFF AVE*** | ***N 1/8 - 1/4 (0.232 mi.)*** | ***60*** | ***112*** |
| ***PPG IND INC HUGHES P***<br>EPA ID:: CAD001989482 | ***12049 REGENTVIEW AVE*** | ***E 1/8 - 1/4 (0.247 mi.)*** | ***P67*** | ***120*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***CLASSIC GRAPHIX***<br>EPA ID:: CAR000012781 | ***9459 WASHBURN RD*** | ***WSW 0 - 1/8 (0.018 mi.)*** | ***C10*** | ***18*** |
| ***STUD WELDING PRODUCT***<br>EPA ID:: CAD983585290 | ***9455 WASHBURN ROAD*** | ***SW 0 - 1/8 (0.031 mi.)*** | ***C13*** | ***26*** |
| ***SO CALIF GAS CO/DOWN***<br>EPA ID:: CAD981422876 | ***9407 WASHBURN RD*** | ***WSW 0 - 1/8 (0.093 mi.)*** | ***G26*** | ***57*** |
| ***SUN RAY TESTING INTE***<br>EPA ID:: CAD982500357 | ***12221 WOODRUFF AVE*** | ***SSE 1/8 - 1/4 (0.183 mi.)*** | ***J47*** | ***93*** |
| ***COMPRESSOR COMPONENT***<br>EPA ID:: CAD983647546 | ***12223 S WOODRUFF UNI*** | ***SSE 1/8 - 1/4 (0.190 mi.)*** | ***J48*** | ***97*** |
| WESTWERK PORSCHE-AUD<br>EPA ID:: CAD981653595 | 12223 WOODRUFF AVE | SSE 1/8 - 1/4 (0.190 mi.) | J49 | 98 |

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/01/2018 has revealed that there is

1 RCRA-CESQG site within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***SO CAL PERFORMANCE I***<br>EPA ID:: CAR000185363 | ***9723 WASHBURN RD*** | ***ESE 1/8 - 1/4 (0.175 mi.)*** | ***K42*** | ***87*** |

***State- and tribal - equivalent CERCLIS***

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 04/30/2018 has revealed that there are 13 ENVIROSTOR sites within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***DAVID LUBER @ M CHEM***<br>Facility Id: 71002450<br>Status: Refer: Local Agency | ***9236 HALL RD*** | ***NNW 1/4 - 1/2 (0.403 mi.)*** | ***V84*** | ***176*** |
| ***PEACOCK ENGINEERING***<br>Facility Id: 19350006<br>Status: Refer: Other Agency | ***10620 EAST FIRESTONE*** | ***E 1/2 - 1 (0.597 mi.)*** | ***94*** | ***197*** |
| DOWNEY FAMILY HOUSIN<br>Facility Id: 80000075<br>Status: Inactive - Needs Evaluation | | WNW 1/2 - 1 (0.719 mi.) | 97 | 200 |
| ***PIH HEALTH HOSPITAL***<br>Facility Id: 71003236<br>Status: Refer: Other Agency | ***11500 BROOKSHIRE AVE*** | ***NW 1/2 - 1 (0.912 mi.)*** | ***101*** | ***223*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MANUFACTURERS WIRE C***<br>Facility Id: 71003652<br>Status: Refer: Other Agency | ***12320 WOODRUFF AVE.*** | ***SSE 1/4 - 1/2 (0.336 mi.)*** | ***80*** | ***163*** |
| ***ARROW TRANSPORTATION***<br>Facility Id: 71002480<br>Status: Refer: Other Agency | ***12328 WOODRUFF*** | ***SSE 1/4 - 1/2 (0.347 mi.)*** | ***U82*** | ***170*** |
| QM BULK STORAGE FAC<br>Facility Id: 80000423<br>Status: Inactive - Needs Evaluation | | SE 1/4 - 1/2 (0.446 mi.) | 87 | 186 |
| VULTEE TRAINING FIEL<br>Facility Id: 80000863<br>Status: Inactive - Needs Evaluation | | W 1/2 - 1 (0.583 mi.) | X91 | 194 |
| AIR FORCE PLANT #16 | | W 1/2 - 1 (0.583 mi.) | X92 | 195 |

| | | | | |
|---|---|---|---|---|
| Facility Id: 80000160<br>Status: Inactive - Needs Evaluation | | | | |
| VULTEE AIRCRAFT CO<br>Facility Id: 80000851<br>Status: Inactive - Needs Evaluation | | WSW 1/2 - 1 (0.644 mi.) | 95 | 198 |
| ***COSTCO WHOLESALE # 4***<br>Facility Id: 71003261<br>Status: Refer: Other Agency | ***12324 HOXIE AVENUE*** | ***ESE 1/2 - 1 (0.833 mi.)*** | ***98*** | ***201*** |
| ***NASA INDUSTRIAL PLAN***<br>Facility Id: 19370366<br>Status: No Further Action | ***12214 LAKEWOOD*** | ***WSW 1/2 - 1 (0.865 mi.)*** | ***99*** | ***218*** |
| UNIVERSAL MOLDING EX<br>Facility Id: 71003361<br>Status: Refer: Local Agency | 9151 E. IMPERIAL HIG | SW 1/2 - 1 (0.907 mi.) | 100 | 222 |

***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, has revealed that there are 2 SWF/LF sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ROSECRANS AVE. / WOO<br>Database: SWF/LF (SWIS), Date of Government Version: 08/08/2018<br>Facility ID: 19-AA-5345<br>Operational Status: Closed<br>Regulation Status: Unpermitted | LINDALE AVE/CORNUTA | NNW 1/8 - 1/4 (0.195 mi.) | 50 | 100 |
| ***DOWNEY AREA RECYCLIN***<br>Database: SWF/LF (SWIS), Date of Government Version: 08/08/2018<br>Database: LOS ANGELES CO. LF, Date of Government Version: 07/16/2018<br>Facility ID: 19-AA-0801<br>Site ID: 181<br>Status: Active<br>Operational Status: Active<br>Regulation Status: Permitted | ***9770 WASHBURN RD*** | ***ESE 1/4 - 1/2 (0.299 mi.)*** | ***76*** | ***147*** |

***State and tribal leaking storage tank lists***

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 17 LUST sites within approximately 0.5 miles of the target property.

# EXECUTIVE SUMMARY

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***INCO EXPRESS INC*** | ***11941 SOUTH WOODRUFF*** | ***NNE 0 - 1/8 (0.053 mi.)*** | ***E17*** | ***38*** |
| Database: LUST, Date of Government Version: 06/11/2018<br>Status: Completed - Case Closed<br>Global Id: T0603719104 | | | | |
| HOLM INDUSTRIES | 9368 STEWART AND GRA | NW 0 - 1/8 (0.118 mi.) | H30 | 64 |
| Database: LUST, Date of Government Version: 06/11/2018<br>Status: Completed - Case Closed<br>Global Id: T0603737698 | | | | |
| ***VIMAR INC*** | ***9650 WASHBURN RD*** | ***ESE 0 - 1/8 (0.123 mi.)*** | ***F32*** | ***66*** |
| Database: LUST REG 4, Date of Government Version: 09/07/2004<br>Database: LUST, Date of Government Version: 06/11/2018<br>Global ID: T0603704145<br>Status: Completed - Case Closed<br>Facility Id: I-14214<br>Status: Case Closed<br>Global Id: T0603704145 | | | | |
| ***MCGEAN-ROHCO, INC.*** | ***9520 CEEBEE DR E*** | ***NE 1/8 - 1/4 (0.136 mi.)*** | ***I33*** | ***68*** |
| Database: LUST REG 4, Date of Government Version: 09/07/2004<br>Database: LUST, Date of Government Version: 06/11/2018<br>Global ID: T0603704555<br>Status: Completed - Case Closed<br>Facility Id: R-01310<br>Status: Case Closed<br>Global Id: T0603704555 | | | | |
| ***CRESCENT TRUCK LINES*** | ***11937 REGENTVIEW AVE*** | ***ENE 1/4 - 1/2 (0.251 mi.)*** | ***R70*** | ***132*** |
| Database: LUST, Date of Government Version: 06/11/2018<br>Status: Completed - Case Closed<br>Global Id: T0603714767 | | | | |
| LEXINGTON CHEMICALS | 11916 REGENTVIEW AVE | ENE 1/4 - 1/2 (0.277 mi.) | R72 | 135 |
| Database: LUST REG 4, Date of Government Version: 09/07/2004<br>Global ID: T0603705366<br>Facility Id: R-22573<br>Status: Case Closed | | | | |
| ***LEXINGTON CHEMICALS*** | ***11916 REGENTVIEW*** | ***ENE 1/4 - 1/2 (0.277 mi.)*** | ***R73*** | ***136*** |
| Database: LUST, Date of Government Version: 06/11/2018<br>Status: Completed - Case Closed<br>Global Id: T0603705366 | | | | |
| ***CALSAN INC*** | ***9821 DOWNEY NORWALK*** | ***E 1/4 - 1/2 (0.293 mi.)*** | ***S75*** | ***137*** |
| Database: LUST REG 4, Date of Government Version: 09/07/2004<br>Database: LUST, Date of Government Version: 06/11/2018<br>Global ID: T0603793083<br>Status: Open - Eligible for Closure<br>Facility Id: R-09296<br>Status: Leak being confirmed<br>Global Id: T0603793083 | | | | |
| ***WESTERN PACIFIC PULP*** | ***9350 HALL RD*** | ***N 1/4 - 1/2 (0.304 mi.)*** | ***T77*** | ***157*** |
| Database: LUST REG 4, Date of Government Version: 09/07/2004<br>Database: LUST, Date of Government Version: 06/11/2018<br>Global ID: T0603704078<br>Status: Completed - Case Closed | | | | |

Facility Id: I-13583
Status: Case Closed
Global Id: T0603704078

***US RENTALS INC*** ***9606 FIRESTONE BLVD*** ***NE 1/4 - 1/2 (0.347 mi.)*** ***83*** ***173***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/11/2018
Global ID: T0603705064
Status: Completed - Case Closed
Facility Id: R-11696
Status: Case Closed
Global Id: T0603705064

SHELL SERVICE STATIO 9305 FIRESTONE BLVD. N 1/4 - 1/2 (0.459 mi.) W88 187
Database: LUST REG 4, Date of Government Version: 09/07/2004
Global ID: T0603748443
Facility Id: I-09468A
Status: Pollution Characterization

***SHELL*** ***9305 FIRESTONE BLVD*** ***N 1/4 - 1/2 (0.459 mi.)*** ***W89*** ***188***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/11/2018
Global ID: T0603703423
Status: Completed - Case Closed
Facility Id: I-09468
Status: Case Closed
Global Id: T0603748443

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|

***A C PETERSON COMPANY*** ***12207 WOODRUFF AVE S*** ***SSE 1/8 - 1/4 (0.142 mi.)*** ***J40*** ***83***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/11/2018
Global ID: T0603704798
Status: Completed - Case Closed
Facility Id: R-09291
Status: Case Closed
Global Id: T0603704798

***GENERAL PAVING CO/JO*** ***9316 WASHBURN RD*** ***WSW 1/8 - 1/4 (0.226 mi.)*** ***O57*** ***106***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/11/2018
Global ID: T0603704974
Status: Completed - Case Closed
Facility Id: R-10910
Status: Case Closed
Global Id: T0603704974

***SEQUEL CONTRACTORS I*** ***12240 WOODRUFF AVE*** ***SSE 1/8 - 1/4 (0.242 mi.)*** ***Q66*** ***118***
Database: LUST, Date of Government Version: 06/11/2018
Status: Completed - Case Closed
Global Id: T0603754702

ARROW TRANSPORTATION 12328 WOODRUFF AVE S SSE 1/4 - 1/2 (0.347 mi.) U81 168
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/11/2018
Global ID: T0603705002
Status: Completed - Case Closed
Facility Id: R-11024

Status: Case Closed
Global Id: T0603705002

***YALE ENGINEERING COM*** ***12405 WOODRUFF AVENU*** ***S 1/4 - 1/2 (0.430 mi.)*** ***86*** ***179***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/11/2018
Global ID: T0603705037
Status: Completed - Case Closed
Facility Id: R-11360
Status: Case Closed
Global Id: T0603705037

CPS-SLIC: Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the CPS-SLIC list, as provided by EDR, has revealed that there are 5 CPS-SLIC sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| DOWNEY INDUSTRIAL CE | 9300-9400 HALL ROAD | N 1/4 - 1/2 (0.304 mi.) | T78 | 161 |
| Database: CPS-SLIC, Date of Government Version: 06/11/2018<br>Facility Status: Open - Site Assessment<br>Global Id: T10000011452 | | | | |
| ***DAVID LUBER @ M CHEM*** | ***9236 HALL RD*** | ***NNW 1/4 - 1/2 (0.403 mi.)*** | ***V84*** | ***176*** |
| Database: CPS-SLIC, Date of Government Version: 06/11/2018<br>Facility Status: Completed - Case Closed<br>Global Id: SLT43200198 | | | | |
| ***PRIMEX TECHNOLOGIES*** | ***9236 HALL RD*** | ***NNW 1/4 - 1/2 (0.403 mi.)*** | ***V85*** | ***179*** |
| Database: SLIC REG 4, Date of Government Version: 11/17/2004<br>Facility Status: No further action required | | | | |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ASTRO PAK FACILITY | 12201 PANGBORN | SE 1/4 - 1/2 (0.254 mi.) | 71 | 134 |
| Database: SLIC REG 4, Date of Government Version: 11/17/2004<br>Database: CPS-SLIC, Date of Government Version: 06/11/2018<br>Facility Status: Completed - Case Closed<br>Facility Status: No further action required<br>Global Id: SL599992903 | | | | |
| ***ALPASE, INC.*** | ***9750 SEAACA*** | ***SE 1/4 - 1/2 (0.317 mi.)*** | ***79*** | ***162*** |
| Database: SLIC REG 4, Date of Government Version: 11/17/2004<br>Database: CPS-SLIC, Date of Government Version: 06/11/2018<br>Facility Status: Completed - Case Closed<br>Facility Status: No further action required<br>Global Id: SL184161399 | | | | |

***State and tribal registered storage tank lists***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 7 UST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***INCO EXPRESS INC*** | ***11941 WOODRUFF AVE*** | ***NNE 0 - 1/8 (0.053 mi.)*** | ***E18*** | ***40*** |
| Database: UST, Date of Government Version: 06/11/2018<br>Facility Id: 12833 | | | | |
| COAST POLYMERS INC | 9368 STEWART AND GRA | NW 0 - 1/8 (0.118 mi.) | H31 | 65 |
| Database: UST, Date of Government Version: 06/11/2018<br>Facility Id: 14427 | | | | |
| ***SO-CAL PERFORMANCE I*** | ***9723 WASHBURN RD*** | ***ESE 1/8 - 1/4 (0.175 mi.)*** | ***K43*** | ***90*** |
| Database: UST, Date of Government Version: 06/11/2018<br>Facility Id: 15399 | | | | |
| SO-CAL NITROUS AND R | 9723 E WASHBURN RD | ESE 1/8 - 1/4 (0.175 mi.) | K45 | 92 |
| Database: UST, Date of Government Version: 06/11/2018<br>Facility Id: LACoFA0046684 | | | | |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| SOUTHERN CALIFORNIA | 9407 WASHBURN RD | WSW 0 - 1/8 (0.093 mi.) | G25 | 57 |
| Database: UST, Date of Government Version: 06/11/2018<br>Facility Id: LACoFA0028785<br>Facility Id: 12689 | | | | |
| SHAWNAN | 12240 S WOODRUFF AVE | SSE 1/8 - 1/4 (0.242 mi.) | Q63 | 117 |
| Database: UST, Date of Government Version: 06/11/2018<br>Facility Id: LACoFA0030318 | | | | |
| SEQUEL CONTRACTORS I | 12240 WOODRUFF AVE | SSE 1/8 - 1/4 (0.242 mi.) | Q65 | 118 |
| Database: UST, Date of Government Version: 06/11/2018<br>Facility Id: 13260 | | | | |

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, has revealed that there are 3 AST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| Not reported | 9645 E WASHBURN RD | ESE 0 - 1/8 (0.091 mi.) | F22 | 44 |
| Database: AST, Date of Government Version: 07/06/2016 | | | | |
| CUMMINS PACIFIC, LLC | 9520 STEWART AND GRA | NE 1/8 - 1/4 (0.197 mi.) | M51 | 101 |
| Database: AST, Date of Government Version: 07/06/2016 | | | | |
| ***PARK WATER CO*** | ***9750 WASHBURN RD*** | ***ESE 1/8 - 1/4 (0.233 mi.)*** | ***P62*** | ***115*** |
| Database: AST, Date of Government Version: 07/06/2016 | | | | |

# EXECUTIVE SUMMARY

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Lists of Landfill / Solid Waste Disposal Sites***

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there are 2 WMUDS/SWAT sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***DOWNEY AREA RECYCLIN*** | ***9770 WASHBURN RD*** | ***ESE 1/4 - 1/2 (0.299 mi.)*** | ***76*** | ***147*** |
| DOWNEY DUMP | 11014 PANGHORN | NNE 1/4 - 1/2 (0.486 mi.) | 90 | 193 |

***Local Lists of Registered Storage Tanks***

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 15 SWEEPS UST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***DARNELL CORP***<br>Status: A<br>Comp Number: 964 | ***12000 WOODRUFF AVE*** | ***ENE 0 - 1/8 (0.021 mi.)*** | ***B12*** | ***23*** |
| ***INCO EXPRESS INC***<br>Status: A<br>Tank Status: A<br>Comp Number: 12833 | ***11941 WOODRUFF AVE*** | ***NNE 0 - 1/8 (0.053 mi.)*** | ***E18*** | ***40*** |
| ***METALSOURCE***<br>Status: A<br>Comp Number: 10350 | ***11939 WOODRUFF AVE*** | ***NNE 0 - 1/8 (0.055 mi.)*** | ***E20*** | ***42*** |
| ***ASSOCIATED READY MIX***<br>Status: A<br>Tank Status: A<br>Comp Number: 3751 | ***9645 E WASHBURN RD*** | ***ESE 0 - 1/8 (0.091 mi.)*** | ***F23*** | ***44*** |
| ***MCGEAN-ROHCO INC***<br>Status: A<br>Tank Status: A<br>Comp Number: 1310 | ***9520 E CEE BEE DRIVE*** | ***NE 1/8 - 1/4 (0.137 mi.)*** | ***I35*** | ***71*** |
| ***SO-CAL PERFORMANCE I***<br>Status: A<br>Tank Status: A<br>Comp Number: 15399 | ***9723 WASHBURN RD*** | ***ESE 1/8 - 1/4 (0.175 mi.)*** | ***K43*** | ***90*** |
| ***CITY OF DOWNEY*** | ***9252 STEWART RD*** | ***WNW 1/8 - 1/4 (0.211 mi.)*** | ***N53*** | ***104*** |

Status: A
Tank Status: A
Comp Number: 11659

| | | | | |
|---|---|---|---|---|
| GOLDEN W PIPE & SUPP<br>Status: A<br>Comp Number: 11251 | 11700 WOODRUFF AVE | NNE 1/8 - 1/4 (0.222 mi.) | L56 | 106 |
| ***PARK WATER CO***<br>Status: A<br>Comp Number: 10909 | ***9750 WASHBURN RD*** | ***ESE 1/8 - 1/4 (0.233 mi.)*** | ***P61*** | ***114*** |
| ***PPG IND INC HUGHES P***<br>Status: A<br>Tank Status: A<br>Comp Number: 3846 | ***12049 REGENTVIEW AVE*** | ***E 1/8 - 1/4 (0.247 mi.)*** | ***P67*** | ***120*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***RAFFAELE UNION SERVI***<br>Status: A<br>Comp Number: 10967 | ***12101 WOODRUFF AVENU*** | ***SSE 0 - 1/8 (0.051 mi.)*** | ***D15*** | ***36*** |
| ***DOWNEY***<br>Status: A<br>Tank Status: A<br>Comp Number: 12689 | ***9407 WASHBURN RD*** | ***WSW 0 - 1/8 (0.093 mi.)*** | ***G27*** | ***59*** |
| ***TERRY PETERSON***<br>Status: A<br>Tank Status: A<br>Comp Number: 9291 | ***12207 WOODRUFF AVE*** | ***SSE 1/8 - 1/4 (0.142 mi.)*** | ***J41*** | ***86*** |
| ***JOMIT EQUIPMENT RENT***<br>Status: A<br>Tank Status: A<br>Comp Number: 10910 | ***9316 WASHBURN RD*** | ***WSW 1/8 - 1/4 (0.226 mi.)*** | ***O59*** | ***110*** |
| ***SHAWNAN***<br>Status: A<br>Tank Status: A<br>Comp Number: 13260 | ***12240 WOODRUFF AVE*** | ***SSE 1/8 - 1/4 (0.242 mi.)*** | ***Q64*** | ***117*** |

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 17 HIST UST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***INCO EXPRESS INC***<br>INCO EXPRESS, INC.<br>Facility Id: 00000066487 | ***11941 SOUTH WOODRUFF***<br>11941 WOODRUFF AVE | ***NNE 0 - 1/8 (0.053 mi.)***<br>NNE 0 - 1/8 (0.053 mi.) | ***E17***<br>E19 | ***38***<br>41 |
| ***ASSOCIATED READY MIX***<br>Facility Id: 00000066424 | ***9645 E WASHBURN RD*** | ***ESE 0 - 1/8 (0.091 mi.)*** | ***F23*** | ***44*** |
| ***ASSOCIATED READY MIX***<br>MCCEAN-ROMCO INC<br>***MCGEAN CHEM CO INC*** | ***9645 E WASHBURN RD***<br>9520 E CEE DEE DRIVE<br>***9520 E CEE BEE DR*** | ***ESE 0 - 1/8 (0.091 mi.)***<br>NE 1/8 - 1/4 (0.137 mi.)<br>***NE 1/8 - 1/4 (0.137 mi.)*** | ***F24***<br>I34<br>***I36*** | ***55***<br>70<br>***77*** |

| | | | | |
|---|---|---|---|---|
| Facility Id: 00000047290 | | | | |
| STOUT ROOFING INC<br>Facility Id: 00000017615 | 9705 WASHBURN ROAD | ESE 1/8 - 1/4 (0.139 mi.) | F38 | 81 |
| ***REGENT JACK MFG CO.,***<br>Facility Id: 00000006431 | ***11905 REGENTVIEW*** | ***NE 1/8 - 1/4 (0.203 mi.)*** | ***M52*** | ***101*** |
| WATER YARD<br>Facility Id: 00000047215 | 9252 STEWART AND GRA | WNW 1/8 - 1/4 (0.211 mi.) | N54 | 104 |
| HUGHES PRODUCTS<br>Facility Id: 00000055458 | 12049 REGENTVIEW AVE | E 1/8 - 1/4 (0.247 mi.) | P68 | 131 |
| HUGHES PRODUCTS | 12045 S REGENTVIEW A | E 1/8 - 1/4 (0.250 mi.) | P69 | 132 |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***RAFFAELE UNION SERVI***<br>Facility Id: 00000017090 | ***12101 WOODRUFF AVENU*** | ***SSE 0 - 1/8 (0.051 mi.)*** | ***D15*** | ***36*** |
| ***DOWNEY***<br>Facility Id: 00000007497 | ***9407 WASHBURN RD*** | ***WSW 0 - 1/8 (0.093 mi.)*** | ***G27*** | ***59*** |
| A.C. PETERSON CO. IN<br>Facility Id: 00000003074 | 12207 WOODRUFF AVE | SSE 1/8 - 1/4 (0.142 mi.) | J39 | 82 |
| ***TERRY PETERSON*** | ***12207 WOODRUFF AVE*** | ***SSE 1/8 - 1/4 (0.142 mi.)*** | ***J41*** | ***86*** |
| GENERAL PAVING COMPA<br>Facility Id: 00000007729 | 9316 WASHBURN RD | WSW 1/8 - 1/4 (0.226 mi.) | O58 | 109 |
| ***JOMIT EQUIPMENT RENT*** | ***9316 WASHBURN RD*** | ***WSW 1/8 - 1/4 (0.226 mi.)*** | ***O59*** | ***110*** |

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 5 CA FID UST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***SO-CAL PERFORMANCE I***<br>Facility Id: 19055118<br>Status: A | ***9723 WASHBURN RD*** | ***ESE 1/8 - 1/4 (0.175 mi.)*** | ***K44*** | ***91*** |
| ***CITY OF DOWNEY***<br>Facility Id: 19054986<br>Status: A | ***9252 STEWART RD*** | ***WNW 1/8 - 1/4 (0.211 mi.)*** | ***N53*** | ***104*** |
| ***PPG IND INC HUGHES P***<br>Facility Id: 19028072<br>Status: A | ***12049 REGENTVIEW AVE*** | ***E 1/8 - 1/4 (0.247 mi.)*** | ***P67*** | ***120*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***TERRY PETERSON***<br>Facility Id: 19040155<br>Status: A | ***12207 WOODRUFF AVE*** | ***SSE 1/8 - 1/4 (0.142 mi.)*** | ***J41*** | ***86*** |
| ***JOMIT EQUIPMENT RENT***<br>Facility Id: 19003436<br>Status: A | ***9316 WASHBURN RD*** | ***WSW 1/8 - 1/4 (0.226 mi.)*** | ***O59*** | ***110*** |

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/01/2018 has revealed that there are 4 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***FUJI PHOTO FILM U S*** | ***12010 WOODRUFF AVE S*** | ***ENE 0 - 1/8 (0.018 mi.)*** | ***B11*** | ***21*** |
| EPA ID:: CAR000129742 | | | | |
| ***DARNELL CORP*** | ***12000 WOODRUFF AVE*** | ***ENE 0 - 1/8 (0.021 mi.)*** | ***B12*** | ***23*** |
| EPA ID:: CAD981971831 | | | | |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***RITE ENGINEERING AND*** | ***9441 WASHBURN RD*** | ***WSW 0 - 1/8 (0.050 mi.)*** | ***C14*** | ***29*** |
| EPA ID:: CAD983643149 | | | | |
| ***SAFARI KAR INTL*** | ***12126 WOODRUFF AVE*** | ***SSE 0 - 1/8 (0.091 mi.)*** | ***D21*** | ***42*** |
| EPA ID:: CA0001019637 | | | | |

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 01/31/2015 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| AIR FORCE PLANT #16 | | W 1/2 - 1 (0.587 mi.) | X93 | 196 |
| Federal Facility ID:: CA9799F5305 | | | | |
| INST ID:: 60965 | | | | |

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, has revealed that there are 2 DRYCLEANERS sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***SR MAINTENANCE & MAN*** | ***11814 WOODRUFF AVE*** | ***NNE 1/8 - 1/4 (0.183 mi.)*** | ***L46*** | ***92*** |
| Database: DRYCLEANERS, Date of Government Version: 05/31/2018 | | | | |
| EPA Id: CAL000371058 | | | | |
| ***SR MAINTENANCE & MAN*** | ***9525 STEWART AND GRA*** | ***NE 1/8 - 1/4 (0.216 mi.)*** | ***55*** | ***105*** |
| Database: DRYCLEANERS, Date of Government Version: 05/31/2018 | | | | |

# EXECUTIVE SUMMARY

EPA Id: CAL000367231

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 12 HIST CORTESE sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| APTOS ESPLANADE PUMP<br>Reg Id: 3045 | 12007 WOODRUFF | 0 - 1/8 (0.000 mi.) | B9 | 18 |
| ***VIMAR INC***<br>Reg Id: I-14214 | ***9650 WASHBURN RD*** | ***ESE 0 - 1/8 (0.123 mi.)*** | ***F32*** | ***66*** |
| ***MCGEAN-ROHCO, INC.***<br>Reg Id: R-01310 | ***9520 CEEBEE DR E*** | ***NE 1/8 - 1/4 (0.136 mi.)*** | ***I33*** | ***68*** |
| ***LEXINGTON CHEMICALS***<br>Reg Id: R-22573 | ***11916 REGENTVIEW*** | ***ENE 1/4 - 1/2 (0.277 mi.)*** | ***R73*** | ***136*** |
| SITE 24, TANK #2<br>Reg Id: 2766 | 9821 DOWNEYNORWALK | E 1/4 - 1/2 (0.293 mi.) | S74 | 137 |
| ***WESTERN PACIFIC PULP***<br>Reg Id: I-13583 | ***9350 HALL RD*** | ***N 1/4 - 1/2 (0.304 mi.)*** | ***T77*** | ***157*** |
| ***US RENTALS INC***<br>Reg Id: R-11696 | ***9606 FIRESTONE BLVD*** | ***NE 1/4 - 1/2 (0.347 mi.)*** | ***83*** | ***173*** |
| ***SHELL***<br>Reg Id: I-09468 | ***9305 FIRESTONE BLVD*** | ***N 1/4 - 1/2 (0.459 mi.)*** | ***W89*** | ***188*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***A C PETERSON COMPANY***<br>Reg Id: R-09291 | ***12207 WOODRUFF AVE S*** | ***SSE 1/8 - 1/4 (0.142 mi.)*** | ***J40*** | ***83*** |
| ***GENERAL PAVING CO/JO***<br>Reg Id: R-10910 | ***9316 WASHBURN RD*** | ***WSW 1/8 - 1/4 (0.226 mi.)*** | ***O57*** | ***106*** |
| ***ARROW TRANSPORTATION***<br>Reg Id: R-11024 | ***12328 WOODRUFF*** | ***SSE 1/4 - 1/2 (0.347 mi.)*** | ***U82*** | ***170*** |
| ***YALE ENGINEERING COM***<br>Reg Id: R-11360 | ***12405 WOODRUFF AVENU*** | ***S 1/4 - 1/2 (0.430 mi.)*** | ***86*** | ***179*** |

Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the Notify 65 list, as provided by EDR, and dated 06/18/2018 has revealed that there is 1 Notify 65 site within approximately 1 mile of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| STORM DRAIN | BELLFLOWER&IMPERIAL | SW 1/2 - 1 (0.649 mi.) | 96 | 199 |

# EXECUTIVE SUMMARY

## EDR HIGH RISK HISTORICAL RECORDS

### *EDR Exclusive Records*

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there is 1 EDR Hist Auto site within approximately 0.125 miles of the target property.

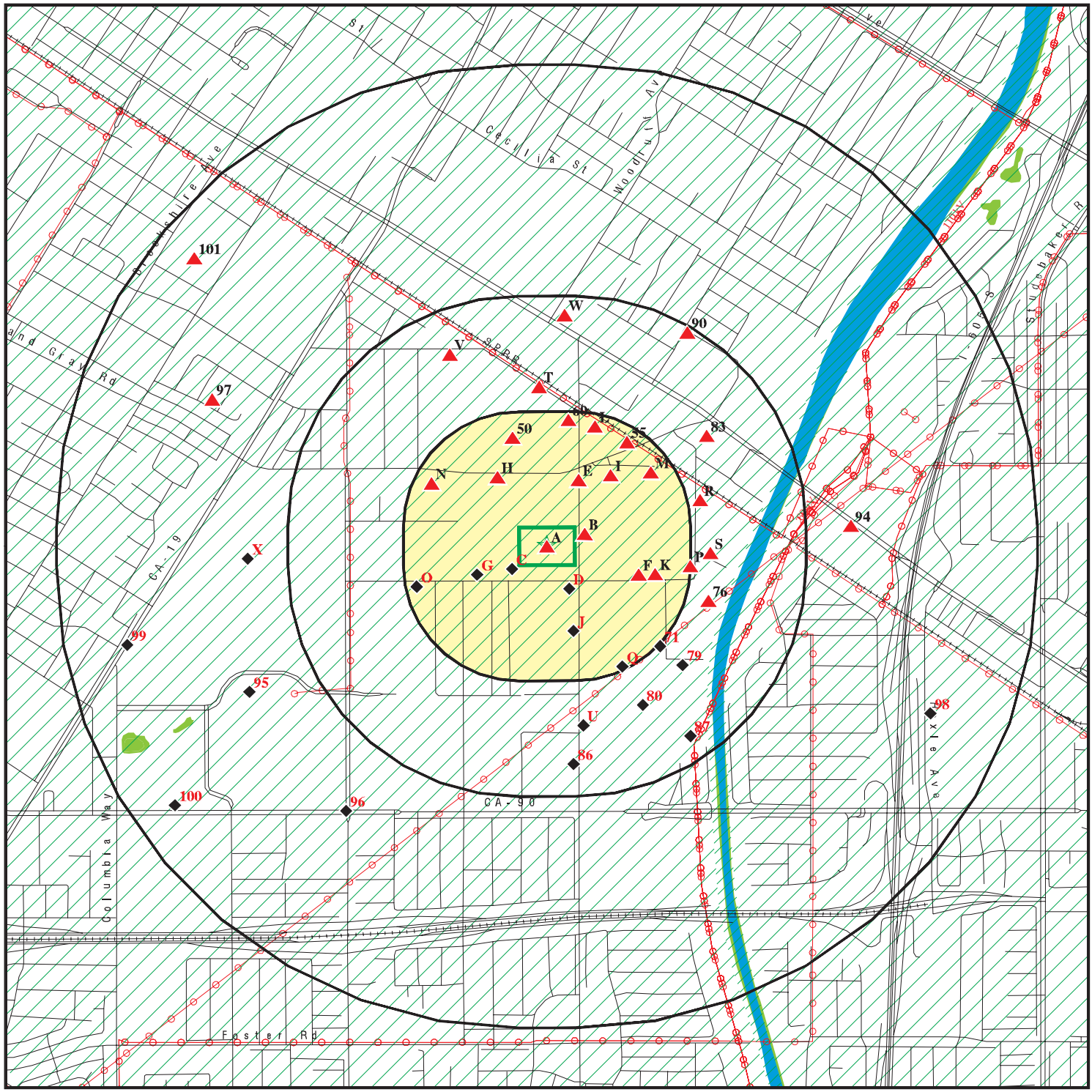
| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| BOB & DON'S SIGNAL S | 12101 WOODRUFF AVE | SSE 0 - 1/8 (0.051 mi.) | D16 | 37 |

# EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

| Site Name | Database(s) |
|---|---|
| STAR CLEANERS | DRYCLEANERS |
| STONEWOOD CENTER | CPS-SLIC |

# OVERVIEW MAP - 5408632.2S




Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

Upgradient Area

Areas of Concern

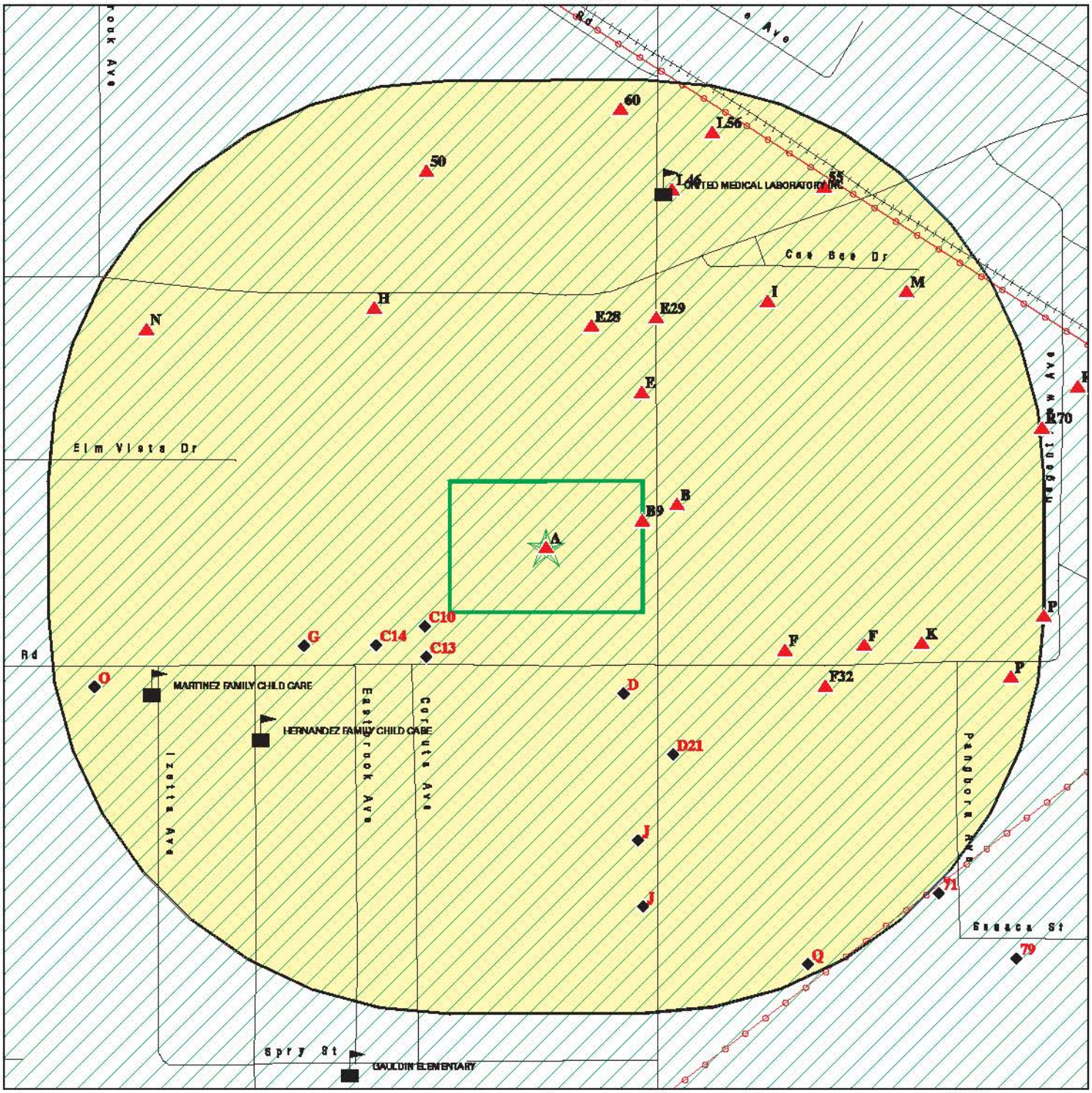
N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | | | |
|---|---|---|---|
| SITE NAME: | Kirkhill | CLIENT: | Partner Engineering and Science, Inc. |
| ADDRESS: | 12021 Woodruff Avenue<br>Downey CA 90242 | CONTACT: | Colleen Tubridy |
| LAT/LONG: | 33.925395 / 118.117903 | INQUIRY #: | 5408632.2s |
| | | DATE: | August 29, 2018 11:31 am |

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# DETAIL MAP - 5408632.2S




- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | |
|---|---|
| SITE NAME: Kirkhill | CLIENT: Partner Engineering and Science, Inc. |
| ADDRESS: 12021 Woodruff Avenue<br>Downey CA 90242 | CONTACT: Colleen Tubridy |
| LAT/LONG: 33.925395 / 118.117903 | INQUIRY #: 5408632.2s<br>DATE: August 29, 2018 11:35 am |

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# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| **STANDARD ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Federal NPL site list*** | | | | | | | | |
| NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| Proposed NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| NPL LIENS | TP | | NR | NR | NR | NR | NR | 0 |
| ***Federal Delisted NPL site list*** | | | | | | | | |
| Delisted NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal CERCLIS list*** | | | | | | | | |
| FEDERAL FACILITY | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| SEMS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal CERCLIS NFRAP site list*** | | | | | | | | |
| SEMS-ARCHIVE | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal RCRA CORRACTS facilities list*** | | | | | | | | |
| CORRACTS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal RCRA non-CORRACTS TSD facilities list*** | | | | | | | | |
| RCRA-TSDF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal RCRA generators list*** | | | | | | | | |
| RCRA-LQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| RCRA-SQG | 0.250 | 1 | 6 | 8 | NR | NR | NR | 15 |
| RCRA-CESQG | 0.250 | | 0 | 1 | NR | NR | NR | 1 |
| ***Federal institutional controls / engineering controls registries*** | | | | | | | | |
| LUCIS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US ENG CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US INST CONTROL | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal ERNS list*** | | | | | | | | |
| ERNS | TP | | NR | NR | NR | NR | NR | 0 |
| ***State- and tribal - equivalent NPL*** | | | | | | | | |
| RESPONSE | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***State- and tribal - equivalent CERCLIS*** | | | | | | | | |
| ENVIROSTOR | 1.000 | | 0 | 0 | 4 | 9 | NR | 13 |
| ***State and tribal landfill and/or solid waste disposal site lists*** | | | | | | | | |
| SWF/LF | 0.500 | | 0 | 1 | 1 | NR | NR | 2 |
| ***State and tribal leaking storage tank lists*** | | | | | | | | |
| LUST | 0.500 | 1 | 3 | 4 | 10 | NR | NR | 18 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| INDIAN LUST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| CPS-SLIC | 0.500 | | 0 | 0 | 5 | NR | NR | 5 |
| ***State and tribal registered storage tank lists*** | | | | | | | | |
| FEMA UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| UST | 0.250 | | 3 | 4 | NR | NR | NR | 7 |
| AST | 0.250 | | 1 | 2 | NR | NR | NR | 3 |
| INDIAN UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***State and tribal voluntary cleanup sites*** | | | | | | | | |
| INDIAN VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***State and tribal Brownfields sites*** | | | | | | | | |
| BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| **ADDITIONAL ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Local Brownfield lists*** | | | | | | | | |
| US BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Landfill / Solid Waste Disposal Sites*** | | | | | | | | |
| WMUDS/SWAT | 0.500 | | 0 | 0 | 2 | NR | NR | 2 |
| SWRCY | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| HAULERS | TP | | NR | NR | NR | NR | NR | 0 |
| INDIAN ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| DEBRIS REGION 9 | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| IHS OPEN DUMPS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Hazardous waste / Contaminated Sites*** | | | | | | | | |
| AOCONCERN | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| US HIST CDL | TP | | NR | NR | NR | NR | NR | 0 |
| HIST Cal-Sites | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| SCH | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| CDL | TP | | NR | NR | NR | NR | NR | 0 |
| Toxic Pits | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| US CDL | TP | | NR | NR | NR | NR | NR | 0 |
| CERS HAZ WASTE | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***Local Lists of Registered Storage Tanks*** | | | | | | | | |
| SWEEPS UST | 0.250 | | 6 | 9 | NR | NR | NR | 15 |
| HIST UST | 0.250 | 2 | 6 | 11 | NR | NR | NR | 19 |
| CA FID UST | 0.250 | | 0 | 5 | NR | NR | NR | 5 |
| CERS TANKS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***Local Land Records*** | | | | | | | | |
| LIENS | TP | | NR | NR | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| LIENS 2 | TP | | NR | NR | NR | NR | NR | 0 |
| DEED | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Records of Emergency Release Reports*** | | | | | | | | |
| HMIRS | TP | | NR | NR | NR | NR | NR | 0 |
| CHMIRS | TP | | NR | NR | NR | NR | NR | 0 |
| LDS | TP | | NR | NR | NR | NR | NR | 0 |
| MCS | TP | | NR | NR | NR | NR | NR | 0 |
| SPILLS 90 | TP | | NR | NR | NR | NR | NR | 0 |
| ***Other Ascertainable Records*** | | | | | | | | |
| RCRA NonGen / NLR | 0.250 | | 4 | 0 | NR | NR | NR | 4 |
| FUDS | 1.000 | | 0 | 0 | 0 | 1 | NR | 1 |
| DOD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| SCRD DRYCLEANERS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US FIN ASSUR | TP | | NR | NR | NR | NR | NR | 0 |
| EPA WATCH LIST | TP | | NR | NR | NR | NR | NR | 0 |
| 2020 COR ACTION | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| TSCA | TP | | NR | NR | NR | NR | NR | 0 |
| TRIS | TP | | NR | NR | NR | NR | NR | 0 |
| SSTS | TP | | NR | NR | NR | NR | NR | 0 |
| ROD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| RMP | TP | | NR | NR | NR | NR | NR | 0 |
| RAATS | TP | | NR | NR | NR | NR | NR | 0 |
| PRP | TP | | NR | NR | NR | NR | NR | 0 |
| PADS | TP | | NR | NR | NR | NR | NR | 0 |
| ICIS | TP | | NR | NR | NR | NR | NR | 0 |
| FTTS | TP | | NR | NR | NR | NR | NR | 0 |
| MLTS | TP | | NR | NR | NR | NR | NR | 0 |
| COAL ASH DOE | TP | | NR | NR | NR | NR | NR | 0 |
| COAL ASH EPA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| PCB TRANSFORMER | TP | | NR | NR | NR | NR | NR | 0 |
| RADINFO | TP | | NR | NR | NR | NR | NR | 0 |
| HIST FTTS | TP | | NR | NR | NR | NR | NR | 0 |
| DOT OPS | TP | | NR | NR | NR | NR | NR | 0 |
| CONSENT | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| INDIAN RESERV | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| FUSRAP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| UMTRA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| LEAD SMELTERS | TP | | NR | NR | NR | NR | NR | 0 |
| US AIRS | TP | | NR | NR | NR | NR | NR | 0 |
| US MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ABANDONED MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| FINDS | TP | 1 | NR | NR | NR | NR | NR | 1 |
| DOCKET HWC | TP | | NR | NR | NR | NR | NR | 0 |
| ECHO | TP | 1 | NR | NR | NR | NR | NR | 1 |
| UXO | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| FUELS PROGRAM | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| CA BOND EXP. PLAN | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| Cortese | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| CUPA Listings | 0.250 | | 0 | 0 | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| DRYCLEANERS | 0.250 | | 0 | 2 | NR | NR | NR | 2 |
| EMI | TP | 1 | NR | NR | NR | NR | NR | 1 |
| ENF | TP | | NR | NR | NR | NR | NR | 0 |
| Financial Assurance | TP | | NR | NR | NR | NR | NR | 0 |
| HAZNET | TP | 2 | NR | NR | NR | NR | NR | 2 |
| ICE | TP | | NR | NR | NR | NR | NR | 0 |
| HIST CORTESE | 0.500 | 1 | 2 | 3 | 7 | NR | NR | 13 |
| LOS ANGELES CO. HMS | TP | 1 | NR | NR | NR | NR | NR | 1 |
| HWP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| HWT | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| MWMP | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NPDES | TP | | NR | NR | NR | NR | NR | 0 |
| PEST LIC | TP | | NR | NR | NR | NR | NR | 0 |
| PROC | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| Notify 65 | 1.000 | | 0 | 0 | 0 | 1 | NR | 1 |
| LA Co. Site Mitigation | TP | | NR | NR | NR | NR | NR | 0 |
| UIC | TP | | NR | NR | NR | NR | NR | 0 |
| WASTEWATER PITS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| WDS | TP | | NR | NR | NR | NR | NR | 0 |
| WIP | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| OTHER OIL GAS | TP | | NR | NR | NR | NR | NR | 0 |
| PROD WATER PONDS | TP | | NR | NR | NR | NR | NR | 0 |
| CERS | TP | | NR | NR | NR | NR | NR | 0 |
| PROJECT | TP | | NR | NR | NR | NR | NR | 0 |
| NON-CASE INFO | TP | | NR | NR | NR | NR | NR | 0 |
| SAMPLING POINT | TP | | NR | NR | NR | NR | NR | 0 |
| UIC GEO | TP | | NR | NR | NR | NR | NR | 0 |
| WELL STIM PROJ | TP | | NR | NR | NR | NR | NR | 0 |
| CIWQS | TP | 1 | NR | NR | NR | NR | NR | 1 |
| MILITARY PRIV SITES | TP | | NR | NR | NR | NR | NR | 0 |
| **EDR HIGH RISK HISTORICAL RECORDS** | | | | | | | | |
| ***EDR Exclusive Records*** | | | | | | | | |
| EDR MGP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| EDR Hist Auto | 0.125 | | 1 | NR | NR | NR | NR | 1 |
| EDR Hist Cleaner | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| **EDR RECOVERED GOVERNMENT ARCHIVES** | | | | | | | | |
| ***Exclusive Recovered Govt. Archives*** | | | | | | | | |
| RGA LF | TP | | NR | NR | NR | NR | NR | 0 |
| RGA LUST | TP | 2 | NR | NR | NR | NR | NR | 2 |
| - Totals -- | | 14 | 32 | 50 | 29 | 11 | 0 | 136 |

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

**A1**
**Target**
**Property**

**KIRKHILL INC**
**12021 WOODRUFF AVE**
**DOWNEY, CA 90241**

**Site 1 of 8 in cluster A**

**Actual:**
**104 ft.**

**RCRA-SQG** **1000270393**
**LUST** **CAD008255648**
**HIST UST**
**FINDS**
**ECHO**
**HIST CORTESE**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 09/01/1996 |
| Facility name: | KIRKHILL INC |
| Facility address: | 12021 WOODRUFF AVE<br>DOWNEY, CA 90241 |
| EPA ID: | CAD008255648 |
| Mailing address: | WOODRUFF AVE<br>DOWNEY, CA 90241 |
| Contact: | Not reported |
| Contact address: | Not reported<br>Not reported |
| Contact country: | US |
| Contact telephone: | Not reported |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | NOT REQUIRED |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Operator |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | KIRKHILL INC |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |

Handler Activities Summary:
U.S. importer of hazardous waste: No

**KIRKHILL INC (Continued)** **1000270393**

Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

LUST:
Lead Agency: LOS ANGELES COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603704020
Global Id: T0603704020
Latitude: 33.9256804
Longitude: -118.1167513
Status: Completed - Case Closed
Status Date: 08/06/1992
Case Worker: JOA
RB Case Number: I-12987
Local Agency: LOS ANGELES COUNTY
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Diesel
Site History: Not reported

LUST:
Global Id: T0603704020
Contact Type: Local Agency Caseworker
Contact Name: JOHN AWUJO
Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Global Id: T0603704020
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603704020
Action Type: Other
Date: 03/15/1990

**KIRKHILL INC (Continued)** **1000270393**

Action: Leak Reported

Global Id: T0603704020
Action Type: Other
Date: 03/12/1990
Action: Leak Stopped

Global Id: T0603704020
Action Type: Other
Date: 03/12/1990
Action: Leak Discovery

LUST:
Global Id: T0603704020
Status: Open - Case Begin Date
Status Date: 03/12/1990

Global Id: T0603704020
Status: Open - Remediation
Status Date: 06/05/1990

Global Id: T0603704020
Status: Completed - Case Closed
Status Date: 08/06/1992

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: I-12987
Status: Case Closed
Substance: Diesel
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Soil
Abatement Method Used at the Site: Not reported
Global ID: T0603704020
W Global ID: Not reported
Staff: UNK
Local Agency: 19000
Cross Street: IMPERIAL HWY.
Enforcement Type: Not reported
Date Leak Discovered: 3/12/1990
Date Leak First Reported: 3/15/1990
Date Leak Record Entered: 4/8/1990
Date Confirmation Began: Not reported
Date Leak Stopped: 3/12/1990
Date Case Last Changed on Database: 8/11/1992
Date the Case was Closed: 8/6/1992
How Leak Discovered: Tank Closure
How Leak Stopped: Not reported
Cause of Leak: UNK
Leak Source: UNK
Operator: BALLANGER, RAYMOND
Water System: Not reported

**KIRKHILL INC (Continued)** **1000270393**

Well Name: Not reported
Approx. Dist To Production Well (ft): 534.71319376592650446050508082
Source of Cleanup Funding: UNK
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: Not reported
Remediation Plan Submitted: 6/5/1990
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Enforcement Action Date: Not reported
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: KIRKHILL INC.
RP Address: 12021 WOODRUFF AVE., DOWNEY, 90241
Program: LUST
Lat/Long: 33.9256804 / -1
Local Agency Staff: Not reported
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

HIST UST:
File Number: Not reported
URL: Not reported
Region: STATE
Facility ID: 00000064445
Facility Type: Other
Other Type: RUBBER GOODS-MANUFAC
Contact Name: Not reported
Telephone: 2138033421
Owner Name: KIRKHILL INC.
Owner Address: 12021 WOODRUFF AVENUE
Owner City,St,Zip: DOWNEY, CA 90241
Total Tanks: 0004

Tank Num: 001
Container Num: 1
Year Installed: 1967
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: 1973
Tank Capacity: 00010000

**KIRKHILL INC (Continued)** **1000270393**

Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: 1976
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: 1953
Tank Capacity: 00007500
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor

FINDS:

Registry ID: 110002631000

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

Registry ID: 110055849872

Environmental Interest/Information System
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000270393
Registry ID: 110002631000
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002631000

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: I-12987

**A2 Target Property** **KIRKHILL INC**
**12021 WOODRUFF AVENUE**
**DOWNEY, CA 90241**

**HIST UST** **S113157677**
**HAZNET** **N/A**

**Site 2 of 8 in cluster A**

**Actual: 104 ft.**

HIST UST:

| | |
|---|---|
| File Number: | 0002737C |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002737C.pdf |
| Region: | Not reported |
| Facility ID: | Not reported |
| Facility Type: | Not reported |
| Other Type: | Not reported |
| Contact Name: | Not reported |
| Telephone: | Not reported |
| Owner Name: | Not reported |
| Owner Address: | Not reported |
| Owner City,St,Zip: | Not reported |
| Total Tanks: | Not reported |
| | |
| Tank Num: | Not reported |
| Container Num: | Not reported |
| Year Installed: | Not reported |
| Tank Capacity: | Not reported |
| Tank Used for: | Not reported |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Not reported |

Click here for Geo Tracker PDF:

HAZNET:

| | |
|---|---|
| envid: | S113157677 |
| Year: | 2014 |
| GEPAID: | CAL000348524 |
| Contact: | MICHAEL PERSION |
| Telephone: | 5628034388 |
| Mailing Name: | Not reported |
| Mailing Address: | 12021 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |
| Gen County: | Los Angeles |
| TSD EPA ID: | NVT330010000 |
| TSD County: | 99 |
| Waste Category: | Other organic solids |
| Disposal Method: | Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization) |
| Tons: | 7.05 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | S113157677 |
| Year: | 2014 |
| GEPAID: | CAL000348524 |
| Contact: | MICHAEL PERSION |
| Telephone: | 5628034388 |
| Mailing Name: | Not reported |
| Mailing Address: | 12021 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |

**KIRKHILL INC (Continued)** **S113157677**

| | |
|---|---|
| Gen County: | Los Angeles |
| TSD EPA ID: | CAT080013352 |
| TSD County: | Los Angeles |
| Waste Category: | Unspecified oil-containing waste |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Tons: | 0.4587 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | S113157677 |
| Year: | 2014 |
| GEPAID: | CAL000348524 |
| Contact: | MICHAEL PERSION |
| Telephone: | 5628034388 |
| Mailing Name: | Not reported |
| Mailing Address: | 12021 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |
| Gen County: | Los Angeles |
| TSD EPA ID: | AZR000501510 |
| TSD County: | 99 |
| Waste Category: | Unspecified oil-containing waste |
| Disposal Method: | Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135) |
| Tons: | 0.68805 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | S113157677 |
| Year: | 2014 |
| GEPAID: | CAL000348524 |
| Contact: | MICHAEL PERSION |
| Telephone: | 5628034388 |
| Mailing Name: | Not reported |
| Mailing Address: | 12021 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |
| Gen County: | Los Angeles |
| TSD EPA ID: | ARD981057870 |
| TSD County: | 99 |
| Waste Category: | Unspecified organic liquid mixture |
| Disposal Method: | Fuel Blending Prior To Energy Recovery At Another Site |
| Tons: | 0.374 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | S113157677 |
| Year: | 2014 |
| GEPAID: | CAL000348524 |
| Contact: | MICHAEL PERSION |
| Telephone: | 5628034388 |
| Mailing Name: | Not reported |
| Mailing Address: | 12021 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |
| Gen County: | Los Angeles |

**KIRKHILL INC (Continued)** **S113157677**

| | |
|---|---|
| TSD EPA ID: | ARD981057870 |
| TSD County: | 99 |
| Waste Category: | Off-specification, aged or surplus organics |
| Disposal Method: | Fuel Blending Prior To Energy Recovery At Another Site |
| Tons: | 0.26 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

Click this hyperlink while viewing on your computer to access
21 additional CA_HAZNET: record(s) in the EDR Site Report.

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**A3** **CAL CONDUIT PRODUCTS** **HAZNET** **S112977534**
**Target** **12021 WOODRUFF AVE** **N/A**
**Property** **DOWNEY, CA 90241**

**Site 3 of 8 in cluster A**

**Actual:** **104 ft.**

HAZNET:

| | |
|---|---|
| envid: | S112977534 |
| Year: | 2009 |
| GEPAID: | CAC002641805 |
| Contact: | FRANK HARMAN |
| Telephone: | 5628034388 |
| Mailing Name: | Not reported |
| Mailing Address: | 9650 WASHBURN RD |
| Mailing City,St,Zip: | DOWNEY, CA 90241 |
| Gen County: | Not reported |
| TSD EPA ID: | CAD099452708 |
| TSD County: | Not reported |
| Waste Category: | Waste oil and mixed oil |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Tons: | 0.95 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

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**A4** **KIRKHILL INC** **EMI** **S106833862**
**Target** **12021 WOODRUFF ST** **N/A**
**Property** **DOWNEY, CA 90241**

**Site 4 of 8 in cluster A**

**Actual:** **104 ft.**

EMI:

| | |
|---|---|
| Year: | 1987 |
| County Code: | 19 |
| Air Basin: | SC |
| Facility ID: | 3736 |
| Air District Name: | SC |
| SIC Code: | 3069 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | 0 |
| Reactive Organic Gases Tons/Yr: | 0 |

**KIRKHILL INC (Continued)** **S106833862**

| | |
|---|---|
| Carbon Monoxide Emissions Tons/Yr: | 0 |
| NOX - Oxides of Nitrogen Tons/Yr: | 1 |
| SOX - Oxides of Sulphur Tons/Yr: | 0 |
| Particulate Matter Tons/Yr: | 0 |
| Part. Matter 10 Micrometers and Smllr Tons/Yr: | 0 |

| | |
|---|---|
| Year: | 1990 |
| County Code: | 19 |
| Air Basin: | SC |
| Facility ID: | 3736 |
| Air District Name: | SC |
| SIC Code: | 3061 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | 0 |
| Reactive Organic Gases Tons/Yr: | 0 |
| Carbon Monoxide Emissions Tons/Yr: | 0 |
| NOX - Oxides of Nitrogen Tons/Yr: | 1 |
| SOX - Oxides of Sulphur Tons/Yr: | 0 |
| Particulate Matter Tons/Yr: | 0 |
| Part. Matter 10 Micrometers and Smllr Tons/Yr: | 0 |

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**A5** **KIRKHILL INC** **CIWQS** **S121648729**
**Target** **12021 WOODRUFF AVE STE A** **N/A**
**Property** **DOWNEY, CA 90241**

**Site 5 of 8 in cluster A**

**Actual:** **104 ft.**

CIWQS:

| | |
|---|---|
| Agency: | Kirkhill Inc |
| Agency Address: | 12021 Woodruff Ave Ste A, Downey, CA 90241 |
| Place/Project Type: | Industrial - Fabricated Rubber Products, NEC |
| SIC/NAICS: | 3069 |
| Region: | 4 |
| Program: | INDSTW |
| Regulatory Measure Status: | Terminated |
| Regulatory Measure Type: | Storm water industrial |
| Order Number: | 2014-0057-DWQ |
| WDID: | 4 19I002452 |
| NPDES Number: | CAS000001 |
| Adoption Date: | Not reported |
| Effective Date: | 04/01/1992 |
| Termination Date: | 01/07/1999 |
| Expiration/Review Date: | Not reported |
| Design Flow: | Not reported |
| Major/Minor: | Not reported |
| Complexity: | Not reported |
| TTWQ: | Not reported |
| Enforcement Actions within 5 years: | 0 |
| Violations within 5 years: | 0 |
| Latitude: | 33.92567 |
| Longitude: | -118.1167 |

**A6** **KIRKHILL RUBBER INC** **LOS ANGELES CO. HMS** **S104538813**
**Target** **12021 WOODRUFF AVE** **N/A**
**Property** **DOWNEY, CA 90241**

**Site 6 of 8 in cluster A**

**Actual:** **104 ft.**

LOS ANGELES CO. HMS:

| | |
|---|---|
| Region: | LA |
| Permit Category: | Not reported |
| Facility Id: | 002968-I03070 |
| Facility Type: | Not reported |
| Facility Status: | OPEN |
| Area: | 1F |
| Permit Number: | Not reported |
| Permit Status: | Not reported |

| | |
|---|---|
| Region: | LA |
| Permit Category: | T |
| Facility Id: | 012790-012987 |
| Facility Type: | 0 |
| Facility Status: | Removed |
| Area: | 1F |
| Permit Number: | 00004735T |
| Permit Status: | Removed |

---

**A7** **KIRKHILL INC.** **RGA LUST** **S114640212**
**Target** **12021 WOODRUFF AVE** **N/A**
**Property** **DOWNEY, CA**

**Site 7 of 8 in cluster A**

**Actual:** **104 ft.**

RGA LUST:

| | | |
|---|---|---|
| 2012 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 2011 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 2010 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 2009 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 2008 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 2007 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 2006 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 2005 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 2003 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 2002 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 2001 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 2000 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 1998 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 1997 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 1996 | KIRKHILL INC. | 12021 WOODRUFF AVE |
| 1995 | KIRKHILL INC. | 12021 WOODRUFF AVE |

**A8**
**Target**
**Property**

**KIRKHILL INC.**
**12021 WOODRUFF AVE.**
**DOWNEY, CA**

**RGA LUST** **S114640211**
**N/A**

**Site 8 of 8 in cluster A**

**Actual:**
**104 ft.**

RGA LUST:

| | | |
|---|---|---|
| 1994 | KIRKHILL INC. | 12021 WOODRUFF AVE. |
| 1993 | KIRKHILL INC. | 12021 WOODRUFF AVE. |

---

**B9**

**APTOS ESPLANADE PUMP STAT**
**12007 WOODRUFF**
**DOWNEY, CA 90241**

**HIST CORTESE** **S103625346**
**N/A**

**< 1/8**
**1 ft.**

**Site 1 of 3 in cluster B**

**Relative:**
**Higher**

**Actual:**
**104 ft.**

HIST CORTESE:

| | |
|---|---|
| Region: | CORTESE |
| Facility County Code: | 30 |
| Reg By: | LTNKA |
| Reg Id: | 3045 |

---

**C10**
**WSW**
**< 1/8**
**0.018 mi.**
**93 ft.**

**CLASSIC GRAPHIX**
**9459 WASHBURN RD**
**DOWNEY, CA 90242**

**RCRA-SQG** **1001111740**
**FINDS** **CAR000012781**
**ECHO**
**HAZNET**
**LOS ANGELES CO. HMS**

**Site 1 of 3 in cluster C**

**Relative:**
**Lower**

**Actual:**
**102 ft.**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 06/03/1996 |
| Facility name: | CLASSIC GRAPHIX |
| Facility address: | 9459 WASHBURN RD<br>DOWNEY, CA 90242 |
| EPA ID: | CAR000012781 |
| Mailing address: | WASHBURN RD<br>DOWNEY, CA 90242 |
| Contact: | JUDY BATHURST |
| Contact address: | 9459 WASHBURN RD<br>DOWNEY, CA 90242 |
| Contact country: | US |
| Contact telephone: | 310-869-1968 |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | JUDY BATHURST |
| Owner/operator address: | 9459 WASHBURN RD<br>DOWNEY, CA 90242 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 310-869-1968 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |

**CLASSIC GRAPHIX (Continued)** **1001111740**

Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002912340

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1001111740
Registry ID: 110002912340
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002912340

HAZNET:
envid: 1001111740
Year: 2006
GEPAID: CAR000012781
Contact: SCOTT BATHURST
Telephone: 5628691968
Mailing Name: Not reported
Mailing Address: 9459 WASHBURN RD
Mailing City,St,Zip: DOWNEY, CA 902422912
Gen County: Not reported

**CLASSIC GRAPHIX (Continued)** **1001111740**

TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified organic liquid mixture
Disposal Method: Transfer Station
Tons: 0.22
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1001111740
Year: 2006
GEPAID: CAR000012781
Contact: SCOTT BATHURST
Telephone: 5628691968
Mailing Name: Not reported
Mailing Address: 9459 WASHBURN RD
Mailing City,St,Zip: DOWNEY, CA 902422912
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified organic liquid mixture
Disposal Method: Recycler
Tons: 0.22
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1001111740
Year: 2006
GEPAID: CAR000012781
Contact: SCOTT BATHURST
Telephone: 5628691968
Mailing Name: Not reported
Mailing Address: 9459 WASHBURN RD
Mailing City,St,Zip: DOWNEY, CA 902422912
Gen County: Not reported
TSD EPA ID: CAD981402522
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: 0.06
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1001111740
Year: 2004
GEPAID: CAR000012781
Contact: SCOTT BATHURST
Telephone: 5628691968
Mailing Name: Not reported
Mailing Address: 9459 WASHBURN RD
Mailing City,St,Zip: DOWNEY, CA 902422912
Gen County: Not reported
TSD EPA ID: CAD981402522
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste

**CLASSIC GRAPHIX (Continued)** **1001111740**

Disposal Method: Recycler
Tons: 0.06
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1001111740
Year: 2004
GEPAID: CAR000012781
Contact: SCOTT BATHURST
Telephone: 5628691968
Mailing Name: Not reported
Mailing Address: 9459 WASHBURN RD
Mailing City,St,Zip: DOWNEY, CA 902422912
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified organic liquid mixture
Disposal Method: Recycler
Tons: 0.22
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
5 additional CA_HAZNET: record(s) in the EDR Site Report.

LOS ANGELES CO. HMS:
Region: LA
Permit Category: Not reported
Facility Id: 026102-035592
Facility Type: Not reported
Facility Status: OPEN
Area: 1F
Permit Number: Not reported
Permit Status: Not reported

---

**B11** **FUJI PHOTO FILM U S A INC** **RCRA NonGen / NLR** **1006805597**
**ENE** **12010 WOODRUFF AVE STE A** **FINDS** **CAR000129742**
**< 1/8** **DOWNEY, CA 90241** **ECHO**
**0.018 mi.** **HAZNET**
**97 ft.** **Site 2 of 3 in cluster B**

**Relative:**
**Higher**

**Actual:**
**105 ft.**

RCRA NonGen / NLR:
Date form received by agency: 11/04/2002
Facility name: FUJI PHOTO FILM U S A INC
Facility address: 12010 WOODRUFF AVE STE A
DOWNEY, CA 90241
EPA ID: CAR000129742
Mailing address: 200 SUMMIT LAKE DRIVE
VALHALLA, NY 10595-1356
Contact: JOANNE M KIRWIN
Contact address: 200 SUMMIT LAKE DRIVE
VALHALLA, NY 10595-1356
Contact country: US
Contact telephone: 914-789-8100
Telephone ext.: 8497

**FUJI PHOTO FILM U S A INC (Continued)** **1006805597**

Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: B E F
Owner/operator address: NOT REQUIRED
NOT REQUIRED, CA 99999
Owner/operator country: Not reported
Owner/operator telephone: 999-999-9999
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110013357526

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

**FUJI PHOTO FILM U S A INC (Continued)** **1006805597**

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1006805597
Registry ID: 110013357526
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110013357526

HAZNET:
envid: 1006805597
Year: 2003
GEPAID: CAR000129742
Contact: JOSEPHINE CARPENITO
Telephone: 9147898359
Mailing Name: Not reported
Mailing Address: 200 SUMMIT LAKE DR
Mailing City,St,Zip: VALHALLA, NY 105950000
Gen County: Not reported
TSD EPA ID: CAD981402522
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: 0.7
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1006805597
Year: 2003
GEPAID: CAR000129742
Contact: JOSEPHINE CARPENITO
Telephone: 9147898359
Mailing Name: Not reported
Mailing Address: 200 SUMMIT LAKE DR
Mailing City,St,Zip: VALHALLA, NY 105950000
Gen County: Not reported
TSD EPA ID: CAD981402522
TSD County: Not reported
Waste Category: Not reported
Disposal Method: Recycler
Tons: 0.1
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

---

**B12** **DARNELL CORP** **SWEEPS UST** **1000312748**
**ENE** **12000 WOODRUFF AVE** **RCRA NonGen / NLR** **CAD981971831**
**< 1/8** **DOWNEY, CA 90241** **FINDS**
**0.021 mi.** **ECHO**
**113 ft.** **Site 3 of 3 in cluster B** **LOS ANGELES CO. HMS**

**Relative:**
**Higher**

**Actual:**
**105 ft.**

SWEEPS UST:
Status: Active
Comp Number: 964
Number: 9
Board Of Equalization: Not reported

**DARNELL CORP (Continued)** **1000312748**

Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: Not reported
Tank Status: Not reported
Capacity: Not reported
Active Date: Not reported
Tank Use: Not reported
STG: Not reported
Content: Not reported
Number Of Tanks: Not reported

RCRA NonGen / NLR:
Date form received by agency: 05/15/1987
Facility name: DARNELL CORP
Facility address: 12000 WOODRUFF AVE
DOWNEY, CA 90241
EPA ID: CAD981971831
Mailing address: WOODRUFF AVE
DOWNEY, CA 90241
Contact: ENVIRONMENTAL MANAGER
Contact address: 12000 WOODRUFF AVE
DOWNEY, CA 90241
Contact country: US
Contact telephone: 213-923-9373
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: EVANS INDUSTRIES
Owner/operator address: 200 RENAISSANCE CTR STE 3150
DETROIT, MI 48243
Owner/operator country: Not reported
Owner/operator telephone: 313-259-2166
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported

**DARNELL CORP (Continued)** **1000312748**

Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002760432

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000312748
Registry ID: 110002760432
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002760432

LOS ANGELES CO. HMS:
Region: LA
Permit Category: Not reported
Facility Id: 000919-000964
Facility Type: Not reported
Facility Status: Removed
Area: 1F
Permit Number: Not reported
Permit Status: Not reported

Region: LA
Permit Category: I
Facility Id: 000919-I00964
Facility Type: 00

**DARNELL CORP (Continued)** **1000312748**

Facility Status: Closed
Area: 1F
Permit Number: 000000287
Permit Status: Closed

---

**C13** **STUD WELDING PRODUCTS INC** **RCRA-SQG** **1000594670**
**SW** **9455 WASHBURN ROAD** **FINDS** **CAD983585290**
**< 1/8** **DOWNEY, CA 90242** **ECHO**
**0.031 mi.** **HAZNET**
**164 ft.** **Site 2 of 3 in cluster C** **LOS ANGELES CO. HMS**

**Relative: Lower**

**Actual: 102 ft.**

RCRA-SQG:
Date form received by agency: 05/18/1991
Facility name: STUD WELDING PRODUCTS INC
Facility address: 9455 WASHBURN ROAD
DOWNEY, CA 90242
EPA ID: CAD983585290
Contact: PHIL BUTCHER
Contact address: 9455 WASHBURN ROAD
DOWNEY, CA 90242
Contact country: US
Contact telephone: 213-327-3668
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: JOSEPH B QUALL
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

**STUD WELDING PRODUCTS INC (Continued)** **1000594670**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002846378

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000594670
Registry ID: 110002846378
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002846378

HAZNET:
envid: 1000594670
Year: 2016
GEPAID: CAD983585290
Contact: LINDA MYERS,
Telephone: 4256569787
Mailing Name: Not reported
Mailing Address: 9459 WASHBURN RD
Mailing City,St,Zip: DOWNEY, CA 902420000

**STUD WELDING PRODUCTS INC (Continued)** **1000594670**

Gen County: Los Angeles
TSD EPA ID: CAT000613976
TSD County: Orange
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.155
Cat Decode: Aqueous solution with total organic residues less than 10 percent
Method Decode: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

envid: 1000594670
Year: 2016
GEPAID: CAD983585290
Contact: LINDA MYERS,
Telephone: 4256569787
Mailing Name: Not reported
Mailing Address: 9459 WASHBURN RD
Mailing City,St,Zip: DOWNEY, CA 902420000
Gen County: Los Angeles
TSD EPA ID: CAD099452708
TSD County: Los Angeles
Waste Category: Waste oil and mixed oil
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.836
Cat Decode: Waste oil and mixed oil
Method Decode: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: Los Angeles

envid: 1000594670
Year: 2015
GEPAID: CAD983585290
Contact: LINDA MYERS,
Telephone: 4256569787
Mailing Name: Not reported
Mailing Address: PO BOX 68887
Mailing City,St,Zip: SEATTLE, WA 981680887
Gen County: Los Angeles
TSD EPA ID: CAT000613976
TSD County: Orange
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.197
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1000594670
Year: 2015
GEPAID: CAD983585290
Contact: LINDA MYERS,
Telephone: 4256569787
Mailing Name: Not reported

**STUD WELDING PRODUCTS INC (Continued)** **1000594670**

Mailing Address: PO BOX 68887
Mailing City,St,Zip: SEATTLE, WA 981680887
Gen County: Los Angeles
TSD EPA ID: CAD099452708
TSD County: Los Angeles
Waste Category: Waste oil and mixed oil
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 1.634
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1000594670
Year: 2014
GEPAID: CAD983585290
Contact: LINDA MYERS, BOOKKEEPER
Telephone: 4256569787
Mailing Name: Not reported
Mailing Address: PO BOX 68887
Mailing City,St,Zip: SEATTLE, WA 981680887
Gen County: Los Angeles
TSD EPA ID: CAD099452708
TSD County: Los Angeles
Waste Category: Waste oil and mixed oil
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.95
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
73 additional CA_HAZNET: record(s) in the EDR Site Report.

LOS ANGELES CO. HMS:
Region: LA
Permit Category: Not reported
Facility Id: 026101-035590
Facility Type: Not reported
Facility Status: OPEN
Area: 1F
Permit Number: Not reported
Permit Status: Not reported

---

**C14** **RITE ENGINEERING AND MFG CORP** **RCRA NonGen / NLR** **1000818442**
**WSW** **9441 WASHBURN RD** **FINDS** **CAD983643149**
**< 1/8** **DOWNEY, CA 90242** **ECHO**
**0.050 mi.** **EMI**
**265 ft.** **Site 3 of 3 in cluster C** **HAZNET**

**Relative:** **Lower**
**Actual:** **102 ft.**

RCRA NonGen / NLR:
Date form received by agency: 10/27/2009
Facility name: RITE ENGINEERING AND MFG CORP
Facility address: 9441 WASHBURN RD
DOWNEY, CA 90242
EPA ID: CAD983643149

**RITE ENGINEERING AND MFG CORP (Continued)** **1000818442**

Contact: JACK COE
Contact address: 9441 WASHBURN RD
DOWNEY, CA 90242
Contact country: US
Contact telephone: 562-862-2135
Contact email: JACKC@RITEBOILER.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: JOHN E KASUNICH
Owner/operator address: 2112 CHELSEA RD
PALOS VERDES, CA 90274
Owner/operator country: Not reported
Owner/operator telephone: 310-375-9210
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 07/14/1992
Site name: RITE ENGINEERING AND MFG CORP
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110002420915

Environmental Interest/Information System
AIR EMISSIONS CLASSIFICATION UNKNOWN

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART)

**RITE ENGINEERING AND MFG CORP (Continued)** **1000818442**

provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Registry ID: 110057126104

Environmental Interest/Information System
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1000818442 |
| Registry ID: | 110002420915 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110002420915 |

EMI:

| | |
|---|---|
| Year: | 1990 |
| County Code: | 19 |
| Air Basin: | SC |
| Facility ID: | 12861 |
| Air District Name: | SC |
| SIC Code: | 3433 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | 2 |
| Reactive Organic Gases Tons/Yr: | 0 |
| Carbon Monoxide Emissions Tons/Yr: | 0 |
| NOX - Oxides of Nitrogen Tons/Yr: | 0 |
| SOX - Oxides of Sulphur Tons/Yr: | 0 |
| Particulate Matter Tons/Yr: | 0 |
| Part. Matter 10 Micrometers and Smllr Tons/Yr: | 0 |

| | |
|---|---|
| Year: | 1995 |
| County Code: | 19 |
| Air Basin: | SC |
| Facility ID: | 12861 |
| Air District Name: | SC |
| SIC Code: | 3433 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | 1 |
| Reactive Organic Gases Tons/Yr: | 0 |
| Carbon Monoxide Emissions Tons/Yr: | 0 |
| NOX - Oxides of Nitrogen Tons/Yr: | 0 |

**RITE ENGINEERING AND MFG CORP (Continued)** **1000818442**

SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Year: 1996
County Code: 19
Air Basin: SC
Facility ID: 12861
Air District Name: SC
SIC Code: 3433
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 2
Reactive Organic Gases Tons/Yr: 1
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Year: 1997
County Code: 19
Air Basin: SC
Facility ID: 12861
Air District Name: SC
SIC Code: 3433
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Year: 1998
County Code: 19
Air Basin: SC
Facility ID: 12861
Air District Name: SC
SIC Code: 3433
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Year: 1999
County Code: 19

**RITE ENGINEERING AND MFG CORP (Continued)** **1000818442**

| | |
|---|---|
| Air Basin: | SC |
| Facility ID: | 12861 |
| Air District Name: | SC |
| SIC Code: | 3433 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | 1 |
| Reactive Organic Gases Tons/Yr: | 0 |
| Carbon Monoxide Emissions Tons/Yr: | 0 |
| NOX - Oxides of Nitrogen Tons/Yr: | 0 |
| SOX - Oxides of Sulphur Tons/Yr: | 0 |
| Particulate Matter Tons/Yr: | 0 |
| Part. Matter 10 Micrometers and Smllr Tons/Yr: | 0 |

| | |
|---|---|
| Year: | 2000 |
| County Code: | 19 |
| Air Basin: | SC |
| Facility ID: | 12861 |
| Air District Name: | SC |
| SIC Code: | 3433 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | 1 |
| Reactive Organic Gases Tons/Yr: | 0 |
| Carbon Monoxide Emissions Tons/Yr: | 0 |
| NOX - Oxides of Nitrogen Tons/Yr: | 0 |
| SOX - Oxides of Sulphur Tons/Yr: | 0 |
| Particulate Matter Tons/Yr: | 0 |
| Part. Matter 10 Micrometers and Smllr Tons/Yr: | 0 |

| | |
|---|---|
| Year: | 2001 |
| County Code: | 19 |
| Air Basin: | SC |
| Facility ID: | 12861 |
| Air District Name: | SC |
| SIC Code: | 3433 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | 1 |
| Reactive Organic Gases Tons/Yr: | 0 |
| Carbon Monoxide Emissions Tons/Yr: | 0 |
| NOX - Oxides of Nitrogen Tons/Yr: | 0 |
| SOX - Oxides of Sulphur Tons/Yr: | 0 |
| Particulate Matter Tons/Yr: | 0 |
| Part. Matter 10 Micrometers and Smllr Tons/Yr: | 0 |

| | |
|---|---|
| Year: | 2008 |
| County Code: | 19 |
| Air Basin: | SC |
| Facility ID: | 12861 |
| Air District Name: | SC |
| SIC Code: | 3443 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |

**RITE ENGINEERING AND MFG CORP (Continued)** **1000818442**

| | |
|---|---|
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | .2423719049523991601 |
| Reactive Organic Gases Tons/Yr: | .23835739175 |
| Carbon Monoxide Emissions Tons/Yr: | .01 |
| NOX - Oxides of Nitrogen Tons/Yr: | .01 |
| SOX - Oxides of Sulphur Tons/Yr: | .0000880791 |
| Particulate Matter Tons/Yr: | .0011156686 |
| Part. Matter 10 Micrometers and Smllr Tons/Yr: | .0011156686 |

HAZNET:

| | |
|---|---|
| envid: | 1000818442 |
| Year: | 2010 |
| GEPAID: | CAD983643149 |
| Contact: | MARGARET C LIGHT - VP |
| Telephone: | 5628622135 |
| Mailing Name: | Not reported |
| Mailing Address: | 5832 GARFIELD AVE |
| Mailing City,St,Zip: | COMMERCE, CA 900403605 |
| Gen County: | Not reported |
| TSD EPA ID: | CAT080013352 |
| TSD County: | Not reported |
| Waste Category: | Unspecified oil-containing waste |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Tons: | 0.2085 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | 1000818442 |
| Year: | 2009 |
| GEPAID: | CAD983643149 |
| Contact: | MARGARET C LIGHT - VP |
| Telephone: | 5628622135 |
| Mailing Name: | Not reported |
| Mailing Address: | 9441 WASHBURN RD |
| Mailing City,St,Zip: | DOWNEY, CA 902420000 |
| Gen County: | Not reported |
| TSD EPA ID: | CAT080013352 |
| TSD County: | Not reported |
| Waste Category: | Waste oil and mixed oil |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Tons: | 0.19 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | 1000818442 |
| Year: | 2007 |
| GEPAID: | CAD983643149 |
| Contact: | MARGARET C LIGHT - VP |
| Telephone: | 5628622135 |
| Mailing Name: | Not reported |
| Mailing Address: | 9441 WASHBURN RD |
| Mailing City,St,Zip: | DOWNEY, CA 902420000 |
| Gen County: | Not reported |

**RITE ENGINEERING AND MFG CORP (Continued)** **1000818442**

TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.41
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1000818442
Year: 1998
GEPAID: CAD983643149
Contact: COE FAMILY TRUST
Telephone: 5628622135
Mailing Name: Not reported
Mailing Address: 9441 WASHBURN RD
Mailing City,St,Zip: DOWNEY, CA 902420000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Tons: .2293
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1000818442
Year: 1998
GEPAID: CAD983643149
Contact: COE FAMILY TRUST
Telephone: 5628622135
Mailing Name: Not reported
Mailing Address: 9441 WASHBURN RD
Mailing City,St,Zip: DOWNEY, CA 902420000
Gen County: Not reported
TSD EPA ID: CAD044429835
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Disposal, Other
Tons: .1000
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

**D15** **RAFFAELE UNION SERVICE** **SWEEPS UST** **U001562927**
**SSE** **12101 WOODRUFF AVENUE** **HIST UST** **N/A**
**< 1/8** **DOWNEY, CA 90241**
**0.051 mi.**
**268 ft.** **Site 1 of 3 in cluster D**

**Relative:**
**Lower**

**Actual:**
**103 ft.**

SWEEPS UST:

| | |
|---|---|
| Status: | Active |
| Comp Number: | 10967 |
| Number: | 9 |
| Board Of Equalization: | Not reported |
| Referral Date: | 06-30-89 |
| Action Date: | Not reported |
| Created Date: | 06-30-89 |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | Not reported |
| Tank Status: | Not reported |
| Capacity: | Not reported |
| Active Date: | Not reported |
| Tank Use: | Not reported |
| STG: | Not reported |
| Content: | Not reported |
| Number Of Tanks: | Not reported |

HIST UST:

| | |
|---|---|
| File Number: | 00027213 |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00027213.pdf |
| Region: | STATE |
| Facility ID: | 00000017090 |
| Facility Type: | Gas Station |
| Other Type: | Not reported |
| Contact Name: | LEN RULLO, DEALER |
| Telephone: | 2138031949 |
| Owner Name: | JOMIT EQUIPMENT RENTAL DBA RAF |
| Owner Address: | 9316 WASHBURN ROAD |
| Owner City,St,Zip: | DOWNEY, CA 90241 |
| Total Tanks: | 0007 |
| | |
| Tank Num: | 001 |
| Container Num: | 1 |
| Year Installed: | Not reported |
| Tank Capacity: | 00003000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | PREMIUM |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |
| | |
| Tank Num: | 002 |
| Container Num: | 2 |
| Year Installed: | Not reported |
| Tank Capacity: | 00003000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | PREMIUM |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |
| | |
| Tank Num: | 003 |
| Container Num: | 3 |
| Year Installed: | Not reported |

**RAFFAELE UNION SERVICE (Continued)** **U001562927**

| | |
|---|---|
| Tank Capacity: | 00005000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | UNLEADED |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |

| | |
|---|---|
| Tank Num: | 004 |
| Container Num: | 4 |
| Year Installed: | Not reported |
| Tank Capacity: | 00005000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | UNLEADED |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |

| | |
|---|---|
| Tank Num: | 005 |
| Container Num: | 5 |
| Year Installed: | Not reported |
| Tank Capacity: | 00008000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | PREMIUM |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |

| | |
|---|---|
| Tank Num: | 006 |
| Container Num: | 6 |
| Year Installed: | Not reported |
| Tank Capacity: | 00006000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | DIESEL |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |

| | |
|---|---|
| Tank Num: | 007 |
| Container Num: | 7 |
| Year Installed: | Not reported |
| Tank Capacity: | 00006000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | DIESEL |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |

Click here for Geo Tracker PDF:

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**D16** **BOB & DON'S SIGNAL SERVICE** **EDR Hist Auto** **1008993859**
**SSE** **12101 WOODRUFF AVE** **N/A**
**< 1/8** **DOWNEY, CA 90239**
**0.051 mi.**
**268 ft.** **Site 2 of 3 in cluster D**

**Relative:** EDR Hist Auto
**Lower**

**Actual:**
**103 ft.**

| Year: | Name: | Type: |
|---|---|---|
| 1967 | BOB'S SIGNAL SERVICE | Not reported |
| 1969 | CASH ROBERT | Gasoline Service Stations |
| 1970 | CASH ROBERT | Gasoline Service Stations |
| 1971 | CASH ROBERT | Gasoline Service Stations |
| 1972 | CASH ROBERT | Gasoline Service Stations |

**BOB & DON'S SIGNAL SERVICE (Continued)** **1008993859**

| | | |
|---|---|---|
| 1973 | CASH ROBERT | Gasoline Service Stations |
| 1974 | CASH ROBERT | Gasoline Service Stations |
| 1975 | CASH ROBERT | Gasoline Service Stations |
| 1976 | CASH ROBERT | Gasoline Service Stations |
| 1977 | CALS EXXON SERVICE | Gasoline Service Stations |
| 1978 | CALS EXXON SERVICE | Gasoline Service Stations |
| 1979 | CALS EXXON SERVICE | Gasoline Service Stations |
| 1980 | CALS EXXON SERVICE | Gasoline Service Stations |
| 1980 | RAFFAELES SERVICE CO INC | Gasoline Service Stations |
| 1982 | RAFFAELES SERVICE CO INC | Gasoline Service Stations |
| 1982 | CALS EXXON SERVICE | Gasoline Service Stations |
| 1983 | CALS EXXON SERVICE | Gasoline Service Stations |
| 1983 | RAFFAELES SERVICE CO INC | Gasoline Service Stations |
| 1985 | CALS EXXON SERVICE | Gasoline Service Stations |
| 1985 | RAFFAELES SERVICE CO INC | Gasoline Service Stations |
| 1986 | RAFFAELES SERVICE CO INC | Gasoline Service Stations |
| 1986 | CALS EXXON SERVICE | Gasoline Service Stations |
| 1987 | RAFFAELES SERVICE CO INC | Gasoline Service Stations |
| 1987 | CALS EXXON SERVICE | Gasoline Service Stations |
| 1988 | CALS EXXON SERVICE | Gasoline Service Stations |
| 1988 | RAFFAELES SERVICE CO INC | Gasoline Service Stations |
| 1989 | CALS EXXON SERVICE | Gasoline Service Stations, NEC |
| 1989 | RAFFAELES SERVICE CO INC | Gasoline Service Stations |
| 1990 | RAFFAELES SERVICE CO INC | Gasoline Service Stations |
| 1991 | RAFFAELES SERVICE CO INC | Gasoline Service Stations |

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**E17** **INCO EXPRESS INC** **LUST S108723479**
**NNE** **11941 SOUTH WOODRUFF AVENUE** **HIST UST N/A**
**< 1/8** **DOWNEY, CA 90241**
**0.053 mi.**
**280 ft.** **Site 1 of 6 in cluster E**

**Relative:**
**Higher**

**Actual:**
**106 ft.**

LUST:

| | |
|---|---|
| Lead Agency: | LOS ANGELES COUNTY |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603719104 |
| Global Id: | T0603719104 |
| Latitude: | 33.926348 |
| Longitude: | -118.116705 |
| Status: | Completed - Case Closed |
| Status Date: | 07/17/2007 |
| Case Worker: | TS |
| RB Case Number: | Not reported |
| Local Agency: | LOS ANGELES COUNTY |
| File Location: | Not reported |
| Local Case Number: | CLUP# 483428 |
| Potential Media Affect: | Not reported |
| Potential Contaminants of Concern: | Gasoline |
| Site History: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0603719104 |
| Contact Type: | Local Agency Caseworker |
| Contact Name: | TIM SMITH |
| Organization Name: | LOS ANGELES COUNTY |
| Address: | 900 S. FREMONT AVE. |
| City: | ALHAMBRA |
| Email: | tsmith@dpw.lacounty.gov |

**INCO EXPRESS INC (Continued)** **S108723479**

Phone Number: Not reported

Global Id: T0603719104
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603719104
Action Type: Other
Date: 09/14/2006
Action: Leak Reported

Global Id: T0603719104
Action Type: REMEDIATION
Date: 05/09/2006
Action: Not reported

Global Id: T0603719104
Action Type: Other
Date: 09/14/2006
Action: Leak Discovery

LUST:
Global Id: T0603719104
Status: Open - Case Begin Date
Status Date: 09/14/2006

Global Id: T0603719104
Status: Open - Site Assessment
Status Date: 07/16/2007

Global Id: T0603719104
Status: Completed - Case Closed
Status Date: 07/17/2007

HIST UST:
File Number: 00026F57
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00026F57.pdf
Region: Not reported
Facility ID: Not reported
Facility Type: Not reported
Other Type: Not reported
Contact Name: Not reported
Telephone: Not reported
Owner Name: Not reported
Owner Address: Not reported
Owner City,St,Zip: Not reported
Total Tanks: Not reported

Tank Num: Not reported

**INCO EXPRESS INC (Continued)** **S108723479**

Container Num: Not reported
Year Installed: Not reported
Tank Capacity: Not reported
Tank Used for: Not reported
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Not reported

Click here for Geo Tracker PDF:

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**E18** **INCO EXPRESS INC** **UST** **U003777056**
**NNE** **11941 WOODRUFF AVE** **SWEEPS UST** **N/A**
**< 1/8** **DOWNEY, CA 90241**
**0.053 mi.**
**280 ft.** **Site 2 of 6 in cluster E**

**Relative: Higher**

**Actual: 106 ft.**

UST:
Facility ID: 12833
Permitting Agency: LOS ANGELES COUNTY
Latitude: 33.92672
Longitude: -118.11672

SWEEPS UST:
Status: Active
Comp Number: 12833
Number: 9
Board Of Equalization: 44-009942
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-012833-000001
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: 3

Status: Active
Comp Number: 12833
Number: 9
Board Of Equalization: 44-009942
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-012833-000002
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

**INCO EXPRESS INC (Continued)** **U003777056**

| | |
|---|---|
| Status: | Active |
| Comp Number: | 12833 |
| Number: | 9 |
| Board Of Equalization: | 44-009942 |
| Referral Date: | 06-30-89 |
| Action Date: | Not reported |
| Created Date: | 06-30-89 |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | 19-000-012833-000003 |
| Tank Status: | A |
| Capacity: | Not reported |
| Active Date: | 06-30-89 |
| Tank Use: | UNKNOWN |
| STG: | W |
| Content: | Not reported |
| Number Of Tanks: | Not reported |

---

**E19** **INCO EXPRESS, INC.** **HIST UST** **U001562914**
**NNE** **11941 WOODRUFF AVE** **N/A**
**< 1/8** **DOWNEY, CA 90241**
**0.053 mi.**
**280 ft.** **Site 3 of 6 in cluster E**

**Relative:** HIST UST:
**Higher**

**Actual:**
**106 ft.**

| | |
|---|---|
| File Number: | Not reported |
| URL: | Not reported |
| Region: | STATE |
| Facility ID: | 00000066487 |
| Facility Type: | Other |
| Other Type: | TRANSPORTATION |
| Contact Name: | JOHN GALEY, TERMINAL MANAGER |
| Telephone: | 2138033366 |
| Owner Name: | INCO EXPRESS, INC. |
| Owner Address: | 3600 SOUTH 124TH |
| Owner City,St,Zip: | SEATTLE, WA 98168 |
| Total Tanks: | 0003 |
| | |
| Tank Num: | 001 |
| Container Num: | TANK I |
| Year Installed: | 1978 |
| Tank Capacity: | 00010000 |
| Tank Used for: | WASTE |
| Type of Fuel: | 4 |
| Container Construction Thickness: | X |
| Leak Detection: | Stock Inventor |
| | |
| Tank Num: | 002 |
| Container Num: | TANK II |
| Year Installed: | 1978 |
| Tank Capacity: | 00010000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | DIESEL |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |
| | |
| Tank Num: | 003 |
| Container Num: | TANK III |
| Year Installed: | Not reported |

**INCO EXPRESS, INC. (Continued)** **U001562914**

| | |
|---|---|
| Tank Capacity: | 00010000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | DIESEL |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |

---

**E20** **METALSOURCE** **SWEEPS UST** **S104538812**
**NNE** **11939 WOODRUFF AVE** **LOS ANGELES CO. HMS** **N/A**
**< 1/8** **DOWNEY, CA 90241**
**0.055 mi.**
**293 ft.** **Site 4 of 6 in cluster E**

**Relative:** **Higher**
**Actual:** **106 ft.**

SWEEPS UST:

| | |
|---|---|
| Status: | Active |
| Comp Number: | 10350 |
| Number: | 9 |
| Board Of Equalization: | Not reported |
| Referral Date: | 06-30-89 |
| Action Date: | Not reported |
| Created Date: | 06-30-89 |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | Not reported |
| Tank Status: | Not reported |
| Capacity: | Not reported |
| Active Date: | Not reported |
| Tank Use: | Not reported |
| STG: | Not reported |
| Content: | Not reported |
| Number Of Tanks: | Not reported |

LOS ANGELES CO. HMS:

| | |
|---|---|
| Region: | LA |
| Permit Category: | Not reported |
| Facility Id: | 010433-010350 |
| Facility Type: | Not reported |
| Facility Status: | Removed |
| Area: | 1F |
| Permit Number: | Not reported |
| Permit Status: | Not reported |

---

**D21** **SAFARI KAR INTL** **RCRA NonGen / NLR** **1000985202**
**SSE** **12126 WOODRUFF AVE** **FINDS** **CA0001019637**
**< 1/8** **DOWNEY, CA 90241** **ECHO**
**0.091 mi.**
**479 ft.** **Site 3 of 3 in cluster D**

**Relative:** **Lower**
**Actual:** **103 ft.**

RCRA NonGen / NLR:

| | |
|---|---|
| Date form received by agency: | 06/27/1995 |
| Facility name: | SAFARI KAR INTL |
| Facility address: | 12126 WOODRUFF AVE<br>DOWNEY, CA 90241 |
| EPA ID: | CA0001019637 |
| Mailing address: | 24147 E SIXTH ST<br>SAN BERNARDINO, CA 92410 |
| Contact: | KIMBERLY HARRISON |
| Contact address: | 12126 WOODRUFF AVE |

**SAFARI KAR INTL (Continued)** **1000985202**

DOWNEY, CA 90241
Contact country: US
Contact telephone: 909-384-8100
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: SAFARI KAR INTL
Owner/operator address: 12126 WOODRUFF AVE
DOWNEY, CA 90241
Owner/operator country: Not reported
Owner/operator telephone: 310-940-6426
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002623778

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

**SAFARI KAR INTL (Continued)** **1000985202**

ECHO:
Envid: 1000985202
Registry ID: 110002623778
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002623778

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**F22** **AST** **A100345436**
**ESE** **9645 E WASHBURN RD** **N/A**
**< 1/8** **DOWNEY, CA**
**0.091 mi.**
**483 ft.** **Site 1 of 6 in cluster F**

**Relative:**
**Higher**

**Actual:**
**104 ft.**

AST:
Certified Unified Program Agencies: Los Angeles County
Owner: ASSOCIATED READY MIXED CONCRETE #59
Total Gallons: 3701
CERSID: Not reported
Facility ID: Not reported
Business Name: Not reported
Phone: Not reported
Fax: Not reported
Mailing Address: Not reported
Mailing Address City: Not reported
Mailing Address State: Not reported
Mailing Address Zip Code: Not reported
Operator Name: Not reported
Operator Phone: Not reported
Owner Phone: Not reported
Owner Mail Address: Not reported
Owner State: Not reported
Owner Zip Code: Not reported
Owner Country: Not reported
Property Owner Name: Not reported
Property Owner Phone: Not reported
Property Owner Mailing Address: Not reported
Property Owner City: Not reported
Property Owner Stat : Not reported
Property Owner Zip Code: Not reported
Property Owner Country: Not reported
EPAID: Not reported

---

**F23** **ASSOCIATED READY MIXED CONCRETE #59** **RCRA-SQG** **1000314690**
**ESE** **9645 E WASHBURN RD** **SWEEPS UST** **CAD981574015**
**< 1/8** **DOWNEY, CA 90241** **HIST UST**
**0.091 mi.** **FINDS**
**483 ft.** **Site 2 of 6 in cluster F** **ECHO**
**LOS ANGELES CO. HMS**

**Relative:**
**Higher**

**NPDES**
**WDS**

**Actual:**
**104 ft.**

**CIWQS**

RCRA-SQG:
Date form received by agency: 09/09/1986
Facility name: DOWNEY TRANSIT MIX INC
Facility address: 9645 E WASHBURN RD
DOWNEY, CA 90241
EPA ID: CAD981574015

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **1000314690**

Mailing address: E WASHBURN RD
DOWNEY, CA 90241
Contact: ENVIRONMENTAL MANAGER
Contact address: 9645 E WASHBURN RD
DOWNEY, CA 90241
Contact country: US
Contact telephone: 213-923-7281
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: DAN MILLER
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **1000314690**

Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

SWEEPS UST:
Status: Active
Comp Number: 3751
Number: 9
Board Of Equalization: 44-007764
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-003751-000001
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: 3

Status: Active
Comp Number: 3751
Number: 9
Board Of Equalization: 44-007764
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-003751-000002
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 3751
Number: 9
Board Of Equalization: 44-007764
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-003751-000003
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **1000314690**

HIST UST:

| | |
|---|---|
| File Number: | Not reported |
| URL: | Not reported |
| Region: | STATE |
| Facility ID: | 00000066424 |
| Facility Type: | Other |
| Other Type: | CONCRETE BATCH PLANT |
| Contact Name: | Not reported |
| Telephone: | 2139237281 |
| Owner Name: | DOWNEY TRANSIT MIX INC. |
| Owner Address: | 9645 E. WASHBURN RD. |
| Owner City,St,Zip: | DOWNEY, CA 90241 |
| Total Tanks: | 0003 |
| | |
| Tank Num: | 001 |
| Container Num: | 1 |
| Year Installed: | Not reported |
| Tank Capacity: | 00005000 |
| Tank Used for: | WASTE |
| Type of Fuel: | 4 |
| Container Construction Thickness: | X |
| Leak Detection: | Stock Inventor |
| | |
| Tank Num: | 002 |
| Container Num: | 2 |
| Year Installed: | Not reported |
| Tank Capacity: | 00005000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | DIESEL |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |
| | |
| Tank Num: | 003 |
| Container Num: | 3 |
| Year Installed: | 1984 |
| Tank Capacity: | 00003000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | UNLEADED |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |

FINDS:

Registry ID: 110055867236

Environmental Interest/Information System
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1000314690 |
| Registry ID: | 110055867236 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110055867236 |

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **1000314690**

LOS ANGELES CO. HMS:
- Region: LA
- Permit Category: T
- Facility Id: 003628-003751
- Facility Type: 0
- Facility Status: Closed
- Area: 1F
- Permit Number: 00004809T
- Permit Status: Closed

NPDES:
- Facility Status: Active
- NPDES Number: CAS000001
- Region: 4
- Agency Number: 0
- Regulatory Measure ID: 189678
- Place ID: Not reported
- Order Number: 97-03-DWQ
- WDID: 4 19I007110
- Regulatory Measure Type: Enrollee
- Program Type: Industrial
- Adoption Date Of Regulatory Measure: Not reported
- Effective Date Of Regulatory Measure: 06/02/1992
- Termination Date Of Regulatory Measure: Not reported
- Expiration Date Of Regulatory Measure: Not reported
- Discharge Address: 4621 Teller Ave Suite 130
- Discharge Name: Associated Ready Mixed Concrete
- Discharge City: Newport Beach
- Discharge State: California
- Discharge Zip: 92660
- Status: Not reported
- Status Date: Not reported
- Operator Name: Not reported
- Operator Address: Not reported
- Operator City: Not reported
- Operator State: Not reported
- Operator Zip: Not reported

NPDES as of 03/2018:
- NPDES Number: CAS000001
- Status: Active
- Agency Number: 0
- Region: 4
- Regulatory Measure ID: 189678
- Order Number: 97-03-DWQ
- Regulatory Measure Type: Enrollee
- Place ID: Not reported
- WDID: 4 19I007110
- Program Type: Industrial
- Adoption Date Of Regulatory Measure: Not reported
- Effective Date Of Regulatory Measure: 06/02/1992
- Expiration Date Of Regulatory Measure: Not reported
- Termination Date Of Regulatory Measure: Not reported
- Discharge Name: Associated Ready Mixed Concrete
- Discharge Address: 4621 Teller Ave Suite 130
- Discharge City: Newport Beach
- Discharge State: California

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **1000314690**

| | |
|---|---|
| Discharge Zip: | 92660 |
| Received Date: | Not reported |
| Processed Date: | Not reported |
| Status: | Not reported |
| Status Date: | Not reported |
| Place Size: | Not reported |
| Place Size Unit: | Not reported |
| Contact: | Not reported |
| Contact Title: | Not reported |
| Contact Phone: | Not reported |
| Contact Phone Ext: | Not reported |
| Contact Email: | Not reported |
| Operator Name: | Not reported |
| Operator Address: | Not reported |
| Operator City: | Not reported |
| Operator State: | Not reported |
| Operator Zip: | Not reported |
| Operator Contact: | Not reported |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | Not reported |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | Not reported |
| Operator Type: | Not reported |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | Not reported |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | Not reported |
| Receiving Water Name: | Not reported |
| Certifier: | Not reported |
| Certifier Title: | Not reported |
| Certification Date: | Not reported |
| Primary Sic: | Not reported |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **1000314690**

| | |
|---|---|
| NPDES Number: | Not reported |
| Status: | Not reported |
| Agency Number: | Not reported |
| Region: | 4 |
| Regulatory Measure ID: | 189678 |
| Order Number: | Not reported |
| Regulatory Measure Type: | Industrial |
| Place ID: | Not reported |
| WDID: | 4 19I007110 |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Not reported |
| Discharge Address: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Received Date: | 05/09/2008 |
| Processed Date: | 06/02/1992 |
| Status: | Active |
| Status Date: | 06/02/1992 |
| Place Size: | 1.06 |
| Place Size Unit: | Acres |
| Contact: | Randy Goetz |
| Contact Title: | Plant Manager |
| Contact Phone: | 562-923-7281 |
| Contact Phone Ext: | Not reported |
| Contact Email: | rgoetz@assocrmc.com |
| Operator Name: | Associated Ready Mixed Concrete |
| Operator Address: | 4621 Teller Ave Suite 130 |
| Operator City: | Newport Beach |
| Operator State: | California |
| Operator Zip: | 92660 |
| Operator Contact: | Alex Nichols |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | 949-253-2800 |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | anichols@assocrmc.com |
| Operator Type: | Private Business |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | California |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **1000314690**

| | |
|---|---|
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | N |
| Receiving Water Name: | San Gabriel River |
| Certifier: | Randy Goetz |
| Certifier Title: | Plant Manager |
| Certification Date: | 22-JUN-15 |
| Primary Sic: | 3273-Ready-Mixed Concrete |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |

| | |
|---|---|
| Facility Status: | Not reported |
| NPDES Number: | Not reported |
| Region: | Not reported |
| Agency Number: | Not reported |
| Regulatory Measure ID: | Not reported |
| Place ID: | Not reported |
| Order Number: | Not reported |
| WDID: | 4 19I007110 |
| Regulatory Measure Type: | Industrial |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Discharge Address: | Not reported |
| Discharge Name: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Status: | Active |
| Status Date: | 06/02/1992 |
| Operator Name: | Associated Ready Mixed Concrete |
| Operator Address: | 4621 Teller Ave Suite 130 |
| Operator City: | Newport Beach |
| Operator State: | California |
| Operator Zip: | 92660 |

NPDES as of 03/2018:

| | |
|---|---|
| NPDES Number: | CAS000001 |
| Status: | Active |
| Agency Number: | 0 |
| Region: | 4 |
| Regulatory Measure ID: | 189678 |
| Order Number: | 97-03-DWQ |
| Regulatory Measure Type: | Enrollee |
| Place ID: | Not reported |
| WDID: | 4 19I007110 |
| Program Type: | Industrial |

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **1000314690**

| | |
|---|---|
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 06/02/1992 |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Associated Ready Mixed Concrete |
| Discharge Address: | 4621 Teller Ave Suite 130 |
| Discharge City: | Newport Beach |
| Discharge State: | California |
| Discharge Zip: | 92660 |
| Received Date: | Not reported |
| Processed Date: | Not reported |
| Status: | Not reported |
| Status Date: | Not reported |
| Place Size: | Not reported |
| Place Size Unit: | Not reported |
| Contact: | Not reported |
| Contact Title: | Not reported |
| Contact Phone: | Not reported |
| Contact Phone Ext: | Not reported |
| Contact Email: | Not reported |
| Operator Name: | Not reported |
| Operator Address: | Not reported |
| Operator City: | Not reported |
| Operator State: | Not reported |
| Operator Zip: | Not reported |
| Operator Contact: | Not reported |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | Not reported |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | Not reported |
| Operator Type: | Not reported |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | Not reported |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **1000314690**

| | |
|---|---|
| Dir Discharge Uswater Ind: | Not reported |
| Receiving Water Name: | Not reported |
| Certifier: | Not reported |
| Certifier Title: | Not reported |
| Certification Date: | Not reported |
| Primary Sic: | Not reported |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |
| | |
| NPDES Number: | Not reported |
| Status: | Not reported |
| Agency Number: | Not reported |
| Region: | 4 |
| Regulatory Measure ID: | 189678 |
| Order Number: | Not reported |
| Regulatory Measure Type: | Industrial |
| Place ID: | Not reported |
| WDID: | 4 19I007110 |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Not reported |
| Discharge Address: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Received Date: | 05/09/2008 |
| Processed Date: | 06/02/1992 |
| Status: | Active |
| Status Date: | 06/02/1992 |
| Place Size: | 1.06 |
| Place Size Unit: | Acres |
| Contact: | Randy Goetz |
| Contact Title: | Plant Manager |
| Contact Phone: | 562-923-7281 |
| Contact Phone Ext: | Not reported |
| Contact Email: | rgoetz@assocrmc.com |
| Operator Name: | Associated Ready Mixed Concrete |
| Operator Address: | 4621 Teller Ave Suite 130 |
| Operator City: | Newport Beach |
| Operator State: | California |
| Operator Zip: | 92660 |
| Operator Contact: | Alex Nichols |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | 949-253-2800 |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | anichols@assocrmc.com |
| Operator Type: | Private Business |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | California |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **1000314690**

| | |
|---|---|
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | N |
| Receiving Water Name: | San Gabriel River |
| Certifier: | Randy Goetz |
| Certifier Title: | Plant Manager |
| Certification Date: | 22-JUN-15 |
| Primary Sic: | 3273-Ready-Mixed Concrete |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |

WDS:

| | |
|---|---|
| Facility ID: | 4 19I007110 |
| Facility Type: | Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping. |
| Facility Status: | Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements. |
| NPDES Number: | CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board |
| Subregion: | 4 |
| Facility Telephone: | 3109237281 |
| Facility Contact: | Jim Lytle |
| Agency Name: | DOWNEY TRANSIT MIXED CONCRETE |
| Agency Address: | 9645 Washburn Rd |
| Agency City,St,Zip: | Downey 90241 |
| Agency Contact: | Chris Pisano |
| Agency Telephone: | 3109237281 |
| Agency Type: | Private |
| SIC Code: | 3273 |
| SIC Code 2: | Not reported |
| Primary Waste Type: | Not reported |
| Primary Waste: | Not reported |
| Waste Type2: | Not reported |
| Waste2: | Not reported |
| Primary Waste Type: | Not reported |

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **1000314690**

Secondary Waste: Not reported
Secondary Waste Type: Not reported
Design Flow: 0
Baseline Flow: 0
Reclamation: Not reported
POTW: Not reported
Treat To Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

CIWQS:

| | |
|---|---|
| Agency: | Associated Ready Mixed Concrete |
| Agency Address: | 4621 Teller Ave Suite 130, Newport Beach, CA 92660 |
| Place/Project Type: | Industrial - Ready-Mixed Concrete |
| SIC/NAICS: | 3273 |
| Region: | 4 |
| Program: | INDSTW |
| Regulatory Measure Status: | Active |
| Regulatory Measure Type: | Storm water industrial |
| Order Number: | 2014-0057-DWQ |
| WDID: | 4 19I007110 |
| NPDES Number: | CAS000001 |
| Adoption Date: | Not reported |
| Effective Date: | 06/02/1992 |
| Termination Date: | Not reported |
| Expiration/Review Date: | Not reported |
| Design Flow: | Not reported |
| Major/Minor: | Not reported |
| Complexity: | Not reported |
| TTWQ: | Not reported |
| Enforcement Actions within 5 years: | 0 |
| Violations within 5 years: | 0 |
| Latitude: | 33.92433 |
| Longitude: | -118.11563 |

---

**F24** **ASSOCIATED READY MIXED CONCRETE #59** **HIST UST S113117045**
**ESE** **9645 E WASHBURN RD** **HAZNET N/A**
**< 1/8** **DOWNEY, CA 90241**
**0.091 mi.**
**483 ft.** **Site 3 of 6 in cluster F**

**Relative:**
**Higher**

**Actual:**
**104 ft.**

HIST UST:

| | |
|---|---|
| File Number: | 000277B6 |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/000277B6.pdf |
| Region: | Not reported |
| Facility ID: | Not reported |
| Facility Type: | Not reported |
| Other Type: | Not reported |

**ASSOCIATED READY MIXED CONCRETE #59 (Continued)** **S113117045**

Contact Name: Not reported
Telephone: Not reported
Owner Name: Not reported
Owner Address: Not reported
Owner City,St,Zip: Not reported
Total Tanks: Not reported

Tank Num: Not reported
Container Num: Not reported
Year Installed: Not reported
Tank Capacity: Not reported
Tank Used for: Not reported
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Not reported

Click here for Geo Tracker PDF:

HAZNET:
envid: S113117045
Year: 2015
GEPAID: CAL000240064
Contact: MIKE COOK
Telephone: 5627903650
Mailing Name: Not reported
Mailing Address: 3250 E 70TH ST
Mailing City,St,Zip: LONG BEACH, CA 908051821
Gen County: Los Angeles
TSD EPA ID: AZR000515924
TSD County: 99
Waste Category: Other organic solids
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.2
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113117045
Year: 2008
GEPAID: CAL000240064
Contact: MIKE COOK/FLEET MGR
Telephone: 5627903650
Mailing Name: Not reported
Mailing Address: 3250 E 70TH ST
Mailing City,St,Zip: LONG BEACH, CA 908050000
Gen County: Not reported
TSD EPA ID: TXD077603371
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.1
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

**G25**
**WSW**
**< 1/8**
**0.093 mi.**
**491 ft.**

**SOUTHERN CALIFORNIA GAS COMPANY: DOWNEY BASE**
**9407 WASHBURN RD**
**DOWNEY, CA 90242**

**Site 1 of 3 in cluster G**

**Database(s):** UST
**EDR ID Number:** U003777038
**EPA ID Number:** N/A

**Relative:**
**Lower**

**Actual:**
**102 ft.**

UST:

| | |
|---|---|
| Facility ID: | LACoFA0028785 |
| Permitting Agency: | Los Angeles County Fire Department |
| Latitude: | 33.92517 |
| Longitude: | -118.12053 |

| | |
|---|---|
| Facility ID: | 12689 |
| Permitting Agency: | LOS ANGELES COUNTY |
| Latitude: | 33.926515 |
| Longitude: | -118.119183 |

---

**G26**
**WSW**
**< 1/8**
**0.093 mi.**
**491 ft.**

**SO CALIF GAS CO/DOWNEY BASE**
**9407 WASHBURN RD**
**DOWNEY, CA 90242**

**Site 2 of 3 in cluster G**

**Database(s):** RCRA-SQG, FINDS, ECHO
**EDR ID Number:** 1000167595
**EPA ID Number:** CAD981422876

**Relative:**
**Lower**

**Actual:**
**102 ft.**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 06/23/1986 |
| Facility name: | SO CALIF GAS CO/DOWNEY BASE |
| Facility address: | 9407 WASHBURN RD<br>DOWNEY, CA 90242 |
| EPA ID: | CAD981422876 |
| Mailing address: | P O BOX 3249 TERMINAL ANNEX<br>LOS ANGELES, CA 90051 |
| Contact: | ENVIRONMENTAL MANAGER |
| Contact address: | 9407 WASHBURN RD<br>DOWNEY, CA 90242 |
| Contact country: | US |
| Contact telephone: | 213-689-3075 |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | NOT REQUIRED |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Operator |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |

**SO CALIF GAS CO/DOWNEY BASE (Continued)** **1000167595**

Owner/operator name: SO CALIFORNIA
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002700747

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000167595

**SO CALIF GAS CO/DOWNEY BASE (Continued)** **1000167595**

Registry ID: 110002700747
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002700747

---

**G27** **DOWNEY** **SWEEPS UST** **U001562953**
**WSW** **9407 WASHBURN RD** **HIST UST** **N/A**
**< 1/8** **DOWNEY, CA 90242**
**0.093 mi.**
**491 ft.** **Site 3 of 3 in cluster G**

**Relative:**
**Lower**

**Actual:**
**102 ft.**

SWEEPS UST:
Status: Active
Comp Number: 12689
Number: 9
Board Of Equalization: 44-007401
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-012689-000001
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: 1

HIST UST:
File Number: 000286C7
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/000286C7.pdf
Region: STATE
Facility ID: 00000007497
Facility Type: Other
Other Type: PUBLIC UTILITY
Contact Name: G. J. STOVER
Telephone: 2138037444
Owner Name: SOUTHERN CALIF. GAS COMPANY
Owner Address: BOX 3249 TERMINAL ANNEX
Owner City,St,Zip: LOS ANGELES, CA 90051
Total Tanks: 0003

Tank Num: 001
Container Num: DSEU100
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: 1
Container Construction Thickness: .25
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: DSEU101
Year Installed: Not reported
Tank Capacity: 00000000
Tank Used for: WASTE
Type of Fuel: 0
Container Construction Thickness: 6

**DOWNEY (Continued)** **U001562953**

Leak Detection: None

Tank Num: 003
Container Num: DSEU102
Year Installed: Not reported
Tank Capacity: 00000250
Tank Used for: WASTE
Type of Fuel: 5
Container Construction Thickness: 12.
Leak Detection: None

Click here for Geo Tracker PDF:

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**E28** **NORTHERN TRUST BANK OF CAL NA** **RCRA-SQG 1000368440**
**NNE** **11911 WOODRUFF AVE** **FINDS CAD981620883**
**< 1/8** **DOWNEY, CA 90241**
**0.097 mi.**
**513 ft.** **Site 5 of 6 in cluster E**

**Relative:** **Higher**

**Actual:** **107 ft.**

RCRA-SQG:
Date form received by agency: 08/19/1997
Facility name: NORTHERN TRUST BANK OF CAL NA
Facility address: 11911 WOODRUFF AVE
DOWNEY, CA 90241
EPA ID: CAD981620883
Mailing address: 355 SO GRAND AVE STE 2600
LOS ANGELES, CA 90071
Contact: ROGER MERRICK
Contact address: 355 SO GRAND AVE STE 2600
LOS ANGELES, CA 90071
Contact country: US
Contact telephone: 213-346-1300
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: KEVIN KELLEY
Owner/operator address: 11911 WOODRUFF AVE
DOWNEY, CA 90241
Owner/operator country: Not reported
Owner/operator telephone: 310-803-3953
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NORTHERN TRUST AS TRUSTEE
Owner/operator address: 355 SO GRAND AVE STE 2600

**NORTHERN TRUST BANK OF CAL NA (Continued)** **1000368440**

LOS ANGELES, CA 90071
Owner/operator country: Not reported
Owner/operator telephone: 213-346-1371
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 08/19/1997
Site name: NORTHERN TRUST BANK OF CAL NA
Classification: Large Quantity Generator

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Date form received by agency: 09/01/1996
Site name: NORTHERN TRUST BANK OF CAL NA
Classification: Small Quantity Generator

Date form received by agency: 09/10/1994
Site name: NORTHERN TRUST BANK OF CAL NA
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110002726872

Environmental Interest/Information System

**NORTHERN TRUST BANK OF CAL NA (Continued)** **1000368440**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

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**E29** **INDUSTRIAL BUILDING** **RCRA-SQG** **1000428498**
**NNE** **11908 12 WOODRUFF AVE** **FINDS** **CAD982323818**
**< 1/8** **DOWNEY, CA 90241** **ECHO**
**0.102 mi.**
**541 ft.** **Site 6 of 6 in cluster E**

**Relative: Higher**
**Actual: 107 ft.**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 09/01/1996 |
| Facility name: | INDUSTRIAL BUILDING |
| Facility address: | 11908 12 WOODRUFF AVE<br>DOWNEY, CA 90241 |
| EPA ID: | CAD982323818 |
| Mailing address: | 5372 VIA APOLINA<br>YORBA LINDA, CA 92686 |
| Contact: | Not reported |
| Contact address: | Not reported<br>Not reported |
| Contact country: | US |
| Contact telephone: | Not reported |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | JANSEN MIRIAM |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |
| Owner/operator name: | NOT REQUIRED |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |

**INDUSTRIAL BUILDING (Continued)** **1000428498**

Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 02/12/1988
Site name: INDUSTRIAL BUILDING
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110006477400

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000428498
Registry ID: 110006477400
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110006477400

**H30** **HOLM INDUSTRIES** **LUST** **S108243552**
**NW** **9368 STEWART AND GRAY RD** **N/A**
**< 1/8** **DOWNEY, CA 90242**
**0.118 mi.**
**624 ft.** **Site 1 of 2 in cluster H**

**Relative:**
**Higher**

**Actual:**
**107 ft.**

LUST:

| | |
|---|---|
| Lead Agency: | LOS ANGELES RWQCB (REGION 4) |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603737698 |
| Global Id: | T0603737698 |
| Latitude: | 33.92769 |
| Longitude: | -118.119772 |
| Status: | Completed - Case Closed |
| Status Date: | 09/13/2011 |
| Case Worker: | MB |
| RB Case Number: | R-41000 |
| Local Agency: | LOS ANGELES COUNTY |
| File Location: | Regional Board |
| Local Case Number: | Not reported |
| Potential Media Affect: | Soil |
| Potential Contaminants of Concern: | Diesel |
| Site History: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0603737698 |
| Contact Type: | Local Agency Caseworker |
| Contact Name: | GILLIAN MINTIER |
| Organization Name: | LOS ANGELES COUNTY |
| Address: | 900 SOUTH FREMONT AVE |
| City: | ALHAMBRA |
| Email: | gmintier@ladpw.org |
| Phone Number: | Not reported |

| | |
|---|---|
| Global Id: | T0603737698 |
| Contact Type: | Regional Board Caseworker |
| Contact Name: | MAGDY BAIADY |
| Organization Name: | LOS ANGELES RWQCB (REGION 4) |
| Address: | 320 W. 4TH ST., SUITE 200 |
| City: | LOS ANGELES |
| Email: | mbaiady@waterboards.ca.gov |
| Phone Number: | 2135766699 |

| | |
|---|---|
| Global Id: | T0603737698 |
| Contact Type: | Regional Board Caseworker |
| Contact Name: | MANUEL R REGALADO |
| Organization Name: | LOS ANGELES COUNTY |
| Address: | 900 S. FREMONT AVE. |
| City: | ALHAMBRA |
| Email: | mregalad@dpw.lacounty.gov |
| Phone Number: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0603737698 |
| Action Type: | Other |
| Date: | 09/22/2004 |
| Action: | Leak Reported |

| | |
|---|---|
| Global Id: | T0603737698 |

**HOLM INDUSTRIES (Continued)** **S108243552**

Action Type: RESPONSE
Date: 07/08/2009
Action: Other Report / Document

Global Id: T0603737698
Action Type: REMEDIATION
Date: 08/01/2004
Action: Excavation

Global Id: T0603737698
Action Type: ENFORCEMENT
Date: 09/13/2011
Action: Closure/No Further Action Letter

Global Id: T0603737698
Action Type: ENFORCEMENT
Date: 06/08/2009
Action: Staff Letter

Global Id: T0603737698
Action Type: Other
Date: 08/24/2004
Action: Leak Discovery

LUST:
Global Id: T0603737698
Status: Open - Case Begin Date
Status Date: 08/24/2004

Global Id: T0603737698
Status: Open - Site Assessment
Status Date: 11/21/2006

Global Id: T0603737698
Status: Open - Referred
Status Date: 04/13/2009

Global Id: T0603737698
Status: Open - Site Assessment
Status Date: 06/08/2009

Global Id: T0603737698
Status: Completed - Case Closed
Status Date: 09/13/2011

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**H31** **COAST POLYMERS INC** **UST** **U003777223**
**NW** **9368 STEWART AND GRAY RD** **N/A**
**< 1/8** **DOWNEY, CA 90241**
**0.118 mi.**
**624 ft.** **Site 2 of 2 in cluster H**

**Relative:** UST:
**Higher** Facility ID: 14427
Permitting Agency: LOS ANGELES COUNTY
**Actual:** Latitude: 33.9288711
**107 ft.** Longitude: -118.1181417

**F32** **VIMAR INC** **LUST** **S100228291**
**ESE** **9650 WASHBURN RD** **HIST CORTESE** **N/A**
**< 1/8** **DOWNEY, CA 90241** **LOS ANGELES CO. HMS**
**0.123 mi.**
**647 ft.** **Site 4 of 6 in cluster F**

**Relative:**
**Higher**

**Actual:**
**104 ft.**

LUST:

| | |
|---|---|
| Lead Agency: | LOS ANGELES COUNTY |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603704145 |
| Global Id: | T0603704145 |
| Latitude: | 33.9242274 |
| Longitude: | -118.1154063 |
| Status: | Completed - Case Closed |
| Status Date: | 01/14/1993 |
| Case Worker: | JOA |
| RB Case Number: | I-14214 |
| Local Agency: | LOS ANGELES COUNTY |
| File Location: | Not reported |
| Local Case Number: | Not reported |
| Potential Media Affect: | Soil |
| Potential Contaminants of Concern: | Gasoline |
| Site History: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0603704145 |
| Contact Type: | Local Agency Caseworker |
| Contact Name: | JOHN AWUJO |
| Organization Name: | LOS ANGELES COUNTY |
| Address: | 900 S FREMONT AVE |
| City: | ALHAMBRA |
| Email: | jawujo@dpw.lacounty.gov |
| Phone Number: | 6264583507 |

| | |
|---|---|
| Global Id: | T0603704145 |
| Contact Type: | Regional Board Caseworker |
| Contact Name: | YUE RONG |
| Organization Name: | LOS ANGELES RWQCB (REGION 4) |
| Address: | 320 W. 4TH ST., SUITE 200 |
| City: | Los Angeles |
| Email: | yrong@waterboards.ca.gov |
| Phone Number: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0603704145 |
| Action Type: | Other |
| Date: | 03/09/1990 |
| Action: | Leak Reported |

LUST:

| | |
|---|---|
| Global Id: | T0603704145 |
| Status: | Open - Case Begin Date |
| Status Date: | 03/09/1990 |

| | |
|---|---|
| Global Id: | T0603704145 |
| Status: | Open - Site Assessment |
| Status Date: | 03/09/1990 |

| | |
|---|---|
| Global Id: | T0603704145 |

**VIMAR INC (Continued)** **S100228291**

Status: Completed - Case Closed
Status Date: 01/14/1993

LUST REG 4:

| | | |
|---|---|---|
| Region: | 4 | |
| Regional Board: | 04 | |
| County: | Los Angeles | |
| Facility Id: | I-14214 | |
| Status: | Case Closed | |
| Substance: | Gasoline | |
| Substance Quantity: | Not reported | |
| Local Case No: | Not reported | |
| Case Type: | Soil | |
| Abatement Method Used at the Site: | | Not reported |
| Global ID: | T0603704145 | |
| W Global ID: | Not reported | |
| Staff: | UNK | |
| Local Agency: | 19000 | |
| Cross Street: | Not reported | |
| Enforcement Type: | Not reported | |
| Date Leak Discovered: | Not reported | |
| Date Leak First Reported: | | 3/9/1990 |
| Date Leak Record Entered: | 3/5/1990 | |
| Date Confirmation Began: | 3/9/1990 | |
| Date Leak Stopped: | Not reported | |
| Date Case Last Changed on Database: | | 5/25/1993 |
| Date the Case was Closed: | | 1/14/1993 |
| How Leak Discovered: | Not reported | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | Not reported | |
| Leak Source: | Not reported | |
| Operator: | Not reported | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 178.184232210543404560598 1502 |
| Source of Cleanup Funding: | | F |
| Preliminary Site Assessment Workplan Submitted: | | Not reported |
| Preliminary Site Assessment Began: | | Not reported |
| Pollution Characterization Began: | | Not reported |
| Remediation Plan Submitted: | | Not reported |
| Remedial Action Underway: | | Not reported |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | Not reported |
| Historical Max MTBE Date: | | Not reported |
| Hist Max MTBE Conc in Groundwater: | | Not reported |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Not reported |
| GW Qualifier: | Not reported | |
| Soil Qualifier: | Not reported | |
| Organization: | Not reported | |
| Owner Contact: | Not reported | |
| Responsible Party: | VIMAR, INC. | |
| RP Address: | 9650 WASHBURN ROAD, DOWNEY, 90241 | |
| Program: | LUST | |
| Lat/Long: | 33.9242274 / -1 | |
| Local Agency Staff: | Not reported | |

**VIMAR INC (Continued)** **S100228291**

Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: I-14214

LOS ANGELES CO. HMS:
Region: LA
Permit Category: Not reported
Facility Id: 026104-035593
Facility Type: Not reported
Facility Status: OPEN
Area: 1F
Permit Number: Not reported
Permit Status: Not reported

---

**I33** **MCGEAN-ROHCO, INC.** **LUST S104406626**
**NE** **9520 CEEBEE DR E** **HIST CORTESE N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.136 mi.**
**716 ft.** **Site 1 of 4 in cluster I**

**Relative: Higher**
**Actual: 106 ft.**

LUST:
Lead Agency: LOS ANGELES COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603704555
Global Id: T0603704555
Latitude: 33.9277803
Longitude: -118.1154583
Status: Completed - Case Closed
Status Date: 07/20/1998
Case Worker: JOA
RB Case Number: R-01310
Local Agency: LOS ANGELES COUNTY
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Other Solvent or Non-Petroleum Hydrocarbon
Site History: Not reported

LUST:
Global Id: T0603704555
Contact Type: Local Agency Caseworker
Contact Name: JOHN AWUJO
Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

**MCGEAN-ROHCO, INC. (Continued)** **S104406626**

Global Id: T0603704555
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603704555
Action Type: Other
Date: 02/18/1998
Action: Leak Reported

Global Id: T0603704555
Action Type: Other
Date: 12/04/1997
Action: Leak Stopped

Global Id: T0603704555
Action Type: Other
Date: 01/21/1998
Action: Leak Discovery

LUST:
Global Id: T0603704555
Status: Open - Case Begin Date
Status Date: 12/04/1997

Global Id: T0603704555
Status: Completed - Case Closed
Status Date: 07/20/1998

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: R-01310
Status: Case Closed
Substance: Hydrocarbons
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Soil
Abatement Method Used at the Site: OT
Global ID: T0603704555
W Global ID: Not reported
Staff: UNK
Local Agency: 19000
Cross Street: STEWART
Enforcement Type: Not reported
Date Leak Discovered: 1/21/1998
Date Leak First Reported: 2/18/1998
Date Leak Record Entered: 3/25/1998
Date Confirmation Began: Not reported

**MCGEAN-ROHCO, INC. (Continued)** **S104406626**

| | | |
|---|---|---|
| Date Leak Stopped: | 12/4/1997 | |
| Date Case Last Changed on Database: | | 7/20/1998 |
| Date the Case was Closed: | | 7/20/1998 |
| How Leak Discovered: | Tank Closure | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | UNK | |
| Leak Source: | UNK | |
| Operator: | HARVEY HANS | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 1116.85783463581815558172928 67 |
| Source of Cleanup Funding: | | UNK |
| Preliminary Site Assessment Workplan Submitted: | | Not reported |
| Preliminary Site Assessment Began: | | Not reported |
| Pollution Characterization Began: | | Not reported |
| Remediation Plan Submitted: | | Not reported |
| Remedial Action Underway: | | Not reported |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | Not reported |
| Historical Max MTBE Date: | | Not reported |
| Hist Max MTBE Conc in Groundwater: | | Not reported |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Not reported |
| GW Qualifier: | Not reported | |
| Soil Qualifier: | Not reported | |
| Organization: | Not reported | |
| Owner Contact: | Not reported | |
| Responsible Party: | MCGEAN-ROHCO, INC. | |
| RP Address: | 1250 TERMINAL TOWER, CLEAVELAND OH 44113-2251 | |
| Program: | LUST | |
| Lat/Long: | 33.9277803 / -1 | |
| Local Agency Staff: | Not reported | |
| Beneficial Use: | Not reported | |
| Priority: | Not reported | |
| Cleanup Fund Id: | Not reported | |
| Suspended: | Not reported | |
| Assigned Name: | Not reported | |
| Summary: | CLOSURE APPLICATION #205714 | |

HIST CORTESE:

| | |
|---|---|
| Region: | CORTESE |
| Facility County Code: | 19 |
| Reg By: | LTNKA |
| Reg Id: | R-01310 |

---

**I34** **MCCEAN-ROMCO INC** **HIST UST** **S118412800**
**NE** **9520 E CEE DEE DRIVE** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.137 mi.**
**722 ft.** **Site 2 of 4 in cluster I**

**Relative:** HIST UST:
**Higher**

| | |
|---|---|
| File Number: | 00027B48 |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00027B48.pdf |
| Region: | Not reported |
| Facility ID: | Not reported |
| Facility Type: | Not reported |

**Actual:**
**106 ft.**

**MCCEAN-ROMCO INC (Continued)** **S118412800**

| | |
|---|---|
| Other Type: | Not reported |
| Contact Name: | Not reported |
| Telephone: | Not reported |
| Owner Name: | Not reported |
| Owner Address: | Not reported |
| Owner City,St,Zip: | Not reported |
| Total Tanks: | Not reported |
| Tank Num: | Not reported |
| Container Num: | Not reported |
| Year Installed: | Not reported |
| Tank Capacity: | Not reported |
| Tank Used for: | Not reported |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Not reported |

Click here for Geo Tracker PDF:

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**I35 MCGEAN-ROHCO INC** **RCRA-SQG 1000200146**
**NE 9520 E CEE BEE DRIVE** **SWEEPS UST CAD981457864**
**1/8-1/4 DOWNEY, CA 90241** **LOS ANGELES CO. HMS**
**0.137 mi.**
**722 ft. Site 3 of 4 in cluster I**

**Relative: Higher**

**Actual: 106 ft.**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 02/27/2002 |
| Facility name: | MCGEAN-ROHCO INC |
| Facility address: | 9520 E CEE BEE DRIVE<br>DOWNEY, CA 90241 |
| EPA ID: | CAD981457864 |
| Mailing address: | HARVARD AVE<br>CLEVALAND, OH 44105 |
| Contact: | JITENDRA U GANDHI |
| Contact address: | Not reported<br>Not reported |
| Contact country: | US |
| Contact telephone: | 216-441-4900 |
| Telephone ext.: | 3233 |
| Contact email: | JITU.GANDHI@MCGEAN.COM |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

Handler Activities Summary:

| | |
|---|---|
| U.S. importer of hazardous waste: | No |
| Mixed waste (haz. and radioactive): | No |
| Recycler of hazardous waste: | No |
| Transporter of hazardous waste: | No |
| Treater, storer or disposer of HW: | No |
| Underground injection activity: | No |
| On-site burner exemption: | No |
| Furnace exemption: | No |

**MCGEAN-ROHCO INC (Continued)** **1000200146**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 02/27/2002
Site name: MCGEAN-ROHCO INC
Classification: Large Quantity Generator

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: 801
. Waste name: Waste potentially containing dioxins

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D003
. Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

. Waste code: D004
. Waste name: ARSENIC

. Waste code: D005
. Waste name: BARIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D009

**MCGEAN-ROHCO INC (Continued)** **1000200146**

. Waste name: MERCURY

. Waste code: D011
. Waste name: SILVER

. Waste code: D022
. Waste name: CHLOROFORM

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: P012
. Waste name: ARSENIC OXIDE AS2O3

. Waste code: P016
. Waste name: DICHLOROMETHYL ETHER

. Waste code: P098
. Waste name: POTASSIUM CYANIDE

. Waste code: P104
. Waste name: SILVER CYANIDE

. Waste code: P121
. Waste name: ZINC CYANIDE

. Waste code: U044
. Waste name: CHLOROFORM

. Waste code: U108
. Waste name: 1,4-DIETHYLENEOXIDE

. Waste code: U122
. Waste name: FORMALDEHYDE

. Waste code: U123
. Waste name: FORMIC ACID (C,T)

. Waste code: U134
. Waste name: HYDROFLUORIC ACID (C,T)

. Waste code: U154
. Waste name: METHANOL (I)

. Waste code: U161
. Waste name: METHYL ISOBUTYL KETONE (I)

. Waste code: U169
. Waste name: BENZENE, NITRO-

. Waste code: U188
. Waste name: PHENOL

. Waste code: U196
. Waste name: PYRIDINE

. Waste code: U239

**MCGEAN-ROHCO INC (Continued)** **1000200146**

. Waste name: BENZENE, DIMETHYL- (I,T)

Date form received by agency: 09/01/1996
Site name: MCGEAN-ROHCO INC
Classification: Small Quantity Generator

Date form received by agency: 04/03/1986
Site name: MCGEAN-ROHCO INC
Classification: Large Quantity Generator

Violation Status: No violations found

SWEEPS UST:
Status: Active
Comp Number: 1310
Number: 9
Board Of Equalization: 44-007544
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-001310-000001
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: 8

Status: Active
Comp Number: 1310
Number: 9
Board Of Equalization: 44-007544
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-001310-000002
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 1310
Number: 9
Board Of Equalization: 44-007544
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-001310-000003
Tank Status: A
Capacity: Not reported

**MCGEAN-ROHCO INC (Continued)** **1000200146**

Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 1310
Number: 9
Board Of Equalization: 44-007544
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-001310-000004
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 1310
Number: 9
Board Of Equalization: 44-007544
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-001310-000005
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 1310
Number: 9
Board Of Equalization: 44-007544
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-001310-000006
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

**MCGEAN-ROHCO INC (Continued)** **1000200146**

Status: Active
Comp Number: 1310
Number: 9
Board Of Equalization: 44-007544
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-001310-000007
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 1310
Number: 9
Board Of Equalization: 44-007544
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-001310-000008
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

LOS ANGELES CO. HMS:
Region: LA
Permit Category: T
Facility Id: 001249-001310
Facility Type: 0
Facility Status: Removed
Area: 1F
Permit Number: 00002364T
Permit Status: Removed

Region: LA
Permit Category: I
Facility Id: 001249-I01310
Facility Type: 00
Facility Status: Closed
Area: 1F
Permit Number: 00000815X
Permit Status: Closed

**I36**
**NE**
**1/8-1/4**
**0.137 mi.**
**722 ft.**

**MCGEAN CHEM CO INC**
**9520 E CEE BEE DR**
**DOWNEY, CA 90241**

**Site 4 of 4 in cluster I**

**Database(s):** RCRA-SQG, HIST UST, FINDS, ECHO

**EDR ID Number:** 1000200129
**EPA ID Number:** CAD072949365

**Relative:**
**Higher**

**Actual:**
**106 ft.**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 09/01/1996 |
| Facility name: | MCGEAN CHEM CO INC |
| Facility address: | 9520 E CEE BEE DR<br>DOWNEY, CA 90241 |
| EPA ID: | CAD072949365 |
| Mailing address: | 9520 EAST CEE BEE DRIVE<br>DOWNEY, CA 90241 |
| Contact: | Not reported |
| Contact address: | Not reported<br>Not reported |
| Contact country: | US |
| Contact telephone: | Not reported |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | MCGEAN CHEMICAL CO INC |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | NOT REQUIRED |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Operator |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |

Handler Activities Summary:

| | |
|---|---|
| U.S. importer of hazardous waste: | No |
| Mixed waste (haz. and radioactive): | No |

**MCGEAN CHEM CO INC (Continued)** **1000200129**

| | |
|---|---|
| Recycler of hazardous waste: | No |
| Transporter of hazardous waste: | No |
| Treater, storer or disposer of HW: | No |
| Underground injection activity: | No |
| On-site burner exemption: | No |
| Furnace exemption: | No |
| Used oil fuel burner: | No |
| Used oil processor: | No |
| User oil refiner: | No |
| Used oil fuel marketer to burner: | No |
| Used oil Specification marketer: | No |
| Used oil transfer facility: | No |
| Used oil transporter: | No |

Historical Generators:

| | |
|---|---|
| Date form received by agency: | 03/05/1981 |
| Site name: | MCGEAN CHEM CO INC |
| Classification: | Large Quantity Generator |
| Violation Status: | No violations found |

HIST UST:

| | |
|---|---|
| File Number: | Not reported |
| URL: | Not reported |
| Region: | STATE |
| Facility ID: | 00000047290 |
| Facility Type: | Other |
| Other Type: | CHEMICAL COMPOUNDER |
| Contact Name: | JOHN F. MCINTYRE |
| Telephone: | 2138034311 |
| Owner Name: | MCGEAN-ROHCO, INC. |
| Owner Address: | 1250 TERMINAL TOWER |
| Owner City,St,Zip: | CLEVELAND, OH 44113 |
| Total Tanks: | 0008 |
| Tank Num: | 001 |
| Container Num: | 1 |
| Year Installed: | 1982 |
| Tank Capacity: | 00001500 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | 3/16 |
| Leak Detection: | Stock Inventor |
| Tank Num: | 002 |
| Container Num: | 2 |
| Year Installed: | 1982 |
| Tank Capacity: | 00001500 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | 3/16 |
| Leak Detection: | Stock Inventor |
| Tank Num: | 003 |
| Container Num: | 3 |
| Year Installed: | 1982 |
| Tank Capacity: | 00001500 |

**MCGEAN CHEM CO INC (Continued)** **1000200129**

Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 3/16"
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: 1982
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 1/4
Leak Detection: Stock Inventor

Tank Num: 005
Container Num: 5
Year Installed: 1982
Tank Capacity: 00001500
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 3/16
Leak Detection: Stock Inventor

Tank Num: 006
Container Num: 6
Year Installed: 1982
Tank Capacity: 00001500
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 3/16
Leak Detection: Stock Inventor

Tank Num: 007
Container Num: 7
Year Installed: 1984
Tank Capacity: 00003001
Tank Used for: WASTE
Type of Fuel: Not reported
Container Construction Thickness: 3/8-1/2
Leak Detection: Visual

Tank Num: 008
Container Num: 8
Year Installed: 1984
Tank Capacity: 00001200
Tank Used for: WASTE
Type of Fuel: Not reported
Container Construction Thickness: 4
Leak Detection: Visual

FINDS:

Registry ID: 110002657045

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of

**MCGEAN CHEM CO INC (Continued)** **1000200129**

events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZARDOUS WASTE BIENNIAL REPORTER

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1000200129 |
| Registry ID: | 110002657045 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110002657045 |

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**F37** **STOUT ROOFING CO** **RCRA-SQG** **1007370119**
**ESE** **9705 WASHBURN RD** **CAR000152850**
**1/8-1/4** **DOWNEY, CA 90239**
**0.139 mi.**
**736 ft.** **Site 5 of 6 in cluster F**

**Relative:** **Higher**

**Actual:** **104 ft.**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 04/30/2004 |
| Facility name: | STOUT ROOFING CO |
| Facility address: | 9705 WASHBURN RD<br>DOWNEY, CA 90239 |
| EPA ID: | CAR000152850 |
| Contact: | TOM HOOVER |
| Contact address: | 9705 WASHBURN RD<br>DOWNEY, CA 90239 |
| Contact country: | US |
| Contact telephone: | 562-923-6775 |
| Telephone ext.: | 32 |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | RAY DE BROUWER |
| Owner/operator address: | Not reported<br>Not reported |
| Owner/operator country: | US |
| Owner/operator telephone: | Not reported |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | 01/01/1967 |

**STOUT ROOFING CO (Continued)** **1007370119**

Owner/Op end date: Not reported

Owner/operator name: TOM HOOVER
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1980
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

---

**F38** **STOUT ROOFING INC** **HIST UST** **U001562939**
**ESE** **9705 WASHBURN ROAD** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.139 mi.**
**736 ft.** **Site 6 of 6 in cluster F**

**Relative:** HIST UST:
**Higher**
**Actual:** File Number: 000288C2
**104 ft.** URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/000288C2.pdf
Region: STATE
Facility ID: 00000017615
Facility Type: Other
Other Type: ROOFING CO.
Contact Name: Not reported
Telephone: 2138628133

**STOUT ROOFING INC (Continued)** **U001562939**

Owner Name: STOUT ROOFING INC
Owner Address: 9705 WASHBURN RD
Owner City,St,Zip: DOWNEY, CA 90241
Total Tanks: 0001

Tank Num: 001
Container Num: 1
Year Installed: 1972
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: None

Click here for Geo Tracker PDF:

---

**J39** **A.C. PETERSON CO. INC.** **HIST UST** **U001562891**
**SSE** **12207 WOODRUFF AVE** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.142 mi.**
**751 ft.** **Site 1 of 6 in cluster J**

**Relative:** HIST UST:
**Lower**
File Number: Not reported
**Actual:** URL: Not reported
**102 ft.** Region: STATE
Facility ID: 00000003074
Facility Type: Other
Other Type: CONTRACTORS YARD
Contact Name: TERRY J. PETERSON
Telephone: 2138034343
Owner Name: A.C. PETERSON CO. INC.
Owner Address: 12207 SO. WOODRUFF AVE.
Owner City,St,Zip: DOWNEY, CA 90241
Total Tanks: 0007

Tank Num: 001
Container Num: 1
Year Installed: 1979
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: 1974
Tank Capacity: 00007500
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00005000

**A.C. PETERSON CO. INC. (Continued)** **U001562891**

| | |
|---|---|
| Tank Used for: | PRODUCT |
| Type of Fuel: | REGULAR |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |
| | |
| Tank Num: | 004 |
| Container Num: | 4 |
| Year Installed: | Not reported |
| Tank Capacity: | 00005000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | UNLEADED |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |
| | |
| Tank Num: | 005 |
| Container Num: | 5 |
| Year Installed: | Not reported |
| Tank Capacity: | 00000300 |
| Tank Used for: | WASTE |
| Type of Fuel: | WASTE OIL |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |
| | |
| Tank Num: | 006 |
| Container Num: | 6 |
| Year Installed: | Not reported |
| Tank Capacity: | 00001000 |
| Tank Used for: | WASTE |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | Not reported |
| Leak Detection: | None |
| | |
| Tank Num: | 007 |
| Container Num: | 7 |
| Year Installed: | Not reported |
| Tank Capacity: | 00001000 |
| Tank Used for: | WASTE |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor, None |

---

**J40** **A C PETERSON COMPANY INC** **LUST** **S103281958**
**SSE** **12207 WOODRUFF AVE S** **HIST CORTESE** **N/A**
**1/8-1/4** **DOWNEY, CA 90242**
**0.142 mi.**
**751 ft.** **Site 2 of 6 in cluster J**

**Relative:** LUST:
**Lower**

| | |
|---|---|
| **Actual:** Lead Agency: | LOS ANGELES COUNTY |
| **102 ft.** Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603704798 |
| Global Id: | T0603704798 |
| Latitude: | 33.922741 |
| Longitude: | -118.117178 |
| Status: | Completed - Case Closed |
| Status Date: | 12/11/1997 |
| Case Worker: | JOA |
| RB Case Number: | R-09291 |

**A C PETERSON COMPANY INC (Continued)** **S103281958**

Local Agency: LOS ANGELES COUNTY
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Other Solvent or Non-Petroleum Hydrocarbon
Site History: Not reported

LUST:
Global Id: T0603704798
Contact Type: Local Agency Caseworker
Contact Name: JOHN AWUJO
Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Global Id: T0603704798
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603704798
Action Type: Other
Date: 12/11/1997
Action: Leak Reported

Global Id: T0603704798
Action Type: Other
Date: 09/09/1997
Action: Leak Stopped

Global Id: T0603704798
Action Type: Other
Date: 10/20/1997
Action: Leak Discovery

LUST:
Global Id: T0603704798
Status: Open - Case Begin Date
Status Date: 09/09/1997

Global Id: T0603704798
Status: Completed - Case Closed
Status Date: 12/11/1997

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles

**A C PETERSON COMPANY INC (Continued)** **S103281958**

| | | |
|---|---|---|
| Facility Id: | R-09291 | |
| Status: | Case Closed | |
| Substance: | Hydrocarbons | |
| Substance Quantity: | Not reported | |
| Local Case No: | Not reported | |
| Case Type: | Soil | |
| Abatement Method Used at the Site: | | Excavate and Dispose |
| Global ID: | T0603704798 | |
| W Global ID: | Not reported | |
| Staff: | UNK | |
| Local Agency: | 19000 | |
| Cross Street: | Not reported | |
| Enforcement Type: | Not reported | |
| Date Leak Discovered: | 10/20/1997 | |
| Date Leak First Reported: | | 12/11/1997 |
| Date Leak Record Entered: | 12/23/1997 | |
| Date Confirmation Began: | Not reported | |
| Date Leak Stopped: | 9/9/1997 | |
| Date Case Last Changed on Database: | | 12/23/1997 |
| Date the Case was Closed: | | 12/11/1997 |
| How Leak Discovered: | Tank Closure | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | UNK | |
| Leak Source: | UNK | |
| Operator: | Not reported | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 1014.6556536618701696276112 34 |
| Source of Cleanup Funding: | | UNK |
| Preliminary Site Assessment Workplan Submitted: | | Not reported |
| Preliminary Site Assessment Began: | | Not reported |
| Pollution Characterization Began: | | Not reported |
| Remediation Plan Submitted: | | Not reported |
| Remedial Action Underway: | | Not reported |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | Not reported |
| Historical Max MTBE Date: | | Not reported |
| Hist Max MTBE Conc in Groundwater: | | Not reported |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Not reported |
| GW Qualifier: | Not reported | |
| Soil Qualifier: | Not reported | |
| Organization: | Not reported | |
| Owner Contact: | Not reported | |
| Responsible Party: | A. C. PETERSON COMPANY, INC. | |
| RP Address: | 10704 RICHEON AVE., DOWNEY, CA 90240 | |
| Program: | LUST | |
| Lat/Long: | 33.9221595 / -1 | |
| Local Agency Staff: | Not reported | |
| Beneficial Use: | Not reported | |
| Priority: | Not reported | |
| Cleanup Fund Id: | Not reported | |
| Suspended: | Not reported | |
| Assigned Name: | Not reported | |
| Summary: | ALL THE CONTAMINATED SOILS WERE EXCAVATED AND NONE DISPOSED | |

**A C PETERSON COMPANY INC (Continued)** **S103281958**

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: R-09291

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**J41** **TERRY PETERSON** **SWEEPS UST** **S101586166**
**SSE** **12207 WOODRUFF AVE** **HIST UST** **N/A**
**1/8-1/4** **DOWNEY, CA 90241** **CA FID UST**
**0.142 mi.** **LOS ANGELES CO. HMS**
**751 ft.** **Site 3 of 6 in cluster J**

**Relative: Lower**
**Actual: 102 ft.**

SWEEPS UST:
Status: Active
Comp Number: 9291
Number: 9
Board Of Equalization: 44-008393
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-009291-000001
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: 2

Status: Active
Comp Number: 9291
Number: 9
Board Of Equalization: 44-008393
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-009291-000002
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

HIST UST:
File Number: 00026113
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00026113.pdf
Region: Not reported
Facility ID: Not reported
Facility Type: Not reported
Other Type: Not reported
Contact Name: Not reported
Telephone: Not reported
Owner Name: Not reported

**TERRY PETERSON (Continued)** **S101586166**

Owner Address: Not reported
Owner City,St,Zip: Not reported
Total Tanks: Not reported

Tank Num: Not reported
Container Num: Not reported
Year Installed: Not reported
Tank Capacity: Not reported
Tank Used for: Not reported
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Not reported

Click here for Geo Tracker PDF:

CA FID UST:
Facility ID: 19040155
Regulated By: UTNKA
Regulated ID: 00003074
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 8180000000
Mail To: Not reported
Mailing Address: 12211 S WOODRUFF AVE
Mailing Address 2: Not reported
Mailing City,St,Zip: DOWNEY
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

LOS ANGELES CO. HMS:
Region: LA
Permit Category: T
Facility Id: 009478-009291
Facility Type: 0
Facility Status: Removed
Area: 1F
Permit Number: 00002382T
Permit Status: Removed

---

**K42** **SO CAL PERFORMANCE INC** **RCRA-CESQG 1010561978**
**ESE** **9723 WASHBURN RD** **HAZNET CAR000185363**
**1/8-1/4** **DOWNEY, CA 90241**
**0.175 mi.**
**924 ft.** **Site 1 of 4 in cluster K**

**Relative:**
**Higher**

**Actual:**
**104 ft.**

RCRA-CESQG:
Date form received by agency: 07/31/2008
Facility name: SO CAL PERFORMANCE INC
Facility address: 9723 WASHBURN RD
DOWNEY, CA 90241
EPA ID: CAR000185363
Contact: STEVE HOWARD

**SO CAL PERFORMANCE INC (Continued)** **1010561978**

| | |
|---|---|
| Contact address: | Not reported |
| | Not reported |
| Contact country: | US |
| Contact telephone: | 562-862-9122 |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Conditionally Exempt Small Quantity Generator |
| Description: | Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | SO CAL PERFORMANCE INC |
| Owner/operator address: | SO CAL PERFORMANCE INC |
| | 9723 WASHBURN RD, CA 90241 |
| Owner/operator country: | US |
| Owner/operator telephone: | Not reported |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | 09/22/2007 |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | GLENN AND STEVE HOWARD |
| Owner/operator address: | Not reported |
| | Not reported |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | Not reported |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Operator |
| Owner/Op start date: | 01/01/1987 |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | GLENN HOWARD |
| Owner/operator address: | 9723 WASHBURN RD |
| | DOWNEY, CA 90241 |
| Owner/operator country: | US |
| Owner/operator telephone: | Not reported |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |

**SO CAL PERFORMANCE INC (Continued)** **1010561978**

Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1987
Owner/Op end date: Not reported

Owner/operator name: STEVE HOWARD
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 09/22/2007
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Historical Generators:
Date form received by agency: 06/26/2007
Site name: SO CAL PERFORMANCE INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT

**SO CAL PERFORMANCE INC (Continued)** **1010561978**

WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

HAZNET:

| | |
|---|---|
| envid: | 1010561978 |
| Year: | 2007 |
| GEPAID: | CAR000185363 |
| Contact: | STEVE N HOWARD |
| Telephone: | 5628629122 |
| Mailing Name: | Not reported |
| Mailing Address: | 9723 WASHBURN RD |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |
| Gen County: | Not reported |
| TSD EPA ID: | CAD008302903 |
| TSD County: | Not reported |
| Waste Category: | Off-specification, aged or surplus organics |
| Disposal Method: | Fuel Blending Prior To Energy Recovery At Another Site |
| Tons: | 13.2 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

---

**K43** **SO-CAL PERFORMANCE INC** **UST** **U003777260**
**ESE** **9723 WASHBURN RD** **SWEEPS UST** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.175 mi.**
**924 ft.** **Site 2 of 4 in cluster K**

**Relative:**
**Higher**

**Actual:**
**104 ft.**

UST:

| | |
|---|---|
| Facility ID: | 15399 |
| Permitting Agency: | LOS ANGELES COUNTY |
| Latitude: | 33.925965 |
| Longitude: | -118.112477 |

SWEEPS UST:

| | |
|---|---|
| Status: | Active |
| Comp Number: | 15399 |
| Number: | 1 |
| Board Of Equalization: | Not reported |
| Referral Date: | 05-25-90 |
| Action Date: | 05-25-90 |
| Created Date: | 05-25-90 |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | 19-000-015399-000001 |
| Tank Status: | A |
| Capacity: | 4000 |
| Active Date: | 05-25-90 |
| Tank Use: | UNKNOWN |
| STG: | P |
| Content: | Not reported |
| Number Of Tanks: | 3 |

| | |
|---|---|
| Status: | Active |
| Comp Number: | 15399 |
| Number: | 1 |
| Board Of Equalization: | Not reported |
| Referral Date: | 05-25-90 |

**SO-CAL PERFORMANCE INC (Continued)** **U003777260**

| | |
|---|---|
| Action Date: | 05-25-90 |
| Created Date: | 05-25-90 |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | 19-000-015399-000002 |
| Tank Status: | A |
| Capacity: | 4000 |
| Active Date: | 05-25-90 |
| Tank Use: | PETROLEUM |
| STG: | P |
| Content: | Not reported |
| Number Of Tanks: | Not reported |

| | |
|---|---|
| Status: | Active |
| Comp Number: | 15399 |
| Number: | 1 |
| Board Of Equalization: | Not reported |
| Referral Date: | 05-25-90 |
| Action Date: | 05-25-90 |
| Created Date: | 05-25-90 |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | 19-000-015399-000003 |
| Tank Status: | A |
| Capacity: | 4000 |
| Active Date: | 05-25-90 |
| Tank Use: | PETROLEUM |
| STG: | P |
| Content: | Not reported |
| Number Of Tanks: | Not reported |

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**K44** **SO-CAL PERFORMANCE INC** **CA FID UST S101587229**
**ESE** **9723 WASHBURN RD** **HAZNET N/A**
**1/8-1/4** **DOWNEY, CA 90241** **LOS ANGELES CO. HMS**
**0.175 mi.**
**924 ft.** **Site 3 of 4 in cluster K**

**Relative:**
**Higher**

**Actual:**
**104 ft.**

CA FID UST:

| | |
|---|---|
| Facility ID: | 19055118 |
| Regulated By: | UTNKA |
| Regulated ID: | Not reported |
| Cortese Code: | Not reported |
| SIC Code: | Not reported |
| Facility Phone: | 2138629122 |
| Mail To: | Not reported |
| Mailing Address: | 6109 BLACKTHORNE AVE |
| Mailing Address 2: | Not reported |
| Mailing City,St,Zip: | DOWNEY 90241 |
| Contact: | Not reported |
| Contact Phone: | Not reported |
| DUNs Number: | Not reported |
| NPDES Number: | Not reported |
| EPA ID: | Not reported |
| Comments: | Not reported |
| Status: | Active |

HAZNET:

| | |
|---|---|
| envid: | S101587229 |
| Year: | 2016 |

**SO-CAL PERFORMANCE INC (Continued)** **S101587229**

| | |
|---|---|
| GEPAID: | CAC002862558 |
| Contact: | MIKE ENGLISH |
| Telephone: | 5623074466 |
| Mailing Name: | Not reported |
| Mailing Address: | 9723 WASHBURN RD |
| Mailing City,St,Zip: | DOWNEY, CA 902415616 |
| Gen County: | Los Angeles |
| TSD EPA ID: | CAT080013352 |
| TSD County: | Los Angeles |
| Waste Category: | Aqueous solution with total organic residues less than 10 percent |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Tons: | 1.26 |
| Cat Decode: | Aqueous solution with total organic residues less than 10 percent |
| Method Decode: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Facility County: | Los Angeles |

LOS ANGELES CO. HMS:

| | |
|---|---|
| Region: | LA |
| Permit Category: | T |
| Facility Id: | 014712-058527 |
| Facility Type: | 0 |
| Facility Status: | Closed |
| Area: | 1F |
| Permit Number: | 000779793 |
| Permit Status: | Closed |

---

**K45** **SO-CAL NITROUS AND RACE FUELS, INC.** **UST** **U004265825**
**ESE** **9723 E WASHBURN RD** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.175 mi.**
**924 ft.** **Site 4 of 4 in cluster K**

**Relative:**
**Higher**

**Actual:**
**104 ft.**

UST:

| | |
|---|---|
| Facility ID: | LACoFA0046684 |
| Permitting Agency: | Los Angeles County Fire Department |
| Latitude: | 33.92462 |
| Longitude: | -118.11382 |

---

**L46** **SR MAINTENANCE & MANAGEMENT SERVICES INC** **DRYCLEANERS** **S112920062**
**NNE** **11814 WOODRUFF AVE** **HAZNET** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.183 mi.**
**965 ft.** **Site 1 of 2 in cluster L**

**Relative:**
**Higher**

**Actual:**
**107 ft.**

DRYCLEANERS:

| | |
|---|---|
| EPA Id: | CAL000371058 |
| NAICS Code: | 81232 |
| NAICS Description: | Drycleaning and Laundry Services (except Coin-Operated) |
| SIC Code: | 7211 |
| SIC Description: | Power Laundries, Family and Commercial |
| Create Date: | 01/25/2012 |
| Facility Active: | No |
| Inactive Date: | 07/20/2017 |
| Facility Addr2: | Not reported |

**SR MAINTENANCE & MANAGEMENT SERVICES INC (Continued)** **S112920062**

| | |
|---|---|
| Owner Name: | SR MAINTENANCE & MANAGEMENT SERVICE |
| Owner Address: | 9525 STEWART AND GRAY RD |
| Owner Address 2: | Not reported |
| Owner Telephone: | 5627769040 |
| Contact Name: | SERGIO SAN ROMAN |
| Contact Address: | 9525 STEWART & GRAY RD |
| Contact Address 2: | Not reported |
| Contact Telephone: | 5627769040 |
| Mailing Name: | Not reported |
| Mailing Address 1: | 9525 STEWART AND GRAY RD |
| Mailing Address 2: | Not reported |
| Mailing City: | DOWNEY |
| Mailing State: | CA |
| Mailing Zip: | 902415519 |
| Owner Fax: | 5622878908 |
| Region Code: | 3 |

HAZNET:

| | |
|---|---|
| envid: | S112920062 |
| Year: | 2001 |
| GEPAID: | CAC002484447 |
| Contact: | PAM HEINTZ/UNITED PUMPING CO |
| Telephone: | 6269619326 |
| Mailing Name: | Not reported |
| Mailing Address: | 6010 BALL RD STE 201 |
| Mailing City,St,Zip: | CYPRESS, CA 906300000 |
| Gen County: | Not reported |
| TSD EPA ID: | AZD980892731 |
| TSD County: | Not reported |
| Waste Category: | Off-specification, aged or surplus inorganics |
| Disposal Method: | Treatment, Incineration |
| Tons: | 0.01 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

---

**J47** **SUN RAY TESTING INTERNATIONAL INC** **RCRA-SQG** **1000129524**
**SSE** **12221 WOODRUFF AVE** **MLTS** **CAD982500357**
**1/8-1/4** **DOWNEY, CA 90241** **FINDS**
**0.183 mi.** **ECHO**
**968 ft.** **Site 4 of 6 in cluster J** **HAZNET**

**Relative:** **Lower**
**Actual:** **102 ft.**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 03/06/1990 |
| Facility name: | SUN RAY TESTING INTERNATIONAL INC |
| Facility address: | 12221 WOODRUFF AVE<br>DOWNEY, CA 90241 |
| EPA ID: | CAD982500357 |
| Contact: | ENVIRONMENTAL MANAGER |
| Contact address: | 12221 WOODRUFF AVE<br>DOWNEY, CA 90241 |
| Contact country: | US |
| Contact telephone: | 213-869-2561 |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous |

**SUN RAY TESTING INTERNATIONAL INC (Continued)** **1000129524**

waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | NOT REQUIRED |
| Owner/operator address: | NOT REQUIRED |
| | NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Operator |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | RAYMOND R MC BRIDE |
| Owner/operator address: | NOT REQUIRED |
| | NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |

Handler Activities Summary:

| | |
|---|---|
| U.S. importer of hazardous waste: | No |
| Mixed waste (haz. and radioactive): | No |
| Recycler of hazardous waste: | No |
| Transporter of hazardous waste: | No |
| Treater, storer or disposer of HW: | No |
| Underground injection activity: | No |
| On-site burner exemption: | No |
| Furnace exemption: | No |
| Used oil fuel burner: | No |
| Used oil processor: | No |
| User oil refiner: | No |
| Used oil fuel marketer to burner: | No |
| Used oil Specification marketer: | No |
| Used oil transfer facility: | No |
| Used oil transporter: | No |

Violation Status: No violations found

MLTS:

| | |
|---|---|
| License Number: | 04-19810-01 |
| First License Date: | Not reported |
| License Date: | 07/29/86 |
| Lic. Expiration Date: | 09/30/86 |
| Contact Name: | Not reported |

**SUN RAY TESTING INTERNATIONAL INC (Continued)** **1000129524**

Contact Phone: Not reported
Institution Code: 19810
Department/Bldg: Not reported
States Allowing Use: Not reported
Store Material Use: No
Redistribution Use: No
Incinerate Use: No
Burial Use: No
Last Inspection Date: 05/01/86
Next Inspection Date: Not reported
Licensee Contact: Not reported
Inspector Name: Not reported

FINDS:

Registry ID: 110002833578

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000129524
Registry ID: 110002833578
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002833578

HAZNET:
envid: 1000129524
Year: 2005
GEPAID: CAD982500357
Contact: STEPHEN L ENGLER PRESIDENT
Telephone: 3104631585
Mailing Name: Not reported
Mailing Address: 12221 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAT080033681
TSD County: Not reported
Waste Category: Not reported
Disposal Method: Not reported
Tons: 0.04
Cat Decode: Not reported
Method Decode: Not reported

**SUN RAY TESTING INTERNATIONAL INC (Continued)** **1000129524**

Facility County: Los Angeles

envid: 1000129524
Year: 2005
GEPAID: CAD982500357
Contact: STEPHEN L ENGLER PRESIDENT
Telephone: 3104631585
Mailing Name: Not reported
Mailing Address: 12221 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAT000613976
TSD County: Not reported
Waste Category: Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method: Transfer Station
Tons: 0.14
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1000129524
Year: 2005
GEPAID: CAD982500357
Contact: STEPHEN L ENGLER PRESIDENT
Telephone: 3104631585
Mailing Name: Not reported
Mailing Address: 12221 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Off-specification, aged or surplus organics
Disposal Method: Not reported
Tons: 0.23
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1000129524
Year: 2005
GEPAID: CAD982500357
Contact: STEPHEN L ENGLER PRESIDENT
Telephone: 3104631585
Mailing Name: Not reported
Mailing Address: 12221 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAT080033681
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Not reported
Tons: 0.04
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1000129524

**SUN RAY TESTING INTERNATIONAL INC (Continued)** **1000129524**

| | |
|---|---|
| Year: | 2005 |
| GEPAID: | CAD982500357 |
| Contact: | STEPHEN L ENGLER PRESIDENT |
| Telephone: | 3104631585 |
| Mailing Name: | Not reported |
| Mailing Address: | 12221 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |
| Gen County: | Not reported |
| TSD EPA ID: | CAT080033681 |
| TSD County: | Not reported |
| Waste Category: | Other organic solids |
| Disposal Method: | Not reported |
| Tons: | 0.1 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

Click this hyperlink while viewing on your computer to access
9 additional CA_HAZNET: record(s) in the EDR Site Report.

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**J48** **COMPRESSOR COMPONENTS** **RCRA-SQG** **1000818840**
**SSE** **12223 S WOODRUFF UNIT A** **FINDS** **CAD983647546**
**1/8-1/4** **DOWNEY, CA 90241** **ECHO**
**0.190 mi.**
**1002 ft.** **Site 5 of 6 in cluster J**

**Relative:**
**Lower**

**Actual:**
**101 ft.**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 03/28/1997 |
| Facility name: | COMPRESSOR COMPONENTS |
| Facility address: | 12223 S WOODRUFF UNIT A<br>DOWNEY, CA 90241 |
| EPA ID: | CAD983647546 |
| Contact: | LIAM WONG |
| Contact address: | 12223 S WOODRUFF UNIT A<br>DOWNEY, CA 90241 |
| Contact country: | US |
| Contact telephone: | 310-803-5303 |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | COMPRESSOR COMPONENTS |
| Owner/operator address: | 12223 S WOODRUFF UNIT A<br>DOWNEY, CA 90241 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 310-803-5303 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |

**COMPRESSOR COMPONENTS (Continued)** **1000818840**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110009550208

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000818840
Registry ID: 110009550208
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110009550208

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**J49** **WESTWERK PORSCHE-AUDI** **RCRA-SQG** **1000422913**
**SSE** **12223 WOODRUFF AVE** **CAD981653595**
**1/8-1/4** **DOWNEY, CA 90241**
**0.190 mi.**
**1002 ft.** **Site 6 of 6 in cluster J**

**Relative:**
**Lower**

**Actual:**
**101 ft.**

RCRA-SQG:
Date form received by agency: 09/18/1986
Facility name: WESTWERK PORSCHE-AUDI
Facility address: 12223 WOODRUFF AVE
DOWNEY, CA 90241
EPA ID: CAD981653595
Mailing address: WOODRUFF AVE
DOWNEY, CA 90241

**WESTWERK PORSCHE-AUDI (Continued)** **1000422913**

| | |
|---|---|
| Contact: | ENVIRONMENTAL MANAGER |
| Contact address: | 12223 WOODRUFF AVE<br>DOWNEY, CA 90241 |
| Contact country: | US |
| Contact telephone: | 213-803-4319 |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | WURSCHUM WILLIAM |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | NOT REQUIRED |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Operator |
| Owner/Op start date: | Not reported |
| Owner/Op end date: | Not reported |

Handler Activities Summary:

| | |
|---|---|
| U.S. importer of hazardous waste: | No |
| Mixed waste (haz. and radioactive): | No |
| Recycler of hazardous waste: | No |
| Transporter of hazardous waste: | No |
| Treater, storer or disposer of HW: | No |
| Underground injection activity: | No |
| On-site burner exemption: | No |
| Furnace exemption: | No |
| Used oil fuel burner: | No |
| Used oil processor: | No |
| User oil refiner: | No |
| Used oil fuel marketer to burner: | No |
| Used oil Specification marketer: | No |
| Used oil transfer facility: | No |

**WESTWERK PORSCHE-AUDI (Continued)** **1000422913**

Used oil transporter: No

Violation Status: No violations found

---

**50**
**NNW**
**1/8-1/4**
**0.195 mi.**
**1027 ft.**

**ROSECRANS AVE. / WOODRUFFAVE. DUMP** **SWF/LF** **S104493080**
**LINDALE AVE/CORNUTA AVE/IBBETSON AVE.** **N/A**
**BELLFLOWER, CA**

**Relative:**
**Higher**

**Actual:**
**109 ft.**

SWF/LF (SWIS):

| | |
|---|---|
| Facility ID: | 19-AA-5345 |
| Lat/Long: | 33.9288 / -118.1192 |
| Owner Name: | Unknown |
| Owner Telephone: | Not reported |
| Owner Address: | Not reported |
| Owner Address2: | P.O. Box 5 |
| Owner City,St,Zip: | Fairfield, CA 94533 |
| Operational Status: | Closed |
| Operator: | Not reported |
| Operator Phone: | Not reported |
| Operator Address: | Not reported |
| Operator Address2: | Not reported |
| Operator City,St,Zip: | Not reported |
| Permit Date: | Not reported |
| Permit Status: | Not reported |
| Permitted Acreage: | 0 |
| Activity: | Solid Waste Disposal Site |
| Regulation Status: | Unpermitted |
| Landuse Name: | Industrial,Commercial |
| GIS Source: | Map |
| Category: | Disposal |
| Unit Number: | 01 |
| Inspection Frequency: | Annual |
| Accepted Waste: | Not reported |
| Closure Date: | Not reported |
| Closure Type: | Not reported |
| Disposal Acreage: | 0 |
| SWIS Num: | 19-AA-5345 |
| Waste Discharge Requirement Num: | Not reported |
| Program Type: | Not reported |
| Permitted Throughput with Units: | 0 |
| Actual Throughput with Units: | Not reported |
| Permitted Capacity with Units: | 0 |
| Remaining Capacity: | 0 |
| Remaining Capacity with Units: | Not reported |
| Lat/Long: | 33.9288 / -118.1192 |

**M51** **CUMMINS PACIFIC, LLC** **AST** **A100419214**
**NE** **9520 STEWART AND GRAY RD** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.197 mi.**
**1038 ft.** **Site 1 of 2 in cluster M**

**Relative:**
**Higher**

**Actual:**
**107 ft.**

AST:

| | |
|---|---|
| Certified Unified Program Agencies: | Not reported |
| Owner: | MARK YRAGUI |
| Total Gallons: | Not reported |
| CERSID: | 10303510 |
| Facility ID: | LACoFA0039724 |
| Business Name: | CUMMINS PACIFIC, LLC |
| Phone: | (562) 415-2800 |
| Fax: | Not reported |
| Mailing Address: | 9520 STEWART & GRAY ROAD |
| Mailing Address City: | DOWNEY |
| Mailing Address State: | CA |
| Mailing Address Zip Code: | 90241 |
| Operator Name: | SUSAN MORALES |
| Operator Phone: | (562) 415-2801 |
| Owner Phone: | (949) 253-6000 |
| Owner Mail Address: | 1939 DEERE AVE |
| Owner State: | CA |
| Owner Zip Code: | 92606 |
| Owner Country: | United States |
| Property Owner Name: | Mark Yragui |
| Property Owner Phone: | (949)253-6000 |
| Property Owner Mailing Address: | 1939 Deere Ave |
| Property Owner City: | Irvine |
| Property Owner Stat : | CA |
| Property Owner Zip Code: | 92606 |
| Property Owner Country: | United States |
| EPAID: | CAL000326402 |

---

**M52** **REGENT JACK MFG CO., INC.** **HIST UST** **U001562928**
**NE** **11905 REGENTVIEW** **EMI** **N/A**
**1/8-1/4** **DOWNEY, CA 90241** **WDS**
**0.203 mi.**
**1070 ft.** **Site 2 of 2 in cluster M**

**Relative:**
**Higher**

**Actual:**
**107 ft.**

HIST UST:

| | |
|---|---|
| File Number: | 00027F16 |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00027F16.pdf |
| Region: | STATE |
| Facility ID: | 00000006431 |
| Facility Type: | Other |
| Other Type: | Not reported |
| Contact Name: | J.A. JARVIS |
| Telephone: | 2138621174 |
| Owner Name: | REGENT JACK MFG CO INC |
| Owner Address: | 11905 REGENT VIEW AVE |
| Owner City,St,Zip: | DOWNEY, CA 90241 |
| Total Tanks: | 0001 |
| | |
| Tank Num: | 001 |
| Container Num: | 1 |
| Year Installed: | Not reported |
| Tank Capacity: | 00000000 |
| Tank Used for: | WASTE |

**REGENT JACK MFG CO., INC. (Continued)** **U001562928**

Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: 10

Click here for Geo Tracker PDF:

EMI:

| | |
|---|---|
| Year: | 1987 |
| County Code: | 19 |
| Air Basin: | SC |
| Facility ID: | 15241 |
| Air District Name: | SC |
| SIC Code: | 3441 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | 5 |
| Reactive Organic Gases Tons/Yr: | 5 |
| Carbon Monoxide Emissions Tons/Yr: | 0 |
| NOX - Oxides of Nitrogen Tons/Yr: | 0 |
| SOX - Oxides of Sulphur Tons/Yr: | 0 |
| Particulate Matter Tons/Yr: | 0 |
| Part. Matter 10 Micrometers and Smllr Tons/Yr: | 0 |

| | |
|---|---|
| Year: | 1990 |
| County Code: | 19 |
| Air Basin: | SC |
| Facility ID: | 15241 |
| Air District Name: | SC |
| SIC Code: | 3441 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | 11 |
| Reactive Organic Gases Tons/Yr: | 9 |
| Carbon Monoxide Emissions Tons/Yr: | 0 |
| NOX - Oxides of Nitrogen Tons/Yr: | 0 |
| SOX - Oxides of Sulphur Tons/Yr: | 0 |
| Particulate Matter Tons/Yr: | 0 |
| Part. Matter 10 Micrometers and Smllr Tons/Yr: | 0 |

| | |
|---|---|
| Year: | 1995 |
| County Code: | 19 |
| Air Basin: | SC |
| Facility ID: | 15241 |
| Air District Name: | SC |
| SIC Code: | 3441 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | 2 |
| Reactive Organic Gases Tons/Yr: | 2 |
| Carbon Monoxide Emissions Tons/Yr: | 0 |
| NOX - Oxides of Nitrogen Tons/Yr: | 0 |
| SOX - Oxides of Sulphur Tons/Yr: | 0 |
| Particulate Matter Tons/Yr: | 0 |
| Part. Matter 10 Micrometers and Smllr Tons/Yr: | 0 |

**REGENT JACK MFG CO., INC. (Continued)** **U001562928**

| | |
|---|---|
| Year: | 1996 |
| County Code: | 19 |
| Air Basin: | SC |
| Facility ID: | 15241 |
| Air District Name: | SC |
| SIC Code: | 3441 |
| Air District Name: | SOUTH COAST AQMD |
| Community Health Air Pollution Info System: | Not reported |
| Consolidated Emission Reporting Rule: | Not reported |
| Total Organic Hydrocarbon Gases Tons/Yr: | 2 |
| Reactive Organic Gases Tons/Yr: | 2 |
| Carbon Monoxide Emissions Tons/Yr: | 0 |
| NOX - Oxides of Nitrogen Tons/Yr: | 0 |
| SOX - Oxides of Sulphur Tons/Yr: | 0 |
| Particulate Matter Tons/Yr: | 0 |
| Part. Matter 10 Micrometers and Smllr Tons/Yr: | 0 |

WDS:

| | |
|---|---|
| Facility ID: | 4 19I001267 |
| Facility Type: | Not reported |
| Facility Status: | Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements. |
| NPDES Number: | CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board |
| Subregion: | 4 |
| Facility Telephone: | Not reported |
| Facility Contact: | Not reported |
| Agency Name: | AVIATION METHODS INC. |
| Agency Address: | Not reported |
| Agency City,St,Zip: | 0 |
| Agency Contact: | Not reported |
| Agency Telephone: | Not reported |
| Agency Type: | Not reported |
| SIC Code: | 0 |
| SIC Code 2: | Not reported |
| Primary Waste Type: | Not reported |
| Primary Waste: | Not reported |
| Waste Type2: | Not reported |
| Waste2: | Not reported |
| Primary Waste Type: | Not reported |
| Secondary Waste: | Not reported |
| Secondary Waste Type: | Not reported |
| Design Flow: | 0 |
| Baseline Flow: | 0 |
| Reclamation: | Not reported |
| POTW: | Not reported |
| Treat To Water: | Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality. |
| Complexity: | Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as |

**REGENT JACK MFG CO., INC. (Continued)** **U001562928**

dairy waste ponds.

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**N53** **CITY OF DOWNEY** **SWEEPS UST** **S101587157**
**WNW** **9252 STEWART RD** **CA FID UST** **N/A**
**1/8-1/4** **DOWNEY, CA**
**0.211 mi.**
**1116 ft.** **Site 1 of 2 in cluster N**

**Relative:**
**Higher**

**Actual:**
**107 ft.**

SWEEPS UST:

| | |
|---|---|
| Status: | Active |
| Comp Number: | 11659 |
| Number: | 9 |
| Board Of Equalization: | 44-009414 |
| Referral Date: | 06-30-89 |
| Action Date: | Not reported |
| Created Date: | 06-30-89 |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | 19-000-011659-000001 |
| Tank Status: | A |
| Capacity: | Not reported |
| Active Date: | 06-30-89 |
| Tank Use: | UNKNOWN |
| STG: | W |
| Content: | Not reported |
| Number Of Tanks: | 1 |

CA FID UST:

| | |
|---|---|
| Facility ID: | 19054986 |
| Regulated By: | UTNKA |
| Regulated ID: | 00047215 |
| Cortese Code: | Not reported |
| SIC Code: | Not reported |
| Facility Phone: | 8180000000 |
| Mail To: | Not reported |
| Mailing Address: | 12324 BELLFLOWER |
| Mailing Address 2: | Not reported |
| Mailing City,St,Zip: | DOWNEY |
| Contact: | Not reported |
| Contact Phone: | Not reported |
| DUNs Number: | Not reported |
| NPDES Number: | Not reported |
| EPA ID: | Not reported |
| Comments: | Not reported |
| Status: | Active |

---

**N54** **WATER YARD** **HIST UST** **U001562944**
**WNW** **9252 STEWART AND GRAY RD** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.211 mi.**
**1116 ft.** **Site 2 of 2 in cluster N**

**Relative:**
**Higher**

**Actual:**
**107 ft.**

HIST UST:

| | |
|---|---|
| File Number: | 00026FDD |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00026FDD.pdf |
| Region: | STATE |
| Facility ID: | 00000047215 |

**WATER YARD (Continued)** **U001562944**

| | |
|---|---|
| Facility Type: | Gas Station |
| Other Type: | Not reported |
| Contact Name: | GREG MAYFIELD |
| Telephone: | 2138697331 |
| Owner Name: | CITY OF DOWNEY |
| Owner Address: | 11111 BROOKSHIRE AVE. CALLER N |
| Owner City,St,Zip: | DOWNEY, CA 90241 |
| Total Tanks: | 0001 |
| | |
| Tank Num: | 001 |
| Container Num: | #7 |
| Year Installed: | 1965 |
| Tank Capacity: | 00001000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | REGULAR |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |

Click here for Geo Tracker PDF:

---

**55**
**NE**
**1/8-1/4**
**0.216 mi.**
**1140 ft.**

**SR MAINTENANCE & MANAGEMENT SERVICES INC** **DRYCLEANERS** **S113157239**
**9525 STEWART AND GRAY RD** **HAZNET** **N/A**
**DOWNEY, CA 90241**

**Relative:**
**Higher**

**Actual:**
**108 ft.**

DRYCLEANERS:

| | |
|---|---|
| EPA Id: | CAL000367231 |
| NAICS Code: | 81232 |
| NAICS Description: | Drycleaning and Laundry Services (except Coin-Operated) |
| SIC Code: | 7211 |
| SIC Description: | Power Laundries, Family and Commercial |
| Create Date: | 09/07/2011 |
| Facility Active: | Yes |
| Inactive Date: | Not reported |
| Facility Addr2: | Not reported |
| Owner Name: | SR MAINTENANCE & MANAGEMENT SERVICE |
| Owner Address: | 9525 STEWART AND GRAY RD |
| Owner Address 2: | Not reported |
| Owner Telephone: | 5627769040 |
| Contact Name: | SERGIO SAN ROMAN |
| Contact Address: | 9525 STEWART & GRAY RD |
| Contact Address 2: | Not reported |
| Contact Telephone: | 5627769040 |
| Mailing Name: | Not reported |
| Mailing Address 1: | 9525 STEWART AND GRAY RD |
| Mailing Address 2: | Not reported |
| Mailing City: | DOWNEY |
| Mailing State: | CA |
| Mailing Zip: | 902415519 |
| Owner Fax: | 5622878908 |
| Region Code: | 3 |

HAZNET:

| | |
|---|---|
| envid: | S113157239 |
| Year: | 2011 |
| GEPAID: | CAL000346959 |

**SR MAINTENANCE & MANAGEMENT SERVICES INC (Continued)** **S113157239**

| | |
|---|---|
| Contact: | TONY CASILLAS |
| Telephone: | 3233530116 |
| Mailing Name: | Not reported |
| Mailing Address: | 9525 STEWART AND GRAY RD |
| Mailing City,St,Zip: | DOWNEY, CA 902415519 |
| Gen County: | Not reported |
| TSD EPA ID: | CAT080013352 |
| TSD County: | Not reported |
| Waste Category: | Waste oil and mixed oil |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Tons: | 0.646 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

---

**L56** **GOLDEN W PIPE & SUPPLY INC** **SWEEPS UST** **S106926788**
**NNE** **11700 WOODRUFF AVE** **N/A**
**1/8-1/4** **DOWNEY, CA**
**0.222 mi.**
**1172 ft.** **Site 2 of 2 in cluster L**

**Relative:** **Higher**
**Actual:** **108 ft.**

SWEEPS UST:

| | |
|---|---|
| Status: | Active |
| Comp Number: | 11251 |
| Number: | 9 |
| Board Of Equalization: | Not reported |
| Referral Date: | 06-30-89 |
| Action Date: | Not reported |
| Created Date: | 06-30-89 |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | Not reported |
| Tank Status: | Not reported |
| Capacity: | Not reported |
| Active Date: | Not reported |
| Tank Use: | Not reported |
| STG: | Not reported |
| Content: | Not reported |
| Number Of Tanks: | Not reported |

---

**O57** **GENERAL PAVING CO/JOMIT RENTAL** **LUST** **S104159681**
**WSW** **9316 WASHBURN RD** **HIST CORTESE** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.226 mi.**
**1194 ft.** **Site 1 of 3 in cluster O**

**Relative:** **Lower**
**Actual:** **101 ft.**

LUST:

| | |
|---|---|
| Lead Agency: | LOS ANGELES COUNTY |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603704974 |
| Global Id: | T0603704974 |
| Latitude: | 33.92392 |
| Longitude: | -118.122802 |
| Status: | Completed - Case Closed |
| Status Date: | 09/09/1992 |
| Case Worker: | JOA |

**GENERAL PAVING CO/JOMIT RENTAL (Continued)** **S104159681**

RB Case Number: R-10910
Local Agency: LOS ANGELES COUNTY
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0603704974
Contact Type: Local Agency Caseworker
Contact Name: JOHN AWUJO
Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Global Id: T0603704974
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603704974
Action Type: Other
Date: 07/03/1991
Action: Leak Discovery

Global Id: T0603704974
Action Type: Other
Date: 11/18/1991
Action: Leak Reported

Global Id: T0603704974
Action Type: Other
Date: 07/03/1991
Action: Leak Stopped

LUST:
Global Id: T0603704974
Status: Open - Case Begin Date
Status Date: 06/20/1991

Global Id: T0603704974
Status: Open - Site Assessment
Status Date: 06/20/1991

Global Id: T0603704974
Status: Open - Site Assessment
Status Date: 07/23/1991

Global Id: T0603704974

**GENERAL PAVING CO/JOMIT RENTAL (Continued)** **S104159681**

Status: Open - Remediation
Status Date: 10/31/1991

Global Id: T0603704974
Status: Open - Remediation
Status Date: 03/02/1992

Global Id: T0603704974
Status: Completed - Case Closed
Status Date: 09/09/1992

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: R-10910
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Soil
Abatement Method Used at the Site: Not reported
Global ID: T0603704974
W Global ID: Not reported
Staff: UNK
Local Agency: 19000
Cross Street: DUNROBIN
Enforcement Type: Informal Enforcement Actions,including Notices of Violations and Staff Enforcement Letters
Date Leak Discovered: 7/3/1991
Date Leak First Reported: 11/18/1991
Date Leak Record Entered: 3/20/1992
Date Confirmation Began: Not reported
Date Leak Stopped: 7/3/1991
Date Case Last Changed on Database: 9/9/1992
Date the Case was Closed: 9/9/1992
How Leak Discovered: Tank Closure
How Leak Stopped: Not reported
Cause of Leak: UNK
Leak Source: UNK
Operator: RULLO, LEN
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 2183.3811333764801859212472736
Source of Cleanup Funding: UNK
Preliminary Site Assessment Workplan Submitted: 6/20/1991
Preliminary Site Assessment Began: 7/23/1991
Pollution Characterization Began: Not reported
Remediation Plan Submitted: 10/31/1991
Remedial Action Underway: 3/2/1992
Post Remedial Action Monitoring Began: Not reported
Enforcement Action Date: 1/1/1965
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported

**GENERAL PAVING CO/JOMIT RENTAL (Continued)** **S104159681**

| | |
|---|---|
| Soil Qualifier: | Not reported |
| Organization: | Not reported |
| Owner Contact: | Not reported |
| Responsible Party: | JOMIT EQUIPMENT RENTALS |
| RP Address: | 12125 WOODRUFF AVE., DOWNEY 90241 |
| Program: | LUST |
| Lat/Long: | 33.9241735 / -1 |
| Local Agency Staff: | Not reported |
| Beneficial Use: | Not reported |
| Priority: | Not reported |
| Cleanup Fund Id: | Not reported |
| Suspended: | Not reported |
| Assigned Name: | Not reported |
| Summary: | Not reported |

HIST CORTESE:

| | |
|---|---|
| Region: | CORTESE |
| Facility County Code: | 19 |
| Reg By: | LTNKA |
| Reg Id: | R-10910 |

---

**O58** **GENERAL PAVING COMPANY** **HIST UST** **U001562909**
**WSW** **9316 WASHBURN RD** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.226 mi.**
**1194 ft.** **Site 2 of 3 in cluster O**

**Relative:**
**Lower**

**Actual:**
**101 ft.**

HIST UST:

| | |
|---|---|
| File Number: | Not reported |
| URL: | Not reported |
| Region: | STATE |
| Facility ID: | 00000007729 |
| Facility Type: | Other |
| Other Type: | PAVING CONTRACTOR |
| Contact Name: | LEN RULLO |
| Telephone: | 2138691093 |
| Owner Name: | GENERAL PAVING COMPANY |
| Owner Address: | 9316 WASHBURN ROAD |
| Owner City,St,Zip: | DOWNEY, CA 90241 |
| Total Tanks: | 0004 |
| | |
| Tank Num: | 001 |
| Container Num: | 1 |
| Year Installed: | Not reported |
| Tank Capacity: | 00012000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | PREMIUM |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Stock Inventor |
| | |
| Tank Num: | 002 |
| Container Num: | 2 |
| Year Installed: | Not reported |
| Tank Capacity: | 00005000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | PREMIUM |
| Container Construction Thickness: | Not reported |

**GENERAL PAVING COMPANY (Continued)** **U001562909**

Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

---

**O59** **JOMIT EQUIPMENT RENTAL** **SWEEPS UST** **S101583337**
**WSW** **9316 WASHBURN RD** **HIST UST** **N/A**
**1/8-1/4** **DOWNEY, CA 90241** **CA FID UST**
**0.226 mi.**
**1194 ft.** **Site 3 of 3 in cluster O**

**Relative:** **Lower**
**Actual:** **101 ft.**

SWEEPS UST:
Status: Active
Comp Number: 10910
Number: 2
Board Of Equalization: 44-009065
Referral Date: 07-12-91
Action Date: 07-12-91
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-010910-000001
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: 4

Status: Active
Comp Number: 10910
Number: 2
Board Of Equalization: 44-009065
Referral Date: 07-12-91
Action Date: 07-12-91
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-010910-000002
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W

**JOMIT EQUIPMENT RENTAL (Continued)** **S101583337**

Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 10910
Number: 2
Board Of Equalization: 44-009065
Referral Date: 07-12-91
Action Date: 07-12-91
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-010910-000003
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 10910
Number: 2
Board Of Equalization: 44-009065
Referral Date: 07-12-91
Action Date: 07-12-91
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-010910-000004
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

HIST UST:
File Number: 00026A9E
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00026A9E.pdf
Region: Not reported
Facility ID: Not reported
Facility Type: Not reported
Other Type: Not reported
Contact Name: Not reported
Telephone: Not reported
Owner Name: Not reported
Owner Address: Not reported
Owner City,St,Zip: Not reported
Total Tanks: Not reported

Tank Num: Not reported
Container Num: Not reported
Year Installed: Not reported
Tank Capacity: Not reported
Tank Used for: Not reported
Type of Fuel: Not reported

**JOMIT EQUIPMENT RENTAL (Continued)** **S101583337**

Container Construction Thickness: Not reported
Leak Detection: Not reported

Click here for Geo Tracker PDF:

CA FID UST:
Facility ID: 19003436
Regulated By: UTNKA
Regulated ID: 00007729
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 2138033439
Mail To: Not reported
Mailing Address: 12125 WOODRUFF AVE
Mailing Address 2: Not reported
Mailing City,St,Zip: DOWNEY 90241
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

---

**60 North 1/8-1/4 0.232 mi. 1226 ft.**

**GOULD-BROWN BOVERI**
**11711 WOODRUFF AVE**
**DOWNEY, CA 90241**

**RCRA-SQG 1000278469**
**FINDS CAD062061973**
**ECHO**

**Relative: Higher**

**Actual: 109 ft.**

RCRA-SQG:
Date form received by agency: 09/01/1996
Facility name: GOULD-BROWN BOVERI
Facility address: 11711 WOODRUFF AVE
DOWNEY, CA 90241
EPA ID: CAD062061973
Mailing address: WOODRUFF AVE
DOWNEY, CA 90241
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: GOULD-BROWN BOVERI
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported

**GOULD-BROWN BOVERI (Continued)** **1000278469**

Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002653049

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

**GOULD-BROWN BOVERI (Continued)** **1000278469**

ECHO:
Envid: 1000278469
Registry ID: 110002653049
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002653049

---

**P61** **PARK WATER CO** **SWEEPS UST** **S102061633**
**ESE** **9750 WASHBURN RD** **EMI** **N/A**
**1/8-1/4** **DOWNEY, CA**
**0.233 mi.**
**1229 ft.** **Site 1 of 5 in cluster P**

**Relative:**
**Higher**

**Actual:**
**105 ft.**

SWEEPS UST:
Status: Active
Comp Number: 10909
Number: 9
Board Of Equalization: Not reported
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: Not reported
Tank Status: Not reported
Capacity: Not reported
Active Date: Not reported
Tank Use: Not reported
STG: Not reported
Content: Not reported
Number Of Tanks: Not reported

EMI:
Year: 1987
County Code: 19
Air Basin: SC
Facility ID: 51468
Air District Name: SC
SIC Code: 3479
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 1
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 8
Part. Matter 10 Micrometers and Smllr Tons/Yr: 7

**P62** **PARK WATER CO** **AST** **S113081874**
**ESE** **9750 WASHBURN RD** **HAZNET** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.233 mi.**
**1229 ft.** **Site 2 of 5 in cluster P**

**Relative:**
**Higher**

**Actual:**
**105 ft.**

AST:

| | |
|---|---|
| Certified Unified Program Agencies: | Not reported |
| Owner: | Western Water LLC. |
| Total Gallons: | Not reported |
| CERSID: | 10304437 |
| Facility ID: | LACoFA0028791 |
| Business Name: | PARK WATER CO |
| Phone: | (562) 923-0711 |
| Fax: | (562) 861-5902 |
| Mailing Address: | 9750 WASHBURN RD |
| Mailing Address City: | DOWNEY |
| Mailing Address State: | CA |
| Mailing Address Zip Code: | 90241 |
| Operator Name: | Park Water Company |
| Operator Phone: | (562) 923-0711 |
| Owner Phone: | (562) 923-0711 |
| Owner Mail Address: | 9750 WASHBURN RD |
| Owner State: | CA |
| Owner Zip Code: | 90241 |
| Owner Country: | United States |
| Property Owner Name: | Western Water LLC |
| Property Owner Phone: | (562) 923-0711 |
| Property Owner Mailing Address: | 9750 WASHBURN RD |
| Property Owner City: | DOWNEY |
| Property Owner Stat : | CA |
| Property Owner Zip Code: | 90242 |
| Property Owner Country: | United States |
| EPAID: | Not reported |

HAZNET:

| | |
|---|---|
| envid: | S113081874 |
| Year: | 2016 |
| GEPAID: | CAL000148654 |
| Contact: | ARNIE MARTINEZ |
| Telephone: | 5622995115 |
| Mailing Name: | Not reported |
| Mailing Address: | 9750 WASHBURN RD |
| Mailing City,St,Zip: | DOWNEY, CA 902417002 |
| Gen County: | Los Angeles |
| TSD EPA ID: | CAD044429835 |
| TSD County: | Los Angeles |
| Waste Category: | Unspecified aqueous solution |
| Disposal Method: | Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135) |
| Tons: | 0.357 |
| Cat Decode: | Unspecified aqueous solution |
| Method Decode: | Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135) |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | S113081874 |
| Year: | 2016 |
| GEPAID: | CAL000148654 |

**PARK WATER CO (Continued)** **S113081874**

| | |
|---|---|
| Contact: | ARNIE MARTINEZ |
| Telephone: | 5622995115 |
| Mailing Name: | Not reported |
| Mailing Address: | 9750 WASHBURN RD |
| Mailing City,St,Zip: | DOWNEY, CA 902417002 |
| Gen County: | Los Angeles |
| TSD EPA ID: | CAD044429835 |
| TSD County: | Los Angeles |
| Waste Category: | Other inorganic solid waste |
| Disposal Method: | Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135) |
| Tons: | 0.015 |
| Cat Decode: | Other inorganic solid waste |
| Method Decode: | Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135) |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | S113081874 |
| Year: | 2016 |
| GEPAID: | CAL000148654 |
| Contact: | ARNIE MARTINEZ |
| Telephone: | 5622995115 |
| Mailing Name: | Not reported |
| Mailing Address: | 9750 WASHBURN RD |
| Mailing City,St,Zip: | DOWNEY, CA 902417002 |
| Gen County: | Los Angeles |
| TSD EPA ID: | CAD044429835 |
| TSD County: | Los Angeles |
| Waste Category: | Other organic solids |
| Disposal Method: | Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135) |
| Tons: | 0.03 |
| Cat Decode: | Other organic solids |
| Method Decode: | Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135) |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | S113081874 |
| Year: | 2016 |
| GEPAID: | CAL000148654 |
| Contact: | ARNIE MARTINEZ |
| Telephone: | 5622995115 |
| Mailing Name: | Not reported |
| Mailing Address: | 9750 WASHBURN RD |
| Mailing City,St,Zip: | DOWNEY, CA 902417002 |
| Gen County: | Los Angeles |
| TSD EPA ID: | CAD008488025 |
| TSD County: | Los Angeles |
| Waste Category: | Unspecified aqueous solution |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Tons: | 0.315 |
| Cat Decode: | Unspecified aqueous solution |
| Method Decode: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Facility County: | Los Angeles |

**PARK WATER CO (Continued)** **S113081874**

envid: S113081874
Year: 2015
GEPAID: CAL000148654
Contact: ARNIE MARTINEZ
Telephone: 5622995115
Mailing Name: Not reported
Mailing Address: 9750 WASHBURN RD
Mailing City,St,Zip: DOWNEY, CA 902417002
Gen County: Los Angeles
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Unspecified oil-containing waste
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 2.7939
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
11 additional CA_HAZNET: record(s) in the EDR Site Report.

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**Q63** **SHAWNAN** **UST** **U004265694**
**SSE** **12240 S WOODRUFF AVE** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.242 mi.**
**1279 ft.** **Site 1 of 4 in cluster Q**

**Relative:** **Lower**
**Actual:** **102 ft.**

UST:
Facility ID: LACoFA0030318
Permitting Agency: Los Angeles County Fire Department
Latitude: 33.92162
Longitude: -118.11506

---

**Q64** **SHAWNAN** **SWEEPS UST** **S105422208**
**SSE** **12240 WOODRUFF AVE** **LOS ANGELES CO. HMS** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.242 mi.**
**1279 ft.** **Site 2 of 4 in cluster Q**

**Relative:** **Lower**
**Actual:** **102 ft.**

SWEEPS UST:
Status: Active
Comp Number: 13260
Number: 9
Board Of Equalization: 44-010113
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-013260-000001
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported

**SHAWNAN (Continued)** **S105422208**

Number Of Tanks: 2

Status: Active
Comp Number: 13260
Number: 9
Board Of Equalization: 44-010113
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-013260-000002
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

LOS ANGELES CO. HMS:
Region: LA
Permit Category: T
Facility Id: 013002-037244
Facility Type: 0
Facility Status: Permit
Area: 1F
Permit Number: 000335212
Permit Status: Permit

---

**Q65** **SEQUEL CONTRACTORS INC** **UST** **U003777104**
**SSE** **12240 WOODRUFF AVE** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.242 mi.**
**1279 ft.** **Site 3 of 4 in cluster Q**

**Relative:** **Lower**
**Actual:** **102 ft.**

UST:
Facility ID: 13260
Permitting Agency: LOS ANGELES COUNTY
Latitude: 33.922971
Longitude: -118.113712

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**Q66** **SEQUEL CONTRACTORS INC** **LUST** **S102062326**
**SSE** **12240 WOODRUFF AVE** **LOS ANGELES CO. HMS** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.242 mi.**
**1279 ft.** **Site 4 of 4 in cluster Q**

**Relative:** **Lower**
**Actual:** **102 ft.**

LUST:
Lead Agency: LOS ANGELES COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603754702
Global Id: T0603754702
Latitude: 33.921622
Longitude: -118.11506
Status: Completed - Case Closed
Status Date: 08/31/2005

**SEQUEL CONTRACTORS INC (Continued)** **S102062326**

Case Worker: TS
RB Case Number: Not reported
Local Agency: LOS ANGELES COUNTY
File Location: Not reported
Local Case Number: 013260
Potential Media Affect: Soil
Potential Contaminants of Concern: Diesel
Site History: Not reported

LUST:
Global Id: T0603754702
Contact Type: Local Agency Caseworker
Contact Name: TIM SMITH
Organization Name: LOS ANGELES COUNTY
Address: 900 S. FREMONT AVE.
City: ALHAMBRA
Email: tsmith@dpw.lacounty.gov
Phone Number: Not reported

Global Id: T0603754702
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603754702
Action Type: Other
Date: 11/19/1999
Action: Leak Reported

Global Id: T0603754702
Action Type: REMEDIATION
Date: 11/15/1999
Action: Not reported

Global Id: T0603754702
Action Type: Other
Date: 08/10/1999
Action: Leak Discovery

LUST:
Global Id: T0603754702
Status: Open - Case Begin Date
Status Date: 08/10/1999

Global Id: T0603754702
Status: Open - Site Assessment
Status Date: 11/19/1999

Global Id: T0603754702
Status: Completed - Case Closed
Status Date: 08/31/2005

**SEQUEL CONTRACTORS INC (Continued)** **S102062326**

LOS ANGELES CO. HMS:
Region: LA
Permit Category: T
Facility Id: 013002-013260
Facility Type: 0
Facility Status: Closed
Area: 1F
Permit Number: 00004991T
Permit Status: Closed

---

**P67** **PPG IND INC HUGHES PRODS** **RCRA-SQG** **1000119897**
**East** **12049 REGENTVIEW AVE** **SWEEPS UST** **CAD001989482**
**1/8-1/4** **DOWNEY, CA 90241** **CA FID UST**
**0.247 mi.** **FINDS**
**1306 ft.** **Site 3 of 5 in cluster P** **ECHO**
**LOS ANGELES CO. HMS**
**Relative: Higher** **NPDES**
**CIWQS**
**Actual: 105 ft.**

RCRA-SQG:
Date form received by agency: 09/01/1996
Facility name: PPG IND INC HUGHES PRODS
Facility address: 12049 REGENTVIEW AVE
DOWNEY, CA 90241
EPA ID: CAD001989482
Mailing address: 961 DIVISION ST
ADRIAN, MI 49221
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED

**PPG IND INC HUGHES PRODS (Continued)** **1000119897**

NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 04/06/1984
Site name: PPG IND INC HUGHES PRODS
Classification: Large Quantity Generator

Violation Status: No violations found

SWEEPS UST:
Status: Active
Comp Number: 3846
Number: 2
Board Of Equalization: 44-007771
Referral Date: 10-30-90
Action Date: 10-30-90
Created Date: 06-30-89
Owner Tank Id: 01
SWRCB Tank Id: 19-000-003846-000001
Tank Status: A
Capacity: 6000
Active Date: 10-30-90
Tank Use: CHEMICAL
STG: P
Content: Not reported
Number Of Tanks: 5

Status: Active
Comp Number: 3846
Number: 2
Board Of Equalization: 44-007771

**PPG IND INC HUGHES PRODS (Continued)** **1000119897**

Referral Date: 10-30-90
Action Date: 10-30-90
Created Date: 06-30-89
Owner Tank Id: 02
SWRCB Tank Id: 19-000-003846-000002
Tank Status: A
Capacity: 3000
Active Date: 10-30-90
Tank Use: CHEMICAL
STG: P
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 3846
Number: 2
Board Of Equalization: 44-007771
Referral Date: 10-30-90
Action Date: 10-30-90
Created Date: 06-30-89
Owner Tank Id: 03
SWRCB Tank Id: 19-000-003846-000003
Tank Status: A
Capacity: 3000
Active Date: 10-30-90
Tank Use: CHEMICAL
STG: P
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 3846
Number: 2
Board Of Equalization: 44-007771
Referral Date: 10-30-90
Action Date: 10-30-90
Created Date: 06-30-89
Owner Tank Id: 04
SWRCB Tank Id: 19-000-003846-000004
Tank Status: A
Capacity: 3000
Active Date: 10-30-90
Tank Use: CHEMICAL
STG: P
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 3846
Number: 2
Board Of Equalization: 44-007771
Referral Date: 10-30-90
Action Date: 10-30-90
Created Date: 06-30-89
Owner Tank Id: 05
SWRCB Tank Id: 19-000-003846-000005
Tank Status: A

**PPG IND INC HUGHES PRODS (Continued)** **1000119897**

Capacity: 6000
Active Date: 10-30-90
Tank Use: CHEMICAL
STG: P
Content: Not reported
Number Of Tanks: Not reported

CA FID UST:
Facility ID: 19028072
Regulated By: UTNKA
Regulated ID: CAD001989
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 2138693091
Mail To: Not reported
Mailing Address: 12049 S REGENTVIEW AVE
Mailing Address 2: Not reported
Mailing City,St,Zip: DOWNEY 90241
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

FINDS:

Registry ID: 110002629237

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000119897
Registry ID: 110002629237
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002629237

LOS ANGELES CO. HMS:
Region: LA
Permit Category: T
Facility Id: 003720-003846
Facility Type: 0
Facility Status: Removed
Area: 1F
Permit Number: 00003219T

**PPG IND INC HUGHES PRODS (Continued)** **1000119897**

Permit Status: Removed

Region: LA
Permit Category: I
Facility Id: 003720-I03846
Facility Type: 00
Facility Status: Closed
Area: 1F
Permit Number: 000001730
Permit Status: Closed

NPDES:

| | |
|---|---|
| Facility Status: | Not reported |
| NPDES Number: | Not reported |
| Region: | Not reported |
| Agency Number: | Not reported |
| Regulatory Measure ID: | Not reported |
| Place ID: | Not reported |
| Order Number: | Not reported |
| WDID: | 4 19NEC001094 |
| Regulatory Measure Type: | Industrial |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Discharge Address: | Not reported |
| Discharge Name: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Status: | Active |
| Status Date: | 10/08/2015 |
| Operator Name: | Tri Star Industrial Products Inc |
| Operator Address: | 12049 Regentview Avenue |
| Operator City: | Downey |
| Operator State: | California |
| Operator Zip: | 90241 |

NPDES as of 03/2018:

| | |
|---|---|
| NPDES Number: | Not reported |
| Status: | Not reported |
| Agency Number: | Not reported |
| Region: | 4 |
| Regulatory Measure ID: | 463375 |
| Order Number: | Not reported |
| Regulatory Measure Type: | Industrial |
| Place ID: | Not reported |
| WDID: | 4 19NEC001094 |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Not reported |
| Discharge Address: | Not reported |
| Discharge City: | Not reported |

**PPG IND INC HUGHES PRODS (Continued)** **1000119897**

| | |
|---|---|
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Received Date: | 09/29/2015 |
| Processed Date: | 10/08/2015 |
| Status: | Active |
| Status Date: | 10/08/2015 |
| Place Size: | 21849.64 |
| Place Size Unit: | SqFt |
| Contact: | Mark Rubens |
| Contact Title: | Not reported |
| Contact Phone: | 562-862-0262 |
| Contact Phone Ext: | Not reported |
| Contact Email: | mrubens@tristarindustrial.com |
| Operator Name: | Tri Star Industrial Products Inc |
| Operator Address: | 12049 Regentview Avenue |
| Operator City: | Downey |
| Operator State: | California |
| Operator Zip: | 90241 |
| Operator Contact: | Mark Rubens |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | 562-862-0262 |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | mrubens@tristarindustrial.com |
| Operator Type: | Private Business |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | California |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | Not reported |
| Receiving Water Name: | Not reported |
| Certifier: | David Joseph |
| Certifier Title: | President |
| Certification Date: | 10-AUG-17 |
| Primary Sic: | 2899-Chemicals and Chemical Preparations, NEC |
| Secondary Sic: | Not reported |

**PPG IND INC HUGHES PRODS (Continued)** **1000119897**

| | |
|---|---|
| Tertiary Sic: | Not reported |
| | |
| NPDES Number: | CAS000001 |
| Status: | Active |
| Agency Number: | 0 |
| Region: | 4 |
| Regulatory Measure ID: | 463375 |
| Order Number: | 97-03-DWQ |
| Regulatory Measure Type: | Enrollee |
| Place ID: | Not reported |
| WDID: | 4 19NEC001094 |
| Program Type: | Industrial |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 10/08/2015 |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Tri Star Industrial Products Inc |
| Discharge Address: | 12049 Regentview Avenue |
| Discharge City: | Downey |
| Discharge State: | California |
| Discharge Zip: | 90241 |
| Received Date: | Not reported |
| Processed Date: | Not reported |
| Status: | Not reported |
| Status Date: | Not reported |
| Place Size: | Not reported |
| Place Size Unit: | Not reported |
| Contact: | Not reported |
| Contact Title: | Not reported |
| Contact Phone: | Not reported |
| Contact Phone Ext: | Not reported |
| Contact Email: | Not reported |
| Operator Name: | Not reported |
| Operator Address: | Not reported |
| Operator City: | Not reported |
| Operator State: | Not reported |
| Operator Zip: | Not reported |
| Operator Contact: | Not reported |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | Not reported |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | Not reported |
| Operator Type: | Not reported |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | Not reported |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |

**PPG IND INC HUGHES PRODS (Continued)** **1000119897**

| | |
|---|---|
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | Not reported |
| Receiving Water Name: | Not reported |
| Certifier: | Not reported |
| Certifier Title: | Not reported |
| Certification Date: | Not reported |
| Primary Sic: | Not reported |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |

| | |
|---|---|
| Facility Status: | Active |
| NPDES Number: | CAS000001 |
| Region: | 4 |
| Agency Number: | 0 |
| Regulatory Measure ID: | 463375 |
| Place ID: | Not reported |
| Order Number: | 97-03-DWQ |
| WDID: | 4 19NEC001094 |
| Regulatory Measure Type: | Enrollee |
| Program Type: | Industrial |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 10/08/2015 |
| Termination Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Discharge Address: | 12049 Regentview Avenue |
| Discharge Name: | Tri Star Industrial Products Inc |
| Discharge City: | Downey |
| Discharge State: | California |
| Discharge Zip: | 90241 |
| Status: | Not reported |
| Status Date: | Not reported |
| Operator Name: | Not reported |
| Operator Address: | Not reported |
| Operator City: | Not reported |
| Operator State: | Not reported |
| Operator Zip: | Not reported |

NPDES as of 03/2018:

| | |
|---|---|
| NPDES Number: | Not reported |
| Status: | Not reported |
| Agency Number: | Not reported |
| Region: | 4 |
| Regulatory Measure ID: | 463375 |
| Order Number: | Not reported |
| Regulatory Measure Type: | Industrial |
| Place ID: | Not reported |

**PPG IND INC HUGHES PRODS (Continued)** **1000119897**

| | |
|---|---|
| WDID: | 4 19NEC001094 |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Not reported |
| Discharge Address: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Received Date: | 09/29/2015 |
| Processed Date: | 10/08/2015 |
| Status: | Active |
| Status Date: | 10/08/2015 |
| Place Size: | 21849.64 |
| Place Size Unit: | SqFt |
| Contact: | Mark Rubens |
| Contact Title: | Not reported |
| Contact Phone: | 562-862-0262 |
| Contact Phone Ext: | Not reported |
| Contact Email: | mrubens@tristarindustrial.com |
| Operator Name: | Tri Star Industrial Products Inc |
| Operator Address: | 12049 Regentview Avenue |
| Operator City: | Downey |
| Operator State: | California |
| Operator Zip: | 90241 |
| Operator Contact: | Mark Rubens |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | 562-862-0262 |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | mrubens@tristarindustrial.com |
| Operator Type: | Private Business |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | California |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |

**PPG IND INC HUGHES PRODS (Continued)** **1000119897**

| | |
|---|---|
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | Not reported |
| Receiving Water Name: | Not reported |
| Certifier: | David Joseph |
| Certifier Title: | President |
| Certification Date: | 10-AUG-17 |
| Primary Sic: | 2899-Chemicals and Chemical Preparations, NEC |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |
| | |
| NPDES Number: | CAS000001 |
| Status: | Active |
| Agency Number: | 0 |
| Region: | 4 |
| Regulatory Measure ID: | 463375 |
| Order Number: | 97-03-DWQ |
| Regulatory Measure Type: | Enrollee |
| Place ID: | Not reported |
| WDID: | 4 19NEC001094 |
| Program Type: | Industrial |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 10/08/2015 |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Tri Star Industrial Products Inc |
| Discharge Address: | 12049 Regentview Avenue |
| Discharge City: | Downey |
| Discharge State: | California |
| Discharge Zip: | 90241 |
| Received Date: | Not reported |
| Processed Date: | Not reported |
| Status: | Not reported |
| Status Date: | Not reported |
| Place Size: | Not reported |
| Place Size Unit: | Not reported |
| Contact: | Not reported |
| Contact Title: | Not reported |
| Contact Phone: | Not reported |
| Contact Phone Ext: | Not reported |
| Contact Email: | Not reported |
| Operator Name: | Not reported |
| Operator Address: | Not reported |
| Operator City: | Not reported |
| Operator State: | Not reported |
| Operator Zip: | Not reported |
| Operator Contact: | Not reported |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | Not reported |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | Not reported |
| Operator Type: | Not reported |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | Not reported |
| Developer Zip: | Not reported |

**PPG IND INC HUGHES PRODS (Continued)** **1000119897**

| | |
|---|---|
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | Not reported |
| Receiving Water Name: | Not reported |
| Certifier: | Not reported |
| Certifier Title: | Not reported |
| Certification Date: | Not reported |
| Primary Sic: | Not reported |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |

CIWQS:

| | |
|---|---|
| Agency: | Tri Star Industrial Products Inc |
| Agency Address: | 12049 Regentview Avenue, Downey, CA 90241 |
| Place/Project Type: | Industrial - Chemicals and Chemical Preparations, NEC |
| SIC/NAICS: | 2899 |
| Region: | 4 |
| Program: | INDSTW |
| Regulatory Measure Status: | Active |
| Regulatory Measure Type: | Storm water industrial |
| Order Number: | 2014-0057-DWQ |
| WDID: | 4 19NEC001094 |
| NPDES Number: | CAS000001 |
| Adoption Date: | Not reported |
| Effective Date: | 10/08/2015 |
| Termination Date: | Not reported |
| Expiration/Review Date: | Not reported |
| Design Flow: | Not reported |
| Major/Minor: | Not reported |
| Complexity: | Not reported |
| TTWQ: | Not reported |
| Enforcement Actions within 5 years: | 0 |
| Violations within 5 years: | 0 |
| Latitude: | 33.924618 |
| Longitude: | -118.112666 |

**P68**
**East**
**1/8-1/4**
**0.247 mi.**
**1306 ft.**

**HUGHES PRODUCTS**
**12049 REGENTVIEW AVE**
**DOWNEY, CA 90241**

**Site 4 of 5 in cluster P**

**HIST UST** **U001562913**
**N/A**

**Relative:**
**Higher**

**Actual:**
**105 ft.**

HIST UST:

| | |
|---|---|
| File Number: | Not reported |
| URL: | Not reported |
| Region: | STATE |
| Facility ID: | 00000055458 |
| Facility Type: | Other |
| Other Type: | ADHESIVE MANUFACTURE |
| Contact Name: | ROBERT HALLIWELL |
| Telephone: | 5172637831 |
| Owner Name: | PPG INDUSTRIES, INC. |
| Owner Address: | ONE PPG PALCE |
| Owner City,St,Zip: | PITTSBURGH, PA 15272 |
| Total Tanks: | 0005 |
| | |
| Tank Num: | 001 |
| Container Num: | 1 |
| Year Installed: | 1972 |
| Tank Capacity: | 00006000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | 1/4 |
| Leak Detection: | None |
| | |
| Tank Num: | 002 |
| Container Num: | 2 |
| Year Installed: | 1972 |
| Tank Capacity: | 00003000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | 1/4 |
| Leak Detection: | None |
| | |
| Tank Num: | 003 |
| Container Num: | 5 |
| Year Installed: | 1972 |
| Tank Capacity: | 00006000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | 1/4 |
| Leak Detection: | None |
| | |
| Tank Num: | 004 |
| Container Num: | 4 |
| Year Installed: | 1972 |
| Tank Capacity: | 00003000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | 1/4 |
| Leak Detection: | None |
| | |
| Tank Num: | 005 |
| Container Num: | 3 |
| Year Installed: | 1972 |

**HUGHES PRODUCTS (Continued)** **U001562913**

| | |
|---|---|
| Tank Capacity: | 00003000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | 1/4 |
| Leak Detection: | None |

---

**P69** **HUGHES PRODUCTS** **HIST UST** **S118411279**
**East** **12045 S REGENTVIEW AVENUE** **N/A**
**1/8-1/4** **DOWNEY, CA 90241**
**0.250 mi.**
**1319 ft.** **Site 5 of 5 in cluster P**

**Relative:** **Higher**
**Actual:** **105 ft.**

HIST UST:

| | |
|---|---|
| File Number: | 00027DC4 |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00027DC4.pdf |
| Region: | Not reported |
| Facility ID: | Not reported |
| Facility Type: | Not reported |
| Other Type: | Not reported |
| Contact Name: | Not reported |
| Telephone: | Not reported |
| Owner Name: | Not reported |
| Owner Address: | Not reported |
| Owner City,St,Zip: | Not reported |
| Total Tanks: | Not reported |
| | |
| Tank Num: | Not reported |
| Container Num: | Not reported |
| Year Installed: | Not reported |
| Tank Capacity: | Not reported |
| Tank Used for: | Not reported |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Not reported |

Click here for Geo Tracker PDF:

---

**R70** **CRESCENT TRUCK LINES** **LUST** **S104537978**
**ENE** **11937 REGENTVIEW AVE** **LOS ANGELES CO. HMS** **N/A**
**1/4-1/2** **DOWNEY, CA 90241**
**0.251 mi.**
**1325 ft.** **Site 1 of 3 in cluster R**

**Relative:** **Higher**
**Actual:** **106 ft.**

LUST:

| | |
|---|---|
| Lead Agency: | LOS ANGELES COUNTY |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603714767 |
| Global Id: | T0603714767 |
| Latitude: | 33.926481 |
| Longitude: | -118.113488 |
| Status: | Completed - Case Closed |
| Status Date: | 05/09/2005 |
| Case Worker: | PGT |
| RB Case Number: | Not reported |
| Local Agency: | LOS ANGELES COUNTY |
| File Location: | Not reported |

**CRESCENT TRUCK LINES (Continued)** **S104537978**

Local Case Number: 012713-040293
Potential Media Affect: Soil
Potential Contaminants of Concern: Diesel, Waste Oil / Motor / Hydraulic / Lubricating
Site History: Not reported

LUST:
Global Id: T0603714767
Contact Type: Local Agency Caseworker
Contact Name: PHILLIP GHARIBIANS-TABRIZI
Organization Name: LOS ANGELES COUNTY
Address: 900 S. FREMONT AVE.
City: ALHAMBRA
Email: pgharibians@dpw.lacounty.gov
Phone Number: Not reported

Global Id: T0603714767
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603714767
Action Type: Other
Date: 05/09/2005
Action: Leak Reported

Global Id: T0603714767
Action Type: REMEDIATION
Date: 09/22/2003
Action: Excavation

Global Id: T0603714767
Action Type: ENFORCEMENT
Date: 04/17/2012
Action: Closure/No Further Action Letter

Global Id: T0603714767
Action Type: Other
Date: 08/27/2003
Action: Leak Discovery

LUST:
Global Id: T0603714767
Status: Open - Case Begin Date
Status Date: 08/27/2003

Global Id: T0603714767
Status: Completed - Case Closed
Status Date: 05/09/2005

Global Id: T0603714767
Status: Open - Site Assessment
Status Date: 05/09/2005

**CRESCENT TRUCK LINES (Continued)** **S104537978**

LOS ANGELES CO. HMS:
Region: LA
Permit Category: T
Facility Id: 012713-012904
Facility Type: 0
Facility Status: Closed
Area: 1F
Permit Number: 00004676T
Permit Status: Closed

Region: LA
Permit Category: T
Facility Id: 012713-040293
Facility Type: 0
Facility Status: Permit
Area: 1F
Permit Number: 000387132
Permit Status: Permit

Region: LA
Permit Category: Not reported
Facility Id: 012713-040401
Facility Type: Not reported
Facility Status: OPEN
Area: 1F
Permit Number: Not reported
Permit Status: Not reported

---

**71**
**SE**
**1/4-1/2**
**0.254 mi.**
**1343 ft.**

**ASTRO PAK FACILITY** **CPS-SLIC** **1006210223**
**12201 PANGBORN** **N/A**
**DOWNEY, CA 90241**

**Relative:**
**Lower**

**Actual:**
**103 ft.**

CPS-SLIC:

| | |
|---|---|
| Region: | STATE |
| **Facility Status:** | **Completed - Case Closed** |
| Status Date: | 11/30/2001 |
| Global Id: | SL599992903 |
| Lead Agency: | LOS ANGELES RWQCB (REGION 4) |
| Lead Agency Case Number: | Not reported |
| Latitude: | 33.924327 |
| Longitude: | -118.112505 |
| Case Type: | Cleanup Program Site |
| Case Worker: | Not reported |
| Local Agency: | Not reported |
| RB Case Number: | 0302A |
| File Location: | Not reported |
| Potential Media Affected: | Not reported |
| Potential Contaminants of Concern: | Not reported |
| Site History: | Not reported |

Click here to access the California GeoTracker records for this facility:

SLIC REG 4:
Region: 4
Facility Status: No further action required

**ASTRO PAK FACILITY (Continued)** **1006210223**

SLIC: 0302A
Substance: VOCs
Staff: John Geroch

---

**R72** **LEXINGTON CHEMICALS CORP** **LUST** **S104159685**
**ENE** **11916 REGENTVIEW AVE** **N/A**
**1/4-1/2** **DOWNEY, CA 90241**
**0.277 mi.**
**1465 ft.** **Site 2 of 3 in cluster R**

**Relative:** **Higher**
**Actual:** **107 ft.**

LUST REG 4:

| | | |
|---|---|---|
| Region: | 4 | |
| Regional Board: | 04 | |
| County: | Los Angeles | |
| Facility Id: | R-22573 | |
| Status: | Case Closed | |
| Substance: | 1 | |
| Substance Quantity: | Not reported | |
| Local Case No: | Not reported | |
| Case Type: | Soil | |
| Abatement Method Used at the Site: | | Not reported |
| Global ID: | T0603705366 | |
| W Global ID: | Not reported | |
| Staff: | UNK | |
| Local Agency: | 19000 | |
| Cross Street: | WASHBURN | |
| Enforcement Type: | Not reported | |
| Date Leak Discovered: | Not reported | |
| Date Leak First Reported: | | 1/24/1996 |
| Date Leak Record Entered: | 5/1/1996 | |
| Date Confirmation Began: | Not reported | |
| Date Leak Stopped: | Not reported | |
| Date Case Last Changed on Database: | | 1/24/1996 |
| Date the Case was Closed: | | 1/24/1996 |
| How Leak Discovered: | Not reported | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | Not reported | |
| Leak Source: | Not reported | |
| Operator: | DONYES, FRANK | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 1317.359063337522780258540624 |
| Source of Cleanup Funding: | | Not reported |
| Preliminary Site Assessment Workplan Submitted: | | Not reported |
| Preliminary Site Assessment Began: | | Not reported |
| Pollution Characterization Began: | | Not reported |
| Remediation Plan Submitted: | | Not reported |
| Remedial Action Underway: | | Not reported |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | Not reported |
| Historical Max MTBE Date: | | Not reported |
| Hist Max MTBE Conc in Groundwater: | | Not reported |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Not reported |
| GW Qualifier: | Not reported | |
| Soil Qualifier: | Not reported | |
| Organization: | Not reported | |
| Owner Contact: | Not reported | |

**LEXINGTON CHEMICALS CORP (Continued)** **S104159685**

| | |
|---|---|
| Responsible Party: | LEXINGTON CHEMICALS CORP |
| RP Address: | 11916 REGENTVIEW AVE, DOWNEY CA 90241-5586 |
| Program: | LUST |
| Lat/Long: | 33.9271163 / -1 |
| Local Agency Staff: | Not reported |
| Beneficial Use: | Not reported |
| Priority: | Not reported |
| Cleanup Fund Id: | Not reported |
| Suspended: | Not reported |
| Assigned Name: | Not reported |
| Summary: | Not reported |

---

**R73** **LEXINGTON CHEMICALS CORP** **LUST** **S102062220**
**ENE** **11916 REGENTVIEW** **HIST CORTESE** **N/A**
**1/4-1/2** **DOWNEY, CA 90241**
**0.277 mi.**
**1465 ft.** **Site 3 of 3 in cluster R**

**Relative:**
**Higher**

**Actual:**
**107 ft.**

LUST:

| | |
|---|---|
| Lead Agency: | LOS ANGELES COUNTY |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603705366 |
| Global Id: | T0603705366 |
| Latitude: | 33.9271163 |
| Longitude: | -118.1121282 |
| Status: | Completed - Case Closed |
| Status Date: | 01/24/1996 |
| Case Worker: | JOA |
| RB Case Number: | R-22573 |
| Local Agency: | LOS ANGELES COUNTY |
| File Location: | Not reported |
| Local Case Number: | Not reported |
| Potential Media Affect: | Soil |
| Potential Contaminants of Concern: | Aviation |
| Site History: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0603705366 |
| Contact Type: | Local Agency Caseworker |
| Contact Name: | JOHN AWUJO |
| Organization Name: | LOS ANGELES COUNTY |
| Address: | 900 S FREMONT AVE |
| City: | ALHAMBRA |
| Email: | jawujo@dpw.lacounty.gov |
| Phone Number: | 6264583507 |

| | |
|---|---|
| Global Id: | T0603705366 |
| Contact Type: | Regional Board Caseworker |
| Contact Name: | YUE RONG |
| Organization Name: | LOS ANGELES RWQCB (REGION 4) |
| Address: | 320 W. 4TH ST., SUITE 200 |
| City: | Los Angeles |
| Email: | yrong@waterboards.ca.gov |
| Phone Number: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0603705366 |
| Action Type: | Other |

**LEXINGTON CHEMICALS CORP (Continued)** **S102062220**

Date: 01/24/1996
Action: Leak Reported

LUST:
Global Id: T0603705366
Status: Completed - Case Closed
Status Date: 01/24/1996

Global Id: T0603705366
Status: Open - Case Begin Date
Status Date: 01/24/1996

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: R-22573

---

**S74** **SITE 24, TANK #2** **HIST CORTESE** **S105023524**
**East** **9821 DOWNEYNORWALK** **N/A**
**1/4-1/2** **DOWNEY, CA 90241**
**0.293 mi.**
**1549 ft.** **Site 1 of 2 in cluster S**

**Relative:**
**Higher**

**Actual:**
**106 ft.**

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: 2766

---

**S75** **CALSAN INC** **RCRA-SQG** **1000376765**
**East** **9821 DOWNEY NORWALK RD** **LUST** **CAD982049850**
**1/4-1/2** **DOWNEY, CA 90241** **UST**
**0.293 mi.** **SWEEPS UST**
**1549 ft.** **Site 2 of 2 in cluster S** **HIST UST**
**FINDS**
**Relative:** **ECHO**
**Higher** **HAZNET**
**LOS ANGELES CO. HMS**
**Actual:** **WDS**
**106 ft.**

RCRA-SQG:
Date form received by agency: 10/19/1987
Facility name: CALSAN INC
Facility address: 9821 DOWNEY NORWALK RD
DOWNEY, CA 90241
EPA ID: CAD982049850
Contact: ENVIRONMENTAL MANAGER
Contact address: 9821 DOWNEY NORWALK RD
DOWNEY, CA 90241
Contact country: US
Contact telephone: 213-923-3571
Contact email: Not reported
EPA Region: 09

**CALSAN INC (Continued)** **1000376765**

Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CALSAN INC
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

LUST:
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603793083

**CALSAN INC (Continued)** **1000376765**

Global Id: T0603793083
Latitude: 33.925017
Longitude: -118.111603
Status: Open - Eligible for Closure
Status Date: 03/09/2018
Case Worker: AJL
RB Case Number: R-09296
Local Agency: LOS ANGELES COUNTY
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Other Solvent or Non-Petroleum Hydrocarbon
Site History: Not reported

LUST:
Global Id: T0603793083
Contact Type: Regional Board Caseworker
Contact Name: AHMAD J. LAMAA
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 West 4th Street Suite 200
City: Los Angeles
Email: alamaa@waterboards.ca.gov
Phone Number: Not reported

Global Id: T0603793083
Contact Type: Local Agency Caseworker
Contact Name: JOHN AWUJO
Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

LUST:
Global Id: T0603793083
Action Type: ENFORCEMENT
Date: 02/22/2017
Action: Health and Safety Code Section 25296.10(c)

Global Id: T0603793083
Action Type: Other
Date: 09/13/2000
Action: Leak Reported

Global Id: T0603793083
Action Type: ENFORCEMENT
Date: 12/21/2011
Action: Referral to Regional Board

Global Id: T0603793083
Action Type: RESPONSE
Date: 07/13/2016
Action: Other Report / Document

Global Id: T0603793083
Action Type: ENFORCEMENT
Date: 05/13/2016

**CALSAN INC (Continued)** **1000376765**

Action: Health and Safety Code Section 25296.10(c)

Global Id: T0603793083
Action Type: RESPONSE
Date: 12/21/2011
Action: Correspondence

Global Id: T0603793083
Action Type: RESPONSE
Date: 02/26/2018
Action: Tank Removal Report / UST Sampling Report

Global Id: T0603793083
Action Type: RESPONSE
Date: 04/03/2017
Action: Preliminary Site Assessment Report

Global Id: T0603793083
Action Type: RESPONSE
Date: 02/26/2018
Action: Tank Removal Report / UST Sampling Report

Global Id: T0603793083
Action Type: RESPONSE
Date: 04/01/2012
Action: Other Report / Document

Global Id: T0603793083
Action Type: Other
Date: 07/20/2000
Action: Leak Discovery

Global Id: T0603793083
Action Type: RESPONSE
Date: 02/26/2018
Action: Tank Removal Report / UST Sampling Report

Global Id: T0603793083
Action Type: ENFORCEMENT
Date: 02/28/2012
Action: Staff Letter

Global Id: T0603793083
Action Type: RESPONSE
Date: 04/30/2017
Action: Other Report / Document

Global Id: T0603793083
Action Type: RESPONSE
Date: 02/26/2018
Action: Tank Removal Report / UST Sampling Report

LUST:
Global Id: T0603793083
Status: Open - Case Begin Date
Status Date: 07/20/2000

**CALSAN INC (Continued)** **1000376765**

Global Id: T0603793083
Status: Open - Site Assessment
Status Date: 07/20/2000

Global Id: T0603793083
Status: Open - Site Assessment
Status Date: 02/28/2012

Global Id: T0603793083
Status: Open - Eligible for Closure
Status Date: 03/09/2018

LUST REG 4:

| | |
|---|---|
| Region: | 4 |
| Regional Board: | 04 |
| County: | Los Angeles |
| Facility Id: | R-09296 |
| Status: | Leak being confirmed |
| Substance: | Hydrocarbons |
| Substance Quantity: | Not reported |
| Local Case No: | Not reported |
| Case Type: | Soil |
| Abatement Method Used at the Site: | OT |
| Global ID: | T0603793083 |
| W Global ID: | Not reported |
| Staff: | UNK |
| Local Agency: | 19000 |
| Cross Street: | REGENTVIEW AVE |
| Enforcement Type: | Not reported |
| Date Leak Discovered: | 7/20/2000 |
| Date Leak First Reported: | 9/13/2000 |
| Date Leak Record Entered: | Not reported |
| Date Confirmation Began: | 7/20/2000 |
| Date Leak Stopped: | Not reported |
| Date Case Last Changed on Database: | 9/13/2000 |
| Date the Case was Closed: | Not reported |
| How Leak Discovered: | Repair Tank |
| How Leak Stopped: | Not reported |
| Cause of Leak: | UNK |
| Leak Source: | Tank |
| Operator: | MARK GREGOREK |
| Water System: | Not reported |
| Well Name: | Not reported |
| Approx. Dist To Production Well (ft): | 1113.175213239639922501245769 1 |
| Source of Cleanup Funding: | Tank |
| Preliminary Site Assessment Workplan Submitted: | Not reported |
| Preliminary Site Assessment Began: | Not reported |
| Pollution Characterization Began: | Not reported |
| Remediation Plan Submitted: | Not reported |
| Remedial Action Underway: | Not reported |
| Post Remedial Action Monitoring Began: | Not reported |
| Enforcement Action Date: | Not reported |
| Historical Max MTBE Date: | Not reported |
| Hist Max MTBE Conc in Groundwater: | Not reported |
| Hist Max MTBE Conc in Soil: | Not reported |
| Significant Interim Remedial Action Taken: | Not reported |

**CALSAN INC (Continued)** **1000376765**

GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: CALSAN, INC.
RP Address: 9821 DOWNEY & NORWALK BLVD., DOWNEY CA 90241
Program: LUST
Lat/Long: 33.925017 / -1
Local Agency Staff: Not reported
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

UST:
Facility ID: 9296
Permitting Agency: LOS ANGELES COUNTY
Latitude: 33.9266301
Longitude: -118.1102165

Facility ID: LACoFA0009249
Permitting Agency: Los Angeles County Fire Department
Latitude: 33.92548
Longitude: -118.1115

SWEEPS UST:
Status: Active
Comp Number: 9296
Number: 9
Board Of Equalization: 44-008396
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-009296-000001
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: 5

Status: Active
Comp Number: 9296
Number: 9
Board Of Equalization: 44-008396
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-009296-000002
Tank Status: A
Capacity: Not reported

**CALSAN INC (Continued)** **1000376765**

Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 9296
Number: 9
Board Of Equalization: 44-008396
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-009296-000003
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 9296
Number: 9
Board Of Equalization: 44-008396
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-009296-000004
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 9296
Number: 9
Board Of Equalization: 44-008396
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-009296-000005
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

**CALSAN INC (Continued)** **1000376765**

HIST UST:

| | |
|---|---|
| File Number: | 00026A18 |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00026A18.pdf |
| Region: | STATE |
| Facility ID: | 00000060954 |
| Facility Type: | Other |
| Other Type: | RUBBISH |
| Contact Name: | BILL HARWOOD |
| Telephone: | 2138690801 |
| Owner Name: | CALSAN INC |
| Owner Address: | 9821 DOWNEY-NORWALK RD |
| Owner City,St,Zip: | DOWNEY, CA 90241 |
| Total Tanks: | 0005 |
| | |
| Tank Num: | 001 |
| Container Num: | 01 |
| Year Installed: | Not reported |
| Tank Capacity: | 00007000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | PREMIUM |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Visual |
| | |
| Tank Num: | 002 |
| Container Num: | 02 |
| Year Installed: | Not reported |
| Tank Capacity: | 00007000 |
| Tank Used for: | PRODUCT |
| Type of Fuel: | DIESEL |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Visual |
| | |
| Tank Num: | 003 |
| Container Num: | 03 |
| Year Installed: | Not reported |
| Tank Capacity: | 00000000 |
| Tank Used for: | WASTE |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | Not reported |
| Leak Detection: | None |
| | |
| Tank Num: | 004 |
| Container Num: | 04 |
| Year Installed: | Not reported |
| Tank Capacity: | 00000000 |
| Tank Used for: | WASTE |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | Not reported |
| Leak Detection: | None |
| | |
| Tank Num: | 005 |
| Container Num: | 05 |
| Year Installed: | Not reported |
| Tank Capacity: | 00000000 |
| Tank Used for: | WASTE |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | Not reported |

**CALSAN INC (Continued)** **1000376765**

Leak Detection: None

Click here for Geo Tracker PDF:

FINDS:

Registry ID: 110002788546

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1000376765 |
| Registry ID: | 110002788546 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110002788546 |

HAZNET:

| | |
|---|---|
| envid: | 1000376765 |
| Year: | 2013 |
| GEPAID: | CAC002716678 |
| Contact: | DEBBIE TREADWELL |
| Telephone: | 5624477431 |
| Mailing Name: | Not reported |
| Mailing Address: | 1955 WORKMAN MILL RD |
| Mailing City,St,Zip: | WHITTIER, CA 906011415 |
| Gen County: | Los Angeles |
| TSD EPA ID: | AZC950823111 |
| TSD County: | 99 |
| Waste Category: | Not reported |
| Disposal Method: | Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization) |
| Tons: | 0.4 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Not reported |

LOS ANGELES CO. HMS:

| | |
|---|---|
| Region: | LA |
| Permit Category: | T |
| Facility Id: | 009483-009296 |
| Facility Type: | 0 |
| Facility Status: | Closed |
| Area: | 1F |
| Permit Number: | 00000344T |

**CALSAN INC (Continued)** **1000376765**

Permit Status: Closed

Region: LA
Permit Category: T
Facility Id: 009483-058959
Facility Type: 0
Facility Status: Permit
Area: 1F
Permit Number: 000768920
Permit Status: Permit

Region: LA
Permit Category: Not reported
Facility Id: 021584-030464
Facility Type: Not reported
Facility Status: OPEN
Area: 1F
Permit Number: Not reported
Permit Status: Not reported

WDS:
Facility ID: 4 19I003532
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 4
Facility Telephone: 5628690901
Facility Contact: RAUL ANGUIANO
Agency Name: CALMET SERVICES INC
Agency Address: 9821 Downey Norwalk Rd
Agency City,St,Zip: Downey 902415502
Agency Contact: RAUL ANGUIANO
Agency Telephone: 5628690901
Agency Type: Private
SIC Code: 0
SIC Code 2: Not reported
Primary Waste Type: Not reported
Primary Waste: Not reported
Waste Type2: Not reported
Waste2: Not reported
Primary Waste Type: Not reported
Secondary Waste: Not reported
Secondary Waste Type: Not reported
Design Flow: 0
Baseline Flow: 0
Reclamation: Not reported
POTW: Not reported
Treat To Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be

**CALSAN INC (Continued)** **1000376765**

considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.

Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

---

**76**
**ESE**
**1/4-1/2**
**0.299 mi.**
**1577 ft.**

**DOWNEY AREA RECYCLING AND TRANSFER** **SWF/LF** **S104159682**
**9770 WASHBURN RD** **WMUDS/SWAT** **N/A**
**DOWNEY, CA 90241** **CHMIRS**
**NPDES**
**CIWQS**

**Relative: Higher**

**Actual: 104 ft.**

SWF/LF (SWIS):

| | |
|---|---|
| Facility ID: | 19-AA-0801 |
| Lat/Long: | 33.92413 / -118.11214 |
| Owner Name: | County Sanitation Districts of Los Angel |
| Owner Telephone: | 5629084288 |
| Owner Address: | Not reported |
| Owner Address2: | 1955 Workman Mill Road |
| Owner City,St,Zip: | Whittier, CA 90601 |
| Operational Status: | Active |
| Operator: | County Sanitation Districts of Los Angel |
| Operator Phone: | 5629084288 |
| Operator Address: | Not reported |
| Operator Address2: | 1955 Workman Mill Road |
| Operator City,St,Zip: | Whittier, CA 90601 |
| Permit Date: | 11/23/1999 |
| Permit Status: | Permitted |
| Permitted Acreage: | 6.2 |
| Activity: | Large Volume Transfer/Proc Facility |
| Regulation Status: | Permitted |
| Landuse Name: | Residential,Industrial,Commercial |
| GIS Source: | Map |
| Category: | Transfer/Processing |
| Unit Number: | 01 |
| Inspection Frequency: | Monthly |
| Accepted Waste: | Construction/demolition,Green Materials,Industrial,Mixed municipal |
| Closure Date: | Not reported |
| Closure Type: | Not reported |
| Disposal Acreage: | Not reported |
| SWIS Num: | 19-AA-0801 |
| Waste Discharge Requirement Num: | Not reported |
| Program Type: | Not reported |
| Permitted Throughput with Units: | 5000 |
| Actual Throughput with Units: | Tons/day |
| Permitted Capacity with Units: | 5000 |
| Remaining Capacity: | Not reported |
| Remaining Capacity with Units: | Tons/day |
| Lat/Long: | 33.92413 / -118.11214 |

LOS ANGELES CO. LF:

| | |
|---|---|
| Site ID: | 181 |
| Alt. Address: | N/A |

**DOWNEY AREA RECYCLING AND TRANSFER (Continued)** **S104159682**

| | |
|---|---|
| Site Contact: | Not reported |
| Site Contact Phone: | (562) 622-3503 |
| Site Email: | sono@lacsd.org |
| Site Website: | http://www.lacsd.org/about/solid_waste_facilities/dart.asp |
| Site Type: | Transfer and Processing Facility |
| Site SWIS Number: | 19-AA-0801 |
| Beginning Operation Date: | N/A |
| Ending Operation Date: | N/A |
| Local Enforcement Agency: | County Of Los Angeles Department of Public Health |
| Maximun Depth Fill(Ft): | Not reported |
| Permitted Capacity: | 5000 |
| Present Use: | Transfer/Processing Facility |
| Remaining Capacity(Million): | N/A |
| Status: | Active |
| Waste Accepted: | Construction & Demolition;Green Materials;Household Trash;Industrial Non-Hazardous; |
| Hours of Operation: | Monday - Friday 6 am - 5:30 pm ; Saturday 6 am - 1:30 pm |
| Disposal Area (Acre): | Not reported |

Detail As Of 01/2014:

| | |
|---|---|
| Operator Name: | County of Los Angeles Sanitation Districts |
| Operator Address: | 1955 Workman Mill Road |
| Operator City/State/Zip: | Whittier, CA 90601 |
| Operator Contact: | Willy Mejia |
| Operator Telephone: | (562) 699-7411x6069 |
| Operator Email: | wmejia@lacsd.org |
| Owner Name: | County of Los Angeles Sanitation Districts |
| Owner Address: | 1955 Workman Mill Road |
| Owner City/State/Zip: | Whittier, CA 90601 |
| Owner Contact: | Willy Mejia |
| Owner Telephone: | (562) 699-7411x6069 |
| Owner Email: | wmejia@lacsd.org |

WMUDS/SWAT:

| | |
|---|---|
| Edit Date: | Not reported |
| Complexity: | Not reported |
| Primary Waste: | Not reported |
| Primary Waste Type: | Not reported |
| Secondary Waste: | Not reported |
| Secondary Waste Type: | Not reported |
| Base Meridian: | Not reported |
| NPID: | Not reported |
| Tonnage: | 0 |
| Regional Board ID: | Not reported |
| Municipal Solid Waste: | False |
| Superorder: | False |
| Open To Public: | False |
| Waste List: | False |
| Agency Type: | Not reported |
| Agency Name: | T.D. HAMLIN DISPOSAL |
| Agency Department: | Not reported |
| Agency Address: | Not reported |
| Agency City,St,Zip: | Not reported |
| Agency Contact: | Not reported |
| Agency Telephone: | Not reported |
| Land Owner Name: | Not reported |
| Land Owner Address: | Not reported |
| Land Owner City,St,Zip: | CA |

**DOWNEY AREA RECYCLING AND TRANSFER (Continued)** **S104159682**

| | |
|---|---|
| Land Owner Contact: | Not reported |
| Land Owner Phone: | Not reported |
| Region: | 4 |
| Facility Type: | Not reported |
| Facility Description: | Not reported |
| Facility Telephone: | Not reported |
| SWAT Facility Name: | Not reported |
| Primary SIC: | Not reported |
| Secondary SIC: | Not reported |
| Comments: | Not reported |
| Last Facility Editors: | Not reported |
| Waste Discharge System: | False |
| Solid Waste Assessment Test Program: | True |
| Toxic Pits Cleanup Act Program: | False |
| Resource Conservation Recovery Act: | False |
| Department of Defence: | False |
| Solid Waste Assessment Test Program: | T.D. HAMLIN DISPOSAL |
| Threat to Water Quality: | Not reported |
| Sub Chapter 15: | False |
| Regional Board Project Officer: | LT |
| Number of WMUDS at Facility: | 1 |
| Section Range: | Not reported |
| RCRA Facility: | Not reported |
| Waste Discharge Requirements: | Not reported |
| Self-Monitoring Rept. Frequency: | Not reported |
| Waste Discharge System ID: | 4 190208NUR |
| Solid Waste Information ID: | Not reported |

CHMIRS:

| | |
|---|---|
| OES Incident Number: | 13-5805 |
| OES notification: | 09/16/2013 |
| OES Date: | Not reported |
| OES Time: | Not reported |
| **Date Completed:** | **Not reported** |
| Property Use: | Not reported |
| Agency Id Number: | Not reported |
| Agency Incident Number: | Not reported |
| Time Notified: | Not reported |
| Time Completed: | Not reported |
| Surrounding Area: | Not reported |
| Estimated Temperature: | Not reported |
| Property Management: | Not reported |
| More Than Two Substances Involved?: | Not reported |
| Resp Agncy Personel # Of Decontaminated: | Not reported |
| Responding Agency Personel # Of Injuries: | Not reported |
| Responding Agency Personel # Of Fatalities: | Not reported |
| Others Number Of Decontaminated: | Not reported |
| Others Number Of Injuries: | Not reported |
| Others Number Of Fatalities: | Not reported |
| Vehicle Make/year: | Not reported |
| Vehicle License Number: | Not reported |
| Vehicle State: | Not reported |
| Vehicle Id Number: | Not reported |
| CA DOT PUC/ICC Number: | Not reported |
| Company Name: | Not reported |
| Reporting Officer Name/ID: | Not reported |
| Report Date: | Not reported |

**DOWNEY AREA RECYCLING AND TRANSFER (Continued)** **S104159682**

| | |
|---|---|
| Facility Telephone: | Not reported |
| Waterway Involved: | No |
| Waterway: | Diked of the storm drain system |
| Spill Site: | Other |
| Cleanup By: | Contractor |
| Containment: | Not reported |
| What Happened: | Not reported |
| Type: | Not reported |
| Measure: | N/A |
| Other: | Not reported |
| Date/Time: | 1045 |
| Year: | 2013 |
| Agency: | Downey FD |
| Incident Date: | 9/16/2013 |
| Admin Agency: | Downey Fire Department |
| Amount: | Not reported |
| Contained: | Yes |
| Site Type: | Diked of the storm drain system |
| E Date: | Not reported |
| Substance: | Aerosol Cans |
| Quantity Released: | UNK |
| Unknown: | Not reported |
| Substance #2: | Not reported |
| Substance #3: | Not reported |
| Evacuations: | 25-30 |
| Number of Injuries: | Not reported |
| Number of Fatalities: | Not reported |
| #1 Pipeline: | Not reported |
| #2 Pipeline: | Not reported |
| #3 Pipeline: | Not reported |
| #1 Vessel >= 300 Tons: | Not reported |
| #2 Vessel >= 300 Tons: | Not reported |
| #3 Vessel >= 300 Tons: | Not reported |
| Evacs: | Not reported |
| Injuries: | Not reported |
| Fatals: | Not reported |
| Comments: | Not reported |
| Description: | Caller is reporting an unknown amount of aerosol cans that were burned up in a metal recycling fire. The release was to the air. The facility was evacuated during the fire, all have returned to work. |

NPDES:

| | |
|---|---|
| Facility Status: | Active |
| NPDES Number: | CAS000001 |
| Region: | 4 |
| Agency Number: | 0 |
| Regulatory Measure ID: | 191242 |
| Place ID: | Not reported |
| Order Number: | 97-03-DWQ |
| WDID: | 4 19I016727 |
| Regulatory Measure Type: | Enrollee |
| Program Type: | Industrial |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 08/21/2001 |
| Termination Date Of Regulatory Measure: | Not reported |

**DOWNEY AREA RECYCLING AND TRANSFER (Continued)** **S104159682**

| | |
|---|---|
| Expiration Date Of Regulatory Measure: | Not reported |
| Discharge Address: | PO Box 4998 |
| Discharge Name: | Los Angeles County Sanitation Districts |
| Discharge City: | Whittier |
| Discharge State: | California |
| Discharge Zip: | 90607 |
| Status: | Not reported |
| Status Date: | Not reported |
| Operator Name: | Not reported |
| Operator Address: | Not reported |
| Operator City: | Not reported |
| Operator State: | Not reported |
| Operator Zip: | Not reported |

NPDES as of 03/2018:

| | |
|---|---|
| NPDES Number: | Not reported |
| Status: | Not reported |
| Agency Number: | Not reported |
| Region: | 4 |
| Regulatory Measure ID: | 191242 |
| Order Number: | Not reported |
| Regulatory Measure Type: | Industrial |
| Place ID: | Not reported |
| WDID: | 4 19I016727 |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Not reported |
| Discharge Address: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Received Date: | 05/09/2008 |
| Processed Date: | 08/21/2001 |
| Status: | Active |
| Status Date: | 08/21/2001 |
| Place Size: | 6.2 |
| Place Size Unit: | Acres |
| Contact: | Beth Bax |
| Contact Title: | Not reported |
| Contact Phone: | 562-908-4288 |
| Contact Phone Ext: | 2440 |
| Contact Email: | bbax@lacsd.org |
| Operator Name: | Los Angeles County Sanitation Districts |
| Operator Address: | PO Box 4998 |
| Operator City: | Whittier |
| Operator State: | California |
| Operator Zip: | 90607 |
| Operator Contact: | Robert Asgian |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | 562-908-4288 |
| Operator Contact Phone Ext: | 6002 |
| Operator Contact Email: | rasgian@lacsd.org |
| Operator Type: | Special District |
| Developer: | Not reported |
| Developer Address: | Not reported |

**DOWNEY AREA RECYCLING AND TRANSFER (Continued)** **S104159682**

| | |
|---|---|
| Developer City: | Not reported |
| Developer State: | California |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | 562-699-7411 |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | Y |
| Receiving Water Name: | San Gabriel River Reach 1 |
| Certifier: | Grace Hyde |
| Certifier Title: | Chief Engineer and General Manager |
| Certification Date: | 24-APR-15 |
| Primary Sic: | 5093-Scrap and Waste Materials |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |
| | |
| NPDES Number: | CAS000001 |
| Status: | Active |
| Agency Number: | 0 |
| Region: | 4 |
| Regulatory Measure ID: | 191242 |
| Order Number: | 97-03-DWQ |
| Regulatory Measure Type: | Enrollee |
| Place ID: | Not reported |
| WDID: | 4 19I016727 |
| Program Type: | Industrial |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 08/21/2001 |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Los Angeles County Sanitation Districts |
| Discharge Address: | PO Box 4998 |
| Discharge City: | Whittier |
| Discharge State: | California |
| Discharge Zip: | 90607 |
| Received Date: | Not reported |
| Processed Date: | Not reported |
| Status: | Not reported |
| Status Date: | Not reported |
| Place Size: | Not reported |

**DOWNEY AREA RECYCLING AND TRANSFER (Continued)** **S104159682**

| | |
|---|---|
| Place Size Unit: | Not reported |
| Contact: | Not reported |
| Contact Title: | Not reported |
| Contact Phone: | Not reported |
| Contact Phone Ext: | Not reported |
| Contact Email: | Not reported |
| Operator Name: | Not reported |
| Operator Address: | Not reported |
| Operator City: | Not reported |
| Operator State: | Not reported |
| Operator Zip: | Not reported |
| Operator Contact: | Not reported |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | Not reported |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | Not reported |
| Operator Type: | Not reported |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | Not reported |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | Not reported |
| Receiving Water Name: | Not reported |
| Certifier: | Not reported |
| Certifier Title: | Not reported |
| Certification Date: | Not reported |
| Primary Sic: | Not reported |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |

| | |
|---|---|
| Facility Status: | Not reported |
| NPDES Number: | Not reported |
| Region: | Not reported |
| Agency Number: | Not reported |

**DOWNEY AREA RECYCLING AND TRANSFER (Continued)** **S104159682**

| | |
|---|---|
| Regulatory Measure ID: | Not reported |
| Place ID: | Not reported |
| Order Number: | Not reported |
| WDID: | 4 19I016727 |
| Regulatory Measure Type: | Industrial |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Discharge Address: | Not reported |
| Discharge Name: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Status: | Active |
| Status Date: | 08/21/2001 |
| Operator Name: | Los Angeles County Sanitation Districts |
| Operator Address: | PO Box 4998 |
| Operator City: | Whittier |
| Operator State: | California |
| Operator Zip: | 90607 |

NPDES as of 03/2018:

| | |
|---|---|
| NPDES Number: | Not reported |
| Status: | Not reported |
| Agency Number: | Not reported |
| Region: | 4 |
| Regulatory Measure ID: | 191242 |
| Order Number: | Not reported |
| Regulatory Measure Type: | Industrial |
| Place ID: | Not reported |
| WDID: | 4 19I016727 |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Not reported |
| Discharge Address: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Received Date: | 05/09/2008 |
| Processed Date: | 08/21/2001 |
| Status: | Active |
| Status Date: | 08/21/2001 |
| Place Size: | 6.2 |
| Place Size Unit: | Acres |
| Contact: | Beth Bax |
| Contact Title: | Not reported |
| Contact Phone: | 562-908-4288 |
| Contact Phone Ext: | 2440 |
| Contact Email: | bbax@lacsd.org |
| Operator Name: | Los Angeles County Sanitation Districts |
| Operator Address: | PO Box 4998 |
| Operator City: | Whittier |
| Operator State: | California |

**DOWNEY AREA RECYCLING AND TRANSFER (Continued)** **S104159682**

| | |
|---|---|
| Operator Zip: | 90607 |
| Operator Contact: | Robert Asgian |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | 562-908-4288 |
| Operator Contact Phone Ext: | 6002 |
| Operator Contact Email: | rasgian@lacsd.org |
| Operator Type: | Special District |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | California |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | 562-699-7411 |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | Y |
| Receiving Water Name: | San Gabriel River Reach 1 |
| Certifier: | Grace Hyde |
| Certifier Title: | Chief Engineer and General Manager |
| Certification Date: | 24-APR-15 |
| Primary Sic: | 5093-Scrap and Waste Materials |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |
| | |
| NPDES Number: | CAS000001 |
| Status: | Active |
| Agency Number: | 0 |
| Region: | 4 |
| Regulatory Measure ID: | 191242 |
| Order Number: | 97-03-DWQ |
| Regulatory Measure Type: | Enrollee |
| Place ID: | Not reported |
| WDID: | 4 19I016727 |
| Program Type: | Industrial |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 08/21/2001 |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Los Angeles County Sanitation Districts |

**DOWNEY AREA RECYCLING AND TRANSFER (Continued)** **S104159682**

| | |
|---|---|
| Discharge Address: | PO Box 4998 |
| Discharge City: | Whittier |
| Discharge State: | California |
| Discharge Zip: | 90607 |
| Received Date: | Not reported |
| Processed Date: | Not reported |
| Status: | Not reported |
| Status Date: | Not reported |
| Place Size: | Not reported |
| Place Size Unit: | Not reported |
| Contact: | Not reported |
| Contact Title: | Not reported |
| Contact Phone: | Not reported |
| Contact Phone Ext: | Not reported |
| Contact Email: | Not reported |
| Operator Name: | Not reported |
| Operator Address: | Not reported |
| Operator City: | Not reported |
| Operator State: | Not reported |
| Operator Zip: | Not reported |
| Operator Contact: | Not reported |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | Not reported |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | Not reported |
| Operator Type: | Not reported |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | Not reported |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | Not reported |
| Receiving Water Name: | Not reported |
| Certifier: | Not reported |
| Certifier Title: | Not reported |
| Certification Date: | Not reported |

**DOWNEY AREA RECYCLING AND TRANSFER (Continued)** **S104159682**

| | |
|---|---|
| Primary Sic: | Not reported |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |

CIWQS:

| | |
|---|---|
| Agency: | Los Angeles County Sanitation Districts |
| Agency Address: | PO Box 4998, Whittier, CA 90607 |
| Place/Project Type: | Industrial - Scrap and Waste Materials |
| SIC/NAICS: | 5093 |
| Region: | 4 |
| Program: | INDSTW |
| Regulatory Measure Status: | Active |
| Regulatory Measure Type: | Storm water industrial |
| Order Number: | 2014-0057-DWQ |
| WDID: | 4 19I016727 |
| NPDES Number: | CAS000001 |
| Adoption Date: | Not reported |
| Effective Date: | 08/21/2001 |
| Termination Date: | Not reported |
| Expiration/Review Date: | Not reported |
| Design Flow: | Not reported |
| Major/Minor: | Not reported |
| Complexity: | Not reported |
| TTWQ: | Not reported |
| Enforcement Actions within 5 years: | 0 |
| Violations within 5 years: | 0 |
| Latitude: | 33.92436 |
| Longitude: | -118.11287 |

---

**T77** **WESTERN PACIFIC PULP & PAPER** **LUST** **S101442129**
**North** **9350 HALL RD** **SWEEPS UST** **N/A**
**1/4-1/2** **DOWNEY, CA 90241** **HAZNET**
**0.304 mi.** **HIST CORTESE**
**1605 ft.** **Site 1 of 2 in cluster T**

**Relative:**
**Higher**

**Actual:**
**112 ft.**

LUST:

| | |
|---|---|
| Lead Agency: | LOS ANGELES RWQCB (REGION 4) |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603704078 |
| Global Id: | T0603704078 |
| Latitude: | 33.9292609 |
| Longitude: | -118.118582 |
| Status: | Completed - Case Closed |
| Status Date: | 08/20/1996 |
| Case Worker: | YR |
| RB Case Number: | I-13583 |
| Local Agency: | LOS ANGELES COUNTY |
| File Location: | Not reported |
| Local Case Number: | Not reported |
| Potential Media Affect: | Soil |
| Potential Contaminants of Concern: | Gasoline |
| Site History: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0603704078 |
| Contact Type: | Local Agency Caseworker |
| Contact Name: | JOHN AWUJO |

**WESTERN PACIFIC PULP & PAPER (Continued)** **S101442129**

Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Global Id: T0603704078
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603704078
Action Type: Other
Date: 01/17/1995
Action: Leak Reported

Global Id: T0603704078
Action Type: Other
Date: 01/17/1995
Action: Leak Discovery

Global Id: T0603704078
Action Type: Other
Date: 01/17/1995
Action: Leak Stopped

LUST:
Global Id: T0603704078
Status: Open - Case Begin Date
Status Date: 01/17/1995

Global Id: T0603704078
Status: Open - Site Assessment
Status Date: 01/17/1995

Global Id: T0603704078
Status: Open - Site Assessment
Status Date: 06/09/1995

Global Id: T0603704078
Status: Open - Remediation
Status Date: 07/28/1995

Global Id: T0603704078
Status: Completed - Case Closed
Status Date: 08/20/1996

LUST REG 4:
Region: 4
Regional Board: 04

**WESTERN PACIFIC PULP & PAPER (Continued)** **S101442129**

| | | |
|---|---|---|
| County: | Los Angeles | |
| Facility Id: | I-13583 | |
| Status: | Case Closed | |
| Substance: | Gasoline | |
| Substance Quantity: | Not reported | |
| Local Case No: | Not reported | |
| Case Type: | Soil | |
| Abatement Method Used at the Site: | | Not reported |
| Global ID: | T0603704078 | |
| W Global ID: | Not reported | |
| Staff: | UNK | |
| Local Agency: | 19000 | |
| Cross Street: | FIRESTONE BLVD | |
| Enforcement Type: | Not reported | |
| Date Leak Discovered: | 1/17/1995 | |
| Date Leak First Reported: | | 1/17/1995 |
| Date Leak Record Entered: | 4/6/1995 | |
| Date Confirmation Began: | 1/17/1995 | |
| Date Leak Stopped: | 1/17/1995 | |
| Date Case Last Changed on Database: | | 7/15/1996 |
| Date the Case was Closed: | | 8/20/1996 |
| How Leak Discovered: | Tank Closure | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | UNK | |
| Leak Source: | UNK | |
| Operator: | SAME AS ABOVE | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 2305.437252882321166932133028 3 |
| Source of Cleanup Funding: | | UNK |
| Preliminary Site Assessment Workplan Submitted: | | Not reported |
| Preliminary Site Assessment Began: | | Not reported |
| Pollution Characterization Began: | | 6/9/1995 |
| Remediation Plan Submitted: | | 7/28/1995 |
| Remedial Action Underway: | | Not reported |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | Not reported |
| Historical Max MTBE Date: | | Not reported |
| Hist Max MTBE Conc in Groundwater: | | Not reported |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Yes |
| GW Qualifier: | Not reported | |
| Soil Qualifier: | Not reported | |
| Organization: | Not reported | |
| Owner Contact: | Not reported | |
| Responsible Party: | BLANK RP | |
| RP Address: | PO BOX 241, DOWNEY, CA 90241 | |
| Program: | LUST | |
| Lat/Long: | 33.9305013 / -1 | |
| Local Agency Staff: | Not reported | |
| Beneficial Use: | Not reported | |
| Priority: | Not reported | |
| Cleanup Fund Id: | Not reported | |
| Suspended: | Not reported | |
| Assigned Name: | Not reported | |
| Summary: | Not reported | |

**WESTERN PACIFIC PULP & PAPER (Continued)** **S101442129**

SWEEPS UST:

| | |
|---|---|
| Status: | Active |
| Comp Number: | 13583 |
| Number: | 9 |
| Board Of Equalization: | 44-010191 |
| Referral Date: | 06-30-89 |
| Action Date: | Not reported |
| Created Date: | 06-30-89 |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | 19-000-013583-000001 |
| Tank Status: | A |
| Capacity: | Not reported |
| Active Date: | 06-30-89 |
| Tank Use: | UNKNOWN |
| STG: | W |
| Content: | Not reported |
| Number Of Tanks: | 2 |

| | |
|---|---|
| Status: | Active |
| Comp Number: | 13583 |
| Number: | 9 |
| Board Of Equalization: | 44-010191 |
| Referral Date: | 06-30-89 |
| Action Date: | Not reported |
| Created Date: | 06-30-89 |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | 19-000-013583-000002 |
| Tank Status: | A |
| Capacity: | Not reported |
| Active Date: | 06-30-89 |
| Tank Use: | UNKNOWN |
| STG: | W |
| Content: | Not reported |
| Number Of Tanks: | Not reported |

HAZNET:

| | |
|---|---|
| envid: | S101442129 |
| Year: | 2014 |
| GEPAID: | CAD981694292 |
| Contact: | RANDY MILLS PLANT MANAGER |
| Telephone: | 5628034401 |
| Mailing Name: | Not reported |
| Mailing Address: | 9350 HALL RD |
| Mailing City,St,Zip: | DOWNEY, CA 902415309 |
| Gen County: | Los Angeles |
| TSD EPA ID: | NVT330010000 |
| TSD County: | 99 |
| Waste Category: | Other organic solids |
| Disposal Method: | Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization) |
| Tons: | 0.9 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | S101442129 |

**WESTERN PACIFIC PULP & PAPER (Continued)** **S101442129**

| | |
|---|---|
| Year: | 2013 |
| GEPAID: | CAD981694292 |
| Contact: | RANDY MILLS PLANT MANAGER |
| Telephone: | 5628034401 |
| Mailing Name: | Not reported |
| Mailing Address: | 9350 HALL RD |
| Mailing City,St,Zip: | DOWNEY, CA 902415309 |
| Gen County: | Los Angeles |
| TSD EPA ID: | OHD048415665 |
| TSD County: | 99 |
| Waste Category: | Not reported |
| Disposal Method: | Incineration--Thermal Destruction Other Than Use As A Fuel |
| Tons: | 1.5 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Not reported |

HIST CORTESE:

| | |
|---|---|
| Region: | CORTESE |
| Facility County Code: | 19 |
| Reg By: | LTNKA |
| Reg Id: | I-13583 |

---

**T78** **DOWNEY INDUSTRIAL CENTER** **CPS-SLIC** **S122356475**
**North** **9300-9400 HALL ROAD** **N/A**
**1/4-1/2** **DOWNEY, CA 90241**
**0.304 mi.**
**1605 ft.** **Site 2 of 2 in cluster T**

**Relative:**
**Higher**

**Actual:**
**112 ft.**

CPS-SLIC:

| | |
|---|---|
| Region: | STATE |
| **Facility Status:** | **Open - Site Assessment** |
| Status Date: | 03/15/2018 |
| Global Id: | T10000011452 |
| Lead Agency: | LOS ANGELES RWQCB (REGION 4) |
| Lead Agency Case Number: | Not reported |
| Latitude: | 33.92954 |
| Longitude: | -118.11908 |
| Case Type: | Cleanup Program Site |
| Case Worker: | JEC |
| Local Agency: | Not reported |
| RB Case Number: | 1420 |
| File Location: | Regional Board |
| Potential Media Affected: | Other Groundwater (uses other than drinking water), Soil, Soil Vapor, Under Investigation |
| Potential Contaminants of Concern: | Not reported |
| Site History: | Not reported |

Click here to access the California GeoTracker records for this facility:

**79**
**SE**
**1/4-1/2**
**0.317 mi.**
**1676 ft.**

**ALPASE, INC.**
**9750 SEAACA**
**DOWNEY, CA 90241**

**CPS-SLIC**
**WDS**

**S101540159**
**N/A**

**Relative:**
**Lower**

**Actual:**
**103 ft.**

CPS-SLIC:

| | |
|---|---|
| Region: | STATE |
| **Facility Status:** | **Completed - Case Closed** |
| Status Date: | 11/01/1998 |
| Global Id: | SL184161399 |
| Lead Agency: | LOS ANGELES RWQCB (REGION 4) |
| Lead Agency Case Number: | Not reported |
| Latitude: | 33.921728 |
| Longitude: | -118.112546 |
| Case Type: | Cleanup Program Site |
| Case Worker: | Not reported |
| Local Agency: | Not reported |
| RB Case Number: | 0380 |
| File Location: | Not reported |
| Potential Media Affected: | Not reported |
| Potential Contaminants of Concern: | Not reported |
| Site History: | Not reported |

Click here to access the California GeoTracker records for this facility:

SLIC REG 4:

| | |
|---|---|
| Region: | 4 |
| Facility Status: | No further action required |
| SLIC: | 0380 |
| Substance: | TPH |
| Staff: | Jenny Au |

WDS:

| | |
|---|---|
| Facility ID: | 4 19I011825 |
| Facility Type: | Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping. |
| Facility Status: | Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements. |
| NPDES Number: | CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board |
| Subregion: | 4 |
| Facility Telephone: | 5628038675 |
| Facility Contact: | AL WALKER |
| Agency Name: | PASE ALUMINUMINC |
| Agency Address: | PO Box 39065 |
| Agency City,St,Zip: | Downey 902390065 |
| Agency Contact: | AL WALKER |
| Agency Telephone: | 5628038675 |
| Agency Type: | Private |
| SIC Code: | 0 |
| SIC Code 2: | Not reported |
| Primary Waste Type: | Not reported |
| Primary Waste: | Not reported |

**ALPASE, INC. (Continued)** **S101540159**

| | |
|---|---|
| Waste Type2: | Not reported |
| Waste2: | Not reported |
| Primary Waste Type: | Not reported |
| Secondary Waste: | Not reported |
| Secondary Waste Type: | Not reported |
| Design Flow: | 0 |
| Baseline Flow: | 0 |
| Reclamation: | Not reported |
| POTW: | Not reported |
| Treat To Water: | Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality. |
| Complexity: | Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds. |

---

**80**
**SSE**
**1/4-1/2**
**0.336 mi.**
**1775 ft.**

**Relative:**
**Lower**

**Actual:**
**101 ft.**

**MANUFACTURERS WIRE CORP**
**12320 WOODRUFF AVE.**
**DOWNEY, CA 90241**

**RCRA-SQG** **1000424734**
**ENVIROSTOR** **CAD981386345**
**FINDS**
**ECHO**
**HAZNET**
**WDS**

RCRA-SQG:

| | |
|---|---|
| Date form received by agency: | 09/01/1996 |
| Facility name: | MANUFACTURERS WIRE CO |
| Facility address: | 12320 WOODRUFF AVE<br>DOWNEY, CA 90241 |
| EPA ID: | CAD981386345 |
| Contact: | Not reported |
| Contact address: | Not reported<br>Not reported |
| Contact country: | US |
| Contact telephone: | Not reported |
| Contact email: | Not reported |
| EPA Region: | 09 |
| Classification: | Small Small Quantity Generator |
| Description: | Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | C RINDERLE, JR |
| Owner/operator address: | NOT REQUIRED<br>NOT REQUIRED, ME 99999 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 415-555-1212 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |

**MANUFACTURERS WIRE CORP (Continued)** **1000424734**

Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 02/11/1986
Site name: MANUFACTURERS WIRE CO
Classification: Large Quantity Generator

Violation Status: No violations found

ENVIROSTOR:
Facility ID: 71003652
Status: Refer: Other Agency
Status Date: Not reported
Site Code: Not reported
Site Type: Tiered Permit
Site Type Detailed: Tiered Permit
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Not reported
Division Branch: Cleanup Chatsworth

**MANUFACTURERS WIRE CORP (Continued)** **1000424734**

Assembly: 58
Senate: 32
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.92041
Longitude: -118.1142
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CAD981386345
Alias Type: EPA Identification Number
Alias Name: 110002140004
Alias Type: EPA (FRS #)
Alias Name: 71003652
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1 Non-Submittal
Completed Date: 02/01/2001
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

FINDS:

Registry ID: 110002140004

Environmental Interest/Information System

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

**MANUFACTURERS WIRE CORP (Continued)** **1000424734**

corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

| | |
|---|---|
| Envid: | 1000424734 |
| Registry ID: | 110002140004 |
| DFR URL: | http://echo.epa.gov/detailed-facility-report?fid=110002140004 |

HAZNET:

| | |
|---|---|
| envid: | 1000424734 |
| Year: | 2004 |
| GEPAID: | CAD981386345 |
| Contact: | MICHAEL VOELTZ GENERAL MGR |
| Telephone: | 5628034334 |
| Mailing Name: | Not reported |
| Mailing Address: | 12320 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |
| Gen County: | Not reported |
| TSD EPA ID: | CAD008488025 |
| TSD County: | Not reported |
| Waste Category: | Unspecified aqueous solution |
| Disposal Method: | Recycler |
| Tons: | 1.25 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | 1000424734 |
| Year: | 2004 |
| GEPAID: | CAD981386345 |
| Contact: | MICHAEL VOELTZ GENERAL MGR |
| Telephone: | 5628034334 |
| Mailing Name: | Not reported |
| Mailing Address: | 12320 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |
| Gen County: | Not reported |
| TSD EPA ID: | CAT080013352 |
| TSD County: | Not reported |
| Waste Category: | Off-specification, aged or surplus organics |
| Disposal Method: | Recycler |
| Tons: | 0.25 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

| | |
|---|---|
| envid: | 1000424734 |
| Year: | 2004 |
| GEPAID: | CAD981386345 |
| Contact: | MICHAEL VOELTZ GENERAL MGR |
| Telephone: | 5628034334 |
| Mailing Name: | Not reported |
| Mailing Address: | 12320 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |

**MANUFACTURERS WIRE CORP (Continued)** **1000424734**

Gen County: Not reported
TSD EPA ID: AZC950823111
TSD County: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Not reported
Tons: 21.07
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1000424734
Year: 2004
GEPAID: CAD981386345
Contact: MICHAEL VOELTZ GENERAL MGR
Telephone: 5628034334
Mailing Name: Not reported
Mailing Address: 12320 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Not reported
Tons: 1.33
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1000424734
Year: 2004
GEPAID: CAD981386345
Contact: MICHAEL VOELTZ GENERAL MGR
Telephone: 5628034334
Mailing Name: Not reported
Mailing Address: 12320 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAT080033681
TSD County: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Disposal, Land Fill
Tons: 0.24
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
8 additional CA_HAZNET: record(s) in the EDR Site Report.

WDS:
Facility ID: 4 19I003691
Facility Type: Other - Does not fall into the category of Municipal/Domestic, Industrial, Agricultural or Solid Waste (Class I, II or III)
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board

**MANUFACTURERS WIRE CORP (Continued)** **1000424734**

| | |
|---|---|
| Subregion: | 4 |
| Facility Telephone: | 3237734949 |
| Facility Contact: | Michael Voelz |
| Agency Name: | MANUFACTURERS WIRE COMPANY |
| Agency Address: | Not reported |
| Agency City,St,Zip: | 0 |
| Agency Contact: | Not reported |
| Agency Telephone: | Not reported |
| Agency Type: | Private |
| SIC Code: | 3315 |
| SIC Code 2: | Not reported |
| Primary Waste Type: | Not reported |
| Primary Waste: | Not reported |
| Waste Type2: | Not reported |
| Waste2: | Not reported |
| Primary Waste Type: | Not reported |
| Secondary Waste: | Not reported |
| Secondary Waste Type: | Not reported |
| Design Flow: | 0 |
| Baseline Flow: | 0 |
| Reclamation: | No reclamation requirements associated with this facility. |
| POTW: | The facility is not a POTW. |
| Treat To Water: | Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality. |
| Complexity: | Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds. |

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**U81** **ARROW TRANSPORTATION CO** **LUST** **S103281957**
**SSE** **12328 WOODRUFF AVE S** **N/A**
**1/4-1/2** **DOWNEY, CA 90242**
**0.347 mi.**
**1832 ft.** **Site 1 of 2 in cluster U**

**Relative:** LUST:
**Lower**

**Actual:**
**100 ft.**

| | |
|---|---|
| Lead Agency: | LOS ANGELES COUNTY |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603705002 |
| Global Id: | T0603705002 |
| Latitude: | 33.9196515 |
| Longitude: | -118.1164772 |
| Status: | Completed - Case Closed |
| Status Date: | 12/10/1997 |
| Case Worker: | JOA |
| RB Case Number: | R-11024 |
| Local Agency: | LOS ANGELES COUNTY |
| File Location: | Not reported |
| Local Case Number: | Not reported |
| Potential Media Affect: | Soil |
| Potential Contaminants of Concern: | Other Solvent or Non-Petroleum Hydrocarbon |
| Site History: | Not reported |

**ARROW TRANSPORTATION CO (Continued)** **S103281957**

LUST:
Global Id: T0603705002
Contact Type: Local Agency Caseworker
Contact Name: JOHN AWUJO
Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Global Id: T0603705002
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603705002
Action Type: Other
Date: 12/10/1997
Action: Leak Reported

Global Id: T0603705002
Action Type: Other
Date: 10/08/1997
Action: Leak Discovery

LUST:
Global Id: T0603705002
Status: Open - Case Begin Date
Status Date: 10/08/1997

Global Id: T0603705002
Status: Completed - Case Closed
Status Date: 12/10/1997

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: R-11024
Status: Case Closed
Substance: Hydrocarbons
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Soil
Abatement Method Used at the Site: EDET
Global ID: T0603705002
W Global ID: Not reported
Staff: UNK
Local Agency: 19000

**ARROW TRANSPORTATION CO (Continued)** **S103281957**

| | | |
|---|---|---|
| Cross Street: | Not reported | |
| Enforcement Type: | Not reported | |
| Date Leak Discovered: | 10/8/1997 | |
| Date Leak First Reported: | | 12/10/1997 |
| Date Leak Record Entered: | 12/23/1997 | |
| Date Confirmation Began: | Not reported | |
| Date Leak Stopped: | Not reported | |
| Date Case Last Changed on Database: | | 12/23/1997 |
| Date the Case was Closed: | | 12/10/1997 |
| How Leak Discovered: | Tank Closure | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | UNK | |
| Leak Source: | Tank | |
| Operator: | Not reported | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 1089.4010543313824889957099808 |
| Source of Cleanup Funding: | | Tank |
| Preliminary Site Assessment Workplan Submitted: | | Not reported |
| Preliminary Site Assessment Began: | | Not reported |
| Pollution Characterization Began: | | Not reported |
| Remediation Plan Submitted: | | Not reported |
| Remedial Action Underway: | | Not reported |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | Not reported |
| Historical Max MTBE Date: | | Not reported |
| Hist Max MTBE Conc in Groundwater: | | Not reported |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Not reported |
| GW Qualifier: | Not reported | |
| Soil Qualifier: | Not reported | |
| Organization: | Not reported | |
| Owner Contact: | Not reported | |
| Responsible Party: | WIDING TERMINAL CO | |
| RP Address: | 322 W. HIGHLAND DR., SEATTLE, CA 98119 | |
| Program: | LUST | |
| Lat/Long: | 33.9196515 / -1 | |
| Local Agency Staff: | Not reported | |
| Beneficial Use: | Not reported | |
| Priority: | Not reported | |
| Cleanup Fund Id: | Not reported | |
| Suspended: | Not reported | |
| Assigned Name: | Not reported | |
| Summary: | Not reported | |

---

**U82** **ARROW TRANSPORTATION CO** **ENVIROSTOR** **S103950971**
**SSE** **12328 WOODRUFF** **CHMIRS** **N/A**
**1/4-1/2** **DOWNEY, CA 90241** **HIST CORTESE**
**0.347 mi.**
**1832 ft.** **Site 2 of 2 in cluster U**

**Relative:** **Lower**
**Actual:** **100 ft.**

ENVIROSTOR:

| | |
|---|---|
| Facility ID: | 71002480 |
| Status: | Refer: Other Agency |
| Status Date: | Not reported |
| Site Code: | Not reported |
| Site Type: | Tiered Permit |
| Site Type Detailed: | Tiered Permit |

**ARROW TRANSPORTATION CO (Continued)** **S103950971**

| | |
|---|---|
| Acres: | Not reported |
| NPL: | NO |
| Regulatory Agencies: | NONE SPECIFIED |
| Lead Agency: | NONE SPECIFIED |
| Program Manager: | Not reported |
| Supervisor: | Not reported |
| Division Branch: | Cleanup Chatsworth |
| Assembly: | 58 |
| Senate: | 32 |
| Special Program: | Not reported |
| Restricted Use: | NO |
| Site Mgmt Req: | NONE SPECIFIED |
| Funding: | Not reported |
| Latitude: | 33.92045 |
| Longitude: | -118.1127 |
| APN: | NONE SPECIFIED |
| Past Use: | NONE SPECIFIED |
| Potential COC: | NONE SPECIFIED |
| Confirmed COC: | NONE SPECIFIED |
| Potential Description: | NONE SPECIFIED |
| Alias Name: | CAD057349839 |
| Alias Type: | EPA Identification Number |
| Alias Name: | 71002480 |
| Alias Type: | Envirostor ID Number |

Completed Info:

| | |
|---|---|
| Completed Area Name: | Not reported |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Not reported |
| Completed Date: | Not reported |
| Comments: | Not reported |
| | |
| Future Area Name: | Not reported |
| Future Sub Area Name: | Not reported |
| Future Document Type: | Not reported |
| Future Due Date: | Not reported |
| Schedule Area Name: | Not reported |
| Schedule Sub Area Name: | Not reported |
| Schedule Document Type: | Not reported |
| Schedule Due Date: | Not reported |
| Schedule Revised Date: | Not reported |

CHMIRS:

| | |
|---|---|
| OES Incident Number: | 4-7309 |
| OES notification: | 12/19/2014 |
| OES Date: | Not reported |
| OES Time: | Not reported |
| **Date Completed:** | **Not reported** |
| Property Use: | Not reported |
| Agency Id Number: | Not reported |
| Agency Incident Number: | Not reported |
| Time Notified: | Not reported |
| Time Completed: | Not reported |
| Surrounding Area: | Not reported |
| Estimated Temperature: | Not reported |
| Property Management: | Not reported |
| More Than Two Substances Involved?: | Not reported |

**ARROW TRANSPORTATION CO (Continued)** **S103950971**

| | |
|---|---|
| Resp Agncy Personel # Of Decontaminated: | Not reported |
| Responding Agency Personel # Of Injuries: | Not reported |
| Responding Agency Personel # Of Fatalities: | Not reported |
| Others Number Of Decontaminated: | Not reported |
| Others Number Of Injuries: | Not reported |
| Others Number Of Fatalities: | Not reported |
| Vehicle Make/year: | Not reported |
| Vehicle License Number: | Not reported |
| Vehicle State: | Not reported |
| Vehicle Id Number: | Not reported |
| CA DOT PUC/ICC Number: | Not reported |
| Company Name: | Not reported |
| Reporting Officer Name/ID: | Not reported |
| Report Date: | Not reported |
| Facility Telephone: | Not reported |
| Waterway Involved: | No |
| Waterway: | Not reported |
| Spill Site: | Other |
| Cleanup By: | No |
| Containment: | Not reported |
| What Happened: | Not reported |
| Type: | Not reported |
| Measure: | Not reported |
| Other: | Not reported |
| Type: | SEWAGE |
| Measure: | Gal(s) |
| Other: | Not reported |
| Date/Time: | 1545 |
| Year: | 2014 |
| Agency: | City of Downey Public Works |
| Incident Date: | 12/19/2014 |
| Admin Agency: | Not reported |
| Amount: | Not reported |
| Contained: | Yes |
| Site Type: | Not reported |
| E Date: | Not reported |
| Substance: | Sanitary over flow |
| Quantity Released: | 40 |
| Unknown: | Not reported |
| Substance #2: | Not reported |
| Substance #3: | Not reported |
| Evacuations: | Not reported |
| Number of Injuries: | Not reported |
| Number of Fatalities: | Not reported |
| #1 Pipeline: | No |
| #2 Pipeline: | No |
| #3 Pipeline: | No |
| #1 Vessel >= 300 Tons: | No |
| #2 Vessel >= 300 Tons: | No |
| #3 Vessel >= 300 Tons: | No |
| Evacs: | No |
| Injuries: | Blockage |
| Fatals: | No |
| Comments: | Not reported |
| Description: | Roots in the line caused this release which has been completely recovered. |

**ARROW TRANSPORTATION CO (Continued)** **S103950971**

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: R-11024

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**83**
**NE**
**1/4-1/2**
**0.347 mi.**
**1834 ft.**

**US RENTALS INC**
**9606 FIRESTONE BLVD**
**DOWNEY, CA 90241**

**LUST** **S100876626**
**SWEEPS UST** **N/A**
**HIST CORTESE**
**LOS ANGELES CO. HMS**

**Relative:**
**Higher**

**Actual:**
**111 ft.**

LUST:
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603705064
Global Id: T0603705064
Latitude: 33.928818
Longitude: -118.111832
Status: Completed - Case Closed
Status Date: 01/29/2001
Case Worker: MB
RB Case Number: R-11696
Local Agency: LOS ANGELES COUNTY
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0603705064
Contact Type: Local Agency Caseworker
Contact Name: JOHN AWUJO
Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Global Id: T0603705064
Contact Type: Regional Board Caseworker
Contact Name: MAGDY BAIADY
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: LOS ANGELES
Email: mbaiady@waterboards.ca.gov
Phone Number: 2135766699

LUST:
Global Id: T0603705064
Action Type: Other
Date: 01/30/1997
Action: Leak Reported

Global Id: T0603705064
Action Type: Other

**US RENTALS INC (Continued)** **S100876626**

Date: 10/01/1996
Action: Leak Stopped

Global Id: T0603705064
Action Type: Other
Date: 01/07/1997
Action: Leak Discovery

LUST:
Global Id: T0603705064
Status: Open - Case Begin Date
Status Date: 10/01/1996

Global Id: T0603705064
Status: Open - Site Assessment
Status Date: 01/30/1997

Global Id: T0603705064
Status: Open - Site Assessment
Status Date: 06/03/1997

Global Id: T0603705064
Status: Open - Site Assessment
Status Date: 12/11/1997

Global Id: T0603705064
Status: Completed - Case Closed
Status Date: 01/29/2001

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: R-11696
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Groundwater
Abatement Method Used at the Site: OT
Global ID: T0603705064
W Global ID: Not reported
Staff: MB
Local Agency: 19000
Cross Street: STEWART & GARY RD
Enforcement Type: Not reported
Date Leak Discovered: 1/7/1997
Date Leak First Reported: 1/30/1997
Date Leak Record Entered: 3/31/1997
Date Confirmation Began: 1/30/1997
Date Leak Stopped: 10/1/1996
Date Case Last Changed on Database: 1/12/2000
Date the Case was Closed: 1/29/2001
How Leak Discovered: Tank Closure
How Leak Stopped: Not reported

**US RENTALS INC (Continued)** **S100876626**

| | |
|---|---|
| Cause of Leak: | UNK |
| Leak Source: | UNK |
| Operator: | NILES, TORRE |
| Water System: | Not reported |
| Well Name: | Not reported |
| Approx. Dist To Production Well (ft): | 1661.1714289739759740590289966 |
| Source of Cleanup Funding: | UNK |
| Preliminary Site Assessment Workplan Submitted: | Not reported |
| Preliminary Site Assessment Began: | 6/3/1997 |
| Pollution Characterization Began: | 12/11/1997 |
| Remediation Plan Submitted: | Not reported |
| Remedial Action Underway: | Not reported |
| Post Remedial Action Monitoring Began: | Not reported |
| Enforcement Action Date: | Not reported |
| Historical Max MTBE Date: | 6/3/1999 |
| Hist Max MTBE Conc in Groundwater: | 45.2 |
| Hist Max MTBE Conc in Soil: | 315 |
| Significant Interim Remedial Action Taken: | Not reported |
| GW Qualifier: | Not reported |
| Soil Qualifier: | Not reported |
| Organization: | Not reported |
| Owner Contact: | Not reported |
| Responsible Party: | U.S. RENTALS INC. |
| RP Address: | 9606 E. FIRESTONE BLVD., DOWNEY CA 90241 |
| Program: | LUST |
| Lat/Long: | 33.9292953 / -1 |
| Local Agency Staff: | Not reported |
| Beneficial Use: | Not reported |
| Priority: | LOP/LOW - MINOR OR NO POTENTIAL WATER RESOURCE IMPACT |
| Cleanup Fund Id: | Not reported |
| Suspended: | Not reported |
| Assigned Name: | Not reported |
| Summary: | 9/10/99 3RD QTR GW MON RPT 1999; 1/12/00 4TH QTR GW MON RPT 1999 |

SWEEPS UST:

| | |
|---|---|
| Status: | Active |
| Comp Number: | 11696 |
| Number: | 9 |
| Board Of Equalization: | 44-009437 |
| Referral Date: | 06-30-89 |
| Action Date: | Not reported |
| Created Date: | 06-30-89 |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | 19-000-011696-000001 |
| Tank Status: | A |
| Capacity: | Not reported |
| Active Date: | 06-30-89 |
| Tank Use: | UNKNOWN |
| STG: | W |
| Content: | Not reported |
| Number Of Tanks: | 3 |

| | |
|---|---|
| Status: | Active |
| Comp Number: | 11696 |
| Number: | 9 |
| Board Of Equalization: | 44-009437 |
| Referral Date: | 06-30-89 |

**US RENTALS INC (Continued)** **S100876626**

Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-011696-000002
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 11696
Number: 9
Board Of Equalization: 44-009437
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-011696-000003
Tank Status: A
Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: R-11696

LOS ANGELES CO. HMS:
Region: LA
Permit Category: T
Facility Id: 011643-011696
Facility Type: 0
Facility Status: Removed
Area: 1F
Permit Number: 00003266T
Permit Status: Removed

---

**V84** **DAVID LUBER @ M CHEMICAL** **ENVIROSTOR** **S102061429**
**NNW** **9236 HALL RD** **CPS-SLIC** **N/A**
**1/4-1/2** **DOWNEY, CA 90241** **HAZNET**
**0.403 mi.** **LOS ANGELES CO. HMS**
**2126 ft.** **Site 1 of 2 in cluster V**

**Relative:**
**Higher**

**Actual:**
**111 ft.**

ENVIROSTOR:
Facility ID: 71002450
Status: Refer: Local Agency
Status Date: 05/31/2012
Site Code: Not reported
Site Type: Tiered Permit

**DAVID LUBER @ M CHEMICAL (Continued)** **S102061429**

Site Type Detailed: Tiered Permit
Acres: 0.01
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Steve Lavinger
Division Branch: Cleanup Chatsworth
Assembly: 58
Senate: 32
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.93157
Longitude: -118.1217
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CAD052384328
Alias Type: EPA Identification Number
Alias Name: 71002450
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase I Verification
Completed Date: 11/17/1997
Comments: Done

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

CPS-SLIC:
Region: STATE
**Facility Status:** **Completed - Case Closed**
Status Date: 09/24/1999
Global Id: SLT43200198
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number: Not reported
Latitude: 33.9315741
Longitude: -118.1214448
Case Type: Cleanup Program Site
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: 0302D
File Location: Not reported

**DAVID LUBER @ M CHEMICAL (Continued)** **S102061429**

Potential Media Affected: Not reported
Potential Contaminants of Concern: Not reported
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

HAZNET:

envid: S102061429
Year: 2016
GEPAID: CAC002865938
Contact: DAVID LUBER
Telephone: 3232543600
Mailing Name: Not reported
Mailing Address: 9236 HALL RD
Mailing City,St,Zip: DOWNEY, CA 902415308
Gen County: Los Angeles
TSD EPA ID: NVT330010000
TSD County: 99
Waste Category: Off-specification, aged or surplus organics
Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization)
Tons: 0.35
Cat Decode: Off-specification, aged or surplus organics
Method Decode: Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization)
Facility County: Los Angeles

envid: S102061429
Year: 2016
GEPAID: CAC002865938
Contact: DAVID LUBER
Telephone: 3232543600
Mailing Name: Not reported
Mailing Address: 9236 HALL RD
Mailing City,St,Zip: DOWNEY, CA 902415308
Gen County: Los Angeles
TSD EPA ID: NVT330010000
TSD County: 99
Waste Category: Off-specification, aged or surplus organics
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.25
Cat Decode: Off-specification, aged or surplus organics
Method Decode: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: Los Angeles

LOS ANGELES CO. HMS:

Region: LA
Permit Category: T
Facility Id: 011642-011695
Facility Type: 0
Facility Status: Closed
Area: 1F
Permit Number: 00003265T
Permit Status: Closed

**V85**
**NNW**
**1/4-1/2**
**0.403 mi.**
**2126 ft.**

**PRIMEX TECHNOLOGIES**
**9236 HALL RD**
**DOWNEY, CA 90241**

**Site 2 of 2 in cluster V**

**Relative:**
**Higher**

**Actual:**
**111 ft.**

**CPS-SLIC** **U003777457**
**UST** **N/A**

SLIC REG 4:
Region: 4
Facility Status: No further action required
SLIC: 0302D
Substance: VOCs
Staff: John Geroch

UST:
Facility ID: 22299
Permitting Agency: LOS ANGELES COUNTY
Latitude: 33.93107
Longitude: -118.120203

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**86**
**South**
**1/4-1/2**
**0.430 mi.**
**2269 ft.**

**YALE ENGINEERING COMPANY**
**12405 WOODRUFF AVENUE**
**DOWNEY, CA 90241**

**Relative:**
**Lower**

**Actual:**
**98 ft.**

**RCRA-SQG** **1000196585**
**LUST** **CAD981384050**
**SWEEPS UST**
**HIST UST**
**CA FID UST**
**FINDS**
**ECHO**
**HAZNET**
**HIST CORTESE**

RCRA-SQG:
Date form received by agency: 02/06/1986
Facility name: YALE ENGINEERING COMPANY
Facility address: 12405 WOODRUFF AVENUE
DOWNEY, CA 90241
EPA ID: CAD981384050
Contact: ENVIRONMENTAL MANAGER
Contact address: 12405 WOODRUFF AVENUE
DOWNEY, CA 90241
Contact country: US
Contact telephone: 213-428-4385
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: TECHNICAL EQUITIES
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private

**YALE ENGINEERING COMPANY (Continued)** **1000196585**

Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

LUST:
Lead Agency: LOS ANGELES COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603705037
Global Id: T0603705037
Latitude: 33.918564
Longitude: -118.117304
Status: Completed - Case Closed
Status Date: 01/05/1994
Case Worker: JOA
RB Case Number: R-11360
Local Agency: LOS ANGELES COUNTY
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Aviation
Site History: Not reported

LUST:
Global Id: T0603705037
Contact Type: Local Agency Caseworker
Contact Name: JOHN AWUJO

**YALE ENGINEERING COMPANY (Continued)** **1000196585**

Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Global Id: T0603705037
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603705037
Action Type: Other
Date: 01/05/1994
Action: Leak Reported

LUST:
Global Id: T0603705037
Status: Completed - Case Closed
Status Date: 01/05/1994

Global Id: T0603705037
Status: Open - Case Begin Date
Status Date: 01/05/1994

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: R-11360
Status: Case Closed
Substance: 1
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Soil
Abatement Method Used at the Site: Not reported
Global ID: T0603705037
W Global ID: Not reported
Staff: UNK
Local Agency: 19000
Cross Street: Not reported
Enforcement Type: Not reported
Date Leak Discovered: Not reported
Date Leak First Reported: 1/5/1994
Date Leak Record Entered: 12/9/1996
Date Confirmation Began: Not reported
Date Leak Stopped: Not reported
Date Case Last Changed on Database: 1/5/1994
Date the Case was Closed: 1/5/1994
How Leak Discovered: Not reported

**YALE ENGINEERING COMPANY (Continued)** **1000196585**

| | |
|---|---|
| How Leak Stopped: | Not reported |
| Cause of Leak: | Not reported |
| Leak Source: | Not reported |
| Operator: | Not reported |
| Water System: | Not reported |
| Well Name: | Not reported |
| Approx. Dist To Production Well (ft): | 347.977247219732880513299001111 |
| Source of Cleanup Funding: | Not reported |
| Preliminary Site Assessment Workplan Submitted: | Not reported |
| Preliminary Site Assessment Began: | Not reported |
| Pollution Characterization Began: | Not reported |
| Remediation Plan Submitted: | Not reported |
| Remedial Action Underway: | Not reported |
| Post Remedial Action Monitoring Began: | Not reported |
| Enforcement Action Date: | Not reported |
| Historical Max MTBE Date: | Not reported |
| Hist Max MTBE Conc in Groundwater: | Not reported |
| Hist Max MTBE Conc in Soil: | Not reported |
| Significant Interim Remedial Action Taken: | Not reported |
| GW Qualifier: | Not reported |
| Soil Qualifier: | Not reported |
| Organization: | Not reported |
| Owner Contact: | Not reported |
| Responsible Party: | YALE ENGINEERING COMPANY |
| RP Address: | 12405 WOODRUFF AVE, DOWNEY CA 90241 |
| Program: | LUST |
| Lat/Long: | 33.9176085 / -1 |
| Local Agency Staff: | Not reported |
| Beneficial Use: | Not reported |
| Priority: | Not reported |
| Cleanup Fund Id: | Not reported |
| Suspended: | Not reported |
| Assigned Name: | Not reported |
| Summary: | Not reported |

SWEEPS UST:

| | |
|---|---|
| Status: | Not reported |
| Comp Number: | 11360 |
| Number: | Not reported |
| Board Of Equalization: | 44-009258 |
| Referral Date: | Not reported |
| Action Date: | Not reported |
| Created Date: | Not reported |
| Owner Tank Id: | Not reported |
| SWRCB Tank Id: | 19-000-011360-000001 |
| Tank Status: | Not reported |
| Capacity: | 2500 |
| Active Date: | Not reported |
| Tank Use: | M.V. FUEL |
| STG: | PRODUCT |
| Content: | REG UNLEADED |
| Number Of Tanks: | 4 |

| | |
|---|---|
| Status: | Not reported |
| Comp Number: | 11360 |
| Number: | Not reported |
| Board Of Equalization: | 44-009258 |

**YALE ENGINEERING COMPANY (Continued)** **1000196585**

Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-011360-000002
Tank Status: Not reported
Capacity: 7500
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: LEADED
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 11360
Number: Not reported
Board Of Equalization: 44-009258
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-011360-000003
Tank Status: Not reported
Capacity: 1000
Active Date: Not reported
Tank Use: UNKNOWN
STG: WASTE
Content: Not reported
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 11360
Number: Not reported
Board Of Equalization: 44-009258
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-011360-000004
Tank Status: Not reported
Capacity: 500
Active Date: Not reported
Tank Use: UNKNOWN
STG: WASTE
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 11360
Number: 9
Board Of Equalization: 44-009258
Referral Date: 07-12-91
Action Date: 07-12-91
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: 19-000-011360-000005
Tank Status: A

**YALE ENGINEERING COMPANY (Continued)** **1000196585**

Capacity: Not reported
Active Date: 06-30-89
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: 1

HIST UST:
File Number: 000263DB
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/000263DB.pdf
Region: STATE
Facility ID: 00000065701
Facility Type: Other
Other Type: MFG.
Contact Name: MIKE CATALDO
Telephone: 2138031441
Owner Name: EDWARD DILORETO
Owner Address: 8607 IMPERIAL HWY. SUITE 208
Owner City,St,Zip: DOWNEY, CA 90242
Total Tanks: 0005

Tank Num: 001
Container Num: 1
Year Installed: 1979
Tank Capacity: 00007500
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 002
Container Num: 2
Year Installed: 1979
Tank Capacity: 00007500
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00000000
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 004
Container Num: 4
Year Installed: 1963
Tank Capacity: 00000000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: None

**YALE ENGINEERING COMPANY (Continued)** **1000196585**

Tank Num: 005
Container Num: 5
Year Installed: Not reported
Tank Capacity: 00000000
Tank Used for: WASTE
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Not reported

Click here for Geo Tracker PDF:

CA FID UST:
Facility ID: 19020113
Regulated By: UTNKA
Regulated ID: 00008573
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 2138031441
Mail To: Not reported
Mailing Address: 12405 S WOODRUFF AVE
Mailing Address 2: Not reported
Mailing City,St,Zip: DOWNEY 90241
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

FINDS:

Registry ID: 110002688547

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000196585
Registry ID: 110002688547
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002688547

HAZNET:
envid: 1000196585

**YALE ENGINEERING COMPANY (Continued)** **1000196585**

| | |
|---|---|
| Year: | 2001 |
| GEPAID: | CAD981384050 |
| Contact: | DIANE TAFOYA |
| Telephone: | 5628031441 |
| Mailing Name: | Not reported |
| Mailing Address: | 12405 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902415611 |
| Gen County: | Not reported |
| TSD EPA ID: | CAT000613893 |
| TSD County: | Not reported |
| Waste Category: | Aqueous solution with total organic residues less than 10 percent |
| Disposal Method: | Transfer Station |
| Tons: | 0.27 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

HIST CORTESE:

| | |
|---|---|
| Region: | CORTESE |
| Facility County Code: | 19 |
| Reg By: | LTNKA |
| Reg Id: | R-11360 |

---

**87**
**SE**
**1/4-1/2**
**0.446 mi.**
**2356 ft.**

**QM BULK STORAGE FAC** **ENVIROSTOR** **S107737112**
**N/A**

**LONG BEACH, CA**

**Relative:**
**Lower**

**Actual:**
**100 ft.**

ENVIROSTOR:

| | |
|---|---|
| Facility ID: | 80000423 |
| Status: | Inactive - Needs Evaluation |
| Status Date: | 07/01/2005 |
| Site Code: | Not reported |
| Site Type: | Military Evaluation |
| Site Type Detailed: | FUDS |
| Acres: | Not reported |
| NPL: | NO |
| Regulatory Agencies: | SMBRP |
| Lead Agency: | SMBRP |
| Program Manager: | Not reported |
| Supervisor: | Douglas Bautista |
| Division Branch: | Cleanup Cypress |
| Assembly: | 58 |
| Senate: | 32 |
| Special Program: | Not reported |
| Restricted Use: | NO |
| Site Mgmt Req: | NONE SPECIFIED |
| Funding: | DERA |
| Latitude: | 33.91944 |
| Longitude: | -118.1125 |
| APN: | NONE SPECIFIED |
| Past Use: | NONE SPECIFIED |
| Potential COC: | NONE SPECIFIED |
| Confirmed COC: | NONE SPECIFIED |
| Potential Description: | NONE SPECIFIED |
| Alias Name: | CA99799F556900 |

**QM BULK STORAGE FAC (Continued)** **S107737112**

| | |
|---|---|
| Alias Type: | Federal Facility ID |
| Alias Name: | J09CA0559 |
| Alias Type: | INPR |
| Alias Name: | 80000423 |
| Alias Type: | Envirostor ID Number |

Completed Info:

| | |
|---|---|
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Inventory Project Report (INPR) |
| Completed Date: | 04/18/1991 |
| Comments: | Not reported |
| Future Area Name: | Not reported |
| Future Sub Area Name: | Not reported |
| Future Document Type: | Not reported |
| Future Due Date: | Not reported |
| Schedule Area Name: | Not reported |
| Schedule Sub Area Name: | Not reported |
| Schedule Document Type: | Not reported |
| Schedule Due Date: | Not reported |
| Schedule Revised Date: | Not reported |

---

**W88** **SHELL SERVICE STATION** **LUST** **S106116174**
**North** **9305 FIRESTONE BLVD. E.** **N/A**
**1/4-1/2** **DOWNEY, CA**
**0.459 mi.**
**2422 ft.** **Site 1 of 2 in cluster W**

**Relative:**
**Higher**

**Actual:**
**113 ft.**

LUST REG 4:

| | | |
|---|---|---|
| Region: | 4 | |
| Regional Board: | 04 | |
| County: | Los Angeles | |
| Facility Id: | I-09468A | |
| Status: | Pollution Characterization | |
| Substance: | Hydrocarbons | |
| Substance Quantity: | Not reported | |
| Local Case No: | 9640-26258 | |
| Case Type: | Groundwater | |
| Abatement Method Used at the Site: | | Not reported |
| Global ID: | T0603748443 | |
| W Global ID: | Not reported | |
| Staff: | NC | |
| Local Agency: | 19000 | |
| Cross Street: | WOODRUFF | |
| Enforcement Type: | SEL | |
| Date Leak Discovered: | 10/23/2002 | |
| Date Leak First Reported: | | 10/23/2002 |
| Date Leak Record Entered: | Not reported | |
| Date Confirmation Began: | 10/23/2002 | |
| Date Leak Stopped: | Not reported | |
| Date Case Last Changed on Database: | | Not reported |
| Date the Case was Closed: | | Not reported |
| How Leak Discovered: | OM | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | UNK | |
| Leak Source: | Not reported | |
| Operator: | Not reported | |

**SHELL SERVICE STATION (Continued)** **S106116174**

| | |
|---|---|
| Water System: | Not reported |
| Well Name: | Not reported |
| Approx. Dist To Production Well (ft): | Not reported |
| Source of Cleanup Funding: | Not reported |
| Preliminary Site Assessment Workplan Submitted: | Not reported |
| Preliminary Site Assessment Began: | Not reported |
| Pollution Characterization Began: | 2/7/2003 |
| Remediation Plan Submitted: | Not reported |
| Remedial Action Underway: | Not reported |
| Post Remedial Action Monitoring Began: | Not reported |
| Enforcement Action Date: | Not reported |
| Historical Max MTBE Date: | 6/19/2003 |
| Hist Max MTBE Conc in Groundwater: | 430 |
| Hist Max MTBE Conc in Soil: | Not reported |
| Significant Interim Remedial Action Taken: | Not reported |
| GW Qualifier: | Not reported |
| Soil Qualifier: | Not reported |
| Organization: | Not reported |
| Owner Contact: | Not reported |
| Responsible Party: | JOE LENTINI |
| RP Address: | P.O. BOX 7869 |
| Program: | LUST |
| Lat/Long: | 0 / 0 |
| Local Agency Staff: | Not reported |
| Beneficial Use: | Not reported |
| Priority: | Not reported |
| Cleanup Fund Id: | Not reported |
| Suspended: | Not reported |
| Assigned Name: | Not reported |
| Summary: | Not reported |

---

**W89** **SHELL** **LUST** **S102436957**
**North** **9305 FIRESTONE BLVD E** **HIST CORTESE** **N/A**
**1/4-1/2** **DOWNEY, CA 90241** **LOS ANGELES CO. HMS**
**0.459 mi.**
**2422 ft.** **Site 2 of 2 in cluster W**

**Relative:**
**Higher**

**Actual:**
**113 ft.**

LUST:

| | |
|---|---|
| Lead Agency: | LOS ANGELES RWQCB (REGION 4) |
| Case Type: | LUST Cleanup Site |
| Geo Track: | http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603748443 |
| Global Id: | T0603748443 |
| Latitude: | 33.932646 |
| Longitude: | -118.11722 |
| Status: | Completed - Case Closed |
| Status Date: | 10/29/2004 |
| Case Worker: | NC |
| RB Case Number: | I-09468A |
| Local Agency: | LOS ANGELES COUNTY |
| File Location: | Regional Board |
| Local Case Number: | 9640-26258 |
| Potential Media Affect: | Aquifer used for drinking water supply |
| Potential Contaminants of Concern: | Other Solvent or Non-Petroleum Hydrocarbon |
| Site History: | Not reported |

LUST:

| | |
|---|---|
| Global Id: | T0603748443 |
| Contact Type: | Local Agency Caseworker |

**SHELL (Continued)** **S102436957**

Contact Name: LAURA GAJDOS
Organization Name: LOS ANGELES COUNTY
Address: 900 S. FREMONT AVE.
City: ALHAMBRA
Email: Not reported
Phone Number: Not reported

Global Id: T0603748443
Contact Type: Regional Board Caseworker
Contact Name: NOMAN CHOWDHURY
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 WEST 4TH STREET, SUITE 200
City: LOS ANGELES
Email: nchowdhury@waterboards.ca.gov
Phone Number: 2135766704

LUST:

Global Id: T0603748443
Action Type: RESPONSE
Date: 07/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603748443
Action Type: RESPONSE
Date: 10/20/2003
Action: Monitoring Report - Quarterly

Global Id: T0603748443
Action Type: RESPONSE
Date: 01/15/2009
Action: Monitoring Report - Annually

Global Id: T0603748443
Action Type: RESPONSE
Date: 10/30/2003
Action: Other Report / Document

Global Id: T0603748443
Action Type: Other
Date: 10/23/2002
Action: Leak Reported

Global Id: T0603748443
Action Type: ENFORCEMENT
Date: 08/27/2003
Action: Staff Letter

Global Id: T0603748443
Action Type: ENFORCEMENT
Date: 10/29/2004
Action: Closure/No Further Action Letter

Global Id: T0603748443
Action Type: ENFORCEMENT
Date: 10/26/2004
Action: Site Visit / Inspection / Sampling

**SHELL (Continued)** **S102436957**

Global Id: T0603748443
Action Type: RESPONSE
Date: 10/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603748443
Action Type: RESPONSE
Date: 04/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603748443
Action Type: RESPONSE
Date: 01/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603748443
Action Type: Other
Date: 10/23/2002
Action: Leak Discovery

LUST:
Global Id: T0603748443
Status: Open - Case Begin Date
Status Date: 10/23/2002

Global Id: T0603748443
Status: Open - Site Assessment
Status Date: 10/23/2002

Global Id: T0603748443
Status: Open - Site Assessment
Status Date: 02/07/2003

Global Id: T0603748443
Status: Completed - Case Closed
Status Date: 10/29/2004

Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603703423
Global Id: T0603703423
Latitude: 33.932631
Longitude: -118.11722
Status: Completed - Case Closed
Status Date: 06/25/1996
Case Worker: YR
RB Case Number: I-09468
Local Agency: LOS ANGELES COUNTY
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0603703423

**SHELL (Continued)** **S102436957**

Contact Type: Local Agency Caseworker
Contact Name: JOHN AWUJO
Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Global Id: T0603703423
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603703423
Action Type: Other
Date: 06/19/1989
Action: Leak Reported

Global Id: T0603703423
Action Type: Other
Date: 10/17/1988
Action: Leak Discovery

LUST:
Global Id: T0603703423
Status: Open - Case Begin Date
Status Date: 10/03/1988

Global Id: T0603703423
Status: Open - Site Assessment
Status Date: 10/03/1988

Global Id: T0603703423
Status: Completed - Case Closed
Status Date: 06/25/1996

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: I-09468
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Soil
Abatement Method Used at the Site: Not reported
Global ID: T0603703423
W Global ID: Not reported
Staff: UNK

**SHELL (Continued)** **S102436957**

| | | |
|---|---|---|
| Local Agency: | 19000 | |
| Cross Street: | WOODRUFF | |
| Enforcement Type: | Not reported | |
| Date Leak Discovered: | 10/17/1988 | |
| Date Leak First Reported: | | 6/19/1989 |
| Date Leak Record Entered: | 8/10/1989 | |
| Date Confirmation Began: | Not reported | |
| Date Leak Stopped: | Not reported | |
| Date Case Last Changed on Database: | | 6/25/1996 |
| Date the Case was Closed: | | 6/25/1996 |
| How Leak Discovered: | OM | |
| How Leak Stopped: | Not reported | |
| Cause of Leak: | UNK | |
| Leak Source: | UNK | |
| Operator: | SAHAKIAN, MOSES | |
| Water System: | Not reported | |
| Well Name: | Not reported | |
| Approx. Dist To Production Well (ft): | | 1543.0562705972426152512772376 |
| Source of Cleanup Funding: | | UNK |
| Preliminary Site Assessment Workplan Submitted: | | Not reported |
| Preliminary Site Assessment Began: | | 10/3/1988 |
| Pollution Characterization Began: | | Not reported |
| Remediation Plan Submitted: | | Not reported |
| Remedial Action Underway: | | Not reported |
| Post Remedial Action Monitoring Began: | | Not reported |
| Enforcement Action Date: | | Not reported |
| Historical Max MTBE Date: | | Not reported |
| Hist Max MTBE Conc in Groundwater: | | Not reported |
| Hist Max MTBE Conc in Soil: | | Not reported |
| Significant Interim Remedial Action Taken: | | Not reported |
| GW Qualifier: | Not reported | |
| Soil Qualifier: | Not reported | |
| Organization: | Not reported | |
| Owner Contact: | Not reported | |
| Responsible Party: | SHELL OIL COMPANY | |
| RP Address: | 9305 FIRESTONE BLVD, DOWNEY, 90241 | |
| Program: | LUST | |
| Lat/Long: | 33.9327483 / -1 | |
| Local Agency Staff: | Not reported | |
| Beneficial Use: | Not reported | |
| Priority: | Not reported | |
| Cleanup Fund Id: | Not reported | |
| Suspended: | Not reported | |
| Assigned Name: | Not reported | |
| Summary: | Not reported | |

HIST CORTESE:

| | |
|---|---|
| Region: | CORTESE |
| Facility County Code: | 19 |
| Reg By: | LTNKA |
| Reg Id: | I-09468 |

LOS ANGELES CO. HMS:

| | |
|---|---|
| Region: | LA |
| Permit Category: | T |
| Facility Id: | 009640-058017 |

**SHELL (Continued)** **S102436957**

Facility Type: 0
Facility Status: Closed
Area: 1F
Permit Number: 000748305
Permit Status: Closed

---

**90**
**NNE**
**1/4-1/2**
**0.486 mi.**
**2567 ft.**

**DOWNEY DUMP**
**11014 PANGHORN**
**DOWNEY, CA**

**WMUDS/SWAT** **S104156350**
**N/A**

**Relative:**
**Higher**

**Actual:**
**113 ft.**

WMUDS/SWAT:

| | |
|---|---|
| Edit Date: | Not reported |
| Complexity: | Not reported |
| Primary Waste: | Not reported |
| Primary Waste Type: | Not reported |
| Secondary Waste: | Not reported |
| Secondary Waste Type: | Not reported |
| Base Meridian: | Not reported |
| NPID: | Not reported |
| Tonnage: | 0 |
| Regional Board ID: | Not reported |
| Municipal Solid Waste: | False |
| Superorder: | False |
| Open To Public: | False |
| Waste List: | False |
| Agency Type: | Not reported |
| Agency Name: | Not reported |
| Agency Department: | Not reported |
| Agency Address: | Not reported |
| Agency City,St,Zip: | Not reported |
| Agency Contact: | Not reported |
| Agency Telephone: | Not reported |
| Land Owner Name: | Not reported |
| Land Owner Address: | Not reported |
| Land Owner City,St,Zip: | CA |
| Land Owner Contact: | Not reported |
| Land Owner Phone: | Not reported |
| Region: | 4 |
| Facility Type: | Not reported |
| Facility Description: | Not reported |
| Facility Telephone: | Not reported |
| SWAT Facility Name: | Not reported |
| Primary SIC: | Not reported |
| Secondary SIC: | Not reported |
| Comments: | Not reported |
| Last Facility Editors: | Not reported |
| Waste Discharge System: | False |
| Solid Waste Assessment Test Program: | True |
| Toxic Pits Cleanup Act Program: | False |
| Resource Conservation Recovery Act: | False |
| Department of Defence: | False |
| Solid Waste Assessment Test Program: | Not reported |
| Threat to Water Quality: | Not reported |
| Sub Chapter 15: | False |
| Regional Board Project Officer: | LT |
| Number of WMUDS at Facility: | 1 |

**DOWNEY DUMP (Continued)** **S104156350**

| | |
|---|---|
| Section Range: | Not reported |
| RCRA Facility: | Not reported |
| Waste Discharge Requirements: | Not reported |
| Self-Monitoring Rept. Frequency: | Not reported |
| Waste Discharge System ID: | 4 190278NUR |
| Solid Waste Information ID: | Not reported |

---

**X91** **VULTEE TRAINING FIELD** **ENVIROSTOR** **S107737583**
**West** **N/A**
**1/2-1** **DOWNEY, CA**
**0.583 mi.**
**3079 ft.** **Site 1 of 3 in cluster X**

**Relative:** **Lower**

**Actual:** **103 ft.**

ENVIROSTOR:

| | |
|---|---|
| Facility ID: | 80000863 |
| Status: | Inactive - Needs Evaluation |
| Status Date: | 07/01/2005 |
| Site Code: | Not reported |
| Site Type: | Military Evaluation |
| Site Type Detailed: | FUDS |
| Acres: | Not reported |
| NPL: | NO |
| Regulatory Agencies: | SMBRP |
| Lead Agency: | SMBRP |
| Program Manager: | Not reported |
| Supervisor: | Douglas Bautista |
| Division Branch: | Cleanup Cypress |
| Assembly: | 58 |
| Senate: | 32 |
| Special Program: | Not reported |
| Restricted Use: | NO |
| Site Mgmt Req: | NONE SPECIFIED |
| Funding: | DERA |
| Latitude: | 33.925 |
| Longitude: | -118.1291 |
| APN: | NONE SPECIFIED |
| Past Use: | NONE SPECIFIED |
| Potential COC: | NONE SPECIFIED |
| Confirmed COC: | NONE SPECIFIED |
| Potential Description: | NONE SPECIFIED |
| Alias Name: | CA99799F998400 |
| Alias Type: | Federal Facility ID |
| Alias Name: | J09CA7161 |
| Alias Type: | INPR |
| Alias Name: | 80000863 |
| Alias Type: | Envirostor ID Number |

Completed Info:

| | |
|---|---|
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Inventory Project Report (INPR) |
| Completed Date: | 04/29/1999 |
| Comments: | Not reported |
| Future Area Name: | Not reported |
| Future Sub Area Name: | Not reported |
| Future Document Type: | Not reported |
| Future Due Date: | Not reported |

**VULTEE TRAINING FIELD (Continued)** **S107737583**

Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

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**X92** **AIR FORCE PLANT #16 (NASA)** **ENVIROSTOR** **S107735804**
**West** **N/A**
**1/2-1** **DOWNEY, CA**
**0.583 mi.**
**3079 ft.** **Site 2 of 3 in cluster X**

**Relative:** **Lower**

**Actual:** **103 ft.**

ENVIROSTOR:
Facility ID: 80000160
Status: Inactive - Needs Evaluation
Status Date: 07/01/2005
Site Code: Not reported
Site Type: Military Evaluation
Site Type Detailed: FUDS
Acres: Not reported
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Douglas Bautista
Division Branch: Cleanup Cypress
Assembly: 58
Senate: 32
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: DERA
Latitude: 33.925
Longitude: -118.1291
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: AFP #16 (NASA); NASA INDUSTRIAL PLANT DOWNEY
Alias Type: Alternate Name
Alias Name: CA99799F530500
Alias Type: Federal Facility ID
Alias Name: J09CA0101
Alias Type: INPR
Alias Name: 80000160
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported

**AIR FORCE PLANT #16 (NASA) (Continued)** **S107735804**

| | |
|---|---|
| Future Due Date: | Not reported |
| Schedule Area Name: | Not reported |
| Schedule Sub Area Name: | Not reported |
| Schedule Document Type: | Not reported |
| Schedule Due Date: | Not reported |
| Schedule Revised Date: | Not reported |

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**X93** **AIR FORCE PLANT #16 (NASA)** **FUDS** **1012129632**
**West** **N/A**
**1/2-1** **DOWNEY, CA**
**0.587 mi.**
**3098 ft.** **Site 3 of 3 in cluster X**

**Relative:** **Lower**
**Actual:** **103 ft.**

FUDS:

| | |
|---|---|
| EPA Region: | 09 |
| Congressional District: | 40 |
| FUDS Number: | J09CA0101 |
| State: | CA |
| Facility Name: | AIR FORCE PLANT #16 (NASA) |
| Fiscal Year: | 2013 |
| City: | DOWNEY |
| Federal Facility ID: | CA9799F5305 |
| Telephone: | 213-452-3920 |
| INST ID: | 60965 |
| County: | LOS ANGELES |
| RAB: | Not reported |
| **CORPS_DIST**: | Los Angeles District (SPL) |
| NPL Status: | Not Listed |
| CTC: | 30.800000000000001 |
| Current Owner: | Private Sector |
| Future Prog: | Not reported |
| Description: | The property is actually a concrete building of approximately 1,150 sq. ft. of floor area. The site is located in the City of Downey, Los Angeles County, California. The site is an old, unsuitable building that is no longer required for use by the National Aeronautic and Space Administration/Rockwell International. |
| Current Program: | Not reported |
| History: | Building No. 125 was constructed of reinforced concrete (12 in. thick roof and walls) in 1941. Its original use was a bomb shelter constructed during World War II by the U.S. Army Air Corps. During 1940 and 1941, the Air Force acquired the property by direct purchase. It was later used as a hazardous materials testing laboratory. It has now been abandoned in place. The General Services Administration concurred with NASA plans to demolish the building in accordance with federal property management regulations. Air Force Plant #16 was transferred to NASA in July of 1964. The facility was renamed NASA Industrial Plant, Downey, California. At this time NASA assumed status as the holding agency. Since 9 August 1972 RI was contracted to be custodian of building #125 and other property. |
| Latitude Degree: | 33 |
| Latitude Minute: | 56 |
| Latitude Second: | 30 |
| Latitude Direction: | N |
| Longitude Degree: | -118 |
| Longitude Minute: | 8 |
| Longitude Second: | 45 |
| Longitude Direction: | E |

**94**
**East**
**1/2-1**
**0.597 mi.**
**3153 ft.**

**PEACOCK ENGINEERING & MANUFACTURING**
**10620 EAST FIRESTONE BOULEVARD**
**NORWALK, CA 90650**

**ENVIROSTOR** **S101480839**
**CPS-SLIC** **N/A**

**Relative:**
**Higher**

**Actual:**
**111 ft.**

ENVIROSTOR:

| | |
|---|---|
| Facility ID: | 19350006 |
| Status: | Refer: Other Agency |
| Status Date: | 08/31/1995 |
| Site Code: | Not reported |
| Site Type: | Historical |
| Site Type Detailed: | * Historical |
| Acres: | Not reported |
| NPL: | NO |
| Regulatory Agencies: | NONE SPECIFIED |
| Lead Agency: | NONE SPECIFIED |
| Program Manager: | Not reported |
| Supervisor: | * Mmonroy |
| Division Branch: | Cleanup Chatsworth |
| Assembly: | Not reported |
| Senate: | Not reported |
| Special Program: | Not reported |
| Restricted Use: | NO |
| Site Mgmt Req: | NONE SPECIFIED |
| Funding: | Not reported |
| Latitude: | 33.92568 |
| Longitude: | -118.1073 |
| APN: | NONE SPECIFIED |
| Past Use: | NONE SPECIFIED |
| Potential COC: | * OXYGENATED SOLVENTS * UNSPECIFIED ACID SOLUTION * UNSPECIFIED ALKALINE SOLUTIONS * WASTE OIL & MIXED OIL Cyanide (free |
| Confirmed COC: | NONE SPECIFIED |
| Potential Description: | NONE SPECIFIED |
| Alias Name: | CAD057352403 |
| Alias Type: | EPA Identification Number |
| Alias Name: | 19350006 |
| Alias Type: | Envirostor ID Number |

Completed Info:

| | |
|---|---|
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Site Screening |
| Completed Date: | 12/08/1994 |
| Comments: | CALSITES VALIDATION PROGRAM CONFIRMS NFA FOR DTSC. |
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Site Screening |
| Completed Date: | 11/09/1988 |
| Comments: | SITE SCREENING DONE DHS WILL CONDUCT FURTHER INVESTIGATION DUE TO THE POTENTIAL FOR CONTAMINATION FROM UNDERGROUND TANKS |
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Site Screening |
| Completed Date: | 01/15/1988 |
| Comments: | SITE SCREENING DONE REASSESSMENT OF PA DONE BY E&E RECOMMEND NFA UNDER CERCLA DUE TO LOW ROUTE CHARACTERISTICS VALUE AND LOW TARGET VALUE |

**PEACOCK ENGINEERING & MANUFACTURING (Continued)** **S101480839**

| | |
|---|---|
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Site Screening |
| Completed Date: | 04/10/1987 |
| Comments: | SITE SCREENING DONE CERCLIS SITE |
| Future Area Name: | Not reported |
| Future Sub Area Name: | Not reported |
| Future Document Type: | Not reported |
| Future Due Date: | Not reported |
| Schedule Area Name: | Not reported |
| Schedule Sub Area Name: | Not reported |
| Schedule Document Type: | Not reported |
| Schedule Due Date: | Not reported |
| Schedule Revised Date: | Not reported |

CPS-SLIC:

| | |
|---|---|
| Region: | STATE |
| **Facility Status:** | **Completed - Case Closed** |
| Status Date: | 12/01/1998 |
| Global Id: | SL184791462 |
| Lead Agency: | LOS ANGELES RWQCB (REGION 4) |
| Lead Agency Case Number: | Not reported |
| Latitude: | 33.9256104304938 |
| Longitude: | -118.106782436371 |
| Case Type: | Cleanup Program Site |
| Case Worker: | Not reported |
| Local Agency: | Not reported |
| RB Case Number: | 0640 |
| File Location: | Not reported |
| Potential Media Affected: | Not reported |
| Potential Contaminants of Concern: | Not reported |
| Site History: | Not reported |

Click here to access the California GeoTracker records for this facility:

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**95 WSW 1/2-1 0.644 mi. 3401 ft.** **VULTEE AIRCRAFT CO** **ENVIROSTOR** **S107737582 N/A**

**DOWNEY, CA**

**Relative: Lower**

**Actual: 97 ft.**

ENVIROSTOR:

| | |
|---|---|
| Facility ID: | 80000851 |
| Status: | Inactive - Needs Evaluation |
| Status Date: | 07/01/2005 |
| Site Code: | Not reported |
| Site Type: | Military Evaluation |
| Site Type Detailed: | FUDS |
| Acres: | Not reported |
| NPL: | NO |
| Regulatory Agencies: | SMBRP |
| Lead Agency: | SMBRP |
| Program Manager: | Not reported |
| Supervisor: | Douglas Bautista |
| Division Branch: | Cleanup Cypress |
| Assembly: | 58 |

**VULTEE AIRCRAFT CO (Continued)** **S107737582**

Senate: 32
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: DERA
Latitude: 33.92083
Longitude: -118.1291
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CA99799F997200
Alias Type: Federal Facility ID
Alias Name: J09CA7149
Alias Type: INPR
Alias Name: 80000851
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inventory Project Report (INPR)
Completed Date: 04/29/1999
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

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**96**
**SW**
**1/2-1**
**0.649 mi.**
**3428 ft.**

**STORM DRAIN** **Notify 65** **S100178469**
**BELLFLOWER&IMPERIAL HWY** **N/A**
**DOWNEY, CA**

**Relative:**
**Lower**

**Actual:**
**95 ft.**

NOTIFY 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Issue Date: Not reported
Incident Description: Not reported

**97**
**WNW**
**1/2-1**
**0.719 mi.**
**3794 ft.**

**DOWNEY FAMILY HOUSING**
**DOWNEY, CA**

**ENVIROSTOR** **S107736234**
**N/A**

**Relative:**
**Higher**

**Actual:**
**108 ft.**

ENVIROSTOR:

| | |
|---|---|
| Facility ID: | 80000075 |
| Status: | Inactive - Needs Evaluation |
| Status Date: | 07/01/2005 |
| Site Code: | Not reported |
| Site Type: | Military Evaluation |
| Site Type Detailed: | FUDS |
| Acres: | Not reported |
| NPL: | NO |
| Regulatory Agencies: | SMBRP |
| Lead Agency: | SMBRP |
| Program Manager: | Not reported |
| Supervisor: | Douglas Bautista |
| Division Branch: | Cleanup Cypress |
| Assembly: | 58 |
| Senate: | 32 |
| Special Program: | Not reported |
| Restricted Use: | NO |
| Site Mgmt Req: | NONE SPECIFIED |
| Funding: | DERA |
| Latitude: | 33.93 |
| Longitude: | -118.1305 |
| APN: | NONE SPECIFIED |
| Past Use: | NONE SPECIFIED |
| Potential COC: | NONE SPECIFIED |
| Confirmed COC: | NONE SPECIFIED |
| Potential Description: | NONE SPECIFIED |
| Alias Name: | CA99799F531600 |
| Alias Type: | Federal Facility ID |
| Alias Name: | J09CA0112 |
| Alias Type: | INPR |
| Alias Name: | 80000075 |
| Alias Type: | Envirostor ID Number |

Completed Info:

| | |
|---|---|
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Inventory Project Report (INPR) |
| Completed Date: | 06/04/1991 |
| Comments: | Not reported |
| Future Area Name: | Not reported |
| Future Sub Area Name: | Not reported |
| Future Document Type: | Not reported |
| Future Due Date: | Not reported |
| Schedule Area Name: | Not reported |
| Schedule Sub Area Name: | Not reported |
| Schedule Document Type: | Not reported |
| Schedule Due Date: | Not reported |
| Schedule Revised Date: | Not reported |

**98**
**ESE**
**1/2-1**
**0.833 mi.**
**4397 ft.**

**Relative:**
**Lower**

**Actual:**
**102 ft.**

**COSTCO WHOLESALE # 410**
**12324 HOXIE AVENUE**
**NORWALK, CA 90650**

**Database(s):** RCRA-LQG, ENVIROSTOR, US AIRS, HAZNET, NPDES, CIWQS

**EDR ID Number:** 1004677945
**EPA ID Number:** CAR000103283

RCRA-LQG:

| | |
|---|---|
| Date form received by agency: | 08/05/2016 |
| Facility name: | COSTCO WHOLESALE # 410 |
| Facility address: | 12324 HOXIE AVENUE<br>NORWALK, CA 90650 |
| EPA ID: | CAR000103283 |
| Mailing address: | GREY HAWK CT<br>STE 200<br>CARLSBAD, CA 92010 |
| Contact: | ERIC D ENSMINGER |
| Contact address: | GREY HAWK CT STE 200<br>CARLSBAD, CA 92010 |
| Contact country: | US |
| Contact telephone: | 760-602-8616 |
| Contact email: | EENSMINGER@3ECOMPANY.COM |
| EPA Region: | 09 |
| Classification: | Large Quantity Generator |
| Description: | Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | COSTCO WHOLESALE CORPORATION |
| Owner/operator address: | Not reported<br>Not reported |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | Not reported |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Operator |
| Owner/Op start date: | 11/27/1985 |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | COSTCO WHOLESALE CORPORATION |
| Owner/operator address: | 999 LAKE DR<br>ISSAQUAH, WA 98027 |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | 425-313-8100 |
| Owner/operator email: | Not reported |
| Owner/operator fax: | Not reported |
| Owner/operator extension: | Not reported |

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NORWALK LA MIRADA UNIFIED SCHOOL DISTRIC
Owner/operator address: NORWALK BLVD
NORWALK, CA 90650
Owner/operator country: US
Owner/operator telephone: 562-929-5700
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 04/18/1983
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 791

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

. Waste name: Liquids with pH < 2

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P075
. Waste name: NICOTINE, & SALTS

Historical Generators:
Date form received by agency: 05/05/2014
Site name: COSTCO WHOLESALE NO 410
Classification: Large Quantity Generator

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 131
. Waste name: Aqueous solution (2 < pH < 12.5) containing reactive anions (azide, bromate, chlorate, cyanide, fluoride, hypochlorite, nitrite, perchlorate, and sulfide anions)

. Waste code: 133
. Waste name: Aqueous solution with 10% or more total organic residues

. Waste code: 134
. Waste name: Aqueous solution with <10% total organic residues

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

. Waste code: 135
. Waste name: Unspecified aqueous solution

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 151
. Waste name: Asbestos-containing waste

. Waste code: 172
. Waste name: Metal dust (see 121) and machining waste

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 211
. Waste name: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)

. Waste code: 212
. Waste name: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)

. Waste code: 213
. Waste name: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 221
. Waste name: Waste oil and mixed oil

. Waste code: 223
. Waste name: Unspecified oil-containing waste

. Waste code: 232
. Waste name: Pesticides and other waste associated with pesticide production

. Waste code: 271
. Waste name: Organic monomer waste (includes unreacted resins)

. Waste code: 272
. Waste name: Polymeric resin waste

. Waste code: 281
. Waste name: Adhesives

. Waste code: 291
. Waste name: Latex waste

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 343
. Waste name: Unspecified organic liquid mixture

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 541
. Waste name: Photochemicals / photo processing waste

. Waste code: 561
. Waste name: Detergent and soap

. Waste code: 611
. Waste name: Contaminated soil from site clean-ups

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D003
. Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

. Waste code: D018
. Waste name: BENZENE

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D026
. Waste name: CRESOL

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P075
. Waste name: NICOTINE, & SALTS

. Waste code: U034
. Waste name: ACETALDEHYDE, TRICHLORO-

Date form received by agency: 08/20/2001
Site name: COSTCO WHOLESALE NO 410
Classification: Small Quantity Generator

. Waste code: D011
. Waste name: SILVER

Biennial Reports:

Last Biennial Reporting Year: 2017

Annual Waste Handled:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 2371

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Amount (Lbs): 642

Waste code: D009
Waste name: MERCURY
Amount (Lbs): 38

Waste code: D010
Waste name: SELENIUM
Amount (Lbs): 11

Waste code: D011
Waste name: SILVER
Amount (Lbs): 11

Waste code: P001
Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%
Amount (Lbs): 14

Waste code: P075
Waste name: NICOTINE, & SALTS
Amount (Lbs): 7

Violation Status: No violations found

ENVIROSTOR:
Facility ID: 71003261
Status: Refer: Other Agency
Status Date: Not reported
Site Code: Not reported
Site Type: Tiered Permit
Site Type Detailed: Tiered Permit
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Not reported
Division Branch: Cleanup Chatsworth
Assembly: 58
Senate: 32
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.91995
Longitude: -118.1025
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

Potential Description: NONE SPECIFIED
Alias Name: CAL000060246
Alias Type: EPA Identification Number
Alias Name: 71003261
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

US AIRS MINOR:
Envid: 1004677945
Region Code: 09
Programmatic ID: AIR 0900000006037R9992
Facility Registry ID: 110012221461
D and B Number: Not reported
Primary SIC Code: 5531
NAICS Code: 562112
Default Air Classification Code: MIN
Facility Type of Ownership Code: POF
Air CMS Category Code: Not reported
HPV Status: Not reported

US AIRS MINOR:
Region Code: 09
Programmatic ID: AIR 0900000006037R9992
Facility Registry ID: 110012221461
Air Operating Status Code: OPR
Default Air Classification Code: MIN
Air Program: Stratospheric Ozone Protection
Activity Date: 2004-03-04 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

US AIRS MINOR:
Envid: 1004677945
Region Code: 09
Programmatic ID: AIR 0900000006037R9992
Facility Registry ID: 110012221461
D and B Number: Not reported
Primary SIC Code: 5531

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

NAICS Code: 562112
Default Air Classification Code: MIN
Facility Type of Ownership Code: POF
Air CMS Category Code: Not reported
HPV Status: Not reported

US AIRS MINOR:
Region Code: 09
Programmatic ID: AIR 0900000006037R9992
Facility Registry ID: 110012221461
Air Operating Status Code: OPR
Default Air Classification Code: MIN
Air Program: Stratospheric Ozone Protection
Activity Date: 2004-03-04 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

HAZNET:
envid: 1004677945
Year: 2016
GEPAID: CAR000103283
Contact: LISA SIMPSON
Telephone: 4253136275
Mailing Name: Not reported
Mailing Address: 999 LAKE DR
Mailing City,St,Zip: ISSAQUAH, WA 980270000
Gen County: Los Angeles
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Off-specification, aged or surplus inorganics
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.062
Cat Decode: Off-specification, aged or surplus inorganics
Method Decode: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

envid: 1004677945
Year: 2016
GEPAID: CAR000103283
Contact: LISA SIMPSON
Telephone: 4253136275
Mailing Name: Not reported
Mailing Address: 999 LAKE DR
Mailing City,St,Zip: ISSAQUAH, WA 980270000
Gen County: Los Angeles
TSD EPA ID: INR000110197
TSD County: Not reported
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.0005
Cat Decode: Not reported

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

| | |
|---|---|
| Method Decode: | Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135) |
| Facility County: | Los Angeles |
| | |
| envid: | 1004677945 |
| Year: | 2016 |
| GEPAID: | CAR000103283 |
| Contact: | LISA SIMPSON |
| Telephone: | 4253136275 |
| Mailing Name: | Not reported |
| Mailing Address: | 999 LAKE DR |
| Mailing City,St,Zip: | ISSAQUAH, WA 980270000 |
| Gen County: | Los Angeles |
| TSD EPA ID: | INR000110197 |
| TSD County: | Not reported |
| Waste Category: | Pharmaceutical waste |
| Disposal Method: | Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135) |
| Tons: | 0.0025 |
| Cat Decode: | Pharmaceutical waste |
| Method Decode: | Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135) |
| Facility County: | Los Angeles |
| | |
| envid: | 1004677945 |
| Year: | 2016 |
| GEPAID: | CAR000103283 |
| Contact: | LISA SIMPSON |
| Telephone: | 4253136275 |
| Mailing Name: | Not reported |
| Mailing Address: | 999 LAKE DR |
| Mailing City,St,Zip: | ISSAQUAH, WA 980270000 |
| Gen County: | Los Angeles |
| TSD EPA ID: | NVT330010000 |
| TSD County: | 99 |
| Waste Category: | Other organic solids |
| Disposal Method: | Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization) |
| Tons: | 0.2525 |
| Cat Decode: | Other organic solids |
| Method Decode: | Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization) |
| Facility County: | Los Angeles |
| | |
| envid: | 1004677945 |
| Year: | 2016 |
| GEPAID: | CAR000103283 |
| Contact: | LISA SIMPSON |
| Telephone: | 4253136275 |
| Mailing Name: | Not reported |
| Mailing Address: | 999 LAKE DR |
| Mailing City,St,Zip: | ISSAQUAH, WA 980270000 |
| Gen County: | Los Angeles |
| TSD EPA ID: | CAT080013352 |
| TSD County: | Los Angeles |
| Waste Category: | Aqueous solution with total organic residues less than 10 percent |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, |

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

Organics Recovery Ect
Tons: 0.1764
Cat Decode: Aqueous solution with total organic residues less than 10 percent
Method Decode: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
77 additional CA_HAZNET: record(s) in the EDR Site Report.

NPDES:

| | |
|---|---|
| Facility Status: | Not reported |
| NPDES Number: | Not reported |
| Region: | Not reported |
| Agency Number: | Not reported |
| Regulatory Measure ID: | Not reported |
| Place ID: | Not reported |
| Order Number: | Not reported |
| WDID: | 4 19C374107 |
| Regulatory Measure Type: | Construction |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Discharge Address: | Not reported |
| Discharge Name: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Status: | Terminated |
| Status Date: | 04/27/2017 |
| Operator Name: | COSTCO WHOLESALE |
| Operator Address: | 9 Corporate Park |
| Operator City: | Irvine |
| Operator State: | California |
| Operator Zip: | 92606 |

NPDES as of 03/2018:

| | |
|---|---|
| NPDES Number: | CAS000002 |
| Status: | Terminated |
| Agency Number: | 0 |
| Region: | 4 |
| Regulatory Measure ID: | 456320 |
| Order Number: | 2009-0009-DWQ |
| Regulatory Measure Type: | Enrollee |
| Place ID: | Not reported |
| WDID: | 4 19C374107 |
| Program Type: | Construction |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 09/24/2015 |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | 11/22/2016 |
| Discharge Name: | COSTCO WHOLESALE |
| Discharge Address: | 9 Corporate Park |
| Discharge City: | Irvine |
| Discharge State: | California |

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

| | |
|---|---|
| Discharge Zip: | 92606 |
| Received Date: | Not reported |
| Processed Date: | Not reported |
| Status: | Not reported |
| Status Date: | Not reported |
| Place Size: | Not reported |
| Place Size Unit: | Not reported |
| Contact: | Not reported |
| Contact Title: | Not reported |
| Contact Phone: | Not reported |
| Contact Phone Ext: | Not reported |
| Contact Email: | Not reported |
| Operator Name: | Not reported |
| Operator Address: | Not reported |
| Operator City: | Not reported |
| Operator State: | Not reported |
| Operator Zip: | Not reported |
| Operator Contact: | Not reported |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | Not reported |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | Not reported |
| Operator Type: | Not reported |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | Not reported |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |
| Dir Discharge Uswater Ind: | Not reported |
| Receiving Water Name: | Not reported |
| Certifier: | Not reported |
| Certifier Title: | Not reported |
| Certification Date: | Not reported |
| Primary Sic: | Not reported |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

| | |
|---|---|
| NPDES Number: | Not reported |
| Status: | Not reported |
| Agency Number: | Not reported |
| Region: | 4 |
| Regulatory Measure ID: | 456320 |
| Order Number: | Not reported |
| Regulatory Measure Type: | Construction |
| Place ID: | Not reported |
| WDID: | 4 19C374107 |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | 11/22/2016 |
| Discharge Name: | Not reported |
| Discharge Address: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Received Date: | 09/23/2015 |
| Processed Date: | 09/24/2015 |
| Status: | Terminated |
| Status Date: | 04/27/2017 |
| Place Size: | 4.15 |
| Place Size Unit: | Acres |
| Contact: | Jenifer Murillo |
| Contact Title: | Not reported |
| Contact Phone: | 714-978-5027 |
| Contact Phone Ext: | Not reported |
| Contact Email: | jmurillo@costco.com |
| Operator Name: | COSTCO WHOLESALE |
| Operator Address: | 9 Corporate Park |
| Operator City: | Irvine |
| Operator State: | California |
| Operator Zip: | 92606 |
| Operator Contact: | Jenifer Murillo |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | 714-978-5027 |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | jmurillo@costco.com |
| Operator Type: | Private Business |
| Developer: | COSTCO WHOLESALE |
| Developer Address: | 500 N State College Blvd |
| Developer City: | Orange |
| Developer State: | California |
| Developer Zip: | 92868 |
| Developer Contact: | Jenifer Murillo |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | N |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | N |
| Constype Below Ground Ind: | N |
| Constype Cable Line Ind: | N |
| Constype Comm Line Ind: | N |
| Constype Commertial Ind: | Y |
| Constype Electrical Line Ind: | N |

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

| | |
|---|---|
| Constype Gas Line Ind: | N |
| Constype Industrial Ind: | N |
| Constype Other Description: | Fueling Station |
| Constype Other Ind: | Y |
| Constype Recons Ind: | N |
| Constype Residential Ind: | N |
| Constype Transport Ind: | N |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | N |
| Constype Water Sewer Ind: | N |
| Dir Discharge Uswater Ind: | N |
| Receiving Water Name: | San Gabriel River |
| Certifier: | Jenifer Murillo |
| Certifier Title: | Director of Real Estate Development |
| Certification Date: | 23-SEP-15 |
| Primary Sic: | Not reported |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |

| | |
|---|---|
| Facility Status: | Terminated |
| NPDES Number: | CAS000002 |
| Region: | 4 |
| Agency Number: | 0 |
| Regulatory Measure ID: | 456320 |
| Place ID: | Not reported |
| Order Number: | 2009-0009-DWQ |
| WDID: | 4 19C374107 |
| Regulatory Measure Type: | Enrollee |
| Program Type: | Construction |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 09/24/2015 |
| Termination Date Of Regulatory Measure: | 11/22/2016 |
| Expiration Date Of Regulatory Measure: | Not reported |
| Discharge Address: | 9 Corporate Park |
| Discharge Name: | COSTCO WHOLESALE |
| Discharge City: | Irvine |
| Discharge State: | California |
| Discharge Zip: | 92606 |
| Status: | Not reported |
| Status Date: | Not reported |
| Operator Name: | Not reported |
| Operator Address: | Not reported |
| Operator City: | Not reported |
| Operator State: | Not reported |
| Operator Zip: | Not reported |

NPDES as of 03/2018:

| | |
|---|---|
| NPDES Number: | CAS000002 |
| Status: | Terminated |
| Agency Number: | 0 |
| Region: | 4 |
| Regulatory Measure ID: | 456320 |
| Order Number: | 2009-0009-DWQ |
| Regulatory Measure Type: | Enrollee |
| Place ID: | Not reported |
| WDID: | 4 19C374107 |
| Program Type: | Construction |

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

| | |
|---|---|
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 09/24/2015 |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | 11/22/2016 |
| Discharge Name: | COSTCO WHOLESALE |
| Discharge Address: | 9 Corporate Park |
| Discharge City: | Irvine |
| Discharge State: | California |
| Discharge Zip: | 92606 |
| Received Date: | Not reported |
| Processed Date: | Not reported |
| Status: | Not reported |
| Status Date: | Not reported |
| Place Size: | Not reported |
| Place Size Unit: | Not reported |
| Contact: | Not reported |
| Contact Title: | Not reported |
| Contact Phone: | Not reported |
| Contact Phone Ext: | Not reported |
| Contact Email: | Not reported |
| Operator Name: | Not reported |
| Operator Address: | Not reported |
| Operator City: | Not reported |
| Operator State: | Not reported |
| Operator Zip: | Not reported |
| Operator Contact: | Not reported |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | Not reported |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | Not reported |
| Operator Type: | Not reported |
| Developer: | Not reported |
| Developer Address: | Not reported |
| Developer City: | Not reported |
| Developer State: | Not reported |
| Developer Zip: | Not reported |
| Developer Contact: | Not reported |
| Developer Contact Title: | Not reported |
| Constype Linear Utility Ind: | Not reported |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | Not reported |
| Constype Below Ground Ind: | Not reported |
| Constype Cable Line Ind: | Not reported |
| Constype Comm Line Ind: | Not reported |
| Constype Commertial Ind: | Not reported |
| Constype Electrical Line Ind: | Not reported |
| Constype Gas Line Ind: | Not reported |
| Constype Industrial Ind: | Not reported |
| Constype Other Description: | Not reported |
| Constype Other Ind: | Not reported |
| Constype Recons Ind: | Not reported |
| Constype Residential Ind: | Not reported |
| Constype Transport Ind: | Not reported |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | Not reported |
| Constype Water Sewer Ind: | Not reported |

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

| | |
|---|---|
| Dir Discharge Uswater Ind: | Not reported |
| Receiving Water Name: | Not reported |
| Certifier: | Not reported |
| Certifier Title: | Not reported |
| Certification Date: | Not reported |
| Primary Sic: | Not reported |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |
| | |
| NPDES Number: | Not reported |
| Status: | Not reported |
| Agency Number: | Not reported |
| Region: | 4 |
| Regulatory Measure ID: | 456320 |
| Order Number: | Not reported |
| Regulatory Measure Type: | Construction |
| Place ID: | Not reported |
| WDID: | 4 19C374107 |
| Program Type: | Not reported |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | Not reported |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | 11/22/2016 |
| Discharge Name: | Not reported |
| Discharge Address: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |
| Received Date: | 09/23/2015 |
| Processed Date: | 09/24/2015 |
| Status: | Terminated |
| Status Date: | 04/27/2017 |
| Place Size: | 4.15 |
| Place Size Unit: | Acres |
| Contact: | Jenifer Murillo |
| Contact Title: | Not reported |
| Contact Phone: | 714-978-5027 |
| Contact Phone Ext: | Not reported |
| Contact Email: | jmurillo@costco.com |
| Operator Name: | COSTCO WHOLESALE |
| Operator Address: | 9 Corporate Park |
| Operator City: | Irvine |
| Operator State: | California |
| Operator Zip: | 92606 |
| Operator Contact: | Jenifer Murillo |
| Operator Contact Title: | Not reported |
| Operator Contact Phone: | 714-978-5027 |
| Operator Contact Phone Ext: | Not reported |
| Operator Contact Email: | jmurillo@costco.com |
| Operator Type: | Private Business |
| Developer: | COSTCO WHOLESALE |
| Developer Address: | 500 N State College Blvd |
| Developer City: | Orange |
| Developer State: | California |
| Developer Zip: | 92868 |
| Developer Contact: | Jenifer Murillo |
| Developer Contact Title: | Not reported |

**COSTCO WHOLESALE # 410 (Continued)** **1004677945**

| | |
|---|---|
| Constype Linear Utility Ind: | N |
| Emergency Phone: | Not reported |
| Emergency Phone Ext: | Not reported |
| Constype Above Ground Ind: | N |
| Constype Below Ground Ind: | N |
| Constype Cable Line Ind: | N |
| Constype Comm Line Ind: | N |
| Constype Commertial Ind: | Y |
| Constype Electrical Line Ind: | N |
| Constype Gas Line Ind: | N |
| Constype Industrial Ind: | N |
| Constype Other Description: | Fueling Station |
| Constype Other Ind: | Y |
| Constype Recons Ind: | N |
| Constype Residential Ind: | N |
| Constype Transport Ind: | N |
| Constype Utility Description: | Not reported |
| Constype Utility Ind: | N |
| Constype Water Sewer Ind: | N |
| Dir Discharge Uswater Ind: | N |
| Receiving Water Name: | San Gabriel River |
| Certifier: | Jenifer Murillo |
| Certifier Title: | Director of Real Estate Development |
| Certification Date: | 23-SEP-15 |
| Primary Sic: | Not reported |
| Secondary Sic: | Not reported |
| Tertiary Sic: | Not reported |

CIWQS:

| | |
|---|---|
| Agency: | COSTCO WHOLESALE |
| Agency Address: | 9 Corporate Park Suite 230, Irvine, CA 92606 |
| Place/Project Type: | Construction - Commercial, Other: Fueling Station |
| SIC/NAICS: | Not reported |
| Region: | 4 |
| Program: | CONSTW |
| Regulatory Measure Status: | Terminated |
| Regulatory Measure Type: | Storm water construction |
| Order Number: | 2009-0009-DWQ |
| WDID: | 4 19C374107 |
| NPDES Number: | CAS000002 |
| Adoption Date: | Not reported |
| Effective Date: | 09/24/2015 |
| Termination Date: | 11/22/2016 |
| Expiration/Review Date: | Not reported |
| Design Flow: | Not reported |
| Major/Minor: | Not reported |
| Complexity: | Not reported |
| TTWQ: | Not reported |
| Enforcement Actions within 5 years: | 0 |
| Violations within 5 years: | 0 |
| Latitude: | 33.918091 |
| Longitude: | -118.103126 |

**99**
**WSW**
**1/2-1**
**0.865 mi.**
**4565 ft.**

**NASA INDUSTRIAL PLANT (UNI**
**12214 LAKEWOOD**
**DOWNEY, CA 90241**

**ENVIROSTOR**
**CPS-SLIC**
**VCP**
**HIST CORTESE**

**S104564877**
**N/A**

**Relative:**
**Lower**

**Actual:**
**101 ft.**

ENVIROSTOR:

| | |
|---|---|
| Facility ID: | 19370366 |
| Status: | No Further Action |
| Status Date: | 08/02/2012 |
| Site Code: | 301157 |
| Site Type: | Voluntary Cleanup |
| Site Type Detailed: | Voluntary Cleanup |
| Acres: | 165 |
| NPL: | NO |
| Regulatory Agencies: | SMBRP, RWQCB 4 - Los Angeles |
| Lead Agency: | RWQCB 4 - Los Angeles,SMBRP |
| Program Manager: | Not reported |
| Supervisor: | Javier Hinojosa |
| Division Branch: | Cleanup Chatsworth |
| Assembly: | 58 |
| Senate: | 32 |
| Special Program: | Voluntary Cleanup Program |
| Restricted Use: | NO |
| Site Mgmt Req: | NONE SPECIFIED |
| Funding: | Responsible Party |
| Latitude: | 33.91829 |
| Longitude: | -118.1326 |
| APN: | 6256-004-019, 6256004036 |
| Past Use: | AEROSPACE MANUFACTURING/MAINTENANCE, AEROSPACE ROCKET TESTING/LAUNCH, MANUFACTURING - INDUSTRIAL MACHINERY, RESEARCH - AEROSPACE |
| Potential COC: | Arsenic Tetrachloroethylene (PCE Trichloroethylene (TCE |
| Confirmed COC: | Tetrachloroethylene (PCE Trichloroethylene (TCE Arsenic |
| Potential Description: | OTH, SOIL, SV, IA |
| Alias Name: | NASA INDUSTRIAL PLANT |
| Alias Type: | Alternate Name |
| Alias Name: | 6256-004-019 |
| Alias Type: | APN |
| Alias Name: | 6256004036 |
| Alias Type: | APN |
| Alias Name: | 110000830824 |
| Alias Type: | EPA (FRS #) |
| Alias Name: | 301157 |
| Alias Type: | Project Code (Site Code) |
| Alias Name: | 19370366 |
| Alias Type: | Envirostor ID Number |

Completed Info:

| | |
|---|---|
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Site Screening |
| Completed Date: | 01/20/1995 |
| Comments: | Site was identified from a non-emergency release report dated 12-23-94. Ground water at the site is contaminated with TCE and PCE. Due to evidence of a release of hazardous waste, a PEA is required. A letter of notification has been sent to the contact person. |
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Preliminary Endangerment Assessment Report |

**NASA INDUSTRIAL PLANT (UNI (Continued)** **S104564877**

Completed Date: 11/04/2004
Comments: VCA

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 11/07/2002
Comments: A Voluntary Cleanup Agreement was signed by DTSC and Kaiser Health Foundation on November 7, 2002. The purpose of the VCA is to conduct a PEA on Parcels II and IV of the Site. Parcels II and IV are being proposed for hospital complex development.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

CPS-SLIC:
Region: STATE
**Facility Status:** **Completed - Case Closed**
Status Date: 03/08/2017
Global Id: SL2045E1618
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number: Not reported
Latitude: 33.9239723749663
Longitude: -118.127961158752
Case Type: Cleanup Program Site
Case Worker: BA
Local Agency: Not reported
RB Case Number: 0302C
File Location: Regional Board
Potential Media Affected: Aquifer used for drinking water supply, Soil, Soil Vapor
Potential Contaminants of Concern: Not reported
Site History: The former NASA Industrial Plant (site) occupies approximately 155 acres in Downey, California, and is bound to the north by Stewart and Gray Road, to the south by Imperial Highway, to the west by Lakewood Boulevard and to the east by Bellflower Boulevard. The site was used for aircraft, and later, aerospace manufacturing by a series of entities from 1929 through 1999. The site was government owned and contractor operated. NASA utilized the plant for manufacture of Apollo and Space Shuttle components. Site activities included the use and storage of chlorinated solvents in support of various manufacturing processes. In 1986 the government declared the property excess to its needs and site manufacturing operations ceased at the site. During the fourth quarter of 2003, the property was transferred from NASA to the City of Downey, California. Following early transfer from NASA to the City of Downey, the various portions of the property were redeveloped. International Risk Assumption-Downey LLC assumed the role of responsible party as part of the early transfer arrangements between NASA, the State of California, and the City of Downey. Site assessments conducted at the site indicated that the soil and groundwater were impacted with volatile organic compounds

**NASA INDUSTRIAL PLANT (UNI (Continued)** **S104564877**

(VOCs) mainly perchloroethylene (PCE), trichloroethene (TCE) and Freon 113. A soil vapor extraction (SVE) system was installed and operated at various locations of the site from 2000 to 2008 to cleanup the soil. During the period of operation, the system removed approximately 6,000 pounds of VOCs. Sodium permanganate solution was injected into a silt layer at the 40 to 45 feet bgs interval below former Building 244 for in situ remediation to cleanup the residual VOCs in the silt layer of the vadose zone. In February 2012, the Regional Board issued a No Further Action (NFA) for site soils. Groundwater beneath the site has been subjected to in situ bioremediation using Enhanced Reductive Dechlorination (ERD) to address the dissolved phase PCE and TCE as well as the subsequent breakdown products from the remedial activities. The ERD process involved the injection of approximately 14,000,000 gallons of dilute carbohydrate solution at 174 points across the site beginning in November 2005. In October 2010, a de-halogenating bacteria was added to the solution injected in the southernmost site locations to enhance the remediation of VOCs at this location. Active injections of carbohydrate solution were stopped after first quarter 2012. Post-remediation groundwater monitoring was conducted from 2012 to 2016. On March 8, 2017, the Regional Board issued an NFA for the groundwater, which constituted a site closure.

Click here to access the California GeoTracker records for this facility:

VCP:

| | |
|---|---|
| Facility ID: | 19370366 |
| Site Type: | Voluntary Cleanup |
| Site Type Detail: | Voluntary Cleanup |
| Site Mgmt. Req.: | NONE SPECIFIED |
| Acres: | 165 |
| National Priorities List: | NO |
| Cleanup Oversight Agencies: | SMBRP, RWQCB 4 - Los Angeles |
| Lead Agency: | RWQCB 4 - Los Angeles,SMBRP |
| Lead Agency Description: | RWQCB 4 - Los Angeles |
| Lead Agency Description: | DTSC - Site Cleanup Program |
| Project Manager: | Not reported |
| Supervisor: | Javier Hinojosa |
| Division Branch: | Cleanup Chatsworth |
| Site Code: | 301157 |
| Assembly: | 58 |
| Senate: | 32 |
| Special Programs Code: | Voluntary Cleanup Program |
| Status: | No Further Action |
| Status Date: | 08/02/2012 |
| Restricted Use: | NO |
| Funding: | Responsible Party |
| Lat/Long: | 33.91829 / -118.1326 |
| APN: | 6256-004-019, 6256004036 |
| Past Use: | AEROSPACE MANUFACTURING/MAINTENANCE, AEROSPACE ROCKET TESTING/LAUNCH, MANUFACTURING - INDUSTRIAL MACHINERY, RESEARCH - AEROSPACE |
| Potential COC: | 30001, 30022, 30027 |
| Confirmed COC: | 30022,30027,30001 |
| Potential Description: | OTH, SOIL, SV, IA |
| Alias Name: | NASA INDUSTRIAL PLANT |
| Alias Type: | Alternate Name |
| Alias Name: | 6256-004-019 |

**NASA INDUSTRIAL PLANT (UNI (Continued)** **S104564877**

Alias Type: APN
Alias Name: 6256004036
Alias Type: APN
Alias Name: 110000830824
Alias Type: EPA (FRS #)
Alias Name: 301157
Alias Type: Project Code (Site Code)
Alias Name: 19370366
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 01/20/1995
Comments: Site was identified from a non-emergency release report dated 12-23-94. Ground water at the site is contaminated with TCE and PCE. Due to evidence of a release of hazardous waste, a PEA is required. A letter of notification has been sent to the contact person.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 11/04/2004
Comments: VCA

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 11/07/2002
Comments: A Voluntary Cleanup Agreement was signed by DTSC and Kaiser Health Foundation on November 7, 2002. The purpose of the VCA is to conduct a PEA on Parcels II and IV of the Site. Parcels II and IV are being proposed for hospital complex development.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: I-00386

**100 SW 1/2-1 0.907 mi. 4790 ft.** **UNIVERSAL MOLDING EXTRUSION CO., INC.**
**9151 E. IMPERIAL HIGHWAY**
**DOWNEY, CA 90242**

**ENVIROSTOR** **S104579435**
**N/A**

**Relative: Lower**

**Actual: 96 ft.**

ENVIROSTOR:

| | |
|---|---|
| Facility ID: | 71003361 |
| Status: | Refer: Local Agency |
| Status Date: | 05/25/2012 |
| Site Code: | Not reported |
| Site Type: | Evaluation |
| Site Type Detailed: | Evaluation |
| Acres: | 1.2 |
| NPL: | NO |
| Regulatory Agencies: | SMBRP |
| Lead Agency: | SMBRP |
| Program Manager: | Not reported |
| Supervisor: | Javier Hinojosa |
| Division Branch: | Cleanup Chatsworth |
| Assembly: | 58 |
| Senate: | 32 |
| Special Program: | EPA - PASI |
| Restricted Use: | NO |
| Site Mgmt Req: | NONE SPECIFIED |
| Funding: | Not reported |
| Latitude: | 33.91790 |
| Longitude: | -118.1315 |
| APN: | NONE SPECIFIED |
| Past Use: | NONE SPECIFIED |
| Potential COC: | NONE SPECIFIED |
| Confirmed COC: | NONE SPECIFIED |
| Potential Description: | NONE SPECIFIED |
| Alias Name: | CAL000147333 |
| Alias Type: | EPA Identification Number |
| Alias Name: | 71003361 |
| Alias Type: | Envirostor ID Number |

Completed Info:

| | |
|---|---|
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | PA/SI Site Screening |
| Completed Date: | 05/25/2012 |
| Comments: | Not reported |
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Phase 1 Non-Submittal |
| Completed Date: | 02/14/2001 |
| Comments: | Not reported |
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Phase I Verification |
| Completed Date: | 12/18/1997 |
| Comments: | Referred to local CUPA |
| Future Area Name: | Not reported |
| Future Sub Area Name: | Not reported |
| Future Document Type: | Not reported |

**UNIVERSAL MOLDING EXTRUSION CO., INC. (Continued)** **S104579435**

Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

---

**101**
**NW**
**1/2-1**
**0.912 mi.**
**4816 ft.**

**PIH HEALTH HOSPITAL DOWNEY**
**11500 BROOKSHIRE AVE**
**DOWNEY, CA 90241**

**ENVIROSTOR** **S100217721**
**LUST** **N/A**
**CHMIRS**
**LOS ANGELES CO. HMS**

**Relative:**
**Higher**

**Actual:**
**112 ft.**

ENVIROSTOR:
Facility ID: 71003236
Status: Refer: Other Agency
Status Date: Not reported
Site Code: Not reported
Site Type: Tiered Permit
Site Type Detailed: Tiered Permit
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Not reported
Division Branch: Cleanup Chatsworth
Assembly: 58
Senate: 32
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.93529
Longitude: -118.1302
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CAL000038831
Alias Type: EPA Identification Number
Alias Name: 71003236
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported

**PIH HEALTH HOSPITAL DOWNEY (Continued)** **S100217721**

Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

LUST:
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000011009
Global Id: T10000011009
Latitude: 33.9343
Longitude: -118.13098
Status: Open - Active
Status Date: 10/05/2017
Case Worker: JC
RB Case Number: R-58944
Local Agency: Not reported
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Not reported
Potential Contaminants of Concern: Not reported
Site History: Not reported

LUST:
Global Id: T10000011009
Contact Type: Regional Board Caseworker
Contact Name: JOSHUA CWIKLA
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4th Street, Suite 200
City: LOS ANGELES
Email: joshua.cwikla@waterboards.ca.gov
Phone Number: 2135766713

LUST:
Global Id: T10000011009
Action Type: ENFORCEMENT
Date: 10/05/2017
Action: Referral to Regional Board

Global Id: T10000011009
Action Type: Other
Date: 03/31/2017
Action: Leak Discovery

Global Id: T10000011009
Action Type: ENFORCEMENT
Date: 03/05/2018
Action: Staff Letter

Global Id: T10000011009
Action Type: Other
Date: 03/31/2017
Action: Leak Reported

Global Id: T10000011009
Action Type: RESPONSE
Date: 04/04/2018
Action: Other Report / Document

**PIH HEALTH HOSPITAL DOWNEY (Continued)** **S100217721**

Global Id: T10000011009
Action Type: Other
Date: 03/31/2017
Action: Leak Began

LUST:
Global Id: T10000011009
Status: Open - Case Begin Date
Status Date: 03/31/2017

Global Id: T10000011009
Status: Open - Active
Status Date: 10/05/2017

CHMIRS:

| | |
|---|---|
| OES Incident Number: | 012809 |
| OES notification: | Not reported |
| OES Date: | Not reported |
| OES Time: | Not reported |
| **Date Completed:** | **07-SEP-90** |
| Property Use: | 300 |
| Agency Id Number: | 19055 |
| Agency Incident Number: | 20150 |
| Time Notified: | 1229 |
| Time Completed: | 1600 |
| Surrounding Area: | 400 |
| Estimated Temperature: | Not reported |
| Property Management: | P |
| More Than Two Substances Involved?: | N |
| Resp Agncy Personel # Of Decontaminated: | 0 |
| Responding Agency Personel # Of Injuries: | 0 |
| Responding Agency Personel # Of Fatalities: | 0 |
| Others Number Of Decontaminated: | 0 |
| Others Number Of Injuries: | 0 |
| Others Number Of Fatalities: | 0 |
| Vehicle Make/year: | Not reported |
| Vehicle License Number: | Not reported |
| Vehicle State: | Not reported |
| Vehicle Id Number: | Not reported |
| CA DOT PUC/ICC Number: | Not reported |
| Company Name: | Not reported |
| Reporting Officer Name/ID: | D. LOCKARD, CAPT.#9 |
| Report Date: | 07-SEP-90 |
| Facility Telephone: | 213 869-7331 |
| Waterway Involved: | Not reported |
| Waterway: | Not reported |
| Spill Site: | Not reported |
| Cleanup By: | Not reported |
| Containment: | Not reported |
| What Happened: | Not reported |
| Type: | Not reported |
| Measure: | Not reported |
| Other: | Not reported |
| Date/Time: | Not reported |
| Year: | 88-92 |

**PIH HEALTH HOSPITAL DOWNEY (Continued)** **S100217721**

| | |
|---|---|
| Agency: | Not reported |
| Incident Date: | 07-SEP-90 |
| Admin Agency: | Not reported |
| Amount: | Not reported |
| Contained: | Not reported |
| Site Type: | Not reported |
| E Date: | 06-JUN-91 |
| Substance: | Not reported |
| Unknown: | Not reported |
| Substance #2: | Not reported |
| Substance #3: | Not reported |
| Evacuations: | Not reported |
| Number of Injuries: | Not reported |
| Number of Fatalities: | Not reported |
| #1 Pipeline: | Not reported |
| #2 Pipeline: | Not reported |
| #3 Pipeline: | Not reported |
| #1 Vessel >= 300 Tons: | Not reported |
| #2 Vessel >= 300 Tons: | Not reported |
| #3 Vessel >= 300 Tons: | Not reported |
| Evacs: | Not reported |
| Injuries: | Not reported |
| Fatals: | Not reported |
| Comments: | N |
| Description: | Not reported |
| | |
| OES Incident Number: | 1-3728 |
| OES notification: | 06/21/2011 |
| OES Date: | Not reported |
| OES Time: | Not reported |
| **Date Completed:** | **Not reported** |
| Property Use: | Not reported |
| Agency Id Number: | Not reported |
| Agency Incident Number: | Not reported |
| Time Notified: | Not reported |
| Time Completed: | Not reported |
| Surrounding Area: | Not reported |
| Estimated Temperature: | Not reported |
| Property Management: | Not reported |
| More Than Two Substances Involved?: | Not reported |
| Resp Agncy Personel # Of Decontaminated: | Not reported |
| Responding Agency Personel # Of Injuries: | Not reported |
| Responding Agency Personel # Of Fatalities: | Not reported |
| Others Number Of Decontaminated: | Not reported |
| Others Number Of Injuries: | Not reported |
| Others Number Of Fatalities: | Not reported |
| Vehicle Make/year: | Not reported |
| Vehicle License Number: | Not reported |
| Vehicle State: | Not reported |
| Vehicle Id Number: | Not reported |
| CA DOT PUC/ICC Number: | Not reported |
| Company Name: | Not reported |
| Reporting Officer Name/ID: | Not reported |
| Report Date: | Not reported |
| Facility Telephone: | Not reported |
| Waterway Involved: | Yes |
| Waterway: | Unknown Flood Control Channel |

**PIH HEALTH HOSPITAL DOWNEY (Continued)** **S100217721**

| | |
|---|---|
| Spill Site: | Merchant/Business |
| Cleanup By: | Unknown |
| Containment: | Not reported |
| What Happened: | Not reported |
| Type: | Not reported |
| Measure: | Gram(s) |
| Other: | Not reported |
| Date/Time: | 1100 |
| Year: | 2011 |
| Agency: | City of Downey FD |
| Incident Date: | 6/21/2011 |
| Admin Agency: | Downey Fire Department |
| Amount: | Not reported |
| Contained: | Yes |
| Site Type: | Unknown Flood Control Channel |
| E Date: | Not reported |
| Substance: | Unknown Dry Powder, White Colored, Poss Oxidizer/Corrosive |
| Quantity Released: | 3 |
| Unknown: | Not reported |
| Substance #2: | Not reported |
| Substance #3: | Not reported |
| Evacuations: | Not reported |
| Number of Injuries: | 3 |
| Number of Fatalities: | Not reported |
| #1 Pipeline: | Not reported |
| #2 Pipeline: | Not reported |
| #3 Pipeline: | Not reported |
| #1 Vessel >= 300 Tons: | Not reported |
| #2 Vessel >= 300 Tons: | Not reported |
| #3 Vessel >= 300 Tons: | Not reported |
| Evacs: | Not reported |
| Injuries: | Not reported |
| Fatals: | Not reported |
| Comments: | Not reported |
| Description: | Vehicle repair inside a trailer resulted in exposure, material was on the walls of the trailer and made the repairmen ill, during decontamination the rinse agent and the material flowed into the storm drain after an catch basin failed, unknown who is handling containment and clean up.. |
| OES Incident Number: | 907920 |
| OES notification: | Not reported |
| OES Date: | Not reported |
| OES Time: | Not reported |
| **Date Completed:** | **14-SEP-89** |
| Property Use: | 300 |
| Agency Id Number: | 19055 |
| Agency Incident Number: | 89-9003 |
| Time Notified: | 854 |
| Time Completed: | 1300 |
| Surrounding Area: | 400 |
| Estimated Temperature: | 75 |
| Property Management: | P |
| More Than Two Substances Involved?: | N |
| Resp Agncy Personel # Of Decontaminated: | 4 |

**PIH HEALTH HOSPITAL DOWNEY (Continued)** **S100217721**

| | |
|---|---|
| Responding Agency Personel # Of Injuries: | 0 |
| Responding Agency Personel # Of Fatalities: | 0 |
| Others Number Of Decontaminated: | 0 |
| Others Number Of Injuries: | 0 |
| Others Number Of Fatalities: | 0 |
| Vehicle Make/year: | Not reported |
| Vehicle License Number: | Not reported |
| Vehicle State: | Not reported |
| Vehicle Id Number: | Not reported |
| CA DOT PUC/ICC Number: | Not reported |
| Company Name: | Not reported |
| Reporting Officer Name/ID: | D. LOCKARD, CAPTAIN |
| Report Date: | 19-SEP-89 |
| Facility Telephone: | 213 869-7331 |
| Waterway Involved: | Not reported |
| Waterway: | Not reported |
| Spill Site: | Not reported |
| Cleanup By: | Not reported |
| Containment: | Not reported |
| What Happened: | Not reported |
| Type: | Not reported |
| Measure: | Not reported |
| Other: | Not reported |
| Date/Time: | Not reported |
| Year: | 88-92 |
| Agency: | Not reported |
| Incident Date: | 14-SEP-89 |
| Admin Agency: | Not reported |
| Amount: | Not reported |
| Contained: | Not reported |
| Site Type: | Not reported |
| E Date: | 18-MAY-90 |
| Substance: | Not reported |
| Unknown: | Not reported |
| Substance #2: | Not reported |
| Substance #3: | Not reported |
| Evacuations: | Not reported |
| Number of Injuries: | Not reported |
| Number of Fatalities: | Not reported |
| #1 Pipeline: | Not reported |
| #2 Pipeline: | Not reported |
| #3 Pipeline: | Not reported |
| #1 Vessel >= 300 Tons: | Not reported |
| #2 Vessel >= 300 Tons: | Not reported |
| #3 Vessel >= 300 Tons: | Not reported |
| Evacs: | Not reported |
| Injuries: | Not reported |
| Fatals: | Not reported |
| Comments: | Not reported |
| Description: | Not reported |

LOS ANGELES CO. HMS:

| | |
|---|---|
| Region: | LA |
| Permit Category: | T |
| Facility Id: | 011279-058944 |
| Facility Type: | 0 |
| Facility Status: | Permit |

**PIH HEALTH HOSPITAL DOWNEY (Continued)** **S100217721**

Area: 1F
Permit Number: 000779447
Permit Status: Permit

Count: 2 records. ORPHAN SUMMARY

| City | EDR ID | Site Name | Site Address | Zip | Database(s) |
|---|---|---|---|---|---|
| DOWNEY | S103878784 | STONEWOOD CENTER | FIRESTONE | 90241 | CPS-SLIC |
| DOWNEY | S121697579 | STAR CLEANERS | 8020 STEWART & GRAY | 90241 | DRYCLEANERS |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

**STANDARD ENVIRONMENTAL RECORDS**

***Federal NPL site list***

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

***Federal Delisted NPL site list***

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

***Federal CERCLIS list***

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/06/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 05/18/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Quarterly

***Federal CERCLIS NFRAP site list***

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 05/18/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Quarterly

***Federal RCRA CORRACTS facilities list***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

***Federal RCRA generators list***

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

***Federal institutional controls / engineering controls registries***

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 07/16/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/28/2018
Next Scheduled EDR Contact: 12/10/2018
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/28/2018
Next Scheduled EDR Contact: 12/10/2018
Data Release Frequency: Varies

***Federal ERNS list***

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/19/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/27/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

***State- and tribal - equivalent NPL***

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/30/2018
Date Data Arrived at EDR: 05/02/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Quarterly

***State- and tribal - equivalent CERCLIS***

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 04/30/2018
Date Data Arrived at EDR: 05/02/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Quarterly

***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/08/2018
Date Data Arrived at EDR: 08/10/2018
Date Made Active in Reports: 08/24/2018
Number of Days to Update: 14

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/10/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: Quarterly

***State and tribal leaking storage tank lists***

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 34
Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29
Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22
Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27
Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9
Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/25/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 34
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

***State and tribal registered storage tank lists***

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/09/2018
Number of Days to Update: 26
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Semi-Annually

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/10/2018
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 06/21/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Quarterly

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/25/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

***State and tribal voluntary cleanup sites***

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/30/2018
Date Data Arrived at EDR: 05/02/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/22/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Varies

***State and tribal Brownfields sites***

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 06/25/2018
Date Data Arrived at EDR: 06/27/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 40

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 06/27/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/19/2018
Date Data Arrived at EDR: 03/21/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/20/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Semi-Annually

***Local Lists of Landfill / Solid Waste Disposal Sites***

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 07/24/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 54

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 05/29/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 48

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/07/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/30/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/17/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 08/03/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/30/2018
Date Data Arrived at EDR: 05/02/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/12/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 55

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/28/2018
Next Scheduled EDR Contact: 12/10/2018
Data Release Frequency: Quarterly

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 44

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 07/25/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Quarterly

***Local Lists of Registered Storage Tanks***

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 03/28/2018
Date Data Arrived at EDR: 05/25/2018
Date Made Active in Reports: 07/10/2018
Number of Days to Update: 46

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/24/2018
Next Scheduled EDR Contact: 12/10/2018
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 04/19/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 10

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 44

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/25/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Quarterly

***Local Land Records***

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/05/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 43

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 30

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 06/04/2018
Date Data Arrived at EDR: 06/06/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 41

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Semi-Annually

***Records of Emergency Release Reports***

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 51

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)
Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 34

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)
Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 34

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/24/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/13/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/27/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/03/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/10/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/22/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/24/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 30

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/20/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/13/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 07/09/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/23/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/07/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/04/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/03/2018
Date Data Arrived at EDR: 04/05/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 85
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/05/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2018
Date Data Arrived at EDR: 04/16/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 74

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/09/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/24/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/20/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 30

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/03/2018
Date Data Arrived at EDR: 05/31/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 29

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 87

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/20/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/21/2018
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 28

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 02/25/2018
Date Data Arrived at EDR: 03/17/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 10/31/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 73

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/13/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 06/01/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 30

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/22/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 06/25/2018
Date Data Arrived at EDR: 06/27/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 40

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 06/27/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 04/03/2018
Date Data Arrived at EDR: 05/07/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 39

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 08/24/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA SAN FRANCISCO CO

Cupa facilities

Date of Government Version: 04/20/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 10

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: DRYCLEAN SOUTH COAST

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/16/2018
Date Data Arrived at EDR: 03/20/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 45

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 08/22/2018
Next Scheduled EDR Contact: 12/10/2018
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 06/25/2018
Date Data Arrived at EDR: 06/28/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 39

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 06/22/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/20/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 47

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/20/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 47

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/20/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 07/06/2018
Number of Days to Update: 73

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/20/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 60

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/17/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/15/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 38

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/07/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/12/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 97

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/13/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Annually

ICE: ICE
Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/21/2018
Date Data Arrived at EDR: 05/23/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 55
Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 08/21/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List
The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/21/2018
Date Data Arrived at EDR: 05/23/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 55
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/21/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 07/09/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 08/24/2018
Number of Days to Update: 44
Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 54
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/23/2018
Date Data Arrived at EDR: 06/06/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 42
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/16/2018
Date Made Active in Reports: 07/05/2018
Number of Days to Update: 50
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/10/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 06/04/2018
Date Data Arrived at EDR: 06/06/2018
Date Made Active in Reports: 07/19/2018
Number of Days to Update: 43
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 54
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 06/18/2018
Date Data Arrived at EDR: 06/20/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 47
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/14/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 04/27/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 34
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 04/13/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 67
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 06/25/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 35
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 35
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 35
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 35
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

CIWQS: California Integrated Water Quality System
The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 06/04/2018
Date Data Arrived at EDR: 06/06/2018
Date Made Active in Reports: 07/13/2018
Number of Days to Update: 37

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)
Other Oil & Gas Projects sites

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)
Non-Case Information sites

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data
The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 44

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/25/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**COUNTY RECORDS**

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 65

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 24

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/05/2018
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 07/01/2018
Date Data Arrived at EDR: 07/24/2018
Date Made Active in Reports: 08/20/2018
Number of Days to Update: 27

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 06/14/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 07/05/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 08/02/2018
Date Data Arrived at EDR: 08/06/2018
Date Made Active in Reports: 08/20/2018
Number of Days to Update: 14

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/25/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 05/23/2018
Date Data Arrived at EDR: 05/24/2018
Date Made Active in Reports: 07/13/2018
Number of Days to Update: 50

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 05/21/2018
Date Data Arrived at EDR: 05/25/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 56

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/30/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 04/27/2018
Date Data Arrived at EDR: 05/02/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 44

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 07/24/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/12/2018
Date Data Arrived at EDR: 07/12/2018
Date Made Active in Reports: 08/20/2018
Number of Days to Update: 39

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 07/30/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 9

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 07/17/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/11/2018
Date Data Arrived at EDR: 07/13/2018
Date Made Active in Reports: 08/22/2018
Number of Days to Update: 40

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/20/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 50

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/17/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 05/02/2018
Date Data Arrived at EDR: 05/07/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 72

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/20/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 06/12/2018
Date Data Arrived at EDR: 06/15/2018
Date Made Active in Reports: 07/13/2018
Number of Days to Update: 28
Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 08/08/2018
Date Data Arrived at EDR: 08/09/2018
Date Made Active in Reports: 08/22/2018
Number of Days to Update: 13
Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/16/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49
Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206
Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 04/16/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 60
Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 07/05/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/16/2018
Date Data Arrived at EDR: 07/18/2018
Date Made Active in Reports: 08/24/2018
Number of Days to Update: 37
Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/18/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2018
Date Data Arrived at EDR: 05/01/2018
Date Made Active in Reports: 05/14/2018
Number of Days to Update: 13
Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 04/17/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 63
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/20/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Semi-Annually

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/17/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Annually

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/05/2018
Date Made Active in Reports: 01/18/2018
Number of Days to Update: 13
Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/23/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/22/2018
Date Data Arrived at EDR: 05/24/2018
Date Made Active in Reports: 07/31/2018
Number of Days to Update: 68

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 03/30/2018
Date Data Arrived at EDR: 04/06/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 28

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/30/2018
Date Data Arrived at EDR: 06/01/2018
Date Made Active in Reports: 07/13/2018
Number of Days to Update: 42

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 05/22/2018
Date Data Arrived at EDR: 05/24/2018
Date Made Active in Reports: 07/13/2018
Number of Days to Update: 50

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/24/2018
Next Scheduled EDR Contact: 12/10/2018
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/13/2018
Date Data Arrived at EDR: 06/19/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 31

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 07/02/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/24/2018
Next Scheduled EDR Contact: 12/10/2018
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 05/23/2018
Date Data Arrived at EDR: 05/31/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 41

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/24/2018
Next Scheduled EDR Contact: 12/10/2018
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/01/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 45

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/24/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 05/11/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 42

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 05/11/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 45

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/03/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/10/2018
Number of Days to Update: 63

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/06/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/05/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 43

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 50

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 07/17/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/09/2018
Date Data Arrived at EDR: 07/13/2018
Date Made Active in Reports: 08/24/2018
Number of Days to Update: 42

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/18/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 24

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/18/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 05/07/2018
Date Data Arrived at EDR: 07/03/2018
Date Made Active in Reports: 08/13/2018
Number of Days to Update: 41

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/03/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 07/03/2018
Date Made Active in Reports: 08/13/2018
Number of Days to Update: 41

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/03/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 05/16/2018
Date Data Arrived at EDR: 05/22/2018
Date Made Active in Reports: 07/13/2018
Number of Days to Update: 52

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 04/09/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 69

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 07/24/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 06/04/2018
Date Data Arrived at EDR: 06/06/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 41

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/17/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/17/2018
Date Data Arrived at EDR: 07/24/2018
Date Made Active in Reports: 08/24/2018
Number of Days to Update: 31

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 07/17/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

SAN DIEGO CO. SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Quarterly

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 06/07/2018
Date Data Arrived at EDR: 06/12/2018
Date Made Active in Reports: 07/10/2018
Number of Days to Update: 28
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/14/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/16/2018
Date Data Arrived at EDR: 05/22/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 56
Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 06/12/2018
Date Data Arrived at EDR: 06/15/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 52

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 06/12/2018
Date Data Arrived at EDR: 06/15/2018
Date Made Active in Reports: 08/13/2018
Number of Days to Update: 59

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Varies

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 05/16/2018
Date Data Arrived at EDR: 05/23/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 55

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 08/24/2018
Next Scheduled EDR Contact: 12/10/2018
Data Release Frequency: Annually

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 05/16/2018
Date Data Arrived at EDR: 05/22/2018
Date Made Active in Reports: 07/19/2018
Number of Days to Update: 58

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/17/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2018
Date Data Arrived at EDR: 06/08/2018
Date Made Active in Reports: 07/18/2018
Number of Days to Update: 40

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2018
Date Data Arrived at EDR: 06/12/2018
Date Made Active in Reports: 07/12/2018
Number of Days to Update: 30

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 06/19/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 21

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/21/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/03/2018
Date Data Arrived at EDR: 07/10/2018
Date Made Active in Reports: 08/24/2018
Number of Days to Update: 45

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/21/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 08/14/2018
Date Data Arrived at EDR: 08/16/2018
Date Made Active in Reports: 08/24/2018
Number of Days to Update: 8

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/16/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 06/04/2018
Date Data Arrived at EDR: 06/08/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 33

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 01/26/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 47

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/17/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 03/19/2018
Date Data Arrived at EDR: 03/22/2018
Date Made Active in Reports: 04/17/2018
Number of Days to Update: 26

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 08/24/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 07/17/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 58

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/23/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/27/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Annually

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/07/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: Quarterly

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 07/02/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 08/24/2018
Number of Days to Update: 29

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/23/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 04/26/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 28
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 06/20/2018
Date Data Arrived at EDR: 07/03/2018
Date Made Active in Reports: 07/12/2018
Number of Days to Update: 9
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/27/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 05/10/2018
Date Data Arrived at EDR: 05/15/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 31
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 08/07/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

**OTHER DATABASE(S)**

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/22/2018
Number of Days to Update: 36
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 07/13/2018
Date Made Active in Reports: 08/01/2018
Number of Days to Update: 19
Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/13/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 04/30/2018
Date Data Arrived at EDR: 05/03/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/12/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/21/2018
Next Scheduled EDR Contact: 12/03/2018
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/15/2018
Date Made Active in Reports: 07/09/2018
Number of Days to Update: 24

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/11/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

**STREET AND ADDRESS INFORMATION**

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# GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

**TARGET PROPERTY ADDRESS**

KIRKHILL
12021 WOODRUFF AVENUE
DOWNEY, CA 90242

**TARGET PROPERTY COORDINATES**

| | |
|---|---|
| Latitude (North): | 33.925395 - 33° 55' 31.42'' |
| Longitude (West): | 118.117903 - 118° 7' 4.45'' |
| Universal Tranverse Mercator: | Zone 11 |
| UTM X (Meters): | 396669.1 |
| UTM Y (Meters): | 3754252.5 |
| Elevation: | 104 ft. above sea level |

**USGS TOPOGRAPHIC MAP**

| | |
|---|---|
| Target Property Map: | 5633777 WHITTIER, CA |
| Version Date: | 2012 |
| | |
| West Map: | 5633765 SOUTH GATE, CA |
| Version Date: | 2012 |

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW DIRECTION INFORMATION**

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

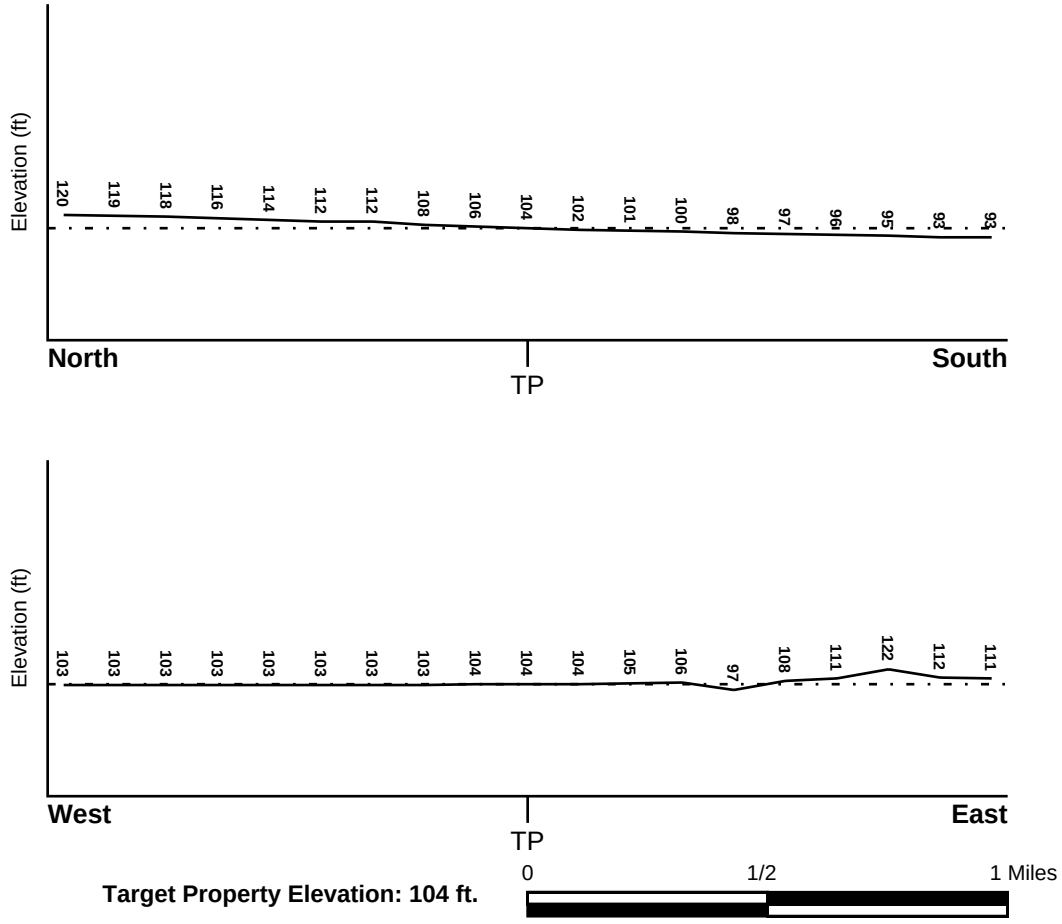
**TOPOGRAPHIC INFORMATION**

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

**TARGET PROPERTY TOPOGRAPHY**

General Topographic Gradient: General SSW

**SURROUNDING TOPOGRAPHY: ELEVATION PROFILES**




Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**HYDROLOGIC INFORMATION**

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

**FEMA FLOOD ZONE**

| Flood Plain Panel at Target Property | FEMA Source Type |
|---|---|
| 06037C1840F | FEMA FIRM Flood data |

| Additional Panels in search area: | FEMA Source Type |
|---|---|
| 06037C1810F | FEMA FIRM Flood data |
| 06037C1830F | FEMA FIRM Flood data |
| 06037C1820F | FEMA FIRM Flood data |

**NATIONAL WETLAND INVENTORY**

| NWI Quad at Target Property | NWI Electronic Data Coverage |
|---|---|
| WHITTIER | YES - refer to the Overview Map and Detail Map |

**HYDROGEOLOGIC INFORMATION**

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

***Site-Specific Hydrogeological Data*:***

| | |
|---|---|
| Search Radius: | 1.25 miles |
| Status: | Not found |

**AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| MAP ID | LOCATION FROM TP | GENERAL DIRECTION GROUNDWATER FLOW |
|---|---|---|
| Not Reported | | |

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW VELOCITY INFORMATION**

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

**GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY**

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

**ROCK STRATIGRAPHIC UNIT**

| | |
|---|---|
| Era: | Cenozoic |
| System: | Quaternary |
| Series: | Quaternary |
| Code: | Q *(decoded above as Era, System & Series)* |

**GEOLOGIC AGE IDENTIFICATION**

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

**DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY**

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: URBAN LAND

Soil Surface Texture: variable

Hydrologic Group: Not reported

Soil Drainage Class: Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 10 inches

Depth to Bedrock Max: > 10 inches

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | | |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | Permeability Rate (in/hr) | Soil Reaction (pH) |
| 1 | 0 inches | 6 inches | variable | Not reported | Not reported | Max: 0.00<br>Min: 0.00 | Max: 0.00<br>Min: 0.00 |

**OTHER SOIL TYPES IN AREA**

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures:
loam
clay
silt loam
loamy sand
sandy loam
fine sand
clay loam
gravelly - sandy loam
coarse sand
gravelly - sand
sand

Surficial Soil Types:
loam
clay
silt loam
loamy sand
sandy loam
fine sand
clay loam
gravelly - sandy loam
coarse sand
gravelly - sand
sand

Shallow Soil Types:
fine sandy loam
gravelly - loam
sand
silty clay

Deeper Soil Types:
stratified
clay loam
silty clay loam
gravelly - sandy loam
coarse sand
sand
weathered bedrock
very fine sandy loam

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

### WELL SEARCH DISTANCE INFORMATION

| DATABASE | SEARCH DISTANCE (miles) |
|---|---|
| Federal USGS | 1.000 |
| Federal FRDS PWS | Nearest PWS within 1 mile |
| State Database | 1.000 |

### FEDERAL USGS WELL INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| 1 | USGS40000139064 | 0 - 1/8 Mile ESE |
| 6 | USGS40000139019 | 1/2 - 1 Mile ESE |
| 8 | USGS40000139161 | 1/2 - 1 Mile North |
| B9 | USGS40000139157 | 1/2 - 1 Mile NNE |
| C11 | USGS40000139099 | 1/2 - 1 Mile ENE |
| C12 | USGS40000139100 | 1/2 - 1 Mile ENE |
| C13 | USGS40000139101 | 1/2 - 1 Mile ENE |
| C14 | USGS40000139096 | 1/2 - 1 Mile ENE |
| C15 | USGS40000139097 | 1/2 - 1 Mile ENE |
| C16 | USGS40000139098 | 1/2 - 1 Mile ENE |
| 17 | USGS40000138966 | 1/2 - 1 Mile SSE |

### FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No PWS System Found | | |

Note: PWS System location is not always the same as well location.

### STATE DATABASE WELL INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| 2 | 3948 | 1/8 - 1/4 Mile ESE |
| A3 | 3960 | 1/2 - 1 Mile South |
| A4 | 3961 | 1/2 - 1 Mile South |
| A5 | 3964 | 1/2 - 1 Mile South |
| 7 | 3949 | 1/2 - 1 Mile SE |
| B10 | 3916 | 1/2 - 1 Mile NNE |

## OTHER STATE DATABASE INFORMATION

### STATE OIL/GAS WELL INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| 1 | CAOG11000204628 | 1/2 - 1 Mile SSW |

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**STATE OIL/GAS WELL INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| 2 | CAOG11000205158 | 1/2 - 1 Mile NNE |
| 3 | CAOG11000204569 | 1/2 - 1 Mile ENE |

# PHYSICAL SETTING SOURCE MAP - 5408632.2s




0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

| | | | |
|---|---|---|---|
| SITE NAME: | Kirkhill | CLIENT: | Partner Engineering and Science, Inc. |
| ADDRESS: | 12021 Woodruff Avenue<br>Downey CA 90242 | CONTACT: | Colleen Tubridy |
| | | INQUIRY #: | 5408632.2s |
| LAT/LONG: | 33.925395 / 118.117903 | DATE: | August 29, 2018 11:36 am |

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# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

**1**
**ESE** **FED USGS** **USGS40000139064**
**0 - 1/8 Mile**
**Higher**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-CA | | |
| Organization Name: | USGS California Water Science Center | | |
| Monitor Location: | 003S012W11E001S | Type: | Well |
| Description: | Not Reported | HUC: | 18070105 |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | California Coastal Basin aquifers | | |
| Formation Type: | Not Reported | Aquifer Type: | Not Reported |
| Construction Date: | Not Reported | Well Depth: | 544 |
| Well Depth Units: | ft | Well Hole Depth: | 544 |
| Well Hole Depth Units: | ft | | |

---

**2**
**ESE** **CA WELLS** **3948**
**1/8 - 1/4 Mile**
**Higher**

| | | | |
|---|---|---|---|
| Seq: | 3948 | Prim sta c: | 03S/12W-11E01 S |
| Frds no: | 1910034025 | County: | 19 |
| District: | 07 | User id: | 4TH |
| System no: | 1910034 | Water type: | G |
| Source nam: | WELL 24 (OLD PWC WELL 08B) | Station ty: | WELL/AMBNT/MUN/INTAKE/SUPPLY |
| Latitude: | 335529.0 | Longitude: | 1180650.0 |
| Precision: | 3 | Status: | AR |
| Comment 1: | THIS WELL WAS PURCHASED BY CITY OF DOWNEY FROM PARK WATER CO IN 1978. | | |
| Comment 2: | Not Reported | Comment 3: | Not Reported |
| Comment 4: | Not Reported | Comment 5: | Not Reported |
| Comment 6: | Not Reported | Comment 7: | Not Reported |
| | | | |
| System no: | 1910034 | System nam: | DOWNEY - CITY, WATER DEPT. |
| Hqname: | Not Reported | Address: | 9252 Stewart & Gray Road |
| City: | Downey | State: | CA |
| Zip: | 90241 | Zip ext: | Not Reported |
| Pop serv: | 91000 | Connection: | 23000 |
| Area serve: | DOWNEY | | |
| | | | |
| Sample date: | 21-NOV-17 | Finding: | 1.7 |
| Chemical: | URANIUM (PCI/L) | Report units: | PCI/L |
| Dlr: | 1. | | |
| | | | |
| Sample date: | 21-NOV-17 | Finding: | 0.193 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| | | | |
| Sample date: | 21-NOV-17 | Finding: | 0.4 |
| Chemical: | RADIUM 228 MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| | | | |
| Sample date: | 21-NOV-17 | Finding: | 0.342 |
| Chemical: | RADIUM 226 MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| | | | |
| Sample date: | 21-NOV-17 | Finding: | 0.543 |

| | | | |
|---|---|---|---|
| Chemical: | RADIUM 228 COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 21-NOV-17 | Finding: | 3.4e-002 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 21-NOV-17 | Finding: | 9.1e-002 |
| Chemical: | RADIUM 226 COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 11-JAN-17 | Finding: | 2.9 |
| Chemical: | NITRATE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 11-JAN-17 | Finding: | 2.9 |
| Chemical: | NITRATE + NITRITE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 23-FEB-16 | Finding: | 69. |
| Chemical: | CHLORIDE | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 110. |
| Chemical: | SULFATE | Report units: | MG/L |
| Dlr: | 0.5 | | |
| Sample date: | 23-FEB-16 | Finding: | 0.35 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 23-FEB-16 | Finding: | 530. |
| Chemical: | TOTAL DISSOLVED SOLIDS | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 0.4 |
| Chemical: | LANGELIER INDEX AT SOURCE TEMP. | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 12. |
| Chemical: | AGGRSSIVE INDEX (CORROSIVITY) | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 2.5 |
| Chemical: | NITRATE + NITRITE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 23-FEB-16 | Finding: | 4.4 |
| Chemical: | POTASSIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 61. |
| Chemical: | SODIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 17. |
| Chemical: | MAGNESIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 78. |
| Chemical: | CALCIUM | Report units: | MG/L |
| Dlr: | 0. | | |

| | | | |
|---|---|---|---|
| Sample date: | 23-FEB-16 | Finding: | 260. |
| Chemical: | HARDNESS (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 2.5 |
| Chemical: | NITRATE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 23-FEB-16 | Finding: | 200. |
| Chemical: | BICARBONATE ALKALINITY | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 170. |
| Chemical: | ALKALINITY (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 7.76 |
| Chemical: | PH, LABORATORY | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 67.3 |
| Chemical: | SOURCE TEMPERATURE C | Report units: | C |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 790. |
| Chemical: | SPECIFIC CONDUCTANCE | Report units: | US |
| Dlr: | 0. | | |
| Sample date: | 15-DEC-15 | Finding: | 1.3 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 15-DEC-15 | Finding: | 1.83 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 19-AUG-15 | Finding: | 1.85 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 19-AUG-15 | Finding: | 1.73 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 06-MAY-15 | Finding: | 1.45 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 06-MAY-15 | Finding: | 1.16 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 24-MAR-15 | Finding: | 1.65 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 24-MAR-15 | Finding: | 1.41 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 120. |
| Chemical: | SULFATE | Report units: | MG/L |

| | | | |
|---|---|---|---|
| Dlr: | 0.5 | | |
| Sample date: | 21-FEB-13 | Finding: | 0.36 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 21-FEB-13 | Finding: | 2.1 |
| Chemical: | ARSENIC | Report units: | UG/L |
| Dlr: | 2. | | |
| Sample date: | 21-FEB-13 | Finding: | 530. |
| Chemical: | TOTAL DISSOLVED SOLIDS | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 0.5 |
| Chemical: | LANGELIER INDEX AT SOURCE TEMP. | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 12. |
| Chemical: | AGGRSSIVE INDEX (CORROSIVITY) | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 78. |
| Chemical: | CHLORIDE | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 4.3 |
| Chemical: | POTASSIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 63. |
| Chemical: | SODIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 17. |
| Chemical: | MAGNESIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 84. |
| Chemical: | CALCIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 280. |
| Chemical: | HARDNESS (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 200. |
| Chemical: | BICARBONATE ALKALINITY | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 160. |
| Chemical: | ALKALINITY (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 7.47 |
| Chemical: | PH, LABORATORY | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 7.9 |
| Chemical: | PH, FIELD | Report units: | Not Reported |
| Dlr: | 0. | | |

| | | | |
|---|---|---|---|
| Sample date: | 21-FEB-13 | Finding: | 800. |
| Chemical: | SPECIFIC CONDUCTANCE | Report units: | US |
| Dlr: | 0. | | |
| Sample date: | 21-FEB-13 | Finding: | 16.1 |
| Chemical: | SOURCE TEMPERATURE C | Report units: | C |
| Dlr: | 0. | | |

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**A3**
**South**
**1/2 - 1 Mile**
**Lower**

**CA WELLS 3960**

| | | | |
|---|---|---|---|
| Seq: | 3960 | Prim sta c: | 03S/12W-14F01 S |
| Frds no: | 1910211016 | County: | 19 |
| District: | 07 | User id: | 4TH |
| System no: | 1910211 | Water type: | G |
| Source nam: | WELL 28-B - STANDBY | Station ty: | WELL/AMBNT/MUN/INTAKE/SUPPLY |
| Latitude: | 335500.0 | Longitude: | 1180700.0 |
| Precision: | 8 | Status: | SR |
| Comment 1: | Not Reported | Comment 2: | Not Reported |
| Comment 3: | Not Reported | Comment 4: | Not Reported |
| Comment 5: | Not Reported | Comment 6: | Not Reported |
| Comment 7: | Not Reported | | |
| System no: | 1910211 | System nam: | PARK WC - BELLFLOWER-NORWALK |
| Hqname: | PARK WATER CO | Address: | PO BOX 7002 (9750 WASHBURN RD) |
| City: | DOWNEY | State: | CA |
| Zip: | 90241 | Zip ext: | Not Reported |
| Pop serv: | 70000 | Connection: | 15837 |
| Area serve: | BELLFLOWER-NORWALK | | |
| Sample date: | 03-NOV-17 | Finding: | 0.112 |
| Chemical: | RADIUM 226 COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 03-NOV-17 | Finding: | 0.322 |
| Chemical: | RADIUM 226 MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 03-NOV-17 | Finding: | 7.9 |
| Chemical: | GROSS BETA | Report units: | PCI/L |
| Dlr: | 4. | | |
| Sample date: | 03-NOV-17 | Finding: | 0.131 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 03-NOV-17 | Finding: | 2.7 |
| Chemical: | NITRATE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 03-NOV-17 | Finding: | 0.4 |
| Chemical: | RADIUM 228 MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 03-NOV-17 | Finding: | 0.322 |
| Chemical: | RADIUM 226 MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 03-NOV-17 | Finding: | 0.577 |

| | | | |
|---|---|---|---|
| Chemical: | RADIUM 228 COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 03-NOV-17 | Finding: | 0.112 |
| Chemical: | RADIUM 226 COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 03-NOV-17 | Finding: | 0.944 |
| Chemical: | GROSS BETA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 03-NOV-17 | Finding: | 1.258 |
| Chemical: | GROSS BETA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 03-NOV-17 | Finding: | 3.4e-002 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 03-NOV-17 | Finding: | 0.577 |
| Chemical: | RADIUM 228 COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 03-NOV-17 | Finding: | 0.4 |
| Chemical: | RADIUM 228 MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 20-OCT-17 | Finding: | 2.7 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 23-JUN-17 | Finding: | 0.34 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 23-JUN-17 | Finding: | 110. |
| Chemical: | SULFATE | Report units: | MG/L |
| Dlr: | 0.5 | | |
| Sample date: | 23-JUN-17 | Finding: | 78. |
| Chemical: | CHLORIDE | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-JUN-17 | Finding: | 4.4 |
| Chemical: | POTASSIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-JUN-17 | Finding: | 59. |
| Chemical: | SODIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-JUN-17 | Finding: | 16. |
| Chemical: | MAGNESIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-JUN-17 | Finding: | 83. |
| Chemical: | CALCIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-JUN-17 | Finding: | 270. |
| Chemical: | HARDNESS (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |

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|---|---|---|---|
| Sample date: | 23-JUN-17 | Finding: | 2.7 |
| Chemical: | NITRATE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 23-JUN-17 | Finding: | 210. |
| Chemical: | BICARBONATE ALKALINITY | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-JUN-17 | Finding: | 170. |
| Chemical: | ALKALINITY (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 23-JUN-17 | Finding: | 7.68 |
| Chemical: | PH, LABORATORY | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 23-JUN-17 | Finding: | 850. |
| Chemical: | SPECIFIC CONDUCTANCE | Report units: | US |
| Dlr: | 0. | | |
| Sample date: | 23-JUN-17 | Finding: | 520. |
| Chemical: | TOTAL DISSOLVED SOLIDS | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 19-MAY-17 | Finding: | 0.36 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 17-APR-17 | Finding: | 2.6 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 17-APR-17 | Finding: | 0.34 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 17-APR-17 | Finding: | 2.7 |
| Chemical: | NITRATE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 08-DEC-16 | Finding: | 3. |
| Chemical: | NITRATE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 08-DEC-16 | Finding: | 3.2 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 08-DEC-16 | Finding: | 200. |
| Chemical: | BORON | Report units: | UG/L |
| Dlr: | 100. | | |
| Sample date: | 08-DEC-16 | Finding: | 0.37 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 25-JUN-15 | Finding: | 0.31 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 07-MAY-15 | Finding: | 7.8 |
| Chemical: | PH, LABORATORY | Report units: | Not Reported |

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|---|---|---|---|
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 180. |
| Chemical: | ALKALINITY (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 220. |
| Chemical: | BICARBONATE ALKALINITY | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 280. |
| Chemical: | HARDNESS (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 85.4 |
| Chemical: | CALCIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 16. |
| Chemical: | MAGNESIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 65. |
| Chemical: | SODIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 4.1 |
| Chemical: | POTASSIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 77. |
| Chemical: | CHLORIDE | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 120. |
| Chemical: | SULFATE | Report units: | MG/L |
| Dlr: | 0.5 | | |
| Sample date: | 07-MAY-15 | Finding: | 4.7 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 07-MAY-15 | Finding: | 2.2 |
| Chemical: | ARSENIC | Report units: | UG/L |
| Dlr: | 2. | | |
| Sample date: | 07-MAY-15 | Finding: | 7.9e-002 |
| Chemical: | FOAMING AGENTS (MBAS) | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 500. |
| Chemical: | TOTAL DISSOLVED SOLIDS | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 1.03 |
| Chemical: | LANGELIER INDEX @ 60 C | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 07-MAY-15 | Finding: | 12.4 |
| Chemical: | AGGRSSIVE INDEX (CORROSIVITY) | Report units: | Not Reported |
| Dlr: | 0. | | |

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|---|---|---|---|
| Sample date: | 07-MAY-15 | Finding: | 2900. |
| Chemical: | NITRATE + NITRITE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 07-MAY-15 | Finding: | 3.2 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 07-MAY-15 | Finding: | 840. |
| Chemical: | SPECIFIC CONDUCTANCE | Report units: | US |
| Dlr: | 0. | | |
| Sample date: | 16-OCT-14 | Finding: | 3.5 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 16-JUN-14 | Finding: | 0.35 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 17-APR-14 | Finding: | 3.3 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 24-OCT-13 | Finding: | 3.1 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 15-MAY-13 | Finding: | 0.38 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 25-APR-13 | Finding: | 0.258 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 25-APR-13 | Finding: | 1.6e-002 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 25-APR-13 | Finding: | 0.439 |
| Chemical: | RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0 | | |
| Report units: | PCI/L | Dlr: | 0. |
| Sample date: | 25-APR-13 | Finding: | 0.22 |
| Chemical: | RA-226 OR TOTAL RA BY 903.0 C.E. | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 25-APR-13 | Finding: | 0.254 |
| Chemical: | RADIUM 228 MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 25-APR-13 | Finding: | 0.542 |
| Chemical: | RADIUM 228 COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 17-APR-13 | Finding: | 5.4 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 17-APR-13 | Finding: | 2.3 |
| Chemical: | URANIUM (PCI/L) | Report units: | PCI/L |

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|---|---|---|---|
| Dlr: | 1. | | |
| Sample date: | 17-APR-13 | Finding: | 3.3 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 09-OCT-12 | Finding: | 4.5 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 26-SEP-12 | Finding: | 0.12 |
| Chemical: | PROMETON | Report units: | UG/L |
| Dlr: | 0. | | |
| Sample date: | 06-JUN-12 | Finding: | 0.46 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 12-APR-12 | Finding: | 12.2 |
| Chemical: | AGGRSSIVE INDEX (CORROSIVITY) | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 12-APR-12 | Finding: | 2900. |
| Chemical: | NITRATE + NITRITE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 12-APR-12 | Finding: | 3.5 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 12-APR-12 | Finding: | 0.822 |
| Chemical: | LANGELIER INDEX @ 60 C | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 12-APR-12 | Finding: | 500. |
| Chemical: | TOTAL DISSOLVED SOLIDS | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-APR-12 | Finding: | 2.1 |
| Chemical: | ARSENIC | Report units: | UG/L |
| Dlr: | 2. | | |
| Sample date: | 12-APR-12 | Finding: | 4.4 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 12-APR-12 | Finding: | 130. |
| Chemical: | SULFATE | Report units: | MG/L |
| Dlr: | 0.5 | | |
| Sample date: | 12-APR-12 | Finding: | 76. |
| Chemical: | CHLORIDE | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-APR-12 | Finding: | 4.3 |
| Chemical: | POTASSIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-APR-12 | Finding: | 64. |
| Chemical: | SODIUM | Report units: | MG/L |
| Dlr: | 0. | | |

| | | | |
|---|---|---|---|
| Sample date: | 12-APR-12 | Finding: | 17. |
| Chemical: | MAGNESIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-APR-12 | Finding: | 87. |
| Chemical: | CALCIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-APR-12 | Finding: | 290. |
| Chemical: | HARDNESS (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-APR-12 | Finding: | 220. |
| Chemical: | BICARBONATE ALKALINITY | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-APR-12 | Finding: | 180. |
| Chemical: | ALKALINITY (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-APR-12 | Finding: | 7.59 |
| Chemical: | PH, LABORATORY | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 12-APR-12 | Finding: | 840. |
| Chemical: | SPECIFIC CONDUCTANCE | Report units: | US |
| Dlr: | 0. | | |

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**A4**
**South**
**1/2 - 1 Mile**
**Lower**

**CA WELLS 3961**

| | | | |
|---|---|---|---|
| Seq: | 3961 | Prim sta c: | 03S/12W-14F02 S |
| Frds no: | 1910018012 | County: | 19 |
| District: | 07 | User id: | 4TH |
| System no: | 1910018 | Water type: | G |
| Source nam: | WELL 14 - STANDBY | Station ty: | WELL/AMBNT/MUN/INTAKE/SUPPLY |
| Latitude: | 335500.0 | Longitude: | 1180700.0 |
| Precision: | 8 | Status: | SR |
| Comment 1: | Not Reported | Comment 2: | Not Reported |
| Comment 3: | Not Reported | Comment 4: | Not Reported |
| Comment 5: | Not Reported | Comment 6: | Not Reported |
| Comment 7: | Not Reported | | |
| System no: | 1910018 | System nam: | PEERLESS WC |
| Hqname: | Not Reported | Address: | P O BOX 117 |
| City: | BELLFLOWER | State: | Not Reported |
| Zip: | 90706 | Zip ext: | Not Reported |
| Pop serv: | 9000 | Connection: | 2005 |
| Area serve: | BELLFLOWER | | |

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**A5**
**South**
**1/2 - 1 Mile**
**Lower**

**CA WELLS 3964**

| | | | |
|---|---|---|---|
| Seq: | 3964 | Prim sta c: | 03S/12W-15A03 S |
| Frds no: | 1910211015 | County: | 19 |
| District: | 07 | User id: | 4TH |

| | | | |
|---|---|---|---|
| System no: | 1910211 | Water type: | G |
| Source nam: | WELL 28-A - DESTROYED | Station ty: | WELL/AMBNT/MUN/INTAKE/SUPPLY |
| Latitude: | 335500.0 | Longitude: | 1180700.0 |
| Precision: | 8 | Status: | DS |
| Comment 1: | Not Reported | Comment 2: | Not Reported |
| Comment 3: | Not Reported | Comment 4: | Not Reported |
| Comment 5: | Not Reported | Comment 6: | Not Reported |
| Comment 7: | Not Reported | | |

| | | | |
|---|---|---|---|
| System no: | 1910211 | System nam: | PARK WC - BELLFLOWER-NORWALK |
| Hqname: | PARK WATER CO | Address: | PO BOX 7002 (9750 WASHBURN RD) |
| City: | DOWNEY | State: | CA |
| Zip: | 90241 | Zip ext: | Not Reported |
| Pop serv: | 70000 | Connection: | 15837 |
| Area serve: | BELLFLOWER-NORWALK | | |

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**6**
**ESE** **FED USGS** **USGS40000139019**
**1/2 - 1 Mile**
**Lower**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-CA | | |
| Organization Name: | USGS California Water Science Center | | |
| Monitor Location: | 003S012W11K006S | Type: | Well |
| Description: | Not Reported | HUC: | 18070106 |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | California Coastal Basin aquifers | | |
| Formation Type: | Not Reported | Aquifer Type: | Not Reported |
| Construction Date: | Not Reported | Well Depth: | 500 |
| Well Depth Units: | ft | Well Hole Depth: | 527 |
| Well Hole Depth Units: | ft | | |

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**7**
**SE** **CA WELLS** **3949**
**1/2 - 1 Mile**
**Lower**

| | | | |
|---|---|---|---|
| Seq: | 3949 | Prim sta c: | 03S/12W-11K06 S |
| Frds no: | 1910211026 | County: | 19 |
| District: | 07 | User id: | 4TH |
| System no: | 1910211 | Water type: | G |
| Source nam: | WELL 41-A | Station ty: | WELL/AMBNT/MUN/INTAKE |
| Latitude: | 335508.0 | Longitude: | 1180628.0 |
| Precision: | 3 | Status: | AR |
| Comment 1: | Not Reported | Comment 2: | Not Reported |
| Comment 3: | Not Reported | Comment 4: | Not Reported |
| Comment 5: | Not Reported | Comment 6: | Not Reported |
| Comment 7: | Not Reported | | |

| | | | |
|---|---|---|---|
| System no: | 1910211 | System nam: | PARK WC - BELLFLOWER-NORWALK |
| Hqname: | PARK WATER CO | Address: | PO BOX 7002 (9750 WASHBURN RD) |
| City: | DOWNEY | State: | CA |
| Zip: | 90241 | Zip ext: | Not Reported |
| Pop serv: | 70000 | Connection: | 15837 |
| Area serve: | BELLFLOWER-NORWALK | | |

| | | | |
|---|---|---|---|
| Sample date: | 20-OCT-17 | Finding: | 1.3 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |

| | | | |
|---|---|---|---|
| Dlr: | 1. | | |
| Sample date: | 19-MAY-17 | Finding: | 0.31 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 28-APR-17 | Finding: | 450. |
| Chemical: | TOTAL DISSOLVED SOLIDS | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 28-APR-17 | Finding: | 0.33 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 28-APR-17 | Finding: | 110. |
| Chemical: | SULFATE | Report units: | MG/L |
| Dlr: | 0.5 | | |
| Sample date: | 28-APR-17 | Finding: | 77. |
| Chemical: | CHLORIDE | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 28-APR-17 | Finding: | 4.3 |
| Chemical: | POTASSIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 28-APR-17 | Finding: | 68. |
| Chemical: | SODIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 28-APR-17 | Finding: | 14.3 |
| Chemical: | MAGNESIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 28-APR-17 | Finding: | 71.2 |
| Chemical: | CALCIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 28-APR-17 | Finding: | 760. |
| Chemical: | SPECIFIC CONDUCTANCE | Report units: | US |
| Dlr: | 0. | | |
| Sample date: | 28-APR-17 | Finding: | 7.65 |
| Chemical: | PH, LABORATORY | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 28-APR-17 | Finding: | 160. |
| Chemical: | ALKALINITY (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 28-APR-17 | Finding: | 190. |
| Chemical: | BICARBONATE ALKALINITY | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 28-APR-17 | Finding: | 2.4 |
| Chemical: | NITRATE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 28-APR-17 | Finding: | 237. |
| Chemical: | HARDNESS (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |

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|---|---|---|---|
| Sample date: | 28-APR-17 | Finding: | 1.2 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 28-APR-17 | Finding: | 2.4 |
| Chemical: | NITRATE + NITRITE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 19-MAY-16 | Finding: | 4.e-002 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 19-MAY-16 | Finding: | 1.4 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 19-MAY-16 | Finding: | 1.4 |
| Chemical: | URANIUM (PCI/L) | Report units: | PCI/L |
| Dlr: | 1. | | |
| Sample date: | 19-MAY-16 | Finding: | 0.163 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 19-MAY-16 | Finding: | 0.32 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 19-MAY-16 | Finding: | 2.3 |
| Chemical: | NITRATE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 19-MAY-16 | Finding: | 0.253 |
| Chemical: | RADIUM 228 MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 19-MAY-16 | Finding: | 0.47 |
| Chemical: | RADIUM 226 MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 19-MAY-16 | Finding: | 0.525 |
| Chemical: | RADIUM 228 COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 19-MAY-16 | Finding: | 0.341 |
| Chemical: | RADIUM 226 COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 19-MAY-16 | Finding: | 7.4e-002 |
| Chemical: | RADIUM 226 | Report units: | PCI/L |
| Dlr: | 1. | | |
| Sample date: | 09-APR-15 | Finding: | 1.4 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 09-APR-15 | Finding: | 0.27 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 13-NOV-14 | Finding: | 1.4 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |

| | | | |
|---|---|---|---|
| Dlr: | 1. | | |
| Sample date: | 17-APR-14 | Finding: | 14.9 |
| Chemical: | MAGNESIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 1.5 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 17-APR-14 | Finding: | 2700. |
| Chemical: | NITRATE + NITRITE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 17-APR-14 | Finding: | 11.9 |
| Chemical: | AGGRSSIVE INDEX (CORROSIVITY) | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 0.599 |
| Chemical: | LANGELIER INDEX @ 60 C | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 480. |
| Chemical: | TOTAL DISSOLVED SOLIDS | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 790. |
| Chemical: | SPECIFIC CONDUCTANCE | Report units: | US |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 7.46 |
| Chemical: | PH, LABORATORY | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 160. |
| Chemical: | ALKALINITY (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 200. |
| Chemical: | BICARBONATE ALKALINITY | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 250. |
| Chemical: | HARDNESS (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 76.4 |
| Chemical: | CALCIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 68. |
| Chemical: | SODIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 4.1 |
| Chemical: | POTASSIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 17-APR-14 | Finding: | 85. |
| Chemical: | CHLORIDE | Report units: | MG/L |
| Dlr: | 0. | | |

| | | | |
|---|---|---|---|
| Sample date: | 17-APR-14 | Finding: | 120. |
| Chemical: | SULFATE | Report units: | MG/L |
| Dlr: | 0.5 | | |
| Sample date: | 17-APR-14 | Finding: | 0.3 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 17-APR-13 | Finding: | 1.7 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 17-APR-13 | Finding: | 0.37 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 09-OCT-12 | Finding: | 1.8 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 12-APR-12 | Finding: | 1.6 |
| Chemical: | 1,4-DIOXANE | Report units: | UG/L |
| Dlr: | 1. | | |
| Sample date: | 12-APR-12 | Finding: | 0.39 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |

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**8**
**North**
**1/2 - 1 Mile**
**Higher**

**FED USGS** **USGS40000139161**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-CA | | |
| Organization Name: | USGS California Water Science Center | | |
| Monitor Location: | 003S012W03J001S | Type: | Well |
| Description: | LA WATER REPLENISHMENT DIST GPS LAT-LONG | | |
| HUC: | 18070106 | Drainage Area: | Not Reported |
| Drainage Area Units: | Not Reported | Contrib Drainage Area: | Not Reported |
| Contrib Drainage Area Unts: | Not Reported | Aquifer: | California Coastal Basin aquifers |
| Formation Type: | Not Reported | Aquifer Type: | Not Reported |
| Construction Date: | 19540321 | Well Depth: | 866 |
| Well Depth Units: | ft | Well Hole Depth: | 866 |
| Well Hole Depth Units: | ft | | |

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**B9**
**NNE**
**1/2 - 1 Mile**
**Higher**

**FED USGS** **USGS40000139157**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-CA | | |
| Organization Name: | USGS California Water Science Center | | |
| Monitor Location: | 003S012W02L001S | Type: | Well |
| Description: | Not Reported | HUC: | Not Reported |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | California Coastal Basin aquifers | | |
| Formation Type: | Not Reported | Aquifer Type: | Not Reported |
| Construction Date: | 19510619 | Well Depth: | 840 |

| | | | |
|---|---|---|---|
| Well Depth Units: | ft | Well Hole Depth: | 860 |
| Well Hole Depth Units: | ft | | |

| | | | |
|---|---|---|---|
| Ground water levels,Number of Measurements: | 1 | Level reading date: | 1951-07 |
| Feet below surface: | 86 | Feet to sea level: | Not Reported |
| Note: | Other conditions existed that would affect the measured water level. | | |

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**B10**
**NNE**
**1/2 - 1 Mile**
**Higher**

**CA WELLS 3916**

| | | | |
|---|---|---|---|
| Seq: | 3916 | Prim sta c: | 03S/12W-02L01 S |
| Frds no: | 1910034017 | County: | 19 |
| District: | 07 | User id: | 4TH |
| System no: | 1910034 | Water type: | G |
| Source nam: | WELL 15 (OLD WELL 06) | Station ty: | WELL/AMBNT/MUN/INTAKE/SUPPLY |
| Latitude: | 335610.0 | Longitude: | 1180639.0 |
| Precision: | 3 | Status: | AR |
| Comment 1: | Not Reported | Comment 2: | Not Reported |
| Comment 3: | Not Reported | Comment 4: | Not Reported |
| Comment 5: | Not Reported | Comment 6: | Not Reported |
| Comment 7: | Not Reported | | |

| | | | |
|---|---|---|---|
| System no: | 1910034 | System nam: | DOWNEY - CITY, WATER DEPT. |
| Hqname: | Not Reported | Address: | 9252 Stewart & Gray Road |
| City: | Downey | State: | CA |
| Zip: | 90241 | Zip ext: | Not Reported |
| Pop serv: | 91000 | Connection: | 23000 |
| Area serve: | DOWNEY | | |

| | | | |
|---|---|---|---|
| Sample date: | 14-FEB-18 | Finding: | 0.208 |
| Chemical: | LANGELIER INDEX AT SOURCE TEMP. | Report units: | Not Reported |
| Dlr: | 0. | | |

| | | | |
|---|---|---|---|
| Sample date: | 14-FEB-18 | Finding: | 12.1 |
| Chemical: | AGGRSSIVE INDEX (CORROSIVITY) | Report units: | Not Reported |
| Dlr: | 0. | | |

| | | | |
|---|---|---|---|
| Sample date: | 14-FEB-18 | Finding: | 480. |
| Chemical: | TOTAL DISSOLVED SOLIDS | Report units: | MG/L |
| Dlr: | 0. | | |

| | | | |
|---|---|---|---|
| Sample date: | 14-FEB-18 | Finding: | 2.4 |
| Chemical: | ARSENIC | Report units: | UG/L |
| Dlr: | 2. | | |

| | | | |
|---|---|---|---|
| Sample date: | 14-FEB-18 | Finding: | 0.32 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |

| | | | |
|---|---|---|---|
| Sample date: | 14-FEB-18 | Finding: | 4.3 |
| Chemical: | POTASSIUM | Report units: | MG/L |
| Dlr: | 0. | | |

| | | | |
|---|---|---|---|
| Sample date: | 14-FEB-18 | Finding: | 60. |
| Chemical: | SODIUM | Report units: | MG/L |
| Dlr: | 0. | | |

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|---|---|---|---|
| Sample date: | 14-FEB-18 | Finding: | 15.4 |

| | | | |
|---|---|---|---|
| Chemical: | MAGNESIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 14-FEB-18 | Finding: | 81.3 |
| Chemical: | CALCIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 14-FEB-18 | Finding: | 266. |
| Chemical: | HARDNESS (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 14-FEB-18 | Finding: | 200. |
| Chemical: | BICARBONATE ALKALINITY | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 14-FEB-18 | Finding: | 160. |
| Chemical: | ALKALINITY (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 14-FEB-18 | Finding: | 7.57 |
| Chemical: | PH, LABORATORY | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 14-FEB-18 | Finding: | 790. |
| Chemical: | SPECIFIC CONDUCTANCE | Report units: | US |
| Dlr: | 0. | | |
| Sample date: | 14-FEB-18 | Finding: | 0.736 |
| Chemical: | LANGELIER INDEX @ 60 C | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 11-JAN-17 | Finding: | 2.9 |
| Chemical: | NITRATE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 11-JAN-17 | Finding: | 2.9 |
| Chemical: | NITRATE + NITRITE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 17-AUG-16 | Finding: | 0.485 |
| Chemical: | RADIUM 228 MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 17-AUG-16 | Finding: | 0.293 |
| Chemical: | RADIUM 228 COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 23-FEB-16 | Finding: | 2.7 |
| Chemical: | NITRATE + NITRITE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 23-FEB-16 | Finding: | 2.7 |
| Chemical: | NITRATE (AS N) | Report units: | MG/L |
| Dlr: | 0.4 | | |
| Sample date: | 15-DEC-15 | Finding: | 1.85 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 15-DEC-15 | Finding: | 1.48 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |

| | | | |
|---|---|---|---|
| Sample date: | 19-AUG-15 | Finding: | 1.8 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 19-AUG-15 | Finding: | 1.55 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 06-MAY-15 | Finding: | 1.39 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 06-MAY-15 | Finding: | 1.59 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 24-MAR-15 | Finding: | 2.09 |
| Chemical: | GROSS ALPHA MDA95 | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 24-MAR-15 | Finding: | 1.68 |
| Chemical: | GROSS ALPHA COUNTING ERROR | Report units: | PCI/L |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 810. |
| Chemical: | SPECIFIC CONDUCTANCE | Report units: | US |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 7.43 |
| Chemical: | PH, LABORATORY | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 170. |
| Chemical: | ALKALINITY (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 200. |
| Chemical: | BICARBONATE ALKALINITY | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 250. |
| Chemical: | HARDNESS (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 72. |
| Chemical: | CALCIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 16. |
| Chemical: | MAGNESIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 57. |
| Chemical: | SODIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 3.8 |
| Chemical: | POTASSIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 83. |
| Chemical: | CHLORIDE | Report units: | MG/L |

| | | | |
|---|---|---|---|
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 120. |
| Chemical: | SULFATE | Report units: | MG/L |
| Dlr: | 0.5 | | |
| Sample date: | 12-FEB-15 | Finding: | 0.32 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 12-FEB-15 | Finding: | 2.3 |
| Chemical: | ARSENIC | Report units: | UG/L |
| Dlr: | 2. | | |
| Sample date: | 12-FEB-15 | Finding: | 500. |
| Chemical: | TOTAL DISSOLVED SOLIDS | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 1.2 |
| Chemical: | LANGELIER INDEX AT SOURCE TEMP. | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 12-FEB-15 | Finding: | 12. |
| Chemical: | AGGRSSIVE INDEX (CORROSIVITY) | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 7.68 |
| Chemical: | PH, LABORATORY | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 150. |
| Chemical: | ALKALINITY (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 150. |
| Chemical: | BICARBONATE ALKALINITY | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 250. |
| Chemical: | HARDNESS (TOTAL) AS CACO3 | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 71. |
| Chemical: | CALCIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 17. |
| Chemical: | MAGNESIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 65. |
| Chemical: | SODIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 4.9 |
| Chemical: | POTASSIUM | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 78. |
| Chemical: | CHLORIDE | Report units: | MG/L |
| Dlr: | 0. | | |

| | | | |
|---|---|---|---|
| Sample date: | 22-FEB-12 | Finding: | 110. |
| Chemical: | SULFATE | Report units: | MG/L |
| Dlr: | 0.5 | | |
| Sample date: | 22-FEB-12 | Finding: | 0.32 |
| Chemical: | FLUORIDE (F) (NATURAL-SOURCE) | Report units: | MG/L |
| Dlr: | 0.1 | | |
| Sample date: | 22-FEB-12 | Finding: | 2.7 |
| Chemical: | ARSENIC | Report units: | UG/L |
| Dlr: | 2. | | |
| Sample date: | 22-FEB-12 | Finding: | 510. |
| Chemical: | TOTAL DISSOLVED SOLIDS | Report units: | MG/L |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 0.11 |
| Chemical: | LANGELIER INDEX AT SOURCE TEMP. | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 12. |
| Chemical: | AGGRSSIVE INDEX (CORROSIVITY) | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 7.6 |
| Chemical: | PH, FIELD | Report units: | Not Reported |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 16.6 |
| Chemical: | SOURCE TEMPERATURE C | Report units: | C |
| Dlr: | 0. | | |
| Sample date: | 22-FEB-12 | Finding: | 840. |
| Chemical: | SPECIFIC CONDUCTANCE | Report units: | US |
| Dlr: | 0. | | |

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**C11**
**ENE**
**1/2 - 1 Mile**
**Higher**

**FED USGS** **USGS40000139099**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-CA | | |
| Organization Name: | USGS California Water Science Center | | |
| Monitor Location: | 003S012W11A010S | Type: | Well |
| Description: | Not Reported | HUC: | Not Reported |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | California Coastal Basin aquifers | | |
| Formation Type: | Not Reported | Aquifer Type: | Not Reported |
| Construction Date: | 20061128 | Well Depth: | 820 |
| Well Depth Units: | ft | Well Hole Depth: | 1502 |
| Well Hole Depth Units: | ft | | |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

**C12**
**ENE**
**1/2 - 1 Mile**
**Higher**

**FED USGS** **USGS40000139100**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-CA | | |
| Organization Name: | USGS California Water Science Center | | |
| Monitor Location: | 003S012W11A011S | Type: | Well |
| Description: | Not Reported | HUC: | Not Reported |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | California Coastal Basin aquifers | | |
| Formation Type: | Not Reported | Aquifer Type: | Not Reported |
| Construction Date: | 20061128 | Well Depth: | 500 |
| Well Depth Units: | ft | Well Hole Depth: | 1502 |
| Well Hole Depth Units: | ft | | |

---

**C13**
**ENE**
**1/2 - 1 Mile**
**Higher**

**FED USGS** **USGS40000139101**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-CA | | |
| Organization Name: | USGS California Water Science Center | | |
| Monitor Location: | 003S012W11A012S | Type: | Well |
| Description: | Not Reported | HUC: | Not Reported |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | California Coastal Basin aquifers | | |
| Formation Type: | Not Reported | Aquifer Type: | Not Reported |
| Construction Date: | 20061128 | Well Depth: | 256 |
| Well Depth Units: | ft | Well Hole Depth: | 1502 |
| Well Hole Depth Units: | ft | | |

---

**C14**
**ENE**
**1/2 - 1 Mile**
**Higher**

**FED USGS** **USGS40000139096**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-CA | | |
| Organization Name: | USGS California Water Science Center | | |
| Monitor Location: | 003S012W11A007S | Type: | Well |
| Description: | Not Reported | HUC: | Not Reported |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | California Coastal Basin aquifers | | |
| Formation Type: | Not Reported | Aquifer Type: | Not Reported |
| Construction Date: | 20061128 | Well Depth: | 1480 |
| Well Depth Units: | ft | Well Hole Depth: | 1502 |
| Well Hole Depth Units: | ft | | |

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

**C15**
**ENE**
**1/2 - 1 Mile**
**Higher**

**FED USGS** **USGS40000139097**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-CA | | |
| Organization Name: | USGS California Water Science Center | | |
| Monitor Location: | 003S012W11A008S | Type: | Well |
| Description: | Not Reported | HUC: | Not Reported |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | California Coastal Basin aquifers | | |
| Formation Type: | Not Reported | Aquifer Type: | Not Reported |
| Construction Date: | 20061128 | Well Depth: | 1280 |
| Well Depth Units: | ft | Well Hole Depth: | 1502 |
| Well Hole Depth Units: | ft | | |

---

**C16**
**ENE**
**1/2 - 1 Mile**
**Higher**

**FED USGS** **USGS40000139098**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-CA | | |
| Organization Name: | USGS California Water Science Center | | |
| Monitor Location: | 003S012W11A009S | Type: | Well |
| Description: | Not Reported | HUC: | Not Reported |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | California Coastal Basin aquifers | | |
| Formation Type: | Not Reported | Aquifer Type: | Not Reported |
| Construction Date: | 20061128 | Well Depth: | 980 |
| Well Depth Units: | ft | Well Hole Depth: | 1502 |
| Well Hole Depth Units: | ft | | |

---

**17**
**SSE**
**1/2 - 1 Mile**
**Lower**

**FED USGS** **USGS40000138966**

| | | | |
|---|---|---|---|
| Organization ID: | USGS-CA | | |
| Organization Name: | USGS California Water Science Center | | |
| Monitor Location: | 003S012W14C006S | Type: | Well |
| Description: | Not Reported | HUC: | 18070106 |
| Drainage Area: | Not Reported | Drainage Area Units: | Not Reported |
| Contrib Drainage Area: | Not Reported | Contrib Drainage Area Unts: | Not Reported |
| Aquifer: | California Coastal Basin aquifers | | |
| Formation Type: | Not Reported | Aquifer Type: | Not Reported |
| Construction Date: | Not Reported | Well Depth: | 550 |
| Well Depth Units: | ft | Well Hole Depth: | 582 |
| Well Hole Depth Units: | ft | | |

Map ID
Direction
Distance

Database EDR ID Number

**1**
**SSW**
**1/2 - 1 Mile**

**OIL_GAS** **CAOG11000204628**

| | | | |
|---|---|---|---|
| Districtnu: | 1 | Apinumber: | 03705362 |
| Blmwell: | N | Redrillcan: | Not Reported |
| Dryhole: | Y | Wellstatus: | P |
| Operatorna: | Downey Land Co. | Countyname: | Los Angeles |
| Fieldname: | Any Field | Areaname: | Any Area |
| Section: | 15 | Township: | 03S |
| Range: | 12W | Basemeridi: | SB |
| Elevation: | Not Reported | Locationde: | Not Reported |
| Gissourcec: | hud | Comments: | Not Reported |
| Leasename: | Downey Land Co. | Wellnumber: | 1 |
| Epawell: | N | Hydraulica: | N |
| Confidenti: | N | Spuddate: | Not Reported |
| Welldeptha: | 0 | Redrillfoo: | 0 |
| Abandonedd: | Not Reported | Completion: | Not Reported |
| Directiona: | Unknown | Gissymbol: | PDH |
| Site id: | CAOG11000204628 | | |

---

**2**
**NNE**
**1/2 - 1 Mile**

**OIL_GAS** **CAOG11000205158**

| | | | |
|---|---|---|---|
| Districtnu: | 1 | Apinumber: | 03706170 |
| Blmwell: | N | Redrillcan: | Not Reported |
| Dryhole: | Y | Wellstatus: | P |
| Operatorna: | Union Oil Company of California | Countyname: | Los Angeles |
| Fieldname: | Any Field | Areaname: | Any Area |
| Section: | 2 | Township: | 03S |
| Range: | 12W | Basemeridi: | SB |
| Elevation: | Not Reported | Locationde: | Not Reported |
| Gissourcec: | hud | Comments: | Not Reported |
| Leasename: | Downey Community | Wellnumber: | 1 |
| Epawell: | N | Hydraulica: | N |
| Confidenti: | N | Spuddate: | Not Reported |
| Welldeptha: | 0 | Redrillfoo: | 0 |
| Abandonedd: | Not Reported | Completion: | Not Reported |
| Directiona: | Unknown | Gissymbol: | PDH |
| Site id: | CAOG11000205158 | | |

---

**3**
**ENE**
**1/2 - 1 Mile**

**OIL_GAS** **CAOG11000204569**

| | | | |
|---|---|---|---|
| Districtnu: | 1 | Apinumber: | 03705280 |
| Blmwell: | N | Redrillcan: | Not Reported |
| Dryhole: | N | Wellstatus: | B |
| Operatorna: | L. B. Chase Oil Co. | Countyname: | Los Angeles |
| Fieldname: | Any Field | Areaname: | Any Area |
| Section: | 11 | Township: | 03S |
| Range: | 12W | Basemeridi: | SB |
| Elevation: | Not Reported | Locationde: | Not Reported |
| Gissourcec: | hud | Comments: | Not Reported |
| Leasename: | Not Reported | Wellnumber: | 1 |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

| | | | |
|---|---|---|---|
| Epawell: | N | Hydraulica: | N |
| Confidenti: | N | Spuddate: | Not Reported |
| Welldeptha: | 0 | Redrillfoo: | 0 |
| Abandonedd: | Not Reported | Completion: | Not Reported |
| Directiona: | Unknown | Gissymbol: | AOG |
| Site id: | CAOG11000204569 | | |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

State Database: CA Radon

Radon Test Results

| Zipcode | Num Tests | > 4 pCi/L |
|---|---|---|
| 90242 | 8 | 0 |

Federal EPA Radon Zone for LOS ANGELES County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

---

Federal Area Radon Information for LOS ANGELES COUNTY, CA

Number of sites tested: 63

| Area | Average Activity | % <4 pCi/L | % 4-20 pCi/L | % >20 pCi/L |
|---|---|---|---|---|
| Living Area - 1st Floor | 0.711 pCi/L | 98% | 2% | 0% |
| Living Area - 2nd Floor | Not Reported | Not Reported | Not Reported | Not Reported |
| Basement | 0.933 pCi/L | 100% | 0% | 0% |

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

## HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

## HYDROGEOLOGIC INFORMATION

AQUIFLOW$^{R}$ Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

## OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

**STREET AND ADDRESS INFORMATION**

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*** J17 ***

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HAZARDOUS SUBSTANCE STORAGE CONTAINER INFORMATION FOR LOS ANGELES COUNTY

CONTAINER TYPES: 1,2,3,4,5

(1=FARM MOTOR VEHICLE FUEL TANKS, 2=ALL OTHER PRODUCT TANKS, 3=WASTE TANKS, 4=SUMPS, 5=PITS, PONDS, LAGOONS & OTHERS)

I OWNER
KIRKHILL INC.
12021 WOODRUFF AVENUE DOWNEY CA 90241

II FACILITY

| | MAILING ADDRESS TOWNSHIP/RANGE/SECTION | DEALER/FOREMAN/SUPERVISOR TELEPHONE | TYPE OF BUSINESS NO. OF CONTAINERS |
|---|---|---|---|
| KIRKHILL INC.<br>12021 WOODRUFF AVENUE<br>SAME CA 90241 | 12021 WOODRUFF AVENUE<br>SAME CA 90241 | | RUBBER GOODS-MANUFAC |
| CROSS STREET :<br>WASHBURN ROAD | | (213) 803-3421 | 4 |

III 24-HR. CONTACT PERSON / TELEPHONE
DAY: JOHNSON, SIDNOR A. (213) 803-3421 NIGHT: DAVIS, DAVID (213) 861-5891

********** OWNER ASSIGNED CONTAINER NUMBER: 1 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 00000064445001 *********

IV DESCRIPTION
A. CONTAINER TYPE : TANK
B. MANUFACTURER/YR OF MFG: /
C. YEAR INSTALLED : 1967
D. CAPACITY (GALLONS) : 10,000
E. REPAIRS : NONE IF YES WHEN :
F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
G. STORES : PRODUCT
H. MOTOR VEHICLE FUEL/WASTE OIL : NO CONTAINS:

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
A. THICKNESS: B. VAULTING: NON-VAULTED C. WALLING: SINGLE
D. MATERIAL : CARBON STEEL
E. LINING : UNLINED
F. WRAPPING : NONE

VI PIPING
A. ABOVEGROUND PIPING : UNKNOWN B. UNDERGROUND PIPING : SUCTION
C. REPAIRS : YES IF YES, YEAR OF MOST RECENT REPAIR: 1985

VII LEAK DETECTION
VISUAL STOCK INVENTORY

VIII CHEMICAL COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
ALIPHATIC HYDROCARBONS (NO SPECIFICS GIVEN)

*** K17 ***

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********** OWNER ASSIGNED CONTAINER NUMBER: 2 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 00000064445002 *********

IV DESCRIPTION
A. CONTAINER TYPE : TANK
B. MANUFACTURER/YR OF MFG: /
C. YEAR INSTALLED : 1973
D. CAPACITY (GALLONS) : 10,000
E. REPAIRS : NONE IF YES WHEN :
F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
G. STORES : PRODUCT
H. MOTOR VEHICLE FUEL/WASTE OIL : NO CONTAINS:

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
A. THICKNESS: B. VAULTING: NON-VAULTED C. WALLING: SINGLE
D. MATERIAL : CARBON STEEL
E. LINING : UNLINED
F. WRAPPING : NONE

VI PIPING
A. ABOVEGROUND PIPING : UNKNOWN B. UNDERGROUND PIPING : SUCTION
C. REPAIRS : NONE IF YES, YEAR OF MOST RECENT REPAIR:

VII LEAK DETECTION
VISUAL STOCK INVENTORY

VIII CHEMICAL COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
BOILER FUEL

********** OWNER ASSIGNED CONTAINER NUMBER: 3 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 00000064445003 *********

IV DESCRIPTION
A. CONTAINER TYPE : TANK
B. MANUFACTURER/YR OF MFG: /
C. YEAR INSTALLED : 1976
D. CAPACITY (GALLONS) : 10,000
E. REPAIRS : NONE IF YES WHEN :
F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
G. STORES : PRODUCT
H. MOTOR VEHICLE FUEL/WASTE OIL : NO CONTAINS:

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
A. THICKNESS: B. VAULTING: NON-VAULTED C. WALLING: SINGLE
D. MATERIAL : CARBON STEEL
E. LINING : UNLINED
F. WRAPPING : NONE

VI PIPING
A. ABOVEGROUND PIPING : UNKNOWN B. UNDERGROUND PIPING : SUCTION
C. REPAIRS : NONE IF YES, YEAR OF MOST RECENT REPAIR:

VII LEAK DETECTION
VISUAL STOCK INVENTORY

VIII CHEMICAL COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
BOILER FUEL

STATE WATER RESOURCES CONTROL BOARD
HAZARDOUS SUBSTANCE STORAGE CONTAINER INFORMATION FOR LOS ANGELES COUNTY
CONTAINER TYPES: 1,2,3,4,5
(1=FARM MOTOR VEHICLE FUEL TANKS, 2=ALL OTHER PRODUCT TANKS, 3=WASTE TANKS, 4=SUMPS, 5=PITS, PONDS, LAGOONS & OTHERS)



********** OWNER ASSIGNED CONTAINER NUMBER: 4 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 00000064445004 **********

IV DESCRIPTION
A. CONTAINER TYPE : TANK
B. MANUFACTURER/YR OF MFG:
C. YEAR INSTALLED : 1953
D. CAPACITY (GALLONS) : 7,500
E. REPAIRS : NONE IF YES WHEN :
F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
G. STORES : PRODUCT
H. MOTOR VEHICLE FUEL/WASTE OIL : NO CONTAINS:

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
A. THICKNESS:
B. VAULTING: NON-VAULTED C. WALLING: SINGLE
D. MATERIAL : CARBON STEEL
E. LINING : UNLINED
F. WRAPPING : NONE

VI PIPING
A. ABOVEGROUND PIPING : UNKNOWN B. UNDERGROUND PIPING : SUCTION
C. REPAIRS : YES IF YES, YEAR OF MOST RECENT REPAIR: 1985

VII LEAK DETECTION
VISUAL STOCK INVENTORY

VIII CHEMICAL COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
BOILER FUEL

*** M17 ***



STATE WATER RESOURCES CONTROL BOARD

**KIRKHILL INC**
12021 WOODRUFF AVENUE
DOWNEY, CA 90241

Inquiry Number:
September 25, 2018

# EDR Site Report™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# TABLE OF CONTENTS

The EDR-Site Report™ is a comprehensive presentation of government filings on a facility identified in a search of federal, state and local environmental databases. The report is divided into three sections:

**Section 1: Facility Summary . . . . . Page 3**

Summary of facility filings including a review of the following areas: waste management, waste disposal, multi-media issues, and Superfund liability.

**Section 2: Facility Detail Reports . . . . . Page 4**

All available detailed information from databases where sites are identified.

**Section 3: Databases and Update Information. . . . . Page 11**

Name, source, update dates, contact phone number and description of each of the databases for this report.

***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

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# SECTION 1: FACILITY SUMMARY

| FACILITY<br><br>AREA | FACILITY 1<br>**KIRKHILL INC**<br>12021 WOODRUFF AVENUE<br>DOWNEY, CA 90241<br>EDR ID #S113157677 |
|---|---|
| **WASTE MANAGEMENT**<br>Facility generates hazardous waste (RCRA) | NO |
| Facility treats, stores, or disposes of hazardous waste on-site (RCRA/TSDF) | NO |
| Facility has received Notices of Violations (RCRA/VIOL) | NO |
| Facility has been subject to RCRA administrative actions (RAATS) | NO |
| Facility has been subject to corrective actions (CORRACTS) | NO |
| Facility handles PCBs (PADS) | NO |
| Facility uses radioactive materials (MLTS) | NO |
| Facility is a FUSRAP Site | NO |
| Facility is a UXO Site | NO |
| Facility is a FUELS Site | NO |
| Facility is an DockHWC/ECHO Site | NO |
| Facility manages registered aboveground storage tanks (AST) | NO |
| Facility manages registered underground storage tanks (UST) | NO |
| Facility has reported leaking underground storage tank incidents (LUST) | NO |
| Facility has reported emergency releases to the soil (ERNS) | NO |
| Facility has reported hazardous material incidents to DOT (HMIRS) | NO |
| **WASTE DISPOSAL**<br>Facility is a Superfund Site (NPL) | NO |
| Facility has a known or suspect abandoned, inactive or uncontrolled hazardous waste site (SEMS) | NO |
| Facility has a reported Superfund Lien on it (LIENS) | NO |
| Facility is listed as a state hazardous waste site (SHWS) | NO |
| Facility has disposed of solid waste on-site (SWF/LF) | NO |
| **MULTIMEDIA**<br>Facility uses toxic chemicals and has notified EPA under SARA Title III, Section 313 (TRIS) | NO |
| Facility produces pesticides and has notified EPA under Section 7 of FIFRA (SSTS) | NO |
| Facility manufactures or imports toxic chemicals on the TSCA list (TSCA) | NO |
| Facility has inspections under FIFRA, TSCA or EPCRA (FTTS) | NO |
| Facility is listed in EPA's index system (FINDS) | NO |
| Facility is listed in other database records (OTHER) | **YES - p4** |
| **POTENTIAL SUPERFUND LIABILITY**<br>Facility has a list of potentially responsible parties PRP | NO |
| **TOTAL (YES)** | 1 |

# SECTION 2: FACILITY DETAIL REPORTS

## MULTIMEDIA

### Facility is listed in other database records

### DATABASE: Other Database Records (OTHER)

KIRKHILL INC
12021 WOODRUFF AVENUE
DOWNEY, CA 90241
EDR ID #S113157677

HIST UST:

| | |
|---|---|
| File Number: | 0002737C |
| URL: | http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002737C.pdf |
| Region: | Not reported |
| Facility ID: | Not reported |
| Facility Type: | Not reported |
| Other Type: | Not reported |
| Contact Name: | Not reported |
| Telephone: | Not reported |
| Owner Name: | Not reported |
| Owner Address: | Not reported |
| Owner City,St,Zip: | Not reported |
| Total Tanks: | Not reported |
| | |
| Tank Num: | Not reported |
| Container Num: | Not reported |
| Year Installed: | Not reported |
| Tank Capacity: | Not reported |
| Tank Used for: | Not reported |
| Type of Fuel: | Not reported |
| Container Construction Thickness: | Not reported |
| Leak Detection: | Not reported |

HAZNET:

| | |
|---|---|
| envid: | S113157677 |
| Year: | 2014 |
| GEPAID: | CAL000348524 |
| Contact: | MICHAEL PERSION |
| Telephone: | 5628034388 |
| Mailing Name: | Not reported |
| Mailing Address: | 12021 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |
| Gen County: | Los Angeles |
| TSD EPA ID: | NVT330010000 |
| TSD County: | 99 |
| Waste Category: | Other organic solids |
| Disposal Method: | Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization) |
| Tons: | 7.05 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |
| | |
| envid: | S113157677 |
| Year: | 2014 |
| GEPAID: | CAL000348524 |
| Contact: | MICHAEL PERSION |
| Telephone: | 5628034388 |
| Mailing Name: | Not reported |
| Mailing Address: | 12021 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |
| Gen County: | Los Angeles |
| TSD EPA ID: | CAT080013352 |
| TSD County: | Los Angeles |
| Waste Category: | Unspecified oil-containing waste |
| Disposal Method: | Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect |
| Tons: | 0.4587 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |
| | |
| envid: | S113157677 |
| Year: | 2014 |
| GEPAID: | CAL000348524 |
| Contact: | MICHAEL PERSION |
| Telephone: | 5628034388 |
| Mailing Name: | Not reported |
| Mailing Address: | 12021 WOODRUFF AVE |

Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Los Angeles
TSD EPA ID: AZR000501510
TSD County: 99
Waste Category: Unspecified oil-containing waste
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.68805
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2014
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Los Angeles
TSD EPA ID: ARD981057870
TSD County: 99
Waste Category: Unspecified organic liquid mixture
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.374
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2014
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Los Angeles
TSD EPA ID: ARD981057870
TSD County: 99
Waste Category: Off-specification, aged or surplus organics
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.26
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2013
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Los Angeles
TSD EPA ID: AZR000501510
TSD County: 99
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.22175
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Not reported

envid: S113157677
Year: 2013
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Los Angeles
TSD EPA ID: ARD981057870
TSD County: 99
Waste Category: Not reported
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.17
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Not reported

# SECTION 2: FACILITY DETAIL REPORTS

...Continued...

envid: S113157677
Year: 2013
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Los Angeles
TSD EPA ID: NVT330010000
TSD County: 99
Waste Category: Not reported
Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization)
Tons: 6.075
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Not reported

envid: S113157677
Year: 2013
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Los Angeles
TSD EPA ID: ARD981057870
TSD County: 99
Waste Category: Not reported
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.374
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Not reported

envid: S113157677
Year: 2012
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Los Angeles
TSD EPA ID: ARD981057870
TSD County: 99
Waste Category: Not reported
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.374
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2012
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Los Angeles
TSD EPA ID: NVT330010000
TSD County: 99
Waste Category: Not reported
Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization)
Tons: 5.35
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2011
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAD981696420
TSD County: Not reported

Waste Category: Other organic solids
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 5.35
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2011
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Off-specification, aged or surplus organics
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.1815
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2011
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: AZR000501510
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.75
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2011
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: AZR000501510
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.75
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2011
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: AZR000501510
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.4587
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2011

# SECTION 2: FACILITY DETAIL REPORTS

...Continued...

GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Off-specification, aged or surplus organics
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.1815
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2011
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAD981696420
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 5.35
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2011
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAD981696420
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.417
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2011
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAD981696420
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.417
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2011
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: AZR000501510
TSD County: Not reported
Waste Category: Unspecified oil-containing waste

Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.4587
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2010
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAD981696420
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.48035
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2010
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAD981696420
TSD County: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.209
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2010
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAT000646117
TSD County: Not reported
Waste Category: Unspecified sludge waste
Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization)
Tons: 0.4587
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2010
GEPAID: CAL000348524
Contact: MICHAEL PERSION
Telephone: 5628034388
Mailing Name: Not reported
Mailing Address: 12021 WOODRUFF AVE
Mailing City,St,Zip: DOWNEY, CA 902410000
Gen County: Not reported
TSD EPA ID: CAD981696420
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 4.35
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: S113157677
Year: 2010

# SECTION 2: FACILITY DETAIL REPORTS

...Continued...

| | |
|---|---|
| GEPAID: | CAL000348524 |
| Contact: | MICHAEL PERSION |
| Telephone: | 5628034388 |
| Mailing Name: | Not reported |
| Mailing Address: | 12021 WOODRUFF AVE |
| Mailing City,St,Zip: | DOWNEY, CA 902410000 |
| Gen County: | Not reported |
| TSD EPA ID: | CAT000646117 |
| TSD County: | Not reported |
| Waste Category: | Other organic solids |
| Disposal Method: | Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization) |
| Tons: | 0.375 |
| Cat Decode: | Not reported |
| Method Decode: | Not reported |
| Facility County: | Los Angeles |

# SECTION 3: DATABASES AND UPDATE DATES

To maintain currency of the following federal, state and local databases, EDR contacts the appropriate government agency on a monthly or quarterly basis as required.

**Elapsed ASTM days:** Provides confirmation that this report meets or exceeds the 90-day updating requirement of the ASTM standard.

## DATABASES FOUND IN THIS REPORT

**CA HIST UST: Hazardous Substance Storage Container Database**
Source: State Water Resources Control Board
Telephone: 916-341-5851
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 07/26/2001
Date of Next Scheduled Update: Not reported

**CA HAZNET: Facility and Manifest Data**
Source: California Environmental Protection Agency
Telephone: 916-255-1136
Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2016
Database Release Frequency: Annually
Date of Last EDR Contact: 07/13/2018
Date of Next Scheduled Update: 10/22/2018

# APPENDIX D: QUALIFICATIONS/INSURANCE

PARTNER

## Education

Bachelor of Arts, Political Science, University of California, Irvine
Diploma, Executive Assistant Business Program, Heald Business College, Hayward, California

## Registrations

California EPA Registered Environmental Assessor I – 07364
California OSHA Certified Site Surveillance Technician No. 97-2116

## Training

40-Hour OSHA HAZWOPER Training
EPA-Certified AHERA Asbestos Building Inspector
EPA-Certified AHERA Contractor/Supervisor/Competent Person

## Highlights

15 years of experience in the environmental due diligence industry:

- Phase I Environmental Site Assessments
- Phase II Environmental Site Assessments
- Property Condition Assessments
- Asbestos Surveys
- Transaction Screen Assessments
- Environmental Desktop Reviews and Reports
- UST Removal
- Regulatory Work Plan Preparation for remediation of hazardous materials
- Business Development / Client Relations

## Experience Summary

Ms. Thomas is a Staff Assessor at Partner Engineering and Science, In and is located in their Torrance, California office. She is responsible for conducting Phase I Environmental Site Assessments (ESA) including site reconnaissance, regulatory file review, historical research, interpretation of data and maps, and technical writing. Ms. Thomas has broad project experience from small privately owned properties to large portfolios of industrial sites in both the private and public sectors. This experience included properties with impact to soil and groundwater from petroleum and solvent releases and required extensive regulatory file review. Ms. Thomas has received training in risk management and liability as it pertains to environmentally impacted properties.

## Project Experience

*Initial Site Assessment for Freeway Expansion, Los Angeles County, California*. Performed an *Initial Site Assessment* for California Department of Transportation (Caltrans) for the Interstate 5 Freeway expansion project in Burbank, Glendale and Los Angeles, which included 10 miles of assessment area and many properties with hazardous materials, USTs and groundwater contamination issues.

*Initial Study and Biological Survey, Madera, California.* City of Madera, California: Performed an *Initial Study* for the City of Madera Wastewater Treatment Plant expansion project, which included a Biological Survey

and assessment for hazardous materials.

*Phase I Environmental Site Assessment and Underground Storage Tank Removal, Beverly Hills, California.* Project Manager for the removal of an old waste oil underground storage tank that was identified through due diligence research, which was subsequently removed and received case closure from the Los Angeles County Environmental Programs Division.

*Phase II Environmental Site Assessment and Work Plan for Remedial Action, Garden Grove, California.* Project Manager for site characterization of a former dry cleaner that included a soil gas survey, soil sampling and the installation of five groundwater monitoring wells. Ms. Thomas conducted the initial Phase II ESA, which identified soil and groundwater impact. Preparation of a Work Plan for site characterization was approved by the Santa Ana Regional Water Quality Control Board and implemented.

*Phase II Environmental Site Assessment, Inglewood, California*. Project Manager of a *Phase II ESA* on a former gas station property that was redeveloped in the early 1980s into a coin operated laundry mat. The client was a prospective buyer of the property. Limited information pertaining to the former gas station was identified at the local regulatory agencies; therefore, a Phase II scope of work was designed and implemented to best identify the former UST and piping locations. Significantly contaminated soil was identified.

*Phase I Environmental Site Assessment, Downtown Los Angeles, California.* Performed a *Phase I ESA* for the Los Angeles County Metropolitan Transportation Authority (MTA) for its Division One Bus Depot Expansion project on a site in downtown Los Angeles that was a former Texaco Super Truck Service Depot with former fueling, carwash and automotive services. Ms. Thomas has performed several Phase I ESA projects for the Los Angeles County MTA.

## Contact

mathomas@partneresi.com

**Kathy Lehnus, CPG, LEP**
**Project Manager**

## Education

University of Connecticut, M.S. Applied Geology
University of Massachusetts, B.S. Environmental Science
University of Massachusetts, B.A. Geology

## Registrations

Licensed Environmental Professional, State of Connecticut
Certified Professional Geologist, American Institute of Petroleum Geologists

## Training

Behavior-Based Health and Safety: Control of Work (BP)
Behavior-Based Health and Safety: Loss Prevention System (Chevron)
OSHA HAZWOPER 40-hour training

## Highlights

20 years in the environmental assessment and remediation industry
Phase I ESAs
Transaction Screens
Phase II ESAs
Contaminant Transport Evaluations
Remediation Design
Implementation of Remediation

## Experience Summary

Ms. Lehnus is currently a project manager providing staff oversight and quality reviews for Phase I ESAs and desktop reviews. Ms. Lehnus focuses on portfolios for purchase or refinance.

Ms. Lehnus has 20 years of experience in the environmental assessment and remediation industry. She has extensive experience conducting due diligence assessments for a variety of property types using a varied number of reporting standards, including ASTM standards, EPA's All Appropriate Inquiry (AAI), and customized client formats. Specifically, Mrs. has performed and managed Phase I Environmental Site Assessments, Environmental Transaction Screens, Phase II and III Subsurface Investigations, and remediation projects.

Further, Ms. Lehnus is a Licensed Environmental Professional in Connecticut and has served as a project manager for large industrial sites involved with Brownfield initiatives for transfer, sale, and redevelopment. Duties included strategic planning of future redevelopment of properties based on the current environmental conditions and the determination of proper remedies required based on future use. Duties also included working with legal counsel to review sale agreements to ensure that remediation measures are appropriately documented for compliance. Ms. Lehnus has also designed and implemented investigation and remediation plans in order to verify closure of projects under the Connecticut Transfer Act.

Responsibilities include managing projects to complete large-scale soil and groundwater investigation and remediation tasks, completion of closure letters, variances, permitting, and other submittals to state agencies, and participation on internal and external committees to improve sampling, reporting, and regulatory processes.

## Project Experience

*Johnny on the Spot Dry Cleaner, Whitestone, New York*. Ms. Lehnus managed the contaminate delineation (Phase III) investigation of groundwater, soil vapor, and indoor air at a former dry cleaner facility in the New York Department of Environmental Conservation (NYDEC) cleanup program. Work included soil, groundwater, soil vapor, and indoor air sampling in compliance with NYDEC guidance documents, and oversight of the design of a sub-slab depressurization system to alleviate vapor intrusion.

*Ansonia Copper and Brass, Ansonia, Connecticut*. Responsible for the completion of Phase III activities at release areas with completion of several Connecticut Department of Energy and Environmental Protection (CTDEEP) submittals, which include proposed remediation strategies for final closure under the Remediation Standard Regulations (RSRs) to allow for property redevelopment. Remediation activities included incorporating capped areas into land use restrictions to allow for extensive reuse of the brownfield property.

*Starbuck Sprague Facility, Waterbury, Connecticut*. Responsible for the completion of the Phase I, II and III activities, reporting, and completion of DEEP submittals to administer a remediation strategy to bring the property into compliance with the RSRs while allowing for minimal disturbance of the existing conditions;

*Farrel Corporation, Ansonia, Connecticut.* Responsible for the completion of Phase III activities at release areas, quarterly groundwater monitoring and contaminant plume mapping, reporting, and completion of several DEEP submittals, which include proposed remediation strategies for final closure.

*Latex Foam, Shelton, Connecticut.* Responsible for permitting and oversight of remediation of wetland area near an Indian burial ground, quarterly groundwater sampling with plume mapping in overburden and bedrock groundwater, and Phase III delineation of a No. 6 oil spill.

*Antares, Stamford, Connecticut*. Included on the team to investigate and assess a portfolio of properties for the prospect of quick-turn purchase, as well as investigation and remediation of properties added to the portfolio.

*Verizon Wireless, Inc., Environmental Assessments, Various Connecticut Locations*. Responsible for the Verizon Wireless account, duties include oversight of staff members and review of reports for the account, client interaction, and applying DEP regulations and National Environmental Policy Act (NEPA) protocol to work scopes and templates.

*Foxon Road, North Haven, Connecticut*. Participated with a team to design an active vapor extraction system at a former dry cleaning facility. Work included conducting a soil gas survey, installing soil vapor extraction points, creating a site-specific geologic cross section with respect to soil permeability, and performing a pilot test to determine design specifications.

*Home Depot, Bloomfield, Connecticut.* Oversight of initial soil and groundwater assessment, followed by site-wide soil excavation and the installation of a passive vapor barrier at a former manufacturing facility. This work was conducted coincident with Site development activities at a high profile retail chain and required working closely with development contractors to ensure the safety of the barrier while exposed. Post remediation work included the installation monitoring wells and soil vapor points with quarterly sampling and DEP submittals.

*Talcottville Road, Vernon, Connecticut*. Excavation of gasoline-contaminated soil and application of Oxygen Release Compound (ORC) in order to remediate release area. Study included DEP permitting, and pre- and post-remediation water chemistry monitoring.

*General Electric, Hazardous Ranking System Package, Pittsfield, Massachusetts*. Worked with a team of geologists assessing and ranking sources at this high profile Site for proposal to the National Priority List.

*American Optical Company, Site Inspection Prioritization, Southbridge, Massachusetts*. As Site Leader for this Site Inspection Prioritization, duties included the preparation of a report to summarize current site conditions and rate the potential for further regulation under the EPA Superfund program. Duties included review of previous analytical data to assess potential sources.

## Affiliations

Board of Directors, Connecticut Environmental Forum (2011-2015)
Society of Woman Environmental Professionals (2005-2014)
Environmental Professionals of Connecticut (1998-2014)

## Contact

klehnus@partneresi.com

**Misty Vazquez Ponce, PE**
**Principal**

## Education

M.S. Civil-Environmental Engineering, California State University, Fullerton
B.S. Environmental Engineering, University of California, Riverside
Coursework in Legal and Regulatory Framework for Environmental Management, University of California Irvine
Coursework in Mold Inspection

## Registrations

Professional Engineer, Colorado
Engineer-In Training (EIT), California
State of California Registered Environmental Assessor (program canceled in July 2012)
LEED Green Associate (GA) Accredited Professional, United States Green Building Council
AHERA Certified Building Inspector for Asbestos

## Training

OSHA 40-hour HAZWOPER, Operations Level Health and Safety Training
OSHA 10-hour Construction Safety Training
Trained/Certified – Hazardous Waste in California, US Department of Transportation Hazardous Materials Transportation, and USEPA Hazardous/Toxic Waste management (LION)

## Highlights

Over 16 years in the environmental and engineering consulting industry with institutional and private clients
Environmental Engineer
Extensive knowledge of real estate due diligence
Phase I and Phase II Environmental Site Assessments
Site Mitigation and Remediation

## Experience Summary

Ms. Ponce is an environmental engineer with more than 16 years of experience in the environmental and engineering services industries. As a Principal and National Client Manager working within Partner's Investment Advisory Group, Ms. Ponce strives to provide the expected high level of client service for the Equity Asset Management industry.

Ms. Ponce has significant experience in the field of environmental due diligence, site assessment, remediation, and regulatory compliance. Ms. Ponce provides environmental support to clients nationwide during the acquisition, disposition, development, and on-going management and operation of commercial, industrial, and multifamily residential properties.

Ms. Ponce has considerable experience in Phase I and Phase II Environmental Site Assessments (ESAs) of commercial, agricultural, and industrial properties and projects involving water quality, soil quality, and regulatory compliance including hazardous and solid waste site characterization and remediation; remediation system design installation, and operation; tank removals; asbestos surveys; lead-based paint surveys; radon studies; mold assessments; lead-in water sampling and analysis; and technical reporting.

Ms. Ponce has been involved with feasibility and treatability studies associated with several remediation projects including soil and groundwater treatment systems, UST/LUST closures, and management of construction soils generated during redevelopment of agricultural and industrial properties. Other equity and finance level services managed and directed by Ms. Ponce include management of Property Condition Assessments, ALTA Land Surveys, zoning reports, Seismic Risk Assessments (PML), Construction Risk Management, construction monitoring services, and construction document cost review analysis.

Real estate investors, financial institutions, insurance lenders, property managers, developers, and brokers have come to rely on her advice and judgment to help them with their real estate business decisions. Ms. Ponce is a dedicated professional who takes pride and pleasure in meeting her client's needs and spearheading and assembling the team with the expertise to handle any issue that may come up during the real estate transaction.

## Project Experience

Ms. Ponce has conducted, managed, and directed thousands of ESAs, industrial hygiene, and engineering assessments throughout her career, nationally and globally. The following select projects and client base provide a glimpse of her consulting experience and due diligence background:

*Ford Leasing Development Company / Sunset Ford, Westminster, California.* Conducted a Phase I and II ESA and remedial activities at a closing automobile dealership with 41 service bays containing active, decommissioned, or removed in-ground hydraulic vehicle lifts. The Phase II ESA identified petroleum hydrocarbon and VOC impacts in soil and groundwater in the immediate vicinity of the lifts. Based on the identified impacts, managed the removal of all lifts and contaminated soil under regulatory oversight and conducted a comprehensive site investigation, including well installation and soil, groundwater, and soil vapor sampling. Prepared and submitted final reports to the client and regulatory agencies and obtained regulatory site closure.

*UBS Realty Investors, LLC, Riverside, California.* Conducted a Phase I ESA of an approximately 36-acre commercial shopping center containing retail stores; restaurants; banks; grocery stores; a movie theater; hair, nail, and beauty salons; and a dry cleaner in a total of 16 buildings. Work included site reconnaissance, tenant inspections, site history review, database search, and final report preparation with recommendations for additional assessment.

*USDA Forest Service, Mountain Center, California.* Prepared a Soil Excavation and Groundwater Well Installation Workplan to assess a release that was discovered during the removal of two 1,000-gallon USTs. Elevated contaminant concentrations were detected in confirmation soil samples collected at that time. Installed one groundwater monitoring well into fractured bedrock and later abandoned the well due to planned excavation activities in the area. A groundwater sample collected prior to well abandonment contained elevated contaminant concentrations. Prepared a Site Investigation Summary Report summarizing site activities and investigations to date. Prepared a Groundwater Assessment Workplan to assess the extent of contaminant concentrations in groundwater. Site assessment work is pending.

*American Golf Corporation, Eighteen Sites in Southern California.* Managed underground storage tank removal and closure activities. Work included performing initial confirmation soil sampling and analysis and subsequent monitoring and soil and/or groundwater testing in association with the removal of the

underground storage tanks, associated dispensers, and piping at sixteen sites located throughout Southern California. Prepared soil and/or groundwater investigation workplans as needed to address contamination issues at several of the sites and closure reports for the various State and local authorities. To date, regulatory closure has been obtained at most of the facilities. Currently managing ongoing monitoring and/or remediation is occurring at several of the facilities.

*G.E. Capital, Tijuana, Mexico.* Managed and conducted more than 30 Phase I and Phase II ESAs for active and proposed industrial developments within various areas of Tijuana, Mexico. Work included site reconnaissance, site history review, and final report preparation.

## Affiliations

Member, Commercial Real Estate Development Association (NAIOP)
Member, Urban Land Institute (ULI)
Member, National Ground Water Association (NGWA)
Associate Member, American Society of Civil Engineers (ASCE)
Member, Commercial Real Estate Women (CREW)
Member, Groundwater Resources Association (GRA) of California
Intern Environmental Engineer, American Academy of Environmental Engineers (AAEE)
Member, International Council of Shopping Centers (ICSC)

## Contact

mponce@partneresi.com

# Appendix F-1

## Preliminary Low-Impact Development Plan

# LOW IMPACT DEVELOPMENT (LID)

**FOR:**
12021 WOODRUFF AVENUE
DOWNEY, CALIFORNIA 90241
APN: 3284-025-18

**OWNER:**
12021 WOODRUFF LLC
1800 WAZEE STREET, SUITE 500
DENVER, CO 80202
PHONE: (303) 567-500
CONTACT: BLAKE KELLEY

JULY 31, 2019

JOB NO. 3700

**PREPARED BY:**
THIENES ENGINEERING
14349 FIRESTONE BOULEVARD
LA MIRADA, CALIFORNIA 90638
PHONE: (714) 521-4811
FAX: (714) 521-4173
CONTACT: LUIS PRADO (luisp@thieneseng.com)

# Preparer (Engineer) Certification

| | | | |
|---|---|---|---|
| Engineer's Name: | Reinhard Stenzel | | |
| Engineer's Title: | Director of Engineering | | |
| Company: | Thienes Engineering Inc. | | |
| Address: | 14349 Firestone Boulevard, La Mirada, CA 90638 | | |
| Email: | reinhard@thieneseng.com | | |
| Telephone No: | 714-521-4811 | | |
| I hereby certify that this Low Impact Development Plan is in compliance with, and meets the requirements set forth in, Order No. R4−2012−0175, of the Los Angeles Regional Water Quality Control Board. | | | |
| Engineer's Signature | | Date | |
| Place Stamp Here | | | |

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Appendix B LID Site Plan
Appendix C BMP Operation and Maintenance
Appendix D Maintenance Agreement
Appendix E Educational Materials
Appendix F Infiltration Feasibility

# Owner's Certification

This Low Impact Development (LID) has been prepared for **12021 Woodruff LLC** (Owner) by **Thienes Engineering, Inc.** (Engineers).

The LID is intended to comply with the requirements of the City of Downey, Public Works Department, and Department of Planning and Redevelopment, requiring the preparation of a LID. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to date conditions on the site consistent with the Los Angeles Regional Board's Basin Plan and the intent of the non-point source National Pollutant Discharge Elimination System (NPDES) Permit for Waste Discharge Requirements for the County of Los Angeles, Los Angeles County Flood Control District and the incorporated cities of Los Angeles County within the California Regional Water Quality Control Board, Los Angeles Region. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the LID. An appropriate number of approved-signed copies of this document shall be available on the subject site in perpetuity.

| **Owner Name: Blake Kelley** | | |
|---|---|---|
| **Title** | | |
| **Company** | 12021 Woodruff LLC | |
| **Address** | 1800 Wazee Street, Suite 500, Denver, CO 80202 | |
| **Email** | bkelley@prologis.com | |
| **Telephone #** | (303) 567-5000 | |
| **Signature** | **Date** | |

# 1.0 Project Description

The project site is located within the City of Downey (Figure 1 - Vicinity Map), at APN(s): 3284-025-18, of Los Angeles County. It's for commercial use with a lot size of approximately 6.30 acres. It's located at 12021 Woodruff Avenue, Downey, CA 90241.

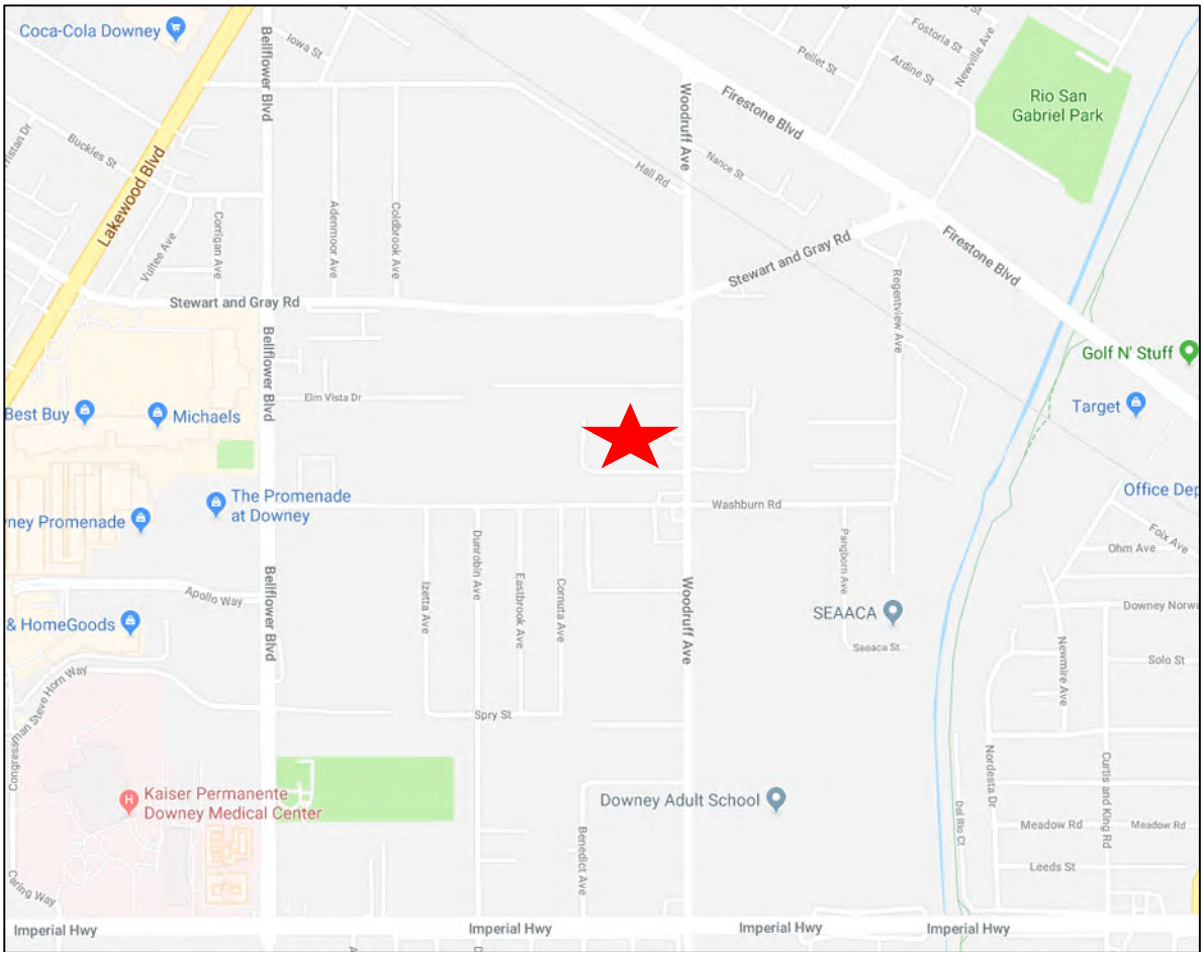



**Figure 1 - Vicinity Map (North↑)**

The proposed site is a Designated Project identified as a significant redevelopment where 50 percent or more of the impervious surface of a previously developed site is proposed to be altered and the previous development project was not subject to post-construction stormwater quality control measures. Hence, the entire development site must meet the requirements of the LID Standards Manual.

The project will treat stormwater runoff generated by the project through the use of one WetlandMOD biofiltration system and underground chambers (detention only) sized to treat 1.5 times the Stormwater Quality Design volume (SWQDv). Infiltration is infeasible due onsite contamination as described in Section 1.3 and as described in the Phase I Environmental Site Assessment Report within Appendix F.

## 1.1 Existing Site Description

The project site has an existing one story masonry and metal building of approximately 159,335 square feet. Vehicle parking is located along the perimeter of the site. A drive aisle wraps around the existing building.

Runoff from the majority of the site drains southwesterly via valley gutter. The valley gutter jogs the northerly and westerly property line. Per existing topography, given the location of the roof drains along the building perimeter, most if not all of the roof runoff will drain to this valley gutter. Flows will be conveyed from the site through the southerly offsite property and eventually discharge to Washburn Road via parkway culvert.

Runoff from the vehicle parking lot and the landscaping fronting Woodruff Avenue will sheet flow toward the street. Some flows will drain via a parkway culvert located at the southeast portion of the site.

## 1.2 Proposed Site Description

The project site encompasses approximately 6.30 acres. Proposed improvements to the site include one industrial warehouse type building (SIC Code 4225) of 43,788 square feet. There will be two separate truck yards on both the north and south sides of the building. Vehicle parking lots will be located on the east side of the building. Trailer stalls will be located on the northerly and southerly part of the site. Landscaping will be located along the easterly property line fronting Woodruff Avenue and throughout the easterly vehicle parking lot.

The site will consist of one outlet location (connection to public storm drain) located at the southerly driveway entrance. Before runoff discharges offsite, catch basins and a sump pump will be utilized to divert the 1.5x SWQDv to the WetlandMOD biofiltration system and underground chambers for treatment. The WetlandMOD biofiltration system will utilize plants and soil media from MS4 Permit's Attachment H to biotreat pollutants. Treated flows will ultimately get discharged onto the proposed onsite storm drain via an underdrain system and a sump pump.

Runoff from portions of the driveways and landscaping fronting Woodruff Avenue (Subarea 10B) will sheet flow to the public street without being routed to an LID BMP.

| SITE CONDITION | IMPERVIOUS AREA (ac.)* | PERVIOUS AREA (ac.)* | TOTAL PROJECT AREA (ac.) | IMPERVIOUS % |
|---|---|---|---|---|
| Existing | 6.30 | 0.00 | 6.30 | 100% |
| Proposed | 5.64 | 0.66 | 6.30 | 10% |

## 1.3 Geological Investigation/Infiltration Feasibility

The site lies above LA County Soil Type 006 known as Hanford Fine Sandy Loam. Based on the "Phase I Environmental Site Assessment Report" dated September 26, 2018 and prepared by Partner Engineering and Science, Inc.; a Phase II conducted in 2013 determined that to an approximate depth of 50 feet below surface (bgs), soil consists of brown, fine grained sand and silt overlying grey, clayey silt. In the same Phase II, groundwater was encountered at 45 feet bgs.

The historic use of the site has been for manufacturing purposes. Kirkhill, a manufacturer of custom rubber products has occupied all or part of the subject building since 1951 and in an earlier Phase II report (2005), high concentrations of diesel range and oil range petroleum were found in the soil. Therefore, infiltration is deemed infeasible. The project will instead propose a WetlandMOD biofiltration system to meet water quality requirements for 1.5x SWQDv. Refer to Appendix F for the Phase I report.

# 2.0 Project Specific Requirements

The proposed site is a Designated Project identified as a significant redevelopment where 50 percent or more of the impervious surface of a previously developed site is proposed to be altered and the previous development project was not subject to post-construction stormwater quality control measures. Thus, the entire development site must meet the requirements of the LID Standards Manual.

## 2.1 Peak Storm Water Runoff Discharge Rates

Runoff from the northerly half of the building and the northerly truck yard (Subarea 1A) drains to catch basins in the truck yard. The 50-year peak flow rate is approximately 9.3 cfs.

Runoff from the easterly vehicle parking lot (Subareas 2A and 3A) drain to catch basins within the parking lot. The 50-year peak flow rate for subareas 2A and 3A is approximately 0.5 cfs and 0.7 cfs, respectively.

Runoff from the southerly half of the building and the southerly truck yard (Subarea 4A) drains to catch basin in the southerly truck yard. The 50-year peak flow rate for this area is approximately 9.0 cfs. All flows from subareas 1A, 2A, 3A, and 4A are conveyed southeasterly of the site via onsite storm drain. Flows from the site will discharge to the 36” storm drain in Woodruff Avenue, located east of the site.

Runoff from portions of both driveways and landscaping fronting Woodruff will sheet flow to the public street.

As previously mentioned, runoff from the site is limited to 1.25 cfs/acre. Discharge from the site is limited to 7.9 cfs (6.30 acres x 1.25 cfs/acre). Both the northerly and southerly truck yard will be used to detain the peak flow rate. Runoff from the site is limited due to the shallow hydraulic grade line at the proposed connection to the existing 36” storm drain in Woodruff Avenue.

## 2.2 Source Controls

Source control measures are designed to prevent pollutants from contacting stormwater runoff or prevent discharge of contaminated stormwater runoff to the storm drain system and/or receiving water. This section describes structural-type, source control measures that must be considered for implementation in conjunction with appropriate nonstructural source control measures, such as good housekeeping and employee training, to optimize pollution prevention.

Source control measures should be implemented to the maximum extent practicable to mitigate pollutant mobilization from the project site in stormwater and non-stormwater runoff. A summary of the source control measures that should be implemented for each type of project is summarized below.

## 2.2.A Storm Drain Message and Signage (S-1)

All proposed and any existing inlets to remain will be stenciled with prohibitive language and/or graphical icons to prevent dumping. Legibility of the stencils/markers will be maintained on a yearly basis, or as needed.

## 2.2.B Outdoor Material Storage Area (S-2)

There are no proposed outdoor material storage areas for this project. Any and all materials will be stored indoors.

## 2.2.C Outdoor Trash Storage/Waste Handling Areas (S-3)

Trash enclosures will be located away from roof drainage. The bin's lid will remain closed when not in use and will be walled off to prevent transport by wind and contact with rainfall.

## 2.2.D Outdoor Loading/Unloading Dock Area (S-4)

The project proposes to construct several aboveground loading docks with dock high doors which will remain closed when not in use. The concrete surface is designed to drain away from the building and minimize run-on to the loading docks. This area will be treated via underground chambers (detention only) and a WetlandMOD biofiltration system. Dock area flows are captured by inlets that utilize drain inserts to filter out pollutants prior to entering the biofiltration system. Additionally, the proposed buildings will be utilized as a warehouse for finished goods and consequently, items being loaded/unloaded do not have the potential to contribute to stormwater pollution. Please refer to Appendix B for loading dock locations.

## 2.2.F Outdoor Vehicle/Equipment Repair/Maintenance Area (S-5)

Not applicable

## 2.2.G Outdoor Vehicle/Equipment Accessory Wash Area (S-6)

Not applicable

## 2.2.H Fuel & Maintenance Area (S-7)

Not applicable

## 2.2.I Landscape Irrigation Practices (S-8)

Install irrigation systems that utilize a weather-based smart irrigation controller to minimize water usage and reduce dry weather urban runoff.

## 2.2.J Building Materials (S-9)

Alternative building materials could not be used in-lieu of traditional materials due to the nature of the project (commercial building).

## 2.2.K Animal Care and Handling Facilities (S-10)

Not applicable

## 2.2.L Outdoor Horticulture Areas (S-11)

Not applicable

# 2.3 Low Impact Development (LID)

## 2.3.A Infiltration Feasibility

Refer to Section 1.3's Geotechnical Investigation/Infiltration Feasibility within this LID report. Infiltration is not feasible due to contaminated soil.

## 2.3.B Harvest and Use

This concept was not utilized because it is a commercial facility where the amount of impervious area is much greater than landscape and toilet use. However, stormwater is detained for biofiltration prior to discharging offsite.

## 2.3.C Biofiltration

One WetlandMOD biofiltration unit with 114 underground chambers will be proposed. The WetlandMOD will utilize plants and soil media from MS4 Permit's Attachment H to biotreat pollutants. Flows will be collected and stored in proposed underground chamber systems for detention only; no infiltration is assumed. Stormwater will then be pumped into the at-grade WetlandMOD for a constant treatment flowrate as listed in the table below. The systems are sized to drawdown the detained 1.5x SWQDv within 96 hours.

HydroCalc was used to determine the 1.5x SWQDv using the 85th percentile storm. The WetlandMOD biofilter a device-specific and constant flowrate for water quality treatment. Flowrates from the 85th percentile storm that exceeds the WetlandMOD's constant flowrate will be detained and slowly biofiltered over the allowable 96 hours. The 114 underground chambers are used to detain that portion of the 1.5x SWQDv. See summary table below and Appendix A for calculations.

| SUMMARY TABLE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | WETLANDMOD | | | MC-4500 CHAMBERS | | | |
| SUBAREAS | AREA (ACRES) | 1.5x SWQDv (CF) | WETLANDMOD MODEL | CONSTANT FLOWRATE (CFS) | AMOUNT FILTERED DURING STORM (CF) | DETENTION REQUIRED (CF) | DETENTION PROVIDED (CF) | # OF CHAMBERS | ACTUAL TREATMENT FILTERED + STORAGE (CF) |
| 1A-4A | 5.95 | 25,716 | WM-11-22-V | 0.076 | 6,635 | 19,114 | 19,188 | 114 | 25,823 |
| **TOTAL** | **5.95** | **25,716** | | | **6,635** | **19,114** | **19,188** | **114** | **25,823** |

## 2.4 Hydromodification

The proposed site is tributary to an engineered channel (San Gabriel River) that is regularly maintained and is not susceptible to hydromodification impacts. In addition, the onsite water quality BMPs will assist in decreasing the time of concentration.

## 2.5 Conserve Natural Areas

*During the subdivision design and approval process, the site layout must be consistent with the applicable General Plan and Local Area Plan policies and implement the following:*

- *Concentrate or cluster development on portions of the site while leaving the remaining land in a natural undisturbed condition;*
- *Limit clearing and grading of native vegetation at the site to the minimum amount needed to build lots, allow access, and provide fire protection;*
- *Maximize trees and other vegetation at the site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants;*
- *Promote natural vegetation by using parking lot islands and other landscaped areas;*
- *Preserve riparian areas and wetlands.*

The property was previously developed with no natural areas to conserve.

## 2.6 Minimize Storm Water Pollutants of Concern

*Stormwater runoff from a site has the potential to contribute oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens to the stormwater conveyance system. The development must be designed so as to minimize, to the maximum extent practicable, the introduction of pollutants of concern that may result in significant impacts, generated from site runoff of directly connected impervious areas (DCIA), to the stormwater conveyance system as approved by the building official. Pollutants of concern, consist of any pollutants that exhibit one or more of the following characteristics: current loadings or historic deposits of the pollutant are impacting the beneficial uses of a receiving water, elevated levels of the pollutant are found in sediments of a receiving water and/or have the potential to bioaccumulate in organisms therein, or the detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna.*

*In meeting this specific requirement, "minimization of the pollutants of concern" will require the incorporation of a BMP or combination of BMPs best suited to maximize the reduction of pollutant loadings in that runoff to the Maximum Extent Practicable.*

Anticipated pollutants generated from the proposed development are:

- Suspended Solids
- Total Phosphorus

- Total Nitrogen
- Total Kjeldahl Nitrogen
- Cadmium, Total
- Chromium, Total
- Copper, Total
- Lead, Total
- Zinc, Total
-

The receiving waters are:

- San Gabriel River (Reach 2): Engineered Channel
- San Gabriel River (Reach 1): Engineered Channel
- San Gabriel River Estuary
- San Pedro Bay Near/Off Shore Zones
- Pacific Ocean

TMDL's for receiving waters:

- San Gabriel River (Reach 2): None
- San Gabriel River (Reach 1): Bacteria, Metals and Trash
- San Gabriel River Estuary: Bacteria, Metals and Trash
- San Pedro Bay Near/Off Shore Zones: None
- Pacific Ocean: None

303d List for receiving waters:

- San Gabriel River (Reach 2): Coliform Bacteria, Cyanide and Lead
- San Gabriel River (Reach 1): Coliform Bacteria and pH
- San Gabriel River Estuary: Copper, Dioxin, Nickel and Oxygen (Dissolved)
- San Pedro Bay Near/Off Shore Zones: Chlordane, DDT (tissue & sediment), PCBs (Polychlorinated biphenyls) and Sediment Toxicity
- Pacific Ocean: None

The pollutants of concern of the project site are:

- Heavy Metals
- Bacteria
- Trash and Debris

The proposed project will treat stormwater runoff and disconnect runoff from impervious areas by means of biofiltration. The proposed WetlandMOD biofiltration system will utilize plants and soil media from MS4 Permit's Attachment H to biotreat pollutants.

## 2.7 Protect Slopes and Channels

*Project plans must include BMPs consistent with local codes and ordinances and LID to decrease the potential of slopes and/or channels from eroding and impacting stormwater runoff:*

- *Convey runoff safely from the tops of slopes and stabilize disturbed slopes.*
- *Utilize natural drainage systems to the maximum extent practicable.*
- *Control or reduce or eliminate flow to natural drainage systems to the maximum extent practicable.*
- *Stabilize permanent channel crossings.*
- *Vegetate slopes with native or drought tolerant vegetation.*
- *Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion, with the approval of all agencies with jurisdiction, e.g., the U.S. Army Corps of Engineers and the California Department of Fish and Game.*

The proposed project site is located on a flat terrain. There are no natural drainage systems, or channel crossings to protect.

## 2.8 Provide Proof of Ongoing BMP Maintenance

*Improper maintenance is one of the most common reasons why water quality controls will not function as designed or which may cause the system to fail entirely. It is important to consider who will be responsible for maintenance of a permanent BMP, and what equipment is required to perform the maintenance properly. If Structural or Treatment Control BMPs are required or included in project plans, the applicant must provide verification of maintenance provisions through such means as may be appropriate, including, but not limited to legal agreements, covenants, CEQA mitigation requirements and/or Conditional Use Permits.*

*The verification will include the developer's signed statement, as part of the project application, accepting responsibility for all Structural and Treatment Control BMP maintenance until the time the property is transferred and, where applicable, a signed agreement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance. The transfer of property to a private or public owner must have conditions requiring the recipient to assume responsibility for maintenance of any Structural or Treatment Control BMP to be included in the sales or lease agreement for that property, and will be the owner's responsibility. The condition of transfer shall include a provision that the property owners conduct maintenance inspection of all Structural or Treatment Control BMPs at least once a year and retain proof of inspection. For residential properties where the Structural or Treatment Control BMPs are located within a common area, which will be maintained by a homeowner's association, language regarding the responsibility for maintenance must be included in the project's conditions, covenants and restrictions (CC&Rs). Printed educational materials will be required to accompany the first deed transfer to highlight the existence of the requirement and to provide information on what stormwater management facilities are present, signs that maintenance is needed, how the*

*necessary maintenance can be performed, and assistance that the Permittee can provide. The transfer of this information shall also be required with any subsequent sale of the property.*

*Structural or Treatment Control BMPs located within a public area proposed for transfer will be the responsibility of the developer until accepted for transfer by the appropriate public agency. Structural or Treatment Control BMPs proposed for transfer must meet design standards adopted by the public entity for the BMP installed and should be approved by the appropriate public agency prior to its installation.*

The property owner/operator will maintain proof of ongoing maintenance at the site as recorded in the Operation and Maintenance (Appendix C) and Covenant and Agreement (Appendix D).

## 2.9 Design Standards for Structural or Treatment Controls BMPs

The proposed project is required to incorporate appropriate stormwater mitigation measures into the design plan for the entire site. The proposed project will treat and mitigate flows per LID guidelines by effectively treating the pollutants of concern by means of biofiltration.

Before runoff discharges offsite, catch basins and a sump pump will be utilized to divert the 1.5x SWQDv to the WetlandMOD biofiltration system and underground chambers for treatment. The WetlandMOD biofiltration system will utilize plants and soil media from MS4 Permit's Attachment H to biotreat pollutants. Treated flows will ultimately get discharged onto the proposed onsite storm drain via an underdrain system and a sump pump.

## 2.10 Provisions Applicable to Individual Priority Project Categories

## 2.10.A Parking Lots

### *2.10.A.1 Properly Design Parking Area*

*Parking lots contain pollutants such as heavy metals, oil and grease, and polycyclic aromatic hydrocarbons that are deposited on parking lot surfaces by motor-vehicles. These pollutants are directly transported to surface waters. To minimize the offsite transport of pollutants, the following design criteria are required:*

- *Reduce impervious land coverage of parking areas.*
- *Infiltrate runoff before it reaches storm drain system.*
- *Treat runoff before it reaches storm drain system.*

The proposed project is designed so that pollutants from the impervious surfaces are disconnected prior to discharging offsite. Runoff from the parking lots are transported through a WetlandMOD biofiltration system for treatment.

***2.10.B.2 Properly Design to Limit Oil Contamination and Perform Maintenance***

*Parking lots may accumulate oil, grease, and water insoluble hydrocarbons from vehicle drippings and engine system leaks.*

- *Treat to remove oil and petroleum hydrocarbons at parking lots that are heavily used (e.g. fast food outlets, lots with 25 or more parking spaces, sports event parking lots, shopping malls, grocery stores, discount warehouse stores).*
- *Ensure adequate operation and maintenance of treatment systems particularly sludge and oil removal, and system fouling and plugging prevention control.*

The project owner will ensure that grease and oil are contained. The parking lot will be swept on a monthly basis, minimum, and before any rain events. Absorbent materials will be used to collect any spilled oil, and disposed of properly, to ensure they do not contaminate stormwater.

# 2.11 Waiver

*A Permittee may, through adoption of an ordinance or code incorporating the treatment requirements of LID, provide for a waiver from the requirement if impracticability for a specific property can be established. A waiver of impracticability shall be granted only when all other Structural or Treatment Control BMPs have been considered and rejected as infeasible. Recognized situations of impracticability include, (i) extreme limitations of space for treatment on a redevelopment project, (ii) unfavorable or unstable soil conditions at a site to attempt infiltration, and (iii) risk of ground water contamination because a known unconfined aquifer lies beneath the land surface or an existing or potential underground source of drinking water is less than 10 feet from the soil surface. Any other justification for impracticability must be separately petitioned by the Permittee and submitted to the Regional Board for consideration. The Regional Board may consider approval of the waiver justification or may delegate the authority to approve a class of waiver justifications to the Regional Board Executive Officer. The supplementary waiver justification becomes recognized and effective only after approval by the Regional Board or the Regional Board Executive Officer. A waiver granted by a Permittee to any development or redevelopment project may be revoked by the Regional Board Executive Officer for cause and with proper notice upon petition.*

The proposed project does not require a waiver of impracticability from any LID conditions.

# 2.12 Mitigation Funding

*The Permittees may propose a management framework, for endorsement by the Regional Board Executive Officer, to support regional or sub-regional solutions to storm water pollution, where any of the following situations occur:*

- *A waiver for impracticability is granted;*
- *Legislative funds become available;*
- *Off-site mitigation is required because of loss of environmental habitat; or*

- *An approved watershed management plan or a regional storm water mitigation plan exists that incorporates an equivalent or improved strategy for storm water mitigation.*

No management framework for mitigation funding is necessary for the proposed project.

Funding will be the responsibility of the owner:

12021 WOODRUFF LLC
1800 WAZEE STREET, SUITE 500
DENVER, CO 80202
PHONE: (303) 567-500
CONTACT: BLAKE KELLEY

## 2.13 Limitation on Use of Infiltration BMPs

*Three factors significantly influence the potential for storm water to contaminate ground water. They are (i) pollutant mobility, (ii) pollutant abundance in storm water, (iii) and soluble fraction of pollutant. The risk of contamination of groundwater may be reduced by pretreatment of storm water. A discussion of limitations and guidance for infiltration practices is contained in, Potential Groundwater Contamination from Intentional and Non-Intentional Stormwater Infiltration, Report No. EPA/600/R-94/051, USEPA (1994).*

*In addition, the distance of the groundwater table from the infiltration BMP may also be a factor determining the risk of contamination. A water table distance separation of ten feet depth in California presumptively poses negligible risk for storm water not associated with industrial activity or high vehicular traffic.*

*Infiltration BMPs are not recommended for areas of industrial activity or areas subject to high vehicular traffic (25,000 or greater average daily traffic (ADT) on main roadway or 15,000 or more ADT on any intersecting roadway) unless appropriate pretreatment is provided to ensure groundwater is protected and the infiltration BMP is not rendered ineffective by overload.*

See Section 1.3 for discussion on the limitation of infiltration at the project site.

## 2.14 Alternative Certification for Storm Water Treatment Mitigation

*In lieu of conducting detailed BMP review to verify Structural or Treatment Control BMPs adequacy, a Permittee may elect to accept a signed certification from a Civil Engineer or a Licensed Architect registered in the State of California, that the plan meets the criteria established herein. The Permittee is encouraged to verify that certifying person(s) have been trained on BMP design for water quality, not more than two years prior to the signature date. Training conducted by an organization with storm water BMP design expertise (e.g., a University, American Society of Civil Engineers, American Society of Landscape Architects,*

*American Public Works Association, or the California Water Environment Association) may be considered qualifying.*

A California licensed civil engineer has provided a detailed BMP review of this report.

## 2.15 Resources and Reference

California Storm Water Best Management Practices Handbooks for Construction Activity (2009), Municipal (2003), and Industrial/Commercial (2003).

# APPENDIX A

# Stormwater Quality Design Calculations

search our site..

# Hydrology Map

A GIS viewer application to view the data for the hydrology manual.

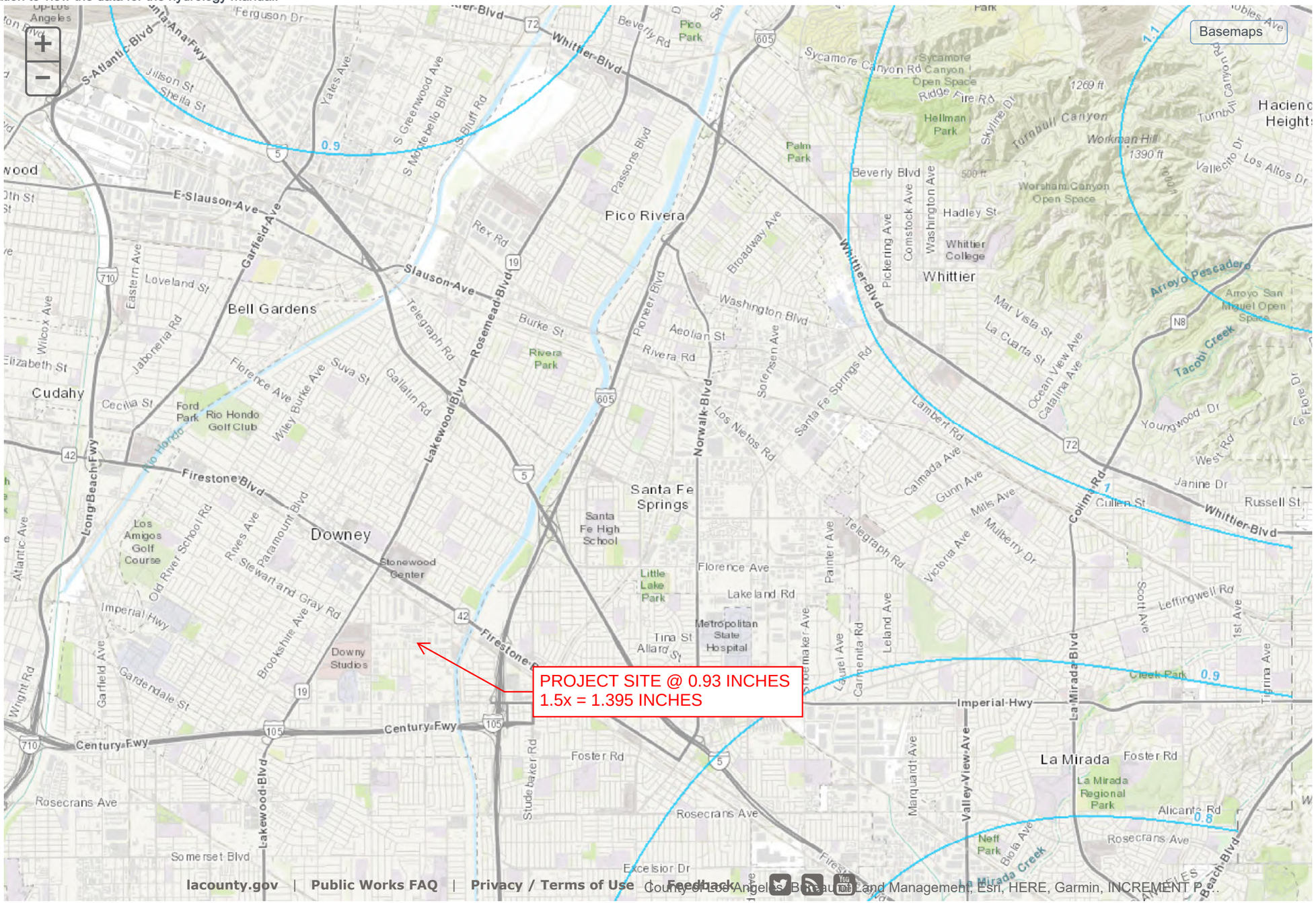
LAYERS

- [ ] 50yr Two Tenths (Rainfall)
- [ ] DPA Zones
- [ ] Soils 2004
- [x] Final 85th Percentile, 24-hr Rainfall
- [ ] Final 95th Percentile, 24-hr Rainfall
- [ ] 1-year, 1-hour Rainfall Intensity

SEARCH

Enter Address, Cross Street, or Parcel No.:
(ex: 900 S. Fremont Ave., Fremont@Valley, 5342005904)

Search



# Peak Flow Hydrologic Analysis

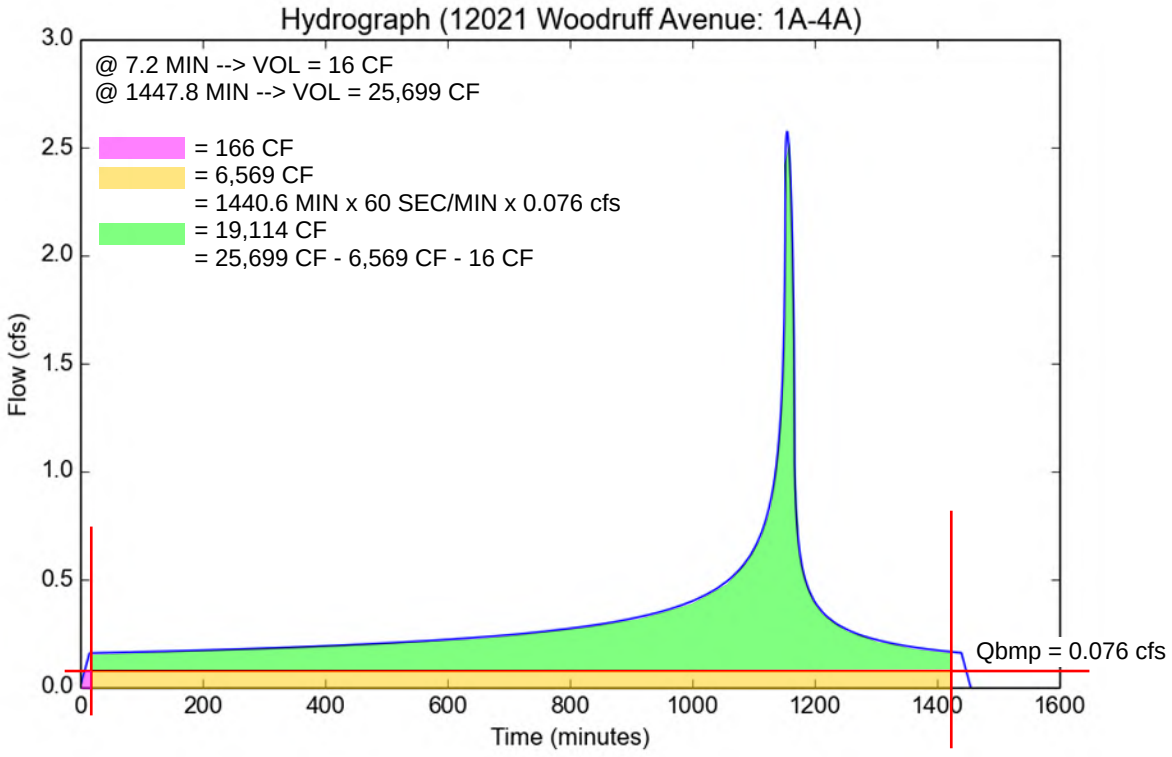
File location: O:/3700-3799/3700/SUSMP/2019-07-XX 1st Submittal/Appendices/Appendix A - SWQDv (PRINT IN COLOR)/HydroCalc/12021 Woodruff A
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | 12021 Woodruff Avenue |
| Subarea ID | 1A-4A |
| Area (ac) | 5.95 |
| Flow Path Length (ft) | 314.0 |
| Flow Path Slope (vft/hft) | 0.0078 |
| 85th Percentile Rainfall Depth (in) | 1.395 |
| Percent Impervious | 0.95 |
| Soil Type | 6 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.395 |
| Peak Intensity (in/hr) | 0.4966 |
| Undeveloped Runoff Coefficient (Cu) | 0.3176 |
| Developed Runoff Coefficient (Cd) | 0.8709 |
| Time of Concentration (min) | 15.0 |
| Clear Peak Flow Rate (cfs) | 2.5734 |
| Burned Peak Flow Rate (cfs) | 2.5734 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.5903 |
| 24-Hr Clear Runoff Volume (cu-ft) | 25715.5343 |



Inputs: 12021 Woodruff Avenue

| Subarea ID | Area (ac) | Flow Path l | Flow Path S | 85th Perce | Percent Im | Soil Type | Design Sto | Fire Factor |
|---|---|---|---|---|---|---|---|---|
| 1A | 5.95 | 314 | 0.0078 | 1.395 | 0.95 | 6 | 85th perce | 0 |

Outputs: 12021 Woodruff Avenue

| Area (ac) | Modeled (8 | Time of Co | Clear Peak | 24-Hr Clear | Burned Pe | Peak Inten | Undevelop | Developed |
|---|---|---|---|---|---|---|---|---|
| 1A | 1.395 | 15 | 2.573386 | 0.590347 | 2.573386 | 0.496627 | 0.317566 | 0.870878 |

Hydrograph: 12021 Woodruff Avenue - 1A

| Time (min) | Incrementa | Incrementa | Intensity (i | Undevelop | Developed | Clear Peak | Incrementa | Cumulative |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0.2 | 7.36E-05 | 0.000103 | 0 | 0 | 0 | 0.002108 | 0.01265 | 0.01265 |
| 0.4 | 0.000147 | 0.000205 | 0 | 0 | 0 | 0.004217 | 0.037949 | 0.050599 |
| 0.6 | 0.000221 | 0.000308 | 0 | 0 | 0 | 0.006325 | 0.063248 | 0.113847 |
| 0.8 | 0.000294 | 0.000411 | 0 | 0 | 0 | 0.008433 | 0.088548 | 0.202395 |
| 1 | 0.000368 | 0.000514 | 0 | 0 | 0 | 0.010541 | 0.113847 | 0.316242 |
| 1.2 | 0.000442 | 0.000616 | 0 | 0 | 0 | 0.01265 | 0.139147 | 0.455389 |
| 1.4 | 0.000515 | 0.000719 | 0 | 0 | 0 | 0.014758 | 0.164446 | 0.619834 |
| 1.6 | 0.000589 | 0.000822 | 0 | 0 | 0 | 0.016866 | 0.189745 | 0.80958 |
| 1.8 | 0.000663 | 0.000925 | 0 | 0 | 0 | 0.018975 | 0.215045 | 1.024624 |
| 2 | 0.000736 | 0.001027 | 0 | 0 | 0 | 0.021083 | 0.240344 | 1.264968 |
| 2.2 | 0.00081 | 0.00113 | 0 | 0 | 0 | 0.023191 | 0.265643 | 1.530612 |
| 2.4 | 0.000884 | 0.001233 | 0 | 0 | 0 | 0.025299 | 0.290943 | 1.821554 |
| 2.6 | 0.000957 | 0.001336 | 0 | 0 | 0 | 0.027408 | 0.316242 | 2.137796 |
| 2.8 | 0.001031 | 0.001438 | 0 | 0 | 0 | 0.029516 | 0.341541 | 2.479338 |
| 3 | 0.001105 | 0.001541 | 0 | 0 | 0 | 0.031624 | 0.366841 | 2.846179 |
| 3.2 | 0.001179 | 0.001644 | 0 | 0 | 0 | 0.033732 | 0.39214 | 3.238319 |
| 3.4 | 0.001252 | 0.001747 | 0 | 0 | 0 | 0.035841 | 0.41744 | 3.655758 |
| 3.6 | 0.001326 | 0.00185 | 0 | 0 | 0 | 0.037949 | 0.442739 | 4.098497 |
| 3.8 | 0.0014 | 0.001953 | 0 | 0 | 0 | 0.040057 | 0.468038 | 4.566535 |
| 4 | 0.001473 | 0.002055 | 0 | 0 | 0 | 0.042166 | 0.493338 | 5.059873 |
| 4.2 | 0.001547 | 0.002158 | 0 | 0 | 0 | 0.044274 | 0.518637 | 5.57851 |
| 4.4 | 0.001621 | 0.002261 | 0 | 0 | 0 | 0.046382 | 0.543936 | 6.122446 |
| 4.6 | 0.001695 | 0.002364 | 0 | 0 | 0 | 0.04849 | 0.569236 | 6.691682 |
| 4.8 | 0.001768 | 0.002467 | 0 | 0 | 0 | 0.050599 | 0.594535 | 7.286217 |
| 5 | 0.001842 | 0.00257 | 0 | 0 | 0 | 0.052707 | 0.619834 | 7.906052 |
| 5.2 | 0.001916 | 0.002673 | 0 | 0 | 0 | 0.054815 | 0.645134 | 8.551185 |
| 5.4 | 0.00199 | 0.002776 | 0 | 0 | 0 | 0.056924 | 0.670433 | 9.221619 |
| 5.6 | 0.002063 | 0.002879 | 0 | 0 | 0 | 0.059032 | 0.695733 | 9.917351 |
| 5.8 | 0.002137 | 0.002981 | 0 | 0 | 0 | 0.06114 | 0.721032 | 10.63838 |
| 6 | 0.002211 | 0.003084 | 0 | 0 | 0 | 0.063248 | 0.746331 | 11.38471 |
| 6.2 | 0.002285 | 0.003187 | 0 | 0 | 0 | 0.065357 | 0.771631 | 12.15634 |
| 6.4 | 0.002359 | 0.00329 | 0 | 0 | 0 | 0.067465 | 0.79693 | 12.95327 |
| 6.6 | 0.002432 | 0.003393 | 0 | 0 | 0 | 0.069573 | 0.822229 | 13.7755 |
| 6.8 | 0.002506 | 0.003496 | 0 | 0 | 0 | 0.071682 | 0.847529 | 14.62303 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7 | 0.00258 | 0.003599 | 0 | 0 | 0 | 0.07379 | 0.872828 | 15.49586 |
| 7.2 | 0.002654 | 0.003702 | 0 | 0 | 0 | 0.075898 | 0.898127 | 16.39399 |
| 7.4 | 0.002728 | 0.003805 | 0 | 0 | 0 | 0.078006 | 0.923427 | 17.31742 |
| 7.6 | 0.002802 | 0.003908 | 0 | 0 | 0 | 0.080115 | 0.948726 | 18.26614 |
| 7.8 | 0.002875 | 0.004011 | 0 | 0 | 0 | 0.082223 | 0.974026 | 19.24017 |
| 8 | 0.002949 | 0.004114 | 0 | 0 | 0 | 0.084331 | 0.999325 | 20.23949 |
| 8.2 | 0.003023 | 0.004217 | 0 | 0 | 0 | 0.086439 | 1.024624 | 21.26412 |
| 8.4 | 0.003097 | 0.00432 | 0 | 0 | 0 | 0.088548 | 1.049924 | 22.31404 |
| 8.6 | 0.003171 | 0.004423 | 0 | 0 | 0 | 0.090656 | 1.075223 | 23.38926 |
| 8.8 | 0.003245 | 0.004526 | 0 | 0 | 0 | 0.092764 | 1.100522 | 24.48979 |
| 9 | 0.003319 | 0.004629 | 0 | 0 | 0 | 0.094873 | 1.125822 | 25.61561 |
| 9.2 | 0.003392 | 0.004733 | 0 | 0 | 0 | 0.096981 | 1.151121 | 26.76673 |
| 9.4 | 0.003466 | 0.004836 | 0 | 0 | 0 | 0.099089 | 1.17642 | 27.94315 |
| 9.6 | 0.00354 | 0.004939 | 0 | 0 | 0 | 0.101197 | 1.20172 | 29.14487 |
| 9.8 | 0.003614 | 0.005042 | 0 | 0 | 0 | 0.103306 | 1.227019 | 30.37189 |
| 10 | 0.003688 | 0.005145 | 0 | 0 | 0 | 0.105414 | 1.252319 | 31.62421 |
| 10.2 | 0.003762 | 0.005248 | 0 | 0 | 0 | 0.107522 | 1.277618 | 32.90182 |
| 10.4 | 0.003836 | 0.005351 | 0 | 0 | 0 | 0.109631 | 1.302917 | 34.20474 |
| 10.6 | 0.00391 | 0.005454 | 0 | 0 | 0 | 0.111739 | 1.328217 | 35.53296 |
| 10.8 | 0.003984 | 0.005557 | 0 | 0 | 0 | 0.113847 | 1.353516 | 36.88647 |
| 11 | 0.004058 | 0.005661 | 0 | 0 | 0 | 0.115955 | 1.378815 | 38.26529 |
| 11.2 | 0.004132 | 0.005764 | 0 | 0 | 0 | 0.118064 | 1.404115 | 39.6694 |
| 11.4 | 0.004206 | 0.005867 | 0 | 0 | 0 | 0.120172 | 1.429414 | 41.09882 |
| 11.6 | 0.00428 | 0.00597 | 0 | 0 | 0 | 0.12228 | 1.454713 | 42.55353 |
| 11.8 | 0.004354 | 0.006073 | 0 | 0 | 0 | 0.124389 | 1.480013 | 44.03355 |
| 12 | 0.004428 | 0.006176 | 0 | 0 | 0 | 0.126497 | 1.505312 | 45.53886 |
| 12.2 | 0.004502 | 0.00628 | 0 | 0 | 0 | 0.128605 | 1.530612 | 47.06947 |
| 12.4 | 0.004575 | 0.006383 | 0 | 0 | 0 | 0.130713 | 1.555911 | 48.62538 |
| 12.6 | 0.004649 | 0.006486 | 0 | 0 | 0 | 0.132822 | 1.58121 | 50.20659 |
| 12.8 | 0.004723 | 0.006589 | 0 | 0 | 0 | 0.13493 | 1.60651 | 51.8131 |
| 13 | 0.004797 | 0.006692 | 0 | 0 | 0 | 0.137038 | 1.631809 | 53.44491 |
| 13.2 | 0.004871 | 0.006796 | 0 | 0 | 0 | 0.139147 | 1.657108 | 55.10202 |
| 13.4 | 0.004946 | 0.006899 | 0 | 0 | 0 | 0.141255 | 1.682408 | 56.78443 |
| 13.6 | 0.00502 | 0.007002 | 0 | 0 | 0 | 0.143363 | 1.707707 | 58.49213 |
| 13.8 | 0.005094 | 0.007106 | 0 | 0 | 0 | 0.145471 | 1.733007 | 60.22514 |
| 14 | 0.005168 | 0.007209 | 0 | 0 | 0 | 0.14758 | 1.758306 | 61.98344 |
| 14.2 | 0.005242 | 0.007312 | 0 | 0 | 0 | 0.149688 | 1.783605 | 63.76705 |
| 14.4 | 0.005316 | 0.007415 | 0 | 0 | 0 | 0.151796 | 1.808905 | 65.57595 |
| 14.6 | 0.00539 | 0.007519 | 0 | 0 | 0 | 0.153904 | 1.834204 | 67.41016 |
| 14.8 | 0.005464 | 0.007622 | 0 | 0 | 0 | 0.156013 | 1.859503 | 69.26966 |
| 15 | 0.005538 | 0.007725 | 0.030901 | 0.1 | 0.86 | 0.158121 | 1.884803 | 71.15446 |
| 15.2 | 0.005612 | 0.007829 | 0.030904 | 0.1 | 0.86 | 0.158134 | 1.89753 | 73.05199 |
| 15.4 | 0.005686 | 0.007932 | 0.030906 | 0.1 | 0.86 | 0.158147 | 1.897686 | 74.94968 |
| 15.6 | 0.00576 | 0.008035 | 0.030909 | 0.1 | 0.86 | 0.15816 | 1.897842 | 76.84752 |
| 15.8 | 0.005834 | 0.008139 | 0.030911 | 0.1 | 0.86 | 0.158173 | 1.897998 | 78.74552 |
| 16 | 0.005908 | 0.008242 | 0.030914 | 0.1 | 0.86 | 0.158186 | 1.898154 | 80.64368 |
| 16.2 | 0.005982 | 0.008345 | 0.030916 | 0.1 | 0.86 | 0.158199 | 1.89831 | 82.54199 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1445.2 | 1 | 1.395 | 0.02029 | 0.1 | 0.86 | 0.103826 | 1.258734 | 25685.09 |
| 1445.4 | 1 | 1.395 | 0.019873 | 0.1 | 0.86 | 0.10169 | 1.233098 | 25686.33 |
| 1445.6 | 1 | 1.395 | 0.019456 | 0.1 | 0.86 | 0.099555 | 1.207472 | 25687.53 |
| 1445.8 | 1 | 1.395 | 0.019039 | 0.1 | 0.86 | 0.097421 | 1.181853 | 25688.71 |
| 1446 | 1 | 1.395 | 0.018622 | 0.1 | 0.86 | 0.095287 | 1.156244 | 25689.87 |
| 1446.2 | 1 | 1.395 | 0.018205 | 0.1 | 0.86 | 0.093154 | 1.130643 | 25691 |
| 1446.4 | 1 | 1.395 | 0.017788 | 0.1 | 0.86 | 0.091021 | 1.105051 | 25692.11 |
| 1446.6 | 1 | 1.395 | 0.017371 | 0.1 | 0.86 | 0.08889 | 1.079467 | 25693.19 |
| 1446.8 | 1 | 1.395 | 0.016955 | 0.1 | 0.86 | 0.086759 | 1.053892 | 25694.24 |
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| 1447.2 | 1 | 1.395 | 0.016123 | 0.1 | 0.86 | 0.082499 | 1.002768 | 25696.27 |
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| 1447.6 | 1 | 1.395 | 0.015291 | 0.1 | 0.86 | 0.078242 | 0.951678 | 25698.2 |
| 1447.8 | 1 | 1.395 | 0.014875 | 0.1 | 0.86 | 0.076115 | 0.926146 | 25699.13 |
| 1448 | 1 | 1.395 | 0.014459 | 0.1 | 0.86 | 0.073989 | 0.900622 | 25700.03 |
| 1448.2 | 1 | 1.395 | 0.014044 | 0.1 | 0.86 | 0.071863 | 0.875107 | 25700.9 |
| 1448.4 | 1 | 1.395 | 0.013629 | 0.1 | 0.86 | 0.069737 | 0.8496 | 25701.75 |
| 1448.6 | 1 | 1.395 | 0.013213 | 0.1 | 0.86 | 0.067613 | 0.824102 | 25702.58 |
| 1448.8 | 1 | 1.395 | 0.012798 | 0.1 | 0.86 | 0.065489 | 0.798613 | 25703.37 |
| 1449 | 1 | 1.395 | 0.012383 | 0.1 | 0.86 | 0.063366 | 0.773132 | 25704.15 |
| 1449.2 | 1 | 1.395 | 0.011969 | 0.1 | 0.86 | 0.061244 | 0.747659 | 25704.89 |
| 1449.4 | 1 | 1.395 | 0.011554 | 0.1 | 0.86 | 0.059122 | 0.722195 | 25705.62 |
| 1449.6 | 1 | 1.395 | 0.01114 | 0.1 | 0.86 | 0.057001 | 0.69674 | 25706.31 |
| 1449.8 | 1 | 1.395 | 0.010725 | 0.1 | 0.86 | 0.054881 | 0.671293 | 25706.99 |
| 1450 | 1 | 1.395 | 0.010311 | 0.1 | 0.86 | 0.052761 | 0.645854 | 25707.63 |
| 1450.2 | 1 | 1.395 | 0.009897 | 0.1 | 0.86 | 0.050643 | 0.620424 | 25708.25 |
| 1450.4 | 1 | 1.395 | 0.009483 | 0.1 | 0.86 | 0.048524 | 0.595002 | 25708.85 |
| 1450.6 | 1 | 1.395 | 0.009069 | 0.1 | 0.86 | 0.046407 | 0.569589 | 25709.42 |
| 1450.8 | 1 | 1.395 | 0.008656 | 0.1 | 0.86 | 0.04429 | 0.544184 | 25709.96 |
| 1451 | 1 | 1.395 | 0.008242 | 0.1 | 0.86 | 0.042174 | 0.518788 | 25710.48 |
| 1451.2 | 1 | 1.395 | 0.007829 | 0.1 | 0.86 | 0.040059 | 0.4934 | 25710.97 |
| 1451.4 | 1 | 1.395 | 0.007415 | 0.1 | 0.86 | 0.037944 | 0.46802 | 25711.44 |
| 1451.6 | 1 | 1.395 | 0.007002 | 0.1 | 0.86 | 0.03583 | 0.442649 | 25711.88 |
| 1451.8 | 1 | 1.395 | 0.006589 | 0.1 | 0.86 | 0.033717 | 0.417286 | 25712.3 |
| 1452 | 1 | 1.395 | 0.006176 | 0.1 | 0.86 | 0.031605 | 0.391931 | 25712.69 |
| 1452.2 | 1 | 1.395 | 0.005764 | 0.1 | 0.86 | 0.029493 | 0.366585 | 25713.06 |
| 1452.4 | 1 | 1.395 | 0.005351 | 0.1 | 0.86 | 0.027382 | 0.341248 | 25713.4 |
| 1452.6 | 1 | 1.395 | 0.004939 | 0.1 | 0.86 | 0.025271 | 0.315918 | 25713.72 |
| 1452.8 | 1 | 1.395 | 0.004526 | 0.1 | 0.86 | 0.023162 | 0.290597 | 25714.01 |
| 1453 | 1 | 1.395 | 0.004114 | 0.1 | 0.86 | 0.021052 | 0.265284 | 25714.27 |
| 1453.2 | 1 | 1.395 | 0.003702 | 0.1 | 0.86 | 0.018944 | 0.23998 | 25714.51 |
| 1453.4 | 1 | 1.395 | 0.00329 | 0.1 | 0.86 | 0.016836 | 0.214684 | 25714.73 |
| 1453.6 | 1 | 1.395 | 0.002879 | 0.1 | 0.86 | 0.01473 | 0.189396 | 25714.92 |
| 1453.8 | 1 | 1.395 | 0.002467 | 0.1 | 0.86 | 0.012623 | 0.164116 | 25715.08 |
| 1454 | 1 | 1.395 | 0.002055 | 0.1 | 0.86 | 0.010518 | 0.138845 | 25715.22 |
| 1454.2 | 1 | 1.395 | 0.001644 | 0.1 | 0.86 | 0.008413 | 0.113582 | 25715.33 |
| 1454.4 | 1 | 1.395 | 0.001233 | 0.1 | 0.86 | 0.006309 | 0.088327 | 25715.42 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1454.6 | 1 | 1.395 | 0.000822 | 0.1 | 0.86 | 0.004205 | 0.063081 | 25715.48 |
| 1454.8 | 1 | 1.395 | 0.000411 | 0.1 | 0.86 | 0.002102 | 0.037843 | 25715.52 |
| 1455 | 1 | 1.395 | 0 | 0.1 | 0.86 | 0 | 0.012613 | 25715.53 |

**1455 min x 60 (sec/min) x 0.076 cfs = 6,635 cf biofiltered**

# WetlandMOD - 24" Media Thickness, Volume Based

| | |
|---|---|
| **Project ID:** | TEI 3700b |
| **Project Name:** | 12021 Woodruff Avenue (1A-4A) |
| **City, State, ZIP:** | Downey, CA |
| **Date:** | 26-Jul |

| |
|---|
| Blue = User Input |
| Gray = Formula |
| Green = Proceed |
| Red = Redo |

| **WetlandMOD Size** | **WM-11-22-V** |
|---|---|

LA County 24"; Bay Area 18"
Provided by EOR/ DMA area(s)
Drain Down Time in hours
LA 5-12in/hr; Bay Area 10 in/hr
Add Row(s) to gain treatment flow
RIM/FS to Outlet pipe

| **User Input Data** | |
|---|---|
| Media Thickness (in) | 24 |
| Treatment Volume (CF) | 25716 |
| Drain Down Time (hrs) | 96 |
| Infiltration Rate (in/hr) | 12 |
| Number of Row(s) | 2 |
| Unit Depth (ft) | 4.50 |

treatment volume x 448.8 =
in/hr / 100 =
treatment flow / loading rate =

| **Treatment Data** | |
|---|---|
| Treatment Flow (gpm) | 33.40 |
| Media Loading Rate (gpm/sf) | 0.12 |
| Requried Media Area (sf) | 278.29 |

Provding 3" Multch on top
Reduced by 4" from FS
Length of cage in each row

| **Cage, HGL Height** | |
|---|---|
| Cage Height (ft) | 4.25 |
| HGL Height (ft) | 4.17 |
| Cage Length/ Row (ft) | 17.0 |

Based on Gravel Layer surface area
Unit discharge rate

| **Final Checks** | |
|---|---|
| Provided Media Surface Area (sf) | 283.33 |
| Discharge Rate (cfs) | 0.076 |

Provided >= Required surface area, unit dimensions in good standing.

Length of Media row + Baffle wall
Pre-treatment + Filtration chm.
Total width of unit

| **Unit Dimensions** | |
|---|---|
| Length Media Row(s) (ft) | 18.0 |
| Length of Unit (ft) | 22.0 |
| Width of Unit (ft) | 11.0 |

| **Media, Gravel Volume** | |
|---|---|
| WM Media Volume (cy) | 21.41 |
| Gravel Layer Volume (cy) | 4.46 |

Feel free to fax or email proposed sizing calculations to BioClean, for assistance with sizing, compliance, and design.
Phone: 760.433.7640 |Fax: 760.433.3176
Email: Info@modularwetlands.com

BioClean
A Forterra Company

StormTech
Detention • Retention • Recharge
Subsurface Stormwater Management℠

# MC-4500 Site Calculator

**Project Information:**

| | |
|---|---|
| Project Name: | 12021 Woodruff Avenue (1A-4A) |
| Location: | Downey, CA |
| Date: | 7/26/2019 |
| Engineer: | Thienes Engineering Inc. |
| StormTech RPM: | |

## System Requirements

| | | | |
|---|---|---|---|
| Units | | Imperial | |
| Required Storage Volume | | 19114 | CF |
| Stone Porosity (Industry Standard = 40%) | | 40 | % |
| Stone Above Chambers | (12 inch min.) | 12 | inches |
| Stone Foundation Depth | (9 inch min.) | 9 | inches |
| Average Cover over Chambers | (24 inch min.) | 24 | inches |
| Bed size controlled by WIDTH or LENGTH? | | WIDTH | |
| Limiting WIDTH or LENGTH dimension | | 30 | feet |
| Storage Volume per Chamber | | 162.6 | CF |
| Storage Volume per End Cap | | 108.6 | CF |

## System Sizing

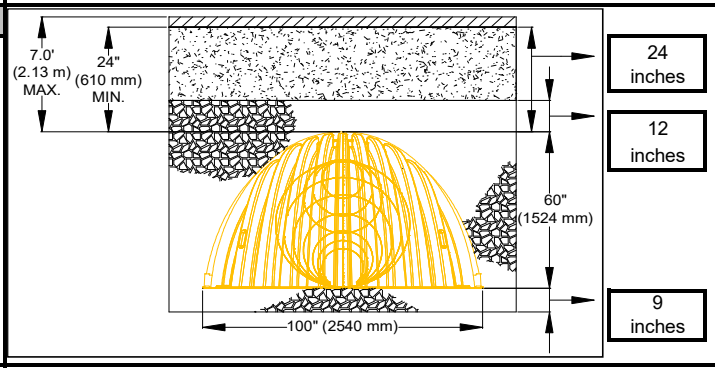
| | | |
|---|---|---|
| Number of Chambers Required | 114 | each |
| Number of End Caps Required | 6 | each |
| Bed Size (including perimeter stone) | 4,562 | square feet |
| Stone Required (including perimeter stone) | 968 | tons |
| Volume of Excavation | 1309 | cubic yards |
| Non-woven Filter Fabric Required (20% Safety Factor) | 1556 | square yards |
| Length of Isolator Row | 160.1 | feet |
| Woven Isolator Row Fabric (20% Safety Factor) | 440 | square yards |
| Installed Storage Volume | 19,188 | cubic feet |

## Controlled by Width (Rows)

| | | |
|---|---|---|
| Maximum Width = | 30 | feet |

3 rows of 38 chambers

| | | |
|---|---|---|
| Maximum Length = | 160.1 | feet |
| Maximum Width = | 28.5 | feet |



| SUMMARY TABLE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | WETLANDMOD | | | MC-4500 CHAMBERS | | | |
| SUBAREAS | AREA (ACRES) | 1.5x SWQDv (CF) | WETLANDMOD MODEL | CONSTANT FLOWRATE (CFS) | AMOUNT FILTERED DURING STORM (CF) | DETENTION REQUIRED (CF) | DETENTION PROVIDED (CF) | # OF CHAMBERS | ACTUAL TREATMENT FILTERED + STORAGE (CF) |
| 1A-4A | 5.95 | 25,716 | WM-11-22-V | 0.076 | 6,635 | 19,114 | 19,188 | 114 | 25,823 |
| **TOTAL** | **5.95** | **25,716** | | | **6,635** | **19,114** | **19,188** | **114** | **25,823** |

# APPENDIX B

# LID Site Plan




Last Update: 7/25/19
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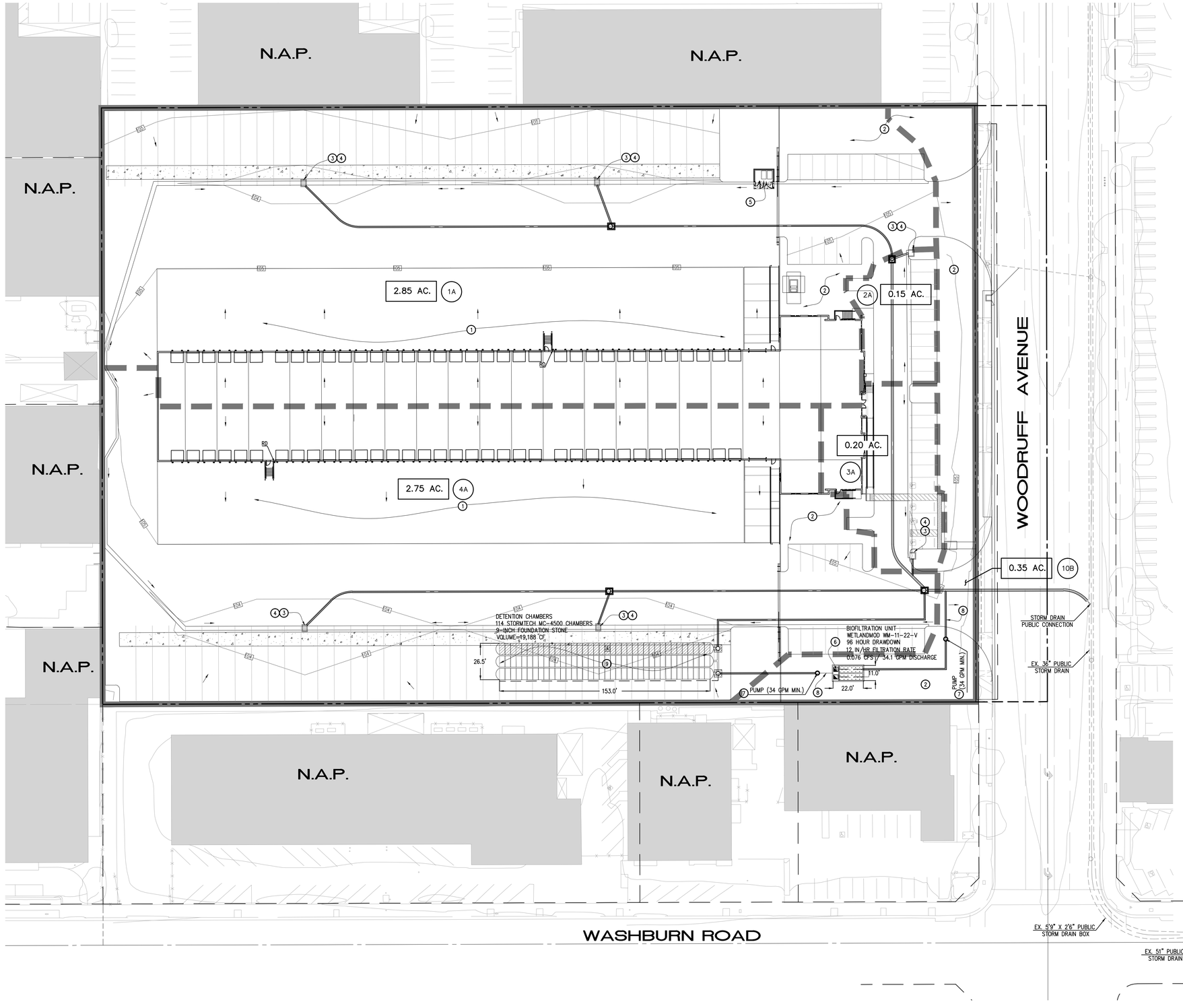
Thienes Engineering, Inc.
CIVIL ENGINEERING • LAND SURVEYING
14349 FIRESTONE BOULEVARD
LA MIRADA, CALIFORNIA 90638
PH.(714)521-4811 FAX(714)521-4173

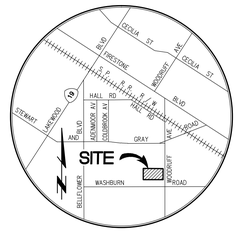
# VICINITY MAP

FOR

## 12021 WOODRUFF AVENUE, DOWNEY CA

NTS



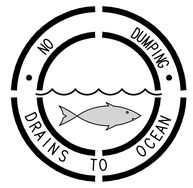

*VICINITY MAP*

N.T.S.

## LEGEND

1. ABOVEGROUND LOADING DOCKS
2. LANDSCAPE
3. DRAIN INSERT(S)
4. STORM DRAIN STENCIL: "NO DUMPING – DRAINS TO OCEAN"
5. TRASH ENCLOSURE
6. BIOCLEAN – WETLANDMOD SYSTEM
7. SUMP PUMP
8. DISCHARGE PIPE
9. STORMTECH MC-4500 CHAMBERS (WITH IMPERMEABLE LINER)

BOUNDARY
DISTURBED AREAS
FLOW LINE
RD ROOF DRAIN




SAMPLE STENCIL TO BE USED NEAR GRATE AND CURB OPENING INLETS

*SAMPLE CATCH BASIN STENCIL*

0 15 30 60 90

SCALE: 1"=30'

Last Update: 7/31/19
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# CITY OF DOWNEY
PUBLIC WORKS DEPARTMENT

## LID SITE MAP

## 12021 WOODRUFF AVENUE

3700/ 1 OF 2 SHEET

**PREPARED FOR:**
12021 WOODRUFF LLC
1800 WAZEE ST., SUITE 500
DENVER, CO 80202
PHONE: (303) 567-5000
FAX: (303) 567-5903

**PREPARED BY:**
Thienes Engineering, Inc.
CIVIL ENGINEERING • LAND SURVEYING
14349 FIRESTONE BOULEVARD
LA MIRADA, CALIFORNIA 90638
PH.(714)521-4811 FAX(714)521-4173

Designed by _____ Date _____
Checked by _____ Date _____
Designed by _____ Date _____
Checked by _____ Date _____

Approved by _____ Date _____
Public Works Director _____ R.C.E. _____

Sheet 1 of 2 Sheets

StormTech

Detention • Retention • Water Quality

Subsurface Stormwater Management™

MC-4500 Chamber

# StormTech™ MC-4500 Chamber

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots thus maximizing land usage for commercial and municipal applications.



**StormTech MC-4500 Chamber** (not to scale)

Nominal Chamber Specifications

| | |
|---|---|
| Size (L x W x H) | 52" (1321 mm) x 100" (2540 mm) x 60" (1524 mm) |
| Chamber Storage | 106.5 ft³ (3.01 m³) |
| Min. Installed Storage* | 160.9 ft³ (4.60 m³) |
| Nominal Weight | 120 lbs (54.4 kg) |

* This assumes a minimum of 12" (305 mm) of stone above, 9" (229 mm) of stone below chambers, 9" (229 mm) of stone between chambers/caps and 40% stone porosity.

**StormTech MC-4500 End Cap** (not to scale)

Nominal End Cap Specifications

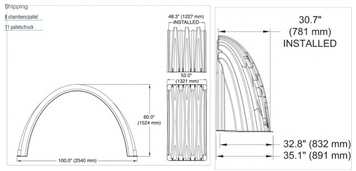
| | |
|---|---|
| Size (L x W x H) | 35.7" (891 mm) x 90.3" (2291 mm) x 59.4" (1509 mm) |
| End Cap Storage | 35.7 ft³ (1.01 m³) |
| Min. Installed Storage* | 106.7 ft³ (3.08 m³) |
| Nominal Weight | 120 lbs (54.4 kg) |

* This assumes a minimum of 12" (305 mm) of stone above, 9" (229 mm) of stone below, 12" (305 mm) of stone perimeter, 9" (229 mm) of stone between chambers/end caps and 40% stone porosity.

Shipping

6 chambers/pallet

11 pallets/truck




**Storage Volume Per Chamber/End Cap ft³ (m³)**

| | Base Unit Storage | Chamber/End Cap and Stone Volume — Stone Foundation Depth in. (mm) | | | |
|---|---|---|---|---|---|
| | 81" (m³) | 9" (229 mm) | 12" (305 mm) | 15" (381 mm) | 18" (457 mm) |
| Chamber | 106.5 (3.02) | 162.6 (4.60) | 166.3 (4.71) | 169.9 (4.81) | 173.6 (4.91) |
| End Cap | 35.7 (1.01) | 108.7 (3.08) | 111.9 (3.17) | 115.2 (3.26) | 118.4 (3.35) |

*NOTE: Assumes 9" (229 mm) min. row spacing, 12" (305 mm) min. of stone above, 40% stone porosity and includes the bare chamber/end cap volume. End cap volume assumes 12" (305 mm) min. stone perimeter.*

**Volume of Excavation Per Chamber/End Cap in yd³ (m³)**

| | Stone Foundation Depth | | | |
|---|---|---|---|---|
| | 9" (229 mm) | 12" (305 mm) | 15" (381 mm) | 18" (457 mm) |
| Chamber | 10.5 (8.0) | 10.8 (8.3) | 11.2 (8.5) | 11.5 (8.8) |
| End Cap | 9.3 (7.1) | 9.6 (7.3) | 9.9 (7.6) | 10.2 (7.8) |

*NOTE: Assumes 9" (229 mm) min. of separation between chamber rows, 12" (305 mm) min. of perimeter in front of end caps, and 24" (610 mm) of cover. The volume of excavation will vary as the depth of cover increases.*

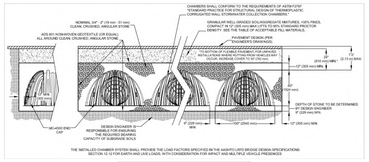
**Amount of Stone Per Chamber**

| ENGLISH (tons (pm*)) | Stone Foundation Depth | | | |
|---|---|---|---|---|
| | 9" (229 mm) | 12" (305 mm) | 15" (381 mm) | 18" (457 mm) |
| Chamber | 7.4 (5.2) | 7.8 (5.5) | 8.3 (5.9) | 8.8 (6.2) |
| End Cap | 5.8 (6.8) | 10.0 (7.1) | 10.4 (7.4) | 10.9 (7.7) |
| METRIC kg (m³) | 229 mm | 305 mm | 381 mm | 457 mm |
| Chamber | 6691 (4.0) | 7117 (4.2) | 7552 (4.5) | 7987 (4.7) |
| End Cap | 8691 (5.2) | 9075 (5.4) | 9460 (5.6) | 9845 (5.9) |

*NOTE: Assumes 12" (305 mm) of stone above, 9" (229 mm) min. row spacing, and 12" (305) mm min. of perimeter stone in front of end caps.*

**General Cross Section**

**Contact your local StormTech representative or visit www.stormtech.com for a copy of the latest installation instructions.


CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS."
GRANULAR WELL GRADED SOIL/AGGREGATE MIXTURES, <35% FINES. PROVIDE MINIMUM 6" (150 mm) COVER ON ALL SIDES. COMPACTION REQUIREMENT: 95% PROCTOR AND 60% RELATIVE DENSITY. SEE THE TABLE OF ACCEPTABLE FILL MATERIALS.
PAVEMENT DESIGN PER ENGINEER'S DRAWINGS.
NOMINAL 24" - 3" (76 mm - 51 mm) CLEAN, CRUSHED, ANGULAR STONE
ASTM F2418 POLYPROPYLENE (PP) WOVEN GEOTEXTILE OR EQUAL
ALL WOVEN GEOTEXTILES MUST HAVE MINIMUM FLOW RATE OF 80 gpm/ft² (3200 lpm/m²) PER ASTM D4491
ALL NON-WOVEN GEOTEXTILES MUST HAVE MINIMUM FLOW RATE OF 110 gpm/ft² (4400 lpm/m²) PER ASTM D4491
6" (150 mm) MIN.
12" (305 mm) MIN.
DEPTH OF STONE TO BE DETERMINED BY ENGINEER PER SITE SPECIFIC DESIGN
6" (150 mm) MIN.
6" (150 mm) MIN.
6" (150 mm) MIN.

# APPENDIX C

# BMP Operation and Maintenance

The owner is responsible for all funding and maintenance of the project's BMPs:

12021 WOODRUFF LLC
1800 WAZEE STREET, SUITE 500
DENVER, CO 80202
PHONE: (303) 567-500
CONTACT: BLAKE KELLEY

| Treatment Control BMP Operation and Maintenance | | | |
|---|---|---|---|
| **BMP** | **Operation/Maintenance** | **Inspection Frequency** | **Responsibility** |
| WetlandMOD System | ➢ All work to be done by the supplier or by a supplier approved contractor.<br>➢ Clean separation (sediment) chamber. The chamber is located directly under the manhole.<br>➢ Replace media in pre-filtration cartridges. Media life depends on the loading conditions and can easily be replaced and disposed of without any equipment. The BioMediaGREEN filter can be ordered from the manufacturer.<br>➢ Replace drain down filter media. Replacement of media takes approximately 5 minutes and is performed without any equipment.<br>➢ Replace wetland media. The life of the media can be up to 20 years. Remove spent media with shovel or vacuum truck and replace with new media. Media can be ordered from the manufacturer.<br>➢ See manufacturer's maintenance requirements for additional information. | Semi-annually (October 1st and February 1st) through maintenance service contract with the vendor or equally qualified contractor. | Owner |
| Underground Chambers | ➢ The isolator row shall be inspected semi-annually (October 1st and February 1st) and maintained once sediment depth is greater than 3-inches. The isolator row shall be inspected and maintained by a qualified technician and he/she will properly dispose of all wastes. A manhole is installed in order to inspect and maintain the isolator row. It is installed per OSHA codes to ensure operator and inspector safety.<br>➢ See manufacturer's maintenance requirements for additional information. | Semi-annually (October 1st and February 1st) through maintenance service contract with the vendor or equally qualified contractor. | Owner |

| Treatment Control BMP Operation and Maintenance | | | |
|---|---|---|---|
| **BMP** | **Operation/Maintenance** | **Inspection Frequency** | **Responsibility** |
| Sump Pump | ➢ Verify automatic and manual operations of pump(s)<br>➢ Inspect floats for proper elevation and movement. Correct any obstructions.<br>➢ Check incoming power and amperage for proper voltage.<br>➢ Hose down lift station to clean pump and floats. | Semi-annually (October 1st and February 1st) through maintenance service contract with the vendor or equally qualified contractor. | Owner |
| Drain Inserts | ➢ Visually inspect for defects and illegal dumping. Notify proper authorities if illegal dumping has occurred.<br>➢ Using an industrial vacuum, the collected materials shall be removed from the filter basket and disposed of properly.<br>➢ Inspect biosorb hydrocarbon boom and replace as necessary.<br>➢ See manufacturer's maintenance requirements for additional information. | Semi-annually (October 1st and February 1st) through maintenance service contract with the vendor or equally qualified contractor. | Owner |
| Maintenance Log | ➢ Keep a log of all inspection and maintenance performed on the above mentioned BMPs for at least 5 years. Keep this log on-site. | Ongoing | Owner |

| Non-Structural Source Control BMPs | | | | |
|---|---|---|---|---|
| **Identifier** | **Name** | **Check One** | | **If not applicable, state brief reason** |
| | | **Included** | **Not Applicable** | |
| N1 | Education for Property Owners, Tenants and Occupants | ☒ | ☐ | |
| N2 | Activity Restrictions | ☒ | ☐ | |
| N3 | Common Area Landscape Management | ☒ | ☐ | |
| N4 | BMP Maintenance | ☒ | ☐ | |
| N5 | Title 22 CCR Compliance (How development will comply) | ☐ | ☒ | No hazardous materials onsite. |

| Non-Structural Source Control BMPs | | | | |
|---|---|---|---|---|
| **Identifier** | **Name** | **Check One** | | **If not applicable, state brief reason** |
| | | **Included** | **Not Applicable** | |
| N6 | Local Industrial Permit Compliance | ☐ | ☒ | Will need coverage under the IGP. No Exposure Certification may apply. |
| N7 | Spill Contingency Plan | ☒ | ☐ | |
| N8 | Underground Storage Tank Compliance | ☐ | ☒ | No underground storage tank onsite. |
| N9 | Hazardous Materials Disclosure Compliance | ☐ | ☒ | No hazardous materials onsite. |
| N10 | Uniform Fire Code Implementation | ☒ | ☐ | |
| N11 | Common Area Litter Control | ☒ | ☐ | |
| N12 | Employee Training | ☒ | ☐ | |
| N13 | Housekeeping of Loading Docks | ☒ | ☐ | |
| N14 | Common Area Catch Basin Inspection | ☒ | ☐ | |
| N15 | Street Sweeping Private Streets and Parking Lots | ☒ | ☐ | |
| N16 | Retail Gasoline Outlets | ☐ | ☒ | Not a retail gasoline outlet. |

**N1.** Education for Property Owners, Tenants, And Occupants. The owners will provide the tenants with information concerning good housekeeping practices that contribute to protection of storm water quality. Please see site-specific Low Impact Development report's Appendix E for educational materials and descriptions of concepts that will be addressed by education and training.

- BMP implementation: Start up to begin immediately after construction is completed.
- Maintenance Schedule: The owner will check with City and County at least once a year to obtain new or updated educational materials and provide these materials to tenants. Employees shall be trained to clean up spills and participate in ongoing maintenance. The project site will have annual employee training and new hires within 1 month.
- The owner is responsible for the tenants, employes, etcetera, being trained.

**N2.** Activity Restrictions. Conditions, Covenants and Restrictions (CC&R's) will identify restricting or prohibiting activities once the project is operational. These activities include, but will not be limited to:

- Prohibit discharges of fertilizer, pesticides, or animal wastes to streets or storm drains.
- Prohibit blowing or sweeping of debris (leaf litter, grass clippings, litter, etc.) into streets or storm drains.
- Requirement to keep trash receptacles covered or sheltered by a roof overhang or canopy.
- Prohibit vehicle washing, maintenance, or repair on the premises.
- BMP implementation: Start up to begin immediately after construction is completed.
- Maintenance Schedule: the owner will inspect the site weekly to ensure that landscaping materials and activities, trash receptacles, and vehicle washing, maintenance, or repair on the premises is managed, disposed of, and implemented to standard.
- The owner will be responsible for inspections of the site to ensure that no prohibited activities are being practiced.

**N3.** Common Area Landscaping Management. Maintenance of the landscaping shall be done weekly. Irrigation must be consistent with applicable Water Conservation Ordinance. Fertilizer and pesticide usage will be consistent with County Management Guidelines for Use of Fertilizers and Pesticides.

- BMP Implementation: Start up upon completion of landscaping.
- Maintenance Schedule: Irrigation system shall be inspected monthly by landscape contractor to check for over-watering, leaks, or excessive runoff to paved areas and landscaping shall be maintained weekly and maintenance contractor shall properly dispose of all landscape wastes.
- The owner will be responsible for inspection and maintenance of the landscaping and irrigation system.

**N4.** BMP Maintenance. BMP maintenance, implementation schedules, and responsible parties are included with each specific BMP narrative.

**N5.** Not applicable, no hazardous wastes onsite.

**N6.** Local Water Quality Permit Compliance: Not applicable. All activities will be done indoors and all materials will be stored indoors.

**N7.** Spill Contingency Plan: Spill contingency plans apply to those facilities having bulk liquid storage in tanks or drums. A spillage control plan will be established following the guidelines and to handle smaller potential spills. Each user may need to update or revise spillage control plan to reflect onsite use of liquids.

- BMP Implementation: Start up upon completion of the site.
- Maintenance Schedule: Daily inspections and maintenance and immediate dry clean up of any spills.
- The tenants and owner will be responsible for the spill contingency plan.

**N8.** Underground Storage Tanks: Not applicable. There will be no underground storage tanks on-site.

**N9.** Hazardous Materials Disclosure Statement: Site will be in compliance with ordinances typically enforced by respective fire protection agency for the management of hazardous

materials, if any. The County, Health care agencies, and/or other appropriate agencies (i.e. Department of Toxics Substances Control is typically responsible for enforcing hazardous materials and hazardous waste handling and disposal regulations. The owner will be responsible.

**N10.** Uniform Fire Code Implementation: Site will be in compliance with article 80 of the Uniform Fire Code enforced by fire protection agency. The owner will be responsible for compliance.

**N11.** Common Area Litter Control: Future employees, gardeners, and the property manager will help keep the site free of trash and other debris. The trash enclosure is located on the west side of the service building. It will be the owner's responsibility for having the site inspected weekly and cleaned as necessary.

- BMP Implementation: Start up upon completion of the site.
- Maintenance Schedule: Weekly inspections and maintenance and immediate dry clean up of any trash or debris.
- The owner/tenants will be responsible for common area litter control.

**N12.** Employee Training: The owner will prepare guidelines for the tenant and their employees discussing both structural and non-structural BMPs and how to implement them. See Educational Materials in Appendix E of the site-specific Low Impact Development report.

**N13.** Housekeeping of Loading Docks: Loading/unloading docks will be kept in a clean and orderly condition through a regular program of sweeping and litter control and immediate cleanup of spills and broken containers.

**N14.** Common Area Catch Basin Inspection: The owner/maintenance contractor will be responsible for cleaning the catch basins on-site on a regular basis prior to the storm season, no later than October 1st of each year.

- BMP Implementation: Maintenance to begin upon completion of storm drain system.
- Maintenance Schedule: Catch basins and storm drain system will be cleaned at least twice a year and prior to October 1. Catch basin filters will be inspected four times a year and prior, during and following a rain event, and serviced by a qualified technician. Service contractor will properly dispose of all wastes.
- The owner will be responsible for inspections and maintenance of all drainage facilities.

**N15.** Parking Lot Sweeping: The owner/maintenance contractor will have the private drive swept. Hosing or watering of the site will not be permitted as a method of cleaning.

- BMP Implementation: Start up upon completion of the paving.
- Maintenance Schedule: Parking lots and drive isles will be swept or vacuumed at least quarterly, October 1, January 1, April 1 and July 1 and as necessary. If there is any trash or debris in between the routine sweeping it will be swept or vacuumed immediately.
- The owner will be responsible for inspection and maintenance of parking lots and drive isles.

**N16.** Retail Gasoline Outlets: Not applicable. Not a retail gasoline outlet.

# Structural Source Control BMPs

| Structural Source Control BMPs | | | | |
|---|---|---|---|---|
| **Identifier** | **Name** | **Check One** | | **If not applicable, state brief reason** |
| | | **Included** | **Not Applicable** | |
| S1 | Provide storm drain system stenciling and signage | ☒ | ☐ | |
| S2 | Design and construct outdoor material storage areas to reduce pollution introduction | ☐ | ☒ | No outdoor storage areas onsite. |
| S3 | Design and construct trash and waste storage areas to reduce pollution introduction | ☒ | ☐ | |
| S4 | Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control | ☒ | ☐ | |
| S5 | Protect slopes and channels and provide energy dissipation | ☒ | ☐ | |
| S6 | Incorporate requirements applicable to individual priority project categories | ☒ | ☐ | |
| S7 | Dock areas | ☒ | ☐ | |
| S8 | Maintenance bays | ☐ | ☒ | No maintenance bay proposed. |
| S9 | Vehicle wash areas | ☐ | ☒ | No vehicle wash areas proposed. |
| S10 | Outdoor processing areas | ☐ | ☒ | No outdoor processing areas proposed. |
| S11 | Equipment wash areas | ☐ | ☒ | No equipment washing onsite. |
| S12 | Fueling areas | ☐ | ☒ | No fueling areas proposed. |
| S13 | Hillside landscaping | ☐ | ☒ | No hillsides. |
| S14 | Wash water control for food preparation areas | ☐ | ☒ | No food preparation onsite. |
| S15 | Community car wash racks | ☐ | ☒ | No community car wash. |

**S1.** Provide storm drain system stenciling and signage
Storm drain system stenciling and signage will be incorporated on the site at catch basins and inlets.

- BMP Implementation: Start up upon completion of the paving.
- Maintenance Schedule: stenciling and signage at catch basins will be inspected quarterly. If signage is missing or broken or stenciling is illegible, repairs are to be made immediately.
- The owner will be responsible for inspection and maintenance of stenciling and signage at catch basins onsite.

**S3.** Design and construct trash and waste storage areas to reduce pollution introduction (see Appendix E of the site-specific Low Impact Development report for CASQA Fact Sheet SC-30 for Oudoor Loading/Unloading)

- BMP Implementation: Start up upon completion of construction
- Maintenance Schedule: Remove waste from facility weekly by outside contractor. Make sure that trash container's lids are closed after use to prevent contact with rainfall and/or become windblown.
- The owner will be responsible for inspection and maintenance of stenciling and signage at catch basins onsite.

**S4.** Use efficient irrigation systems and landscape design, water conservation, smart controllers, and source control

- BMP Implementation: Start up upon completion of landscape installation.
- Maintenance Schedule: landscaping, irrigation system and controllers inspected at every routine maintenance on company's landscape maintenance schedule. If leakage, broken irriation or controllers are broken, shut off water and repair immediately. Regular source control and water conservation practices are required.
- The owner will be responsible for inspection and maintenance of landscape and irrigation at the site as well as water conservation and source control practices.

**S5.** Protect slopes and channels and provide energy dissipation

- BMP Implementation: Start up upon completion of vegetated swale.
- Maintenance Schedule: Weekly or with typical lanscape maintenance frequency. Revegetate slopes that may have eroded and/or unbury the energy disspator into the vegetated swale to prevent erosion and transport of sediment.
- The owner will be responsible for inspection and maintenance of the vegetated swale.

**S6.** Incorporate requirements applicable to individual priority project categories
See Section 2.2.D and 2.10.A of site-specific Low Impact Development report for industrial developments and parking lots, repsectively.

**S7.** Dock Areas (see Appendix E for CASQA Fact Sheet SC-30 for Oudoor Loading/Unloading)
Loading/unloading docks will be kept in a clean and orderly condition through a regular program of sweeping and litter control and immediate cleanup of spills and broken containers.

- BMP Implementation: Start up upon completion of the paving.

- Maintenance Schedule: Weekly inspection, cleaning and sweeping of trash; immediate clean up of spills is required. Keep docks property maintained.
- The owner will be responsible for inspection and maintenance of dock areas.

# Storm Drain Signage SD-13




**Design Objectives**

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

## Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

## Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

## Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

## Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

### *Designing New Installations*

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include “NO DUMPING

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– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

### *Redeveloping Existing Installations*

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

## Additional Information

### *Maintenance Considerations*

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

### *Placement*

- Signage on top of curbs tends to weather and fade.

- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

## Supplemental Information

### *Examples*

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

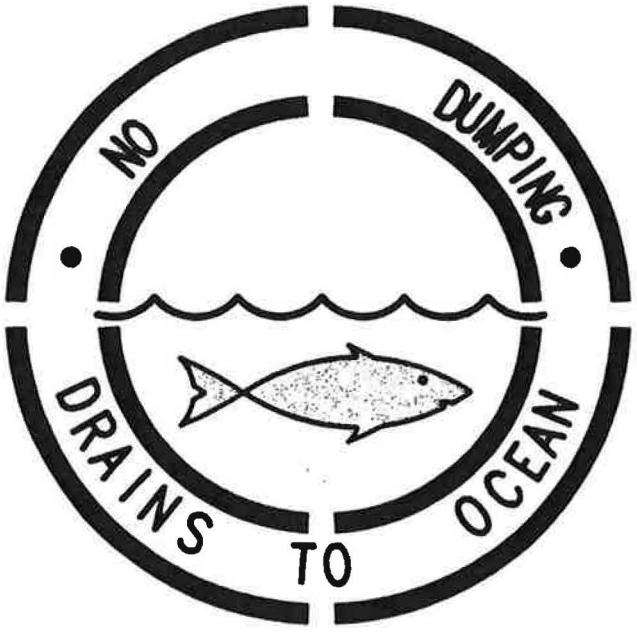
## Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.




SAMPLE STENCIL TO BE USED NEAR
GRATE AND CURB OPENING INLETS
SYMBOL TO BE 24" IN DIAMETER

Thienes Engineering
CIVIL ENGINEERING • LAND SURVEYING
14349 FIRESTONE BOULEVARD
LA MIRADA, CALIFORNIA 90638
PH.(714)521-4811 FAX(714)521-4173

SAMPLE CATCH BASIN STENCIL
PER BMP SD-13

## LIFT STATION REQUIRED MAINTENANCE

The lift station should be inspected twice a year for proper operation, and should be checked for overabundance of solid matter such as grease and soap buildup.

Proper operation and inspection would include the following:

1) Automatic operation of the system by float activation. One pump starting at lead on levels, second pump starting at high level conditions; manual operation by use of the selector switches.

2) Inspect floats for proper elevation and for proper movement. Correct any obstructions.

3) Check incoming power for proper voltage. Check voltage at motor connections.

4) Check amperage of each motor.

5) Hose down lift station to clean the walls of the wet well, pumps and floats.

## MECHANICAL SEAL INSPECTION OF PUMPS

Inspection of the mechanical seals should be done every two years.

The inspection will include the following:

Pull pump out of wet well. Remove oil seal plug and inspect the oil for clarity. Clear oil indicates no water intrusion and chamber is to be topped off with 30 weight turbine oil. If oil is cloudy the mechanical seal and oil needs to be replaced.

PSI recommends that preventive maintenance and service be performed by a qualified technician.

Any question regarding your lift station should be directed to Scott Richardson at 800-358-9095.

# Drain Inserts MP-52

## Description

Drain inserts are manufactured filters or fabric placed in a drop inlet to remove sediment and debris. There are a multitude of inserts of various shapes and configurations, typically falling into one of three different groups: socks, boxes, and trays. The sock consists of a fabric, usually constructed of polypropylene. The fabric may be attached to a frame or the grate of the inlet holds the sock. Socks are meant for vertical (drop) inlets. Boxes are constructed of plastic or wire mesh. Typically a polypropylene "bag" is placed in the wire mesh box. The bag takes the form of the box. Most box products are one box; that is, the setting area and filtration through media occur in the same box. Some products consist of one or more trays or mesh grates. The trays may hold different types of media. Filtration media vary by manufacturer. Types include polypropylene, porous polymer, treated cellulose, and activated carbon.

## California Experience

The number of installations is unknown but likely exceeds a thousand. Some users have reported that these systems require considerable maintenance to prevent plugging and bypass.

## Advantages

- Does not require additional space as inserts as the drain inlets are already a component of the standard drainage systems.
- Easy access for inspection and maintenance.
- As there is no standing water, there is little concern for mosquito breeding.
- A relatively inexpensive retrofit option.

## Limitations

Performance is likely significantly less than treatment systems that are located at the end of the drainage system such as ponds and vaults. Usually not suitable for large areas or areas with trash or leaves than can plug the insert.

## Design and Sizing Guidelines

Refer to manufacturer's guidelines. Drain inserts come any many configurations but can be placed into three general groups: socks, boxes, and trays. The sock consists of a fabric, usually constructed of polypropylene. The fabric may be attached to a frame or the grate of the inlet holds the sock. Socks are meant for vertical (drop) inlets. Boxes are constructed of plastic or wire mesh. Typically a polypropylene "bag" is placed in the wire mesh box. The bag takes the form of the box. Most box products are

### Design Considerations

- Use with other BMPs
- Fit and Seal Capacity within Inlet

### Targeted Constituents

- ☑ Sediment
- ☑ Nutrients
- ☑ Trash
- ☑ Metals
- Bacteria
- ☑ Oil and Grease
- ☑ Organics

*Removal Effectiveness*

See New Development and Redevelopment Handbook-Section 5.

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one box; that is, the setting area and filtration through media occurs in the same box. One manufacturer has a double-box. Stormwater enters the first box where setting occurs. The stormwater flows into the second box where the filter media is located. Some products consist of one or more trays or mesh grates. The trays can hold different types of media. Filtration media vary with the manufacturer: types include polypropylene, porous polymer, treated cellulose, and activated carbon.

### *Construction/Inspection Considerations*

Be certain that installation is done in a manner that makes certain that the stormwater enters the unit and does not leak around the perimeter. Leakage between the frame of the insert and the frame of the drain inlet can easily occur with vertical (drop) inlets.

## Performance

Few products have performance data collected under field conditions.

## Siting Criteria

It is recommended that inserts be used only for retrofit situations or as pretreatment where other treatment BMPs presented in this section area used.

## Additional Design Guidelines

Follow guidelines provided by individual manufacturers.

## Maintenance

Likely require frequent maintenance, on the order of several times per year.

## Cost

- The initial cost of individual inserts ranges from less than $100 to about $2,000. The cost of using multiple units in curb inlet drains varies with the size of the inlet.
- The low cost of inserts may tend to favor the use of these systems over other, more effective treatment BMPs. However, the low cost of each unit may be offset by the number of units that are required, more frequent maintenance, and the shorter structural life (and therefore replacement).

## References and Sources of Additional Information

Hrachovec, R., and G. Minton, 2001, Field testing of a sock-type catch basin insert, Planet CPR, Seattle, Washington

Interagency Catch Basin Insert Committee, Evaluation of Commercially-Available Catch Basin Inserts for the Treatment of Stormwater Runoff from Developed Sites, 1995

Larry Walker Associates, June 1998, NDMP Inlet/In-Line Control Measure Study Report

Manufacturers literature

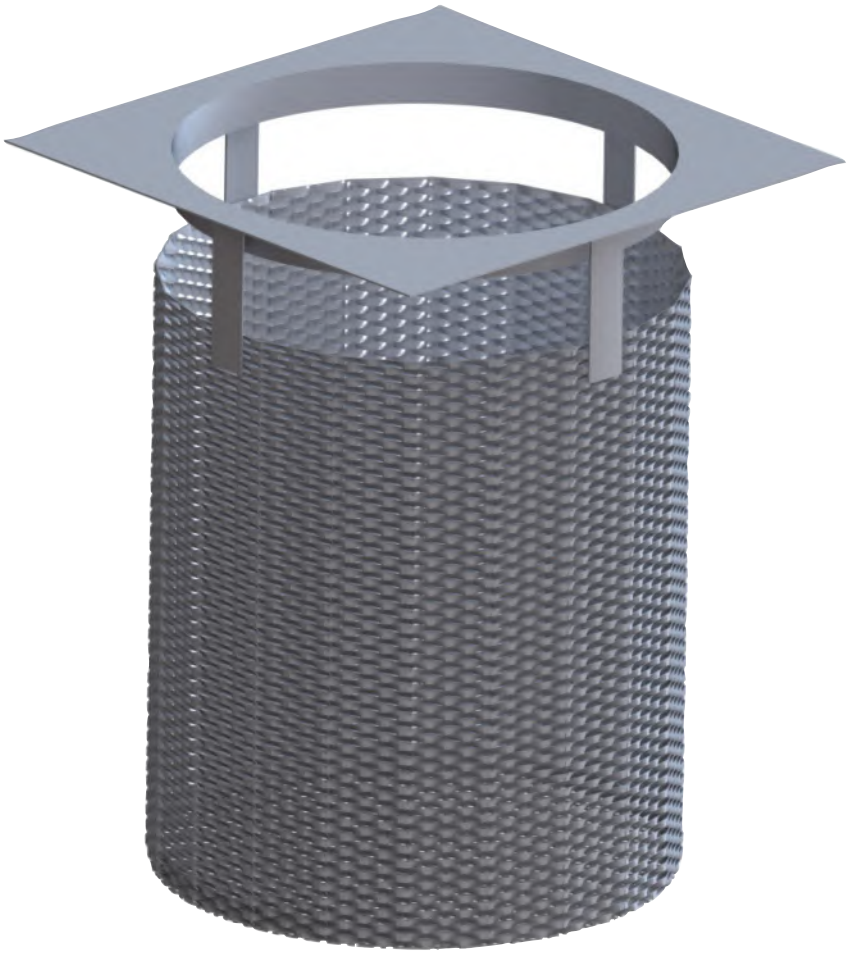
Santa Monica (City), Santa Monica Bay Municipal Stormwater/Urban Runoff Project - Evaluation of Potential Catch basin Retrofits, Woodward Clyde, September 24, 1998

Woodward Clyde, June 11, 1996, Parking Lot Monitoring Report, Santa Clara Valley Nonpoint Source Pollution Control Program.

# Grate Inlet Filter

Bio Clean
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# OPERATION & MAINTENANCE



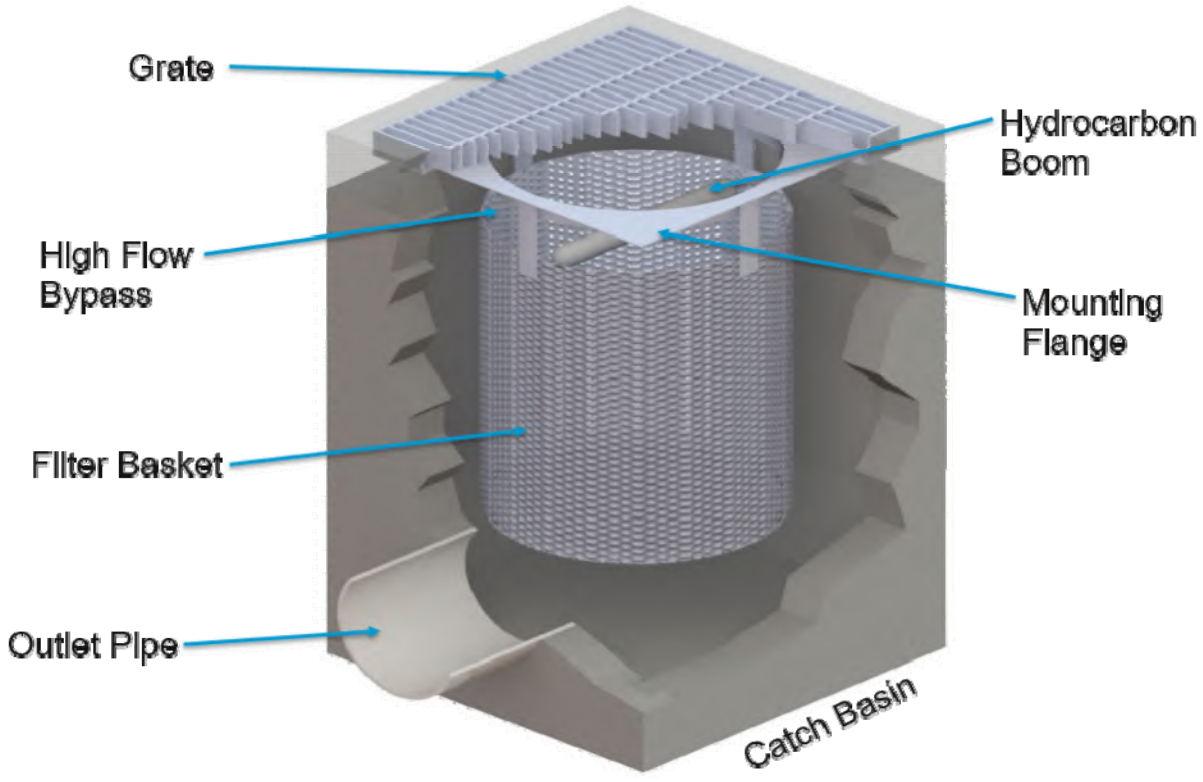
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f: 760.433.3176

# OPERATION & MAINTENANCE

The Bio Clean Grate Inlet Filter is a stormwater device designed to remove high levels of trash, debris, sediments and hydrocarbons. The filter is available in several configurations including trash full capture, multi-level screening, Kraken membrane filter and media filter variations. This manual covers maintenance procedures of the trash full capture and multi-level screening configurations. A supplemental manual is available for the Kraken and media filter variations. This filter is made of 100% stainless steel and is available and various sizes and depths allowing it to fit in any grated catch basin inlet. The filters heavy duty construction allows for cleaning with any vacuum truck. The filet can also easily be cleaned by hand.

As with all stormwater BMPs, inspection and maintenance on the Grate Inlet Filter is necessary. Stormwater regulations require BMPs be inspected and maintained to ensure they are operating as designed to allow for effective pollutant removal and provide protection to receiving water bodies. It is recommended that inspections be performed multiple times during the first year to assess site-specific loading conditions. This is recommended because pollutant loading can vary greatly from site to site. Variables such as nearby soil erosion or construction sites, winter sanding of roads, amount of daily traffic and land use can increase pollutant loading on the system. The first year of inspections can be used to set inspection and maintenance intervals for subsequent years. Without appropriate maintenance a BMP can exceed its storage capacity which can negatively affect its continued performance in removing and retaining captured pollutants.




*System Diagram:*

*Inspection Equipment*

Following is a list of equipment to allow for simple and effective inspection of the Grate Inlet Filter:

- Bio Clean Environmental Inspection Form (contained within this manual).
- Manhole hook or appropriate tools to remove access hatches and covers.
- Appropriate traffic control signage and procedures.
- Protective clothing and eye protection.
- Note: entering a confined space requires appropriate safety and certification. It is generally not required for routine inspections or maintenance of the system.



*Inspection Steps*

The core to any successful stormwater BMP maintenance program is routine inspections. The inspection steps required on the Grate Inlet Filter are quick and easy. As mentioned above the first year should be seen as the maintenance interval establishment phase. During the first year more frequent inspections should occur in order to gather loading data and maintenance requirements for that specific site. This information can be used to establish a base for long-term inspection and maintenance interval requirements.

The Grate Inlet Filter can be inspected though visual observation. All necessary pre-inspection steps must be carried out before inspection occurs, such as safety measures to protect the inspector and nearby pedestrians from any dangers associated with an open grated inlet. Once the grate has been safely removed the inspection process can proceed:

- Prepare the inspection form by writing in the necessary information including project name, location, date & time, unit number and other info (see inspection form).
- Observe the filter with the grate removed.
- Look for any out of the ordinary obstructions on the grate or in the filter and its bypass. Write down any observations on the inspection form.
- Through observation and/or digital photographs estimate the amount of trash, foliage and sediment accumulated inside the filter basket. Record this information on the inspection form.
- Observe the condition and color of the hydrocarbon boom. Record this information on the inspection form.
- Finalize inspection report for analysis by the maintenance manager to determine if maintenance is required.

*Maintenance Indicators*

Based upon observations made during inspection, maintenance of the system may be required based on the following indicators:

- Missing or damaged internal components.
- Obstructions in the filter basket and its bypass.
- Excessive accumulation of trash, foliage and sediment in the filter basket. Maintenance is required when the basket is greater than half-full.
- The following chart shows the 50% and 100% storage capacity of each filter height:

| Model | Filter Basket Diameter (in) | Filter Basket Height (in) | 50% Storage Capacity (cu ft) | 100% Storage Capacity (cu ft) |
|---|---|---|---|---|
| **BC-GRATE-12-12-12** | 10.00 | 12.00 | 0.27 | 0.55 |
| **BC-GRATE-18-18-18** | 16.00 | 18.00 | 1.05 | 2.09 |
| **BC-GRATE-24-24-24** | 21.00 | 24.00 | 2.41 | 4.81 |
| **BC-GRATE-30-30-24** | 27.00 | 24.00 | 3.98 | 7.95 |
| **BC-GRATE-36-36-24** | 33.00 | 24.00 | 5.94 | 11.88 |
| **BC-GRATE-48-48-18** | 44.00 | 18.00 | 7.92 | 15.84 |

*Maintenance Equipment*

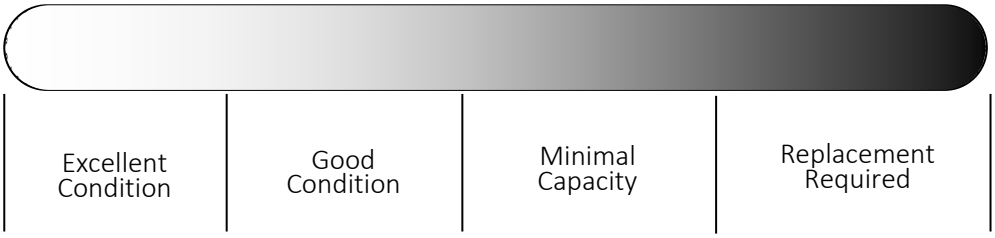
It is recommended that a vacuum truck be utilized to minimize the time required to maintain the Curb Inlet Filter, though it can easily cleaned by hand:

- Bio Clean Environmental Maintenance Form (contained in O&M Manual).
- Manhole hook or appropriate tools to remove the grate.
- Appropriate safety signage and procedures.
- Protective clothing and eye protection.
- Note: entering a confined space requires appropriate safety and certification. It is generally not required for routine maintenance of the system. Small or large vacuum truck (with pressure washer attachment preferred).

*Maintenance Procedures*

It is recommended that maintenance occurs at least two days after the most recent rain event to allow debris and sediments to dry out. Maintaining the system while flows are still entering it will increase the time and complexity required for maintenance. Cleaning of the Grate Inlet Filter can be performed utilizing a vacuum truck. Once all safety measures have been set up cleaning of the Grate Inlet Filter can proceed as followed:

- Remove grate (traffic control and safety measures to be completed prior).
- Using an extension on a vacuum truck position the hose over the opened catch basin. Insert the vacuum hose down into the filter basket and suck out trash, foliage and sediment. A pressure wash is recommended and will assist in spraying of any debris stuck on the side or bottom of the filter basket. Power wash off the filter basket sides and bottom.
- Next remove the hydrocarbon boom that is attached to the inside of the filter basket. The hydrocarbon boom is fastened to rails on two opposite sides of the basket (vertical rails). Assess the color and condition of the boom using the following information in the next bullet point. If replacement is required install and fasten on a new hydrocarbon boom. Booms can be ordered directly from the manufacturer.
- Follow is a replacement indication color chart for the hydrocarbon booms:




- The last step is to replace the grate and remove all traffic control.
- All removed debris and pollutants shall be disposed of following local and state requirements.
- Disposal requirements for recovered pollutants may vary depending on local guidelines. In most areas the sediment, once dewatered, can be disposed of in a sanitary landfill. It is not anticipated that the sediment would be classified as hazardous waste.
- In the case of damaged components, replacement parts can be ordered from the manufacturer. Hydrocarbon booms can also be ordered directly from the manufacturer as previously noted.

*Maintenance Sequence*

Remove grate and set up vacuum truck to clean the filter basket.



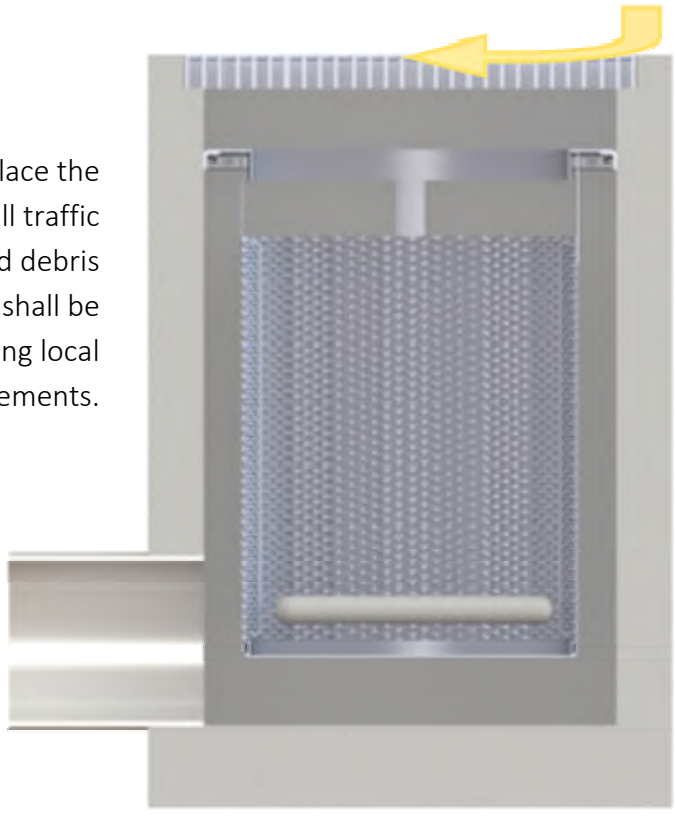


Insert the vacuum hose down into the filter basket and suck out debris. Use a pressure washer to assist in vacuum removal. Pressure wash off screens.



Remove the hydrocarbon boom that is attached to the inside of the filter basket. The hydrocarbon boom is fastened to rails on two opposite sides of the basket (vertical rails). Assess the color and condition of the boom using the following information in the next bullet point. If replacement is required install and fasten on a new hydrocarbon boom.

Close up and replace the grate and remove all traffic control. All removed debris and pollutants shall be disposed of following local and state requirements.



For Maintenance Services or Information Please Contact Us At:
760-433-7640
Or Email:
info@biocleanenvironmental.com

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# Inspection and Maintenance Report
# Catch Basin Only

Project Name _____

Project Address _____ (city) (Zip Code)

Owner / Management Company _____

Contact _____ Phone ( ) –

Inspector Name _____ Date ____/____/____ Time _____ AM / PM

Type of Inspection ☐ Routine ☐ Follow Up ☐ Complaint ☐ Storm Storm Event in Last 72-hours? ☐ ☐

Weather Condition _____ Additional Notes _____

| For Office Use Only |
|---|
| (Reviewed By) |
| (Date) |
| Office personnel to complete section to the left. |

| Site Map # | GPS Coordinates of Insert | Catch Basin Size | Evidence of Illicit Discharge? | Trash Accumulation | Foliage Accumulation | Sediment Accumulation | Signs of Structural Damage? | Functioning Properly or Maintenance Needed? |
|---|---|---|---|---|---|---|---|---|
| 1 | Lat:<br>Long: | | | | | | | |
| 2 | Lat:<br>Long: | | | | | | | |
| 3 | Lat:<br>Long: | | | | | | | |
| 4 | Lat:<br>Long: | | | | | | | |
| 5 | Lat:<br>Long: | | | | | | | |
| 6 | Lat:<br>Long: | | | | | | | |
| 7 | Lat:<br>Long: | | | | | | | |
| 8 | Lat:<br>Long: | | | | | | | |
| 10 | Lat:<br>Long: | | | | | | | |
| 11 | Lat:<br>Long: | | | | | | | |
| 12 | Lat:<br>Long: | | | | | | | |

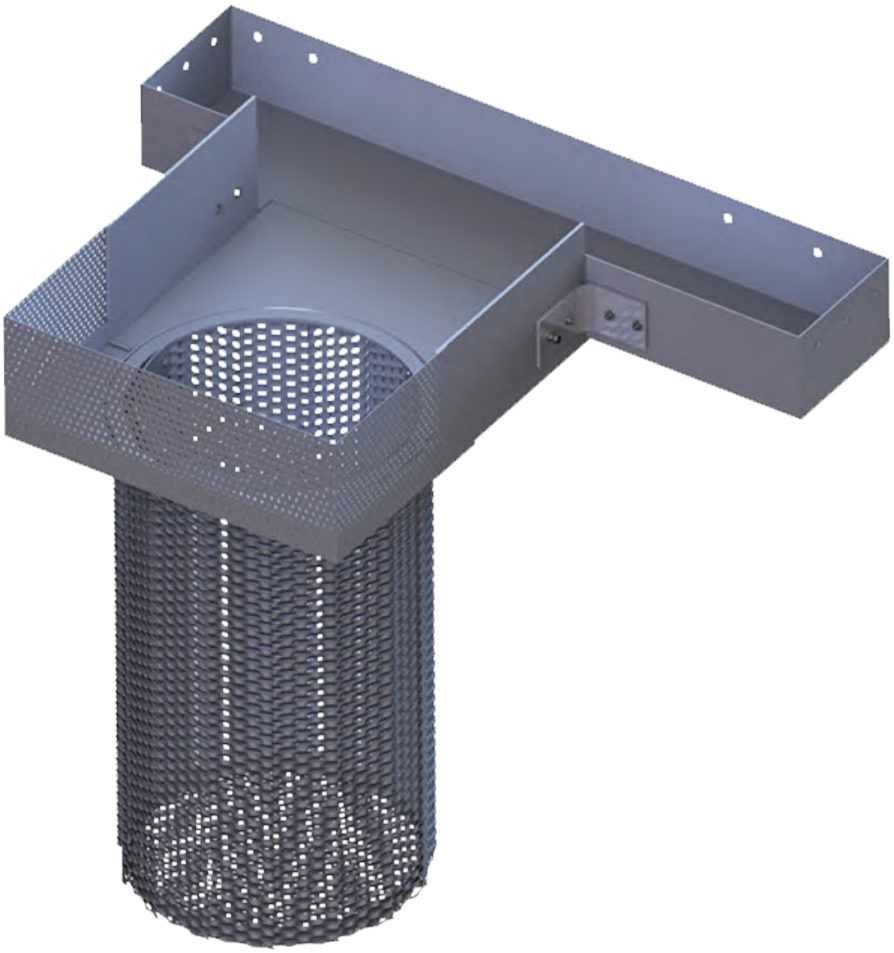
Comments:

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# Curb Inlet Filter

Bio Clean
A Forterra Company

# OPERATION & MAINTENANCE



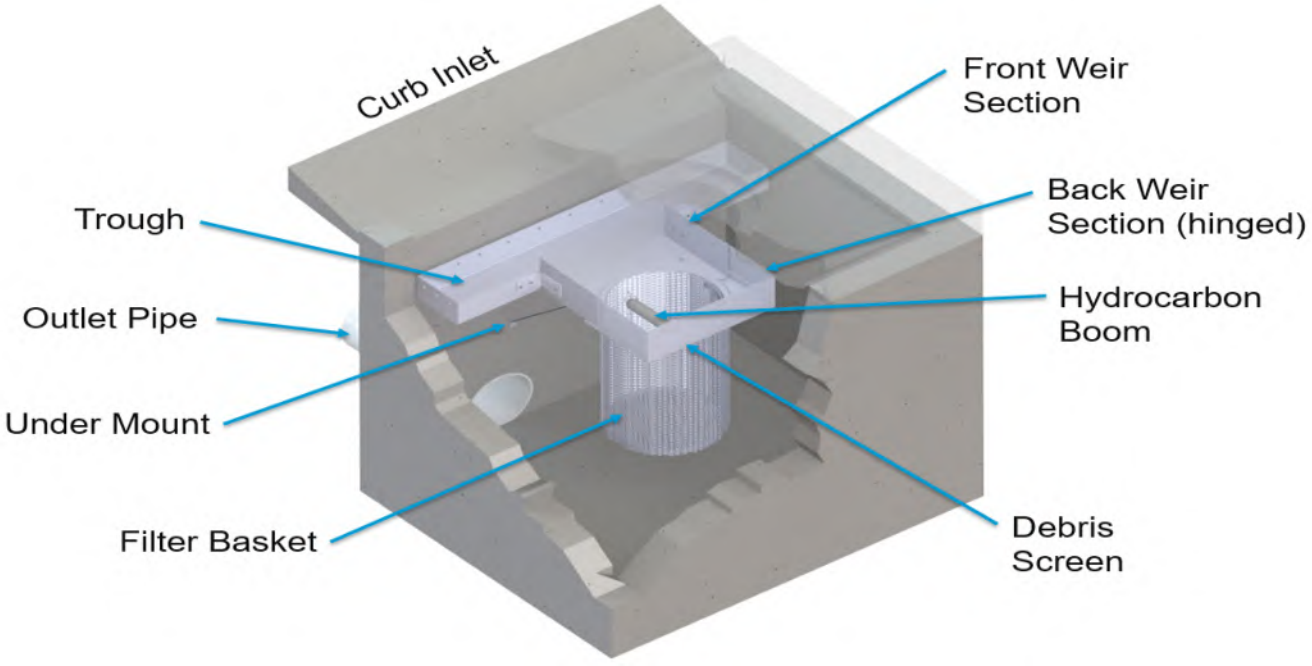
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# OPERATION & MAINTENANCE

The Bio Clean Curb Inlet Filter is a stormwater device designed to remove high levels of trash, debris, sediments and hydrocarbons. The filter is available in several configurations including trash full capture, multi-level screening, Kraken membrane filter and media filter variations. This manual covers maintenance procedures of the trash full capture and multi-level screening configurations. A supplemental manual is available for the Kraken and media filter variations. The innovative trough & weir system is mounted along the curb face and directs incoming stormwater toward the filter basket which is positioned "directly" under the manhole access opening regardless of its location in the catch basin. This innovative design allows the filter to be cleaned from finish surface without access into the catch basin, therefore drastically reducing maintenance time and eliminating confined space entry. The filter has a lifting handle allowing for the filter to be removed easily through the manhole. The weir also folds up to allow for unimpeded access into the basin for routine maintenance or pipe jetting.

As with all stormwater BMPs, inspection and maintenance on the Curb Inlet Filter is necessary. Stormwater regulations require BMPs be inspected and maintained to ensure they are operating as designed to allow for effective pollutant removal and provide protection to receiving water bodies. It is recommended that inspections be performed multiple times during the first year to assess site-specific loading conditions. This is recommended because pollutant loading can vary greatly from site to site. Variables such as nearby soil erosion or construction sites, winter sanding of roads, amount of daily traffic and land use can increase pollutant loading on the system. The first year of inspections can be used to set inspection and maintenance intervals for subsequent years. Without appropriate maintenance a BMP can exceed its storage capacity which can negatively affect its continued performance in removing and retaining captured pollutants.




*System Diagram:*

*Inspection Equipment*

Following is a list of equipment to allow for simple and effective inspection of the Curb Inlet Filter:

- Bio Clean Environmental Inspection Form (contained within this manual).
- Manhole hook or appropriate tools to remove access hatches and covers.
- Appropriate traffic control signage and procedures.
- Protective clothing and eye protection.
- Note: entering a confined space requires appropriate safety and certification. It is generally not required for routine inspections or maintenance of the system.



*Inspection Steps*

The core to any successful stormwater BMP maintenance program is routine inspections. The inspection steps required on the Curb Inlet Fitler are quick and easy. As mentioned above the first year should be seen as the maintenance interval establishment phase. During the first year more frequent inspections should occur in order to gather loading data and maintenance requirements for that specific site. This information can be used to establish a base for long-term inspection and maintenance interval requirements.

The Curb Inlet Filter can be inspected though visual observation without entry into the catch basin. All necessary pre-inspection steps must be carried out before inspection occurs, such as safety measures to protect the inspector and nearby pedestrians from any dangers associated with an open access hatch or manhole. Once the manhole has been safely opened the inspection process can proceed:

- Prepare the inspection form by writing in the necessary information including project name, location, date & time, unit number and other info (see inspection form).
- Observe the inside of the catch basin through the manhole. If minimal light is available and vision into the unit is impaired utilize a flashlight to see inside the catch basin.
- Look for any out of the ordinary obstructions in the catch basin, trough, weir, filter basket, basin floor our outlet pipe. Write down any observations on the inspection form.
- Through observation and/or digital photographs estimate the amount of trash, foliage and sediment accumulated inside the filter basket. Record this information on the inspection form.
- Observe the condition and color of the hydrocarbon boom. Record this information on the inspection form.

- Finalize inspection report for analysis by the maintenance manager to determine if maintenance is required.

*Maintenance Indicators*

Based upon observations made during inspection, maintenance of the system may be required based on the following indicators:

- Missing or damaged internal components.
- Obstructions in the trough, weir, filter basket or catch basin.
- Excessive accumulation of trash, foliage and sediment in the filter basket and/or trough and weir sections. Maintenance is required when the basket is greater than half-full.
- The following chart shows the 50% and 100% storage capacity of each filter height:

| Model | Filter Basket Diameter (in) | Filter Basket Height (in) | 50% Storage Capacity (cu ft) | 100% Storage Capacity (cu ft) |
|---|---|---|---|---|
| **BC-CURB-30** | 18 | 30 | 2.21 | 4.42 |
| **BC-CURB-24** | 18 | 24 | 1.77 | 3.53 |
| **BC-CURB-18** | 18 | 18 | 1.33 | 2.65 |
| **BC-CURB-12** | 18 | 12 | 0.88 | 1.77 |

*Maintenance Equipment*

It is recommended that a vacuum truck be utilized to minimize the time required to maintain the Curb Inlet Filter though it can easily cleaned by hand:

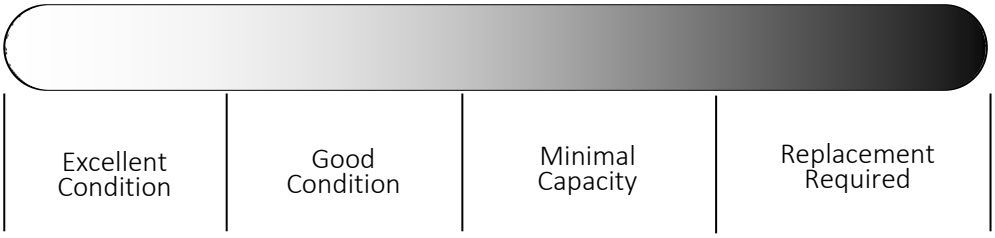
- Bio Clean Environmental Maintenance Form (contained in O&M Manual).
- Manhole hook or appropriate tools to access hatches and covers.
- Appropriate safety signage and procedures.
- Protective clothing and eye protection.
- Note: entering a confined space requires appropriate safety and certification. It is generally not required for routine maintenance of the system. Small or large vacuum truck (with pressure washer attachment preferred).

*Maintenance Procedures*

It is recommended that maintenance occurs at least two days after the most recent rain event to allow debris and sediments to dry out. Maintaining the system while flows are still entering it will increase the time and complexity required for maintenance. Cleaning of the Curb Inlet Filter can be performed from finish surface without entry into catch basin utilizing a vacuum truck. Some unique

and custom configurations may create conditions which would require entry for some or all of the maintenance procedures. Once all safety measures have been set up cleaning of the Curb Inlet Filter can proceed as followed:

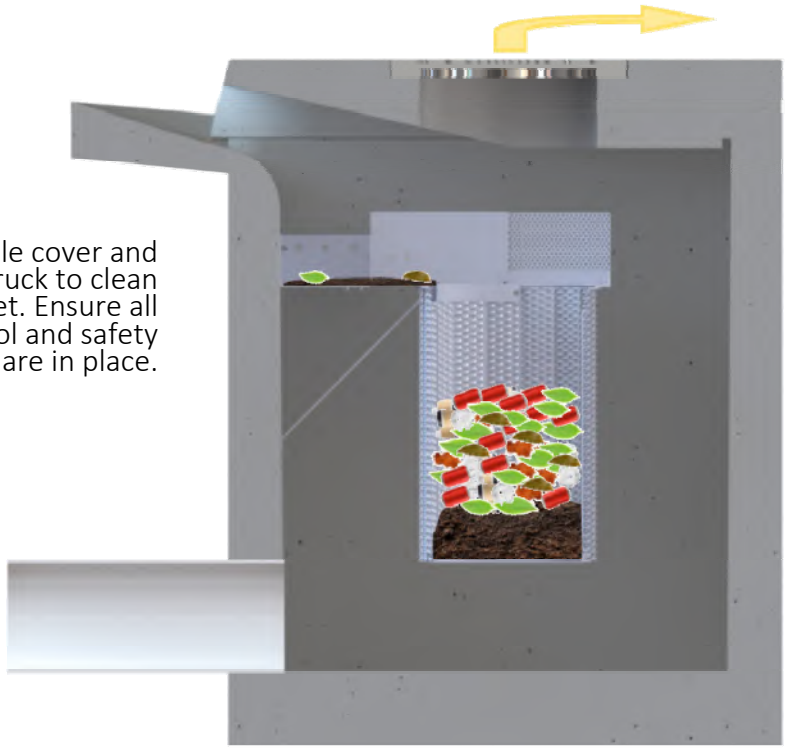
- Remove all manhole cover or access hatches (traffic control and safety measures to be completed prior).
- Using an extension on a vacuum truck position the hose over the opened manhole or hatch opening. Insert the vacuum hose down into the filter basket and suck out trash, foliage and sediment. A pressure wash is recommended and will assist in spraying of any debris stuck on the side or bottom of the filter basket. If the filter basket is full, trash, sediment, and debris will accumulate inside the trough and weir sections of the system. Once the filter basket is clean power wash the weir and trough pushing these debris into the filter basket (leave the hose in the filter basket during this process so entering debris will be sucked out). Power wash off the trough, weir, debris screen, and filter basket sides and bottom.
- Next remove the hydrocarbon boom that is attached to the inside of the filter basket. The hydrocarbon boom is fastened to rails on two opposite sides of the basket (vertical rails). Assess the color and condition of the boom using the following information in the next bullet point. If replacement is required install and fasten on a new hydrocarbon boom. Booms can be ordered directly from the manufacturer.
- Follow is a replacement indication color chart for the hydrocarbon booms:




- The last step is to close up and replace the manhole or hatch and remove all traffic control.
- All removed debris and pollutants shall be disposed of following local and state requirements.
- Disposal requirements for recovered pollutants may vary depending on local guidelines. In most areas the sediment, once dewatered, can be disposed of in a sanitary landfill. It is not anticipated that the sediment would be classified as hazardous waste.
- In the case of damaged components, replacement parts can be ordered from the manufacturer. Hydrocarbon booms can also be ordered directly from the manufacturer as previously noted.

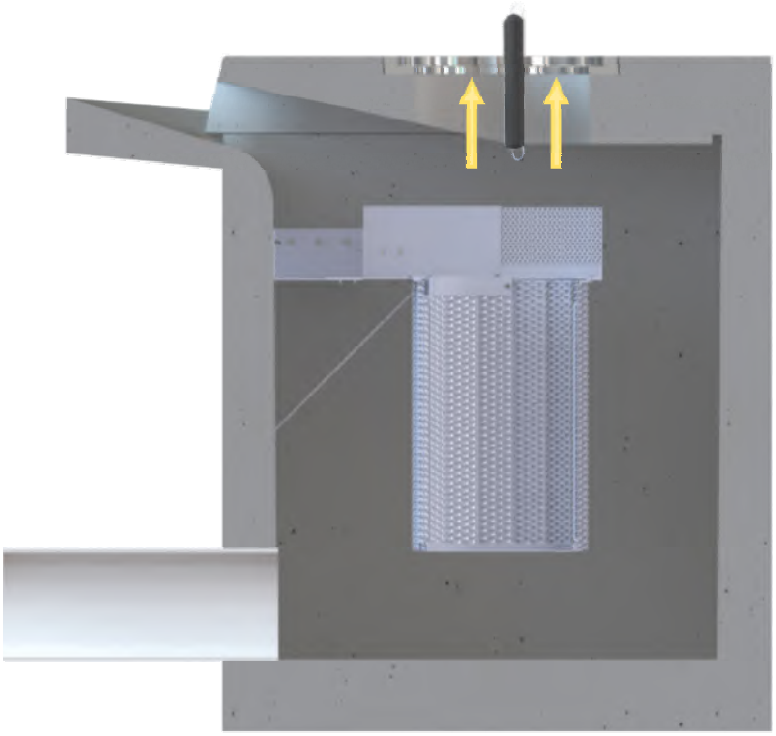
*Maintenance Sequence*

Remove manhole cover and set up vacuum truck to clean the filter basket. Ensure all traffic control and safety measures are in place.



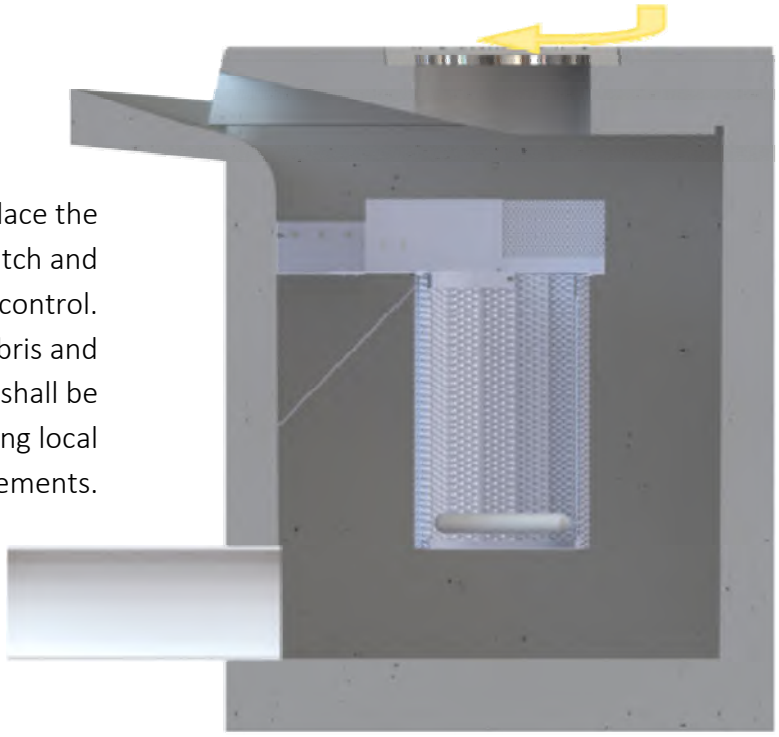


Insert the vacuum hose down into the filter basket and suck out debris. Use a pressure washer to assist in vacuum removal. Pressure wash off the weir and trough and vacuum out any remaining debris.



Remove the hydrocarbon boom that is attached to the inside of the filter basket. The hydrocarbon boom is fastened to rails on two opposite sides of the basket (vertical rails). Assess the color and condition of the boom using the following information in the next bullet point. If replacement is required install and fasten on a new hydrocarbon boom.

Close up and replace the manhole or hatch and remove all traffic control. All removed debris and pollutants shall be disposed of following local and state requirements.



For Maintenance Services or Information Please Contact Us At:
760-433-7640
Or Email: info@biocleanenvironmental.com

Bio Clean
A Forterra Company

# Inspection and Maintenance Report
# Catch Basin Only

Project Name _____

Project Address _____ (city) (Zip Code)

Owner / Management Company _____

Contact _____ Phone ( ) –

Inspector Name _____ Date ____/____/____ Time _____ AM / PM

Type of Inspection ☐ Routine ☐ Follow Up ☐ Complaint ☐ Storm Storm Event in Last 72-hours? ☐ ☐

Weather Condition _____ Additional Notes _____

| For Office Use Only |
|---|
| (Reviewed By) |
| (Date) |
| Office personnel to complete section to the left. |

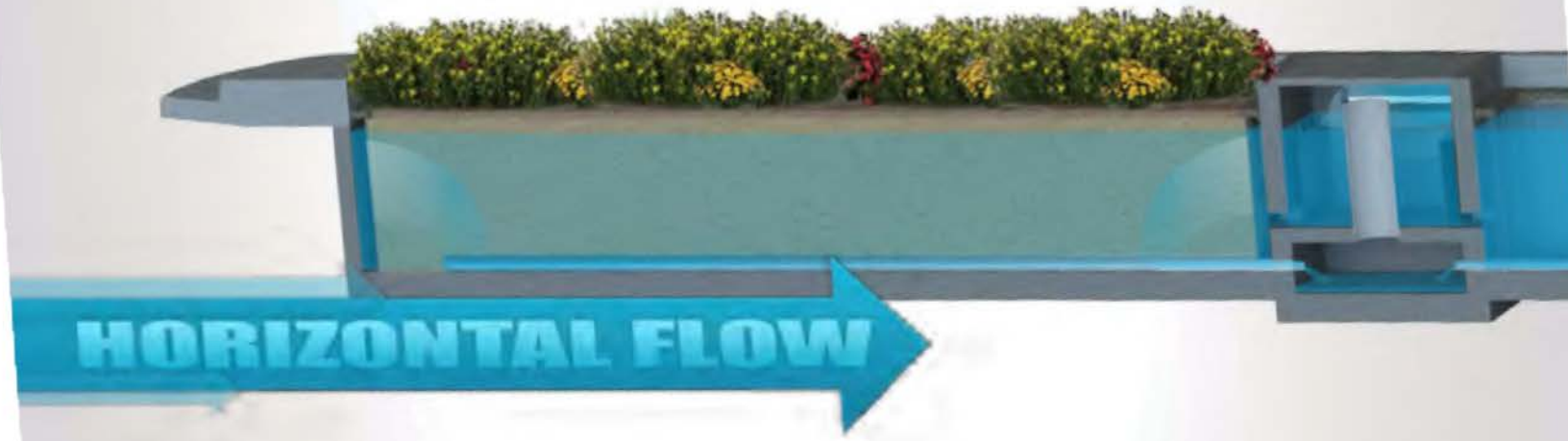
| Site Map # | GPS Coordinates of Insert | Catch Basin Size | Evidence of Illicit Discharge? | Trash Accumulation | Foliage Accumulation | Sediment Accumulation | Signs of Structural Damage? | Functioning Properly or Maintenance Needed? |
|---|---|---|---|---|---|---|---|---|
| 1 | Lat:<br>Long: | | | | | | | |
| 2 | Lat:<br>Long: | | | | | | | |
| 3 | Lat:<br>Long: | | | | | | | |
| 4 | Lat:<br>Long: | | | | | | | |
| 5 | Lat:<br>Long: | | | | | | | |
| 6 | Lat:<br>Long: | | | | | | | |
| 7 | Lat:<br>Long: | | | | | | | |
| 8 | Lat:<br>Long: | | | | | | | |
| 10 | Lat:<br>Long: | | | | | | | |
| 11 | Lat:<br>Long: | | | | | | | |
| 12 | Lat:<br>Long: | | | | | | | |

Comments:

398 Via El Centro, Oceanside, CA 92058 P. 760.433.7640 F. 760.433.3176

MODULAR WETLANDS™

*Advanced **Stormwater** Biofiltration*




# WetlandMod™

MODULAR WETLAND TREATMENT VOLUME REDUCTION, REUSE & STORAGE SYSTEM

A NEW DIRECTION IN TRADITIONAL BIORETENTION / BIOFILTRATION SYSTEMS

## Overview

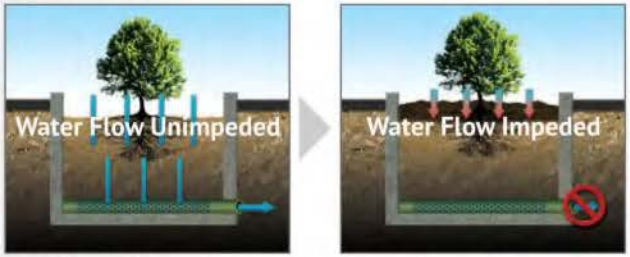
Modular Wetland Systems, Inc. continues to provide groundbreaking stormwater treatment and volume reduction/control technology with the **WetlandMod™**. This modular system provides the same treatment train concept as the industry leading MWS Linear (Modular Wetland System Linear™) - screening, separation, & biofiltration - combined with the capacity to reduce and control water volume in a more efficient way when compared to traditional downward flow bioretention systems.




The system is built upon the concept of horizontal flow biofiltration, which was first introduced by the MWS Linear in 2007. Horizontal flow works with gravity, not against it, to prevent clogging, standing water and other problems associated with traditional downward flow bioretention systems. Bioretention systems have an inherent flaw, the force of gravity. As stormwater runoff carries pollutants into the system, including sediments and hydrocarbons, they are deposited on top of the bioretention media where it accumulates and quickly clogs the filter media.

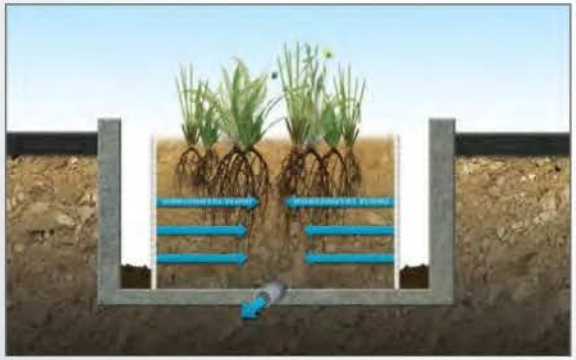
It has been documented that sediment accumulation from just a few storm events can completely clog a bioretention system. This leads to drastically reduced infiltration rates, expensive maintenance burdens, and safety issues associated with standing water, depressed landscaping and vector control.

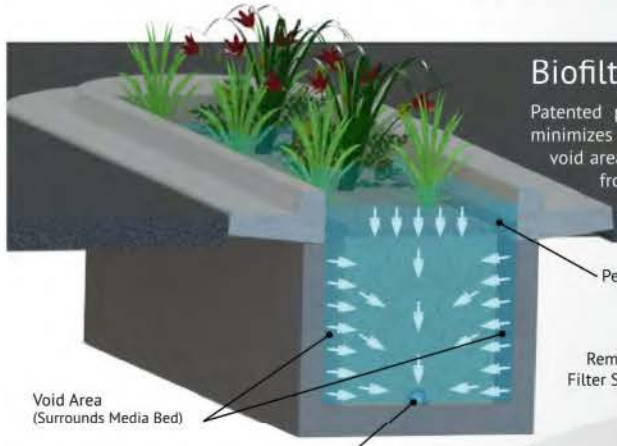
**Downward Flow**




**Sediments Accumulate on Top of the Media Leading to Clogging**

The **WetlandMod™** overcomes these challenges by utilizing pre-treatment, a horizontal flow biofiltration bed, and orifice flow control. The initial surface of the media bed in the **WetlandMod™** is oriented on a vertical plane, as opposed to horizontally, therefore running parallel with the force of gravity as opposed to perpendicular. This simple concept, increases surface area, reduces BMP footprint, prevents clogging and leads to an enhanced overall system with lower maintenance costs. The **WetlandMod™** can utilize various blends to meet local stormwater bioretention media specifications. The system is also available with an organic-free WetlandMEDIA to prevent nutrient leaching and maximize pollutant removal.

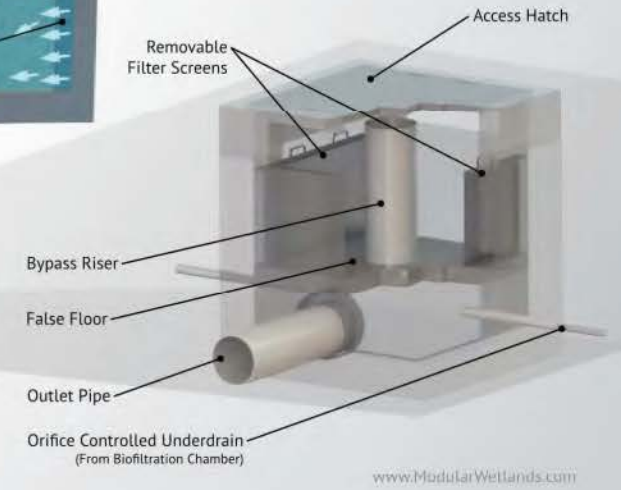





### Biofiltration Chamber

Patented perimeter void area maximizes surface area and minimizes footprint, saving space and money. The perimeter void area allows water to penetrate the media bed, not only from the top, but from all four sides.

### Pre-Treatment & Discharge Chamber



## Configuration

One of the biggest challenges of the implementation of LID and bioretention/biofiltration systems is the associated space requirements. The large space requirements of traditional bioretention systems can cause design and feasibility issues, increasing the overall cost to comply with local and state stormwater regulations.

The **WetlandMod™** marks the first technological breakthrough to address how we comply with these regulations. The goal of the system is to minimize footprint and land costs associated with traditional bioretention/ biofiltration systems. This is acheived by utilizing horizontal flow technology and combining it with traditional downward flow, therefore maximizing the surface area for a given footprint.

### Designed To Minimize Required BMP Footprint and Maximize Buildable Space

This system is constructed from modular precast concrete structures. The system comes standard with a curb-type pre-treatment structure, including internal bypass. The biofiltration chambers can be made in any length and shape (shown below) to allow for easy integration with parking lot island designs. The system comes in two standard widths, 4 feet (18" minimum media requirement - San Diego County) and 5 feet (24" minimum media requirement - Los Angeles County).

### Footprint Reduction Up To 61% Over Traditional Bioretention Systems

**(Example: Planter Boxes, Rain Gardens, Biofiltration)**




## Wetland Chamber Module



The *Wetland Chamber Module* is constructed of precast concrete and available in various lengths and heights. The chamber also includes rebar dowels to attach structure to curb and gutter. Units can be connected mechanically end-to-end for longer modules.

## Pre-Treatment Chamber Module

*Pre-treatment Chambers* come standard with built-in curb inlets to intercept sheet flows from surrounding areas. The pre-treatment chamber is available with an optional internal bypass for high flows and it is easily accessible for quick maintenance. Trash, debris and sediments are isolated in a central location, minimizing maintenance requirements on the biofiltration chamber.

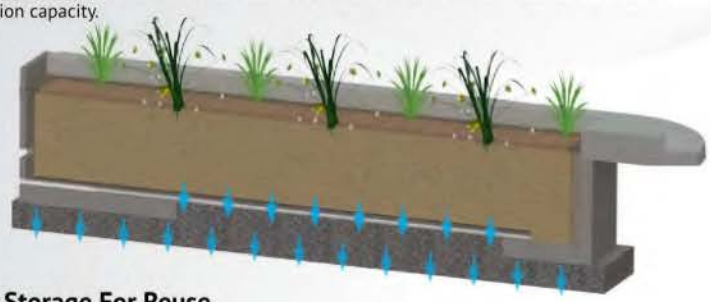


Curb inlet

# Configurations

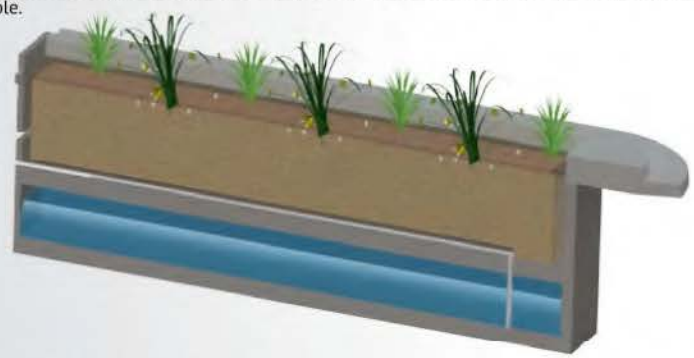
## Open Bottom - Infiltration

This configuration is available with an open basin to maximize infiltration and meet "partial infiltration" requirements in many jurisdictions. A 12" rock base is recommended under the structure to maximize storage and infiltration capacity.



## Cistern - Storage For Reuse

An optional storage vessel under the biofiltration chamber stores water for reuse, including irrigation and grey water. The *Cistern* configuration allows for treated runoff to be stored for later use and a removable sump pump is available.





## WetlandMEDIA

WetlandMEDIA is an organic free alternative to traditional bioretention media. It offers higher infiltration rates and a sorptive media mix with high ion exchange capacity. This makes it ideal for nutrient removal. WetlandMEDIA also supports robust vegetation and prevents standing water.

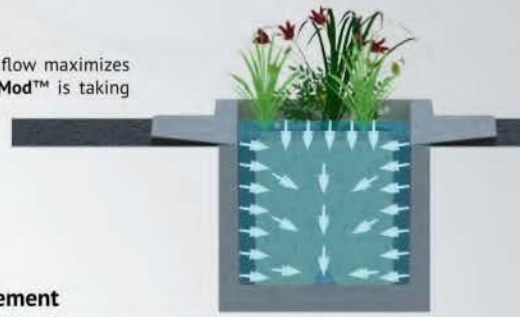


## Bioretention Mix

The **WetlandMod™** is designed to utilize any type of bioretention mix required to meet local requirements and specifications, including a *5-Inch Per Hour* sand compost mix found in most LID manuals.

# Sizing

The combination of horizontal flow and downward flow maximizes surface area and minimizes footprint. The **WetlandMod™** is taking bioretention/biofiltration to a new level.



### 18" Media - San Diego County Minimum Requirement

| 18" Media Thickness | WetlandMod | Traditional Bioretention |
|---|---|---|
| Chamber Width I.D. (ft.) | 4.00 | 4.00 |
| Cage Width (ft.) | 3.34 | n/a |
| Void Width (ft.) | 0.33 | n/a |
| Chamber Height Max (TC) (ft.) | 4.40 | n/a |
| Assoc. Cage Height Max (ft.) | 3.52 | n/a |
| TC to Top of Cage Distance (ft.) | 0.88 | n/a |
| Ponding Over Media (ft.) | 0.33 | Variable |
| Chamber Height Min (ft.) | 1.61 | Variable |
| Assoc. Cage Height Min (ft.) | 1.83 | Variable |
| TC to Top of Cage Distance (ft.) | 0.88 | Variable |
| **MAX Surface Area Per Linear Foot (sq. ft.)** | **10.38** | **4** |
| **Footprint Reduction Provided** | **61%** | |
| **MIN Surface Area Per Linear Foot (sq. ft.)** | **7** | **4** |
| **Footprint Reduction Provided** | **43%** | |

### 24" Media - Los Angeles County Minimum Requirement

| 24" Media Thickness | WetlandMod | Traditional Bioretention |
|---|---|---|
| Chamber Width I.D. (ft.) | 5.00 | 5.00 |
| Cage Width (ft.) | 4.34 | n/a |
| Void Width (ft.) | 0.33 | n/a |
| Chamber Height Max (TC) (ft.) | 4.40 | n/a |
| Assoc. Cage Height Max (ft.) | 3.52 | n/a |
| TC to Top of Cage Distance (ft.) | 0.88 | n/a |
| Ponding Over Media (ft.) | 0.33 | Variable |
| Chamber Height Min (ft.) | 2.05 | Variable |
| Assoc. Cage Height Min (ft.) | 2.33 | Variable |
| TC to Top of Cage Distance (ft.) | 0.88 | Variable |
| **MAX Surface Area Per Linear Foot (sq. ft.)** | **11.38** | **5** |
| **Footprint Reduction Provided** | **56%** | |
| **MIN Surface Area Per Linear Foot (sq. ft.)** | **9** | **5** |
| **Footprint Reduction Provided** | **44%** | |

## Advantages of WetlandMod™ Over Traditional Downward Flow Bioretention/Biofiltration Systems

- Minimizes Clogging
- Advanced Pre-Treatment
- Maximized Surface Area
- Minimal Footprint
- High Nutrient Removal
- Easy Maintenance
- No Standing Water Concerns
- Greater Volume Reduction, Moisture Retention and Evapotranspiration
- Orifice Controlled Discharge

Maintenance Overview –

A. Every installed WetlandMOD unit is to be maintained by the Supplier, or a Supplier approved contractor. The cost of this service varies among providers.

B. The WetlandMOD is a multi-stage self-contained treatment train for stormwater treatment. Each stage protects subsequent stages from clogging. Stages include: screening, separation, and Biofiltration. The biofiltration stage contains various types of vegetation which will require annual evaluation and trimming.

1. Clean Bio Clean® Pre-Filter Screen – Screening is provided by well proven continuous modular screen filter. The filter removes gross solids, including litter, and sediments greater than 5 mm. This procedure is easily done by hand or with a small industrial vacuum device.

2. Clean Separation (sediment) Chamber – separation occurs in the pre-treatment chamber. This chamber targets TSS, and particulate metals and nutrients. This procedure can be performed with a standard vacuum truck. This chamber is located directly under the manhole, hatch, or grate access cover.

3. Trim Vegetation – The system utilizes multiple plants in the biofiltration chamber to provide enhanced treatment. The vegetation will need to be maintained (trimmed) as needed. This can be done as part of the project normal landscape maintenance. NO FERTILIZER SHALL BE USED IN THIS CHAMBER.

4. Evaluate Biofiltration Media Flow Hydraulic Conductivity – The systems flow can be assessed from the discharge. This should be done during a rain event. By viewing into the discharge pipe the flow out of the system can be observed. If little to no flow is observed this is a sign of potential Biofiltration media maintenance needs.

5. **Biofiltration Media Replacement** –This filter contains a mix that supports abundant plant life. Replacement of the media is simple. Removal of spent media can be done with a shovel of a vacuum truck.

C. The WetlandMOD pre-filter, separation chamber, and Biofiltration media are designed to allow for the use of vacuum removal of captured pollutants and spent filter media by centrifugal compressor vacuum units without causing damage to the filter or during normal cleaning and maintenance. Filter and chambers can be cleaned from finish surface through standard manhole, hatch, or grate access.

**Maintenance Procedures –**

1. **Clean Bio Clean® Pre-Filter –** Bio Clean recommends the **pre-filter** be inspected and cleaned a minimum of once every six months. The procedure is easily done with the use of any standard vacuum truck. *This procedure takes approximately 15 minutes.*

1. Remove grate, manhole, or hatch to gain access to catch basin filter insert. Where possible the maintenance should be performed from the ground surface. Note: entry into an underground stormwater vault such as an inlet vault may require certification in confined space training.
2. Remove all trash, debris, organics, and sediments collected by the pre-filter. Removal of the trash and debris can be done manually or with the use of a vacuum truck. The hose of the vacuum truck will not damage the screen of the filter.
3. Transport all debris, trash, organics and sediments to approved facility for disposal in accordance with local and state requirements. Hazardous material can only be handled by a certified hazardous waste trained person (minimum 24-hour hazwoper).

2. Clean Separation (sediment) Chamber – Bio Clean recommends the **separation chamber** be inspected and cleaned a minimum of once a year. The procedure is easily done with the use of any standard vacuum truck. *This procedure takes approximately 30 minutes.*

1. Remove grate, manhole, or hatch to gain access to the Separation Chamber.
2. Where possible the maintenance should be performed from the ground surface. Note: entry into an underground stormwater vault such as an inlet vault may require certification in confined space training.
3. With a pressure washer spray down pollutants accumulated on walls and pre-filters.
4. Vacuum out separation chamber and remove all accumulated debris and sediments.
5. Replace grate, manhole, or hatch cover.
6. Transport all debris, trash, organics and sediments to approved facility for disposal in accordance with local and state requirements.

3. Trim Vegetation – Bio Clean recommends the plants/vegetation be inspected and maintained a minimum of once a year. It is also recommended that the plants receive the same care as other landscaped areas. Note: No fertilizer is to be used on this area. *Trimming of vegetation takes approximately 15 minutes.*

4. Evaluate Biofiltration Media Flow Hydraulic Conductivity – Bio Clean recommends system flow be inspected and observed a minimum of once a year. This needs to be done during a rain event. *Inspection and Observation takes approximately 5 minutes.*

1. Observe discharge out of system
2. Observe the level of flow from the bottom of the pipe.
3. If flow is steady and high the system is operating normally.
4. If little or no flow is observed exiting the discharge pipe possible maintenance to the Biofiltration media may be needed. Contact Bio Clean for further assistance.

5. Biofiltration Media Replacement – Bio Clean recommends the Biofiltration media be replaced a minimum of one every 20 years. *Inspection takes approximately 15 minutes. Replacement of rock media takes approximately 6 hours and requires a vacuum truck.*

1. Remove plants from the Biofiltration chamber.
2. Use a vacuum truck or shovel to remove all wetland media.
3. Spray down the walls and floor of the chamber and vacuum out any accumulated pollutants.
4. Spray down perforated piping and netting of flow matrix and the inflow and outflow end to remove any accumulated pollutants.
5. Vacuum out any standing water from the media removal and insure the chamber is cleaning.
6. Use a small backhoe to fill chamber with new media. Call Bio Clean for media delivery information.
7. Plant new vegetation in the same configuration and quantity as old vegetation.
8. Spray down the plants and media with water to saturate.
9. Continue supplemental irrigation (spray or drip) for at lest 90 days.

6. Other Maintenance Notes –

1. Following maintenance and/or inspection, the maintenance operator shall prepare a maintenance/inspection record. The record shall include any maintenance activities performed, amount and description of debris collected, and condition of the system and its various filter mechanism. .
2. The owner shall retain the maintenance/inspection record for a minimum of five years from the date of maintenance. These records shall be made available to the governing municipality for inspection upon request at any time.
3. Any person performing maintenance activities must have completed a minimum of OSHA 24-hour hazardous waste worker (hazwoper) training.
4. Remove access manhole lid or grate to gain access to filter screens and sediment chambers. Where possible the maintenance should be performed

from the ground surface.  Note: entry into an underground stormwater vault such as an inlet vault requires certification in confined space training.

5. Transport all debris, trash, organics and sediments to approved facility for disposal in accordance with local and state requirements.
6. The hydrocarbon boom is classified as hazardous material and will have to be picked up and disposed of as hazardous waste.  Hazardous material can only be handled by a certified hazardous waste trained person (minimum 24-hour hazwoper).

# Inspection Form



Modular Wetland System, Inc.
P. 760.433-7640
F. 760-433-3176
E. Info@modularwetlands.com

www.modularwetlands.com

# Inspection Report
# Modular Wetlands System

Project Name _____

Project Address _____
(city) (Zip Code)

Owner / Management Company _____

Contact _____ Phone ( ) –

Inspector Name _____ Date ____/____/____ Time _____ AM / PM

Type of Inspection ☐ Routine ☐ Follow Up ☐ Complaint ☐ Storm Storm Event in Last 72-hours? ☐ No ☐ Yes

Weather Condition _____ Additional Notes _____

| For Office Use Only |
|---|
| (Reviewed By) |
| (Date) |
| Office personnel to complete section to the left. |

## Inspection Checklist

Modular Wetland System Type (Curb, Grate or UG Vault): _____ Size (22', 14' or etc.): _____

| **Structural Integrity:** | **Yes** | **No** | **Comments** |
|---|---|---|---|
| Damage to pre-treatment access cover (manhole cover/grate) or cannot be opened using normal lifting pressure? | | | |
| Damage to discharge chamber access cover (manhole cover/grate) or cannot be opened using normal lifting pressure? | | | |
| Does the MWS unit show signs of structural deterioration (cracks in the wall, damage to frame)? | | | |
| Is the inlet/outlet pipe or drain down pipe damaged or otherwise not functioning properly? | | | |
| **Working Condition:** | | | |
| Is there evidence of illicit discharge or excessive oil, grease, or other automobile fluids entering and clogging the unit? | | | |
| Is there standing water in inappropriate areas after a dry period? | | | |
| Is the filter insert (if applicable) at capacity and/or is there an accumulation of debris/trash on the shelf system? | | | |
| Does the depth of sediment/trash/debris suggest a blockage of the inflow pipe, bypass or cartridge filter? If yes, specify which one in the comments section. Note depth of accumulation in in pre-treatment chamber. | | | Depth: |
| Does the cartridge filter media need replacement in pre-treatment chamber and/or discharge chamber? | | | Chamber: |
| Any signs of improper functioning in the discharge chamber? Note issues in comments section. | | | |
| **Other Inspection Items:** | | | |
| Is there an accumulation of sediment/trash/debris in the wetland media (if applicable)? | | | |
| Is it evident that the plants are alive and healthy (if applicable)? Please note Plant Information below. | | | |
| Is there a septic or foul odor coming from inside the system? | | | |

| **Waste:** | **Yes** | **No** |
|---|---|---|
| Sediment / Silt / Clay | | |
| Trash / Bags / Bottles | | |
| Green Waste / Leaves / Foliage | | |

| **Recommended Maintenance** | |
|---|---|
| No Cleaning Needed | |
| Schedule Maintenance as Planned | |
| Needs Immediate Maintenance | |

| **Plant Information** | |
|---|---|
| Damage to Plants | |
| Plant Replacement | |
| Plant Trimming | |

Additional Notes: _____

2972 San Luis Rey Road, Oceanside, CA 92058 P (760) 433-7640 F (760) 433-3176

# Maintenance Report




**Modular Wetland System, Inc.**
**P. 760.433-7640**
**F. 760-433-3176**
**E. Info@modularwetlands.com**

**www.modularwetlands.com**

# Cleaning and Maintenance Report
# Modular Wetlands System

Project Name _____

Project Address _____
(city) (Zip Code)

Owner / Management Company _____

Contact _____ Phone ( ) –

Inspector Name _____ Date ____/____/____ Time _____ AM / PM

Type of Inspection ☐ Routine ☐ Follow Up ☐ Complaint ☐ Storm Storm Event in Last 72-hours? ☐ No ☐ Yes

Weather Condition _____ Additional Notes _____

| For Office Use Only |
|---|
| (Reviewed By) |
| (Date) |
| Office personnel to complete section to the left. |

| Site Map # | GPS Coordinates of Insert | Manufacturer / Description / Sizing | Trash Accumulation | Foliage Accumulation | Sediment Accumulation | Total Debris Accumulation | Condition of Media 25/50/75/100 (will be changed @ 75%) | Operational Per Manufactures' Specifications (If not, why?) |
|---|---|---|---|---|---|---|---|---|
| | Lat:<br>Long: | MWS Catch Basins | | | | | | |
| | | MWS Sedimentation Basin | | | | | | |
| | | Media Filter Condition | | | | | | |
| | | Plant Condition | | | | | | |
| | | Drain Down Media Condition | | | | | | |
| | | Discharge Chamber Condition | | | | | | |
| | | Drain Down Pipe Condition | | | | | | |
| | | Inlet and Outlet Pipe Condition | | | | | | |

Comments:

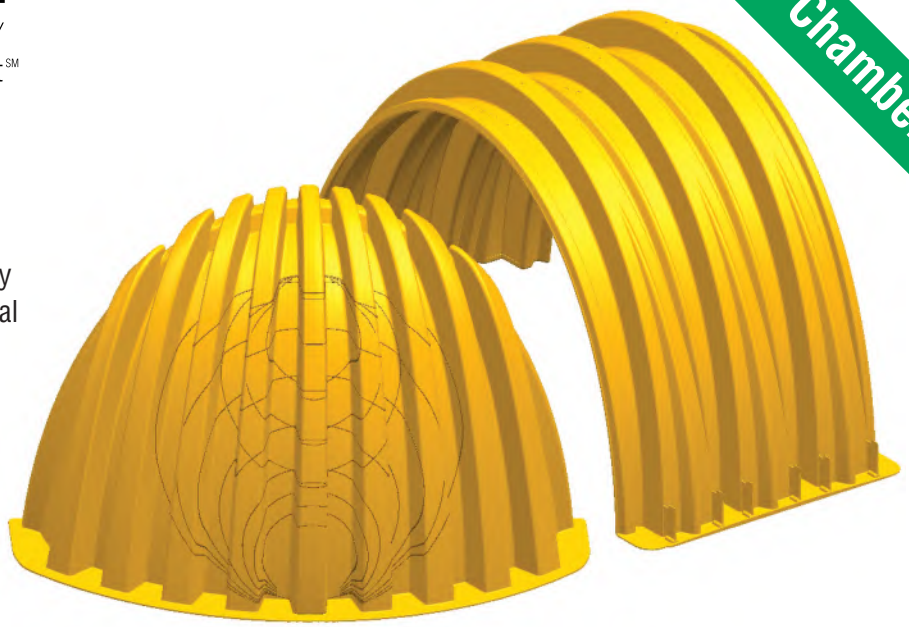
2972 San Luis Rey Road, Oceanside, CA 92058 P. 760.433.7640 F. 760.433.3176

StormTech®
*Detention • Retention • Water Quality*
Subsurface Stormwater Management℠

MC-4500 Chamber

# StormTech™ MC-4500 Chamber

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots thus maximizing land usage for commercial and municipal applications.



**StormTech MC-4500 Chamber** (not to scale)

Nominal Chamber Specifications

| | |
|---|---|
| Size (L x W x H) | 52" (1321 mm) x 100" (2540 mm) x 60" (1524 mm) |
| Chamber Storage | 106.5 ft³ (3.01 m³) |
| Min. Installed Storage* | 162.6 ft³ (4.60 m³) |
| Nominal Weight | 120 lbs (54.4 kg) |

* This assumes a minimum of 12" (305 mm) of stone above, 9" (229 mm) of stone below chambers, 9" (229 mm) of stone between chambers/end caps and 40% stone porosity.

**StormTech MC-4500 End Cap** (not to scale)

Nominal End Cap Specifications

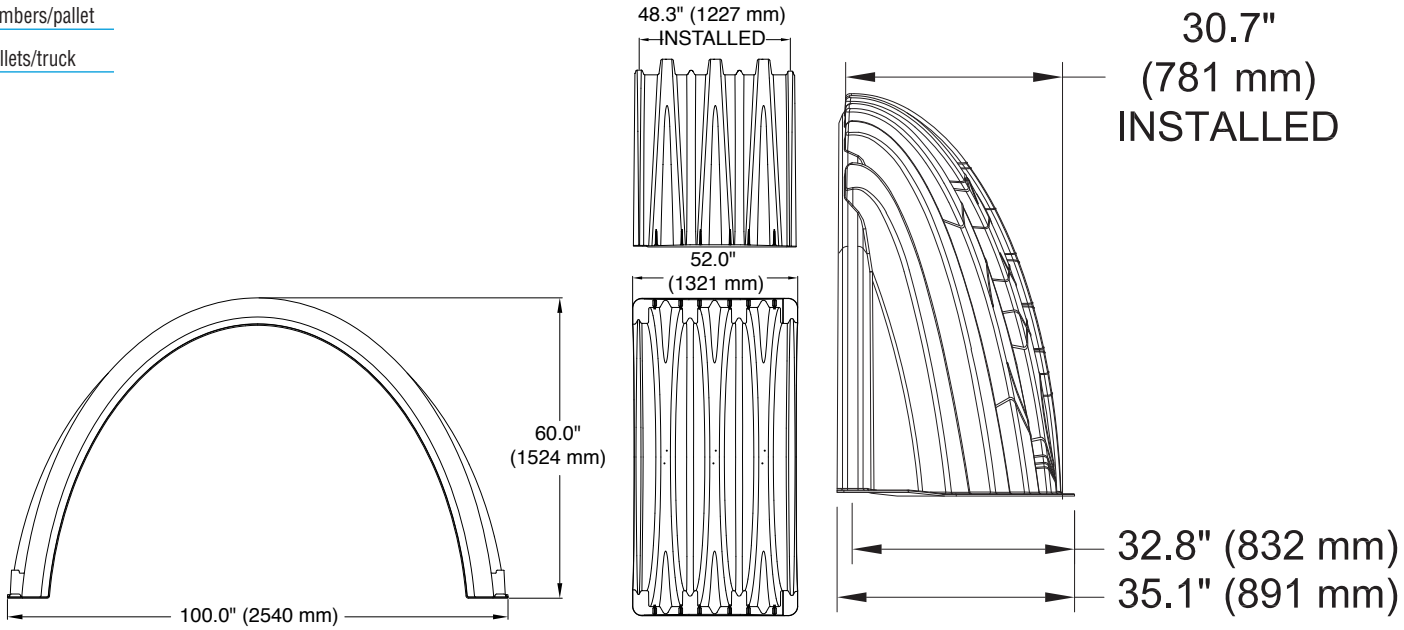
| | |
|---|---|
| Size (L x W x H) | 35.1" (891 mm) x 90.2" (2291 mm) x 59.4" (1509 mm) |
| End Cap Storage | 35.7 ft³ (1.01 m³) |
| Min. Installed Storage* | 108.7 ft³ (3.08 m³) |
| Nominal Weight | 120 lbs (54.4 kg) |

*This assumes a minimum of 12" (305 mm) of stone above, 9" (229 mm) of stone below, 12" (305 mm) of stone perimeter, 9" (229 mm) of stone between chambers/end caps and 40% stone porosity.

Shipping

8 chambers/pallet

11 pallets/truck



### Storage Volume Per Chamber/End Cap ft³ (m³)

| | Bare Unit Storage | Chamber/End Cap and Stone Volume — Stone Foundation Depth in. (mm) | | | |
|---|---|---|---|---|---|
| | ft³ (m³) | 9" (229 mm) | 12" (305 mm) | 15" (381 mm) | 18" (457 mm) |
| **Chamber** | 106.5 (3.02) | 162.6 (4.60) | 166.3 (4.71) | 169.9 (4.81) | 173.6 (4.91) |
| **End Cap** | 35.7 (1.01) | 108.7 (3.08) | 111.9 (3.17) | 115.2 (3.26) | 118.4 (3.35) |

*NOTE: Assumes 9" (229 mm) min. row spacing, 12" (305 mm) min. of stone above, 40% stone porosity and includes the bare chamber/end cap volume. End cap volume assumes 12" (305 mm) min. stone perimeter.*

### Volume of Excavation Per Chamber/End Cap in yd³ (m³)

| | Stone Foundation Depth | | | |
|---|---|---|---|---|
| | 9" (229 mm) | 12" (305 mm) | 15" (381 mm) | 18" (457 mm) |
| **Chamber** | 10.5 (8.0) | 10.8 (8.3) | 11.2 (8.5) | 11.5 (8.8) |
| **End Cap** | 9.3 (7.1) | 9.6 (7.3) | 9.9 (7.6) | 10.2 (7.8) |

*NOTE: Assumes 9" (229 mm) min. of separation between chamber rows, 12" (305 mm) min. of perimeter in front of end caps, and 24" (610 mm) of cover. The volume of excavation will vary as the depth of cover increases.*

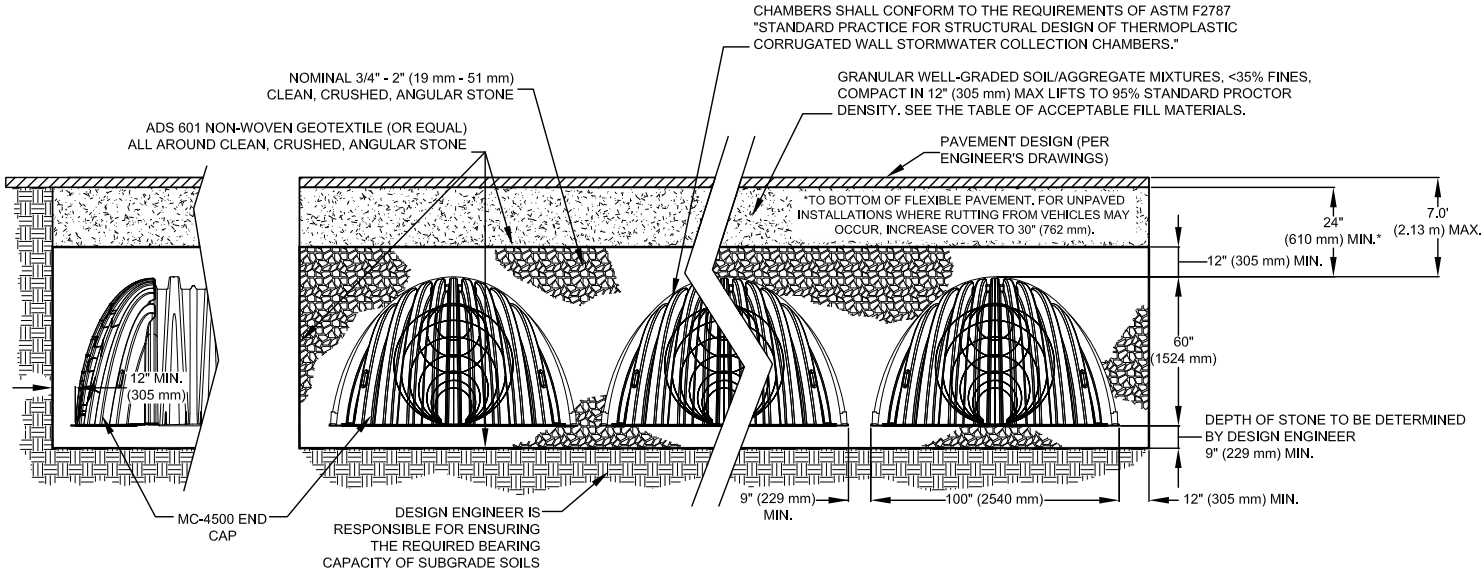
### Amount of Stone Per Chamber

| ENGLISH tons (yds³) | Stone Foundation Depth | | | |
|---|---|---|---|---|
| | 9" (229 mm) | 12" (305 mm) | 15" (381 mm) | 18" (457 mm) |
| **Chamber** | 7.4 (5.2) | 7.8 (5.5) | 8.3 (5.9) | 8.8 (6.2) |
| **End Cap** | 9.6 (6.8) | 10.0 (7.1) | 10.4 (7.4) | 10.9 (7.7) |
| METRIC kg (m³) | **229 mm** | **305 mm** | **381 mm** | **457 mm** |
| **Chamber** | 6681 (4.0) | 7117 (4.2) | 7552 (4.5) | 7987 (4.7) |
| **End Cap** | 8691 (5.2) | 9075 (5.4) | 9460 (5.6) | 9845 (5.9) |

*NOTE: Assumes 12" (305 mm) of stone above, 9" (229 mm) min. row spacing, and 12" (305 mm) min. of perimeter stone in front of end caps.*

### General Cross Section

**Contact your local StormTech representative or visit www.stormtech.com for a copy of the latest installation instructions.




THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

StormTech®

*Detention • Retention • Water Quality*

*Division of* ADS

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An ADS company

# Isolator® Row O&M Manual


SC-740


MC-3500


MC-4500

THE MOST **ADVANCED** NAME IN WATER MANAGEMENT SOLUTIONS™

ADS®

# THE ISOLATOR® ROW

## INTRODUCTION

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row is a technique to inexpensively enhance Total Suspended Solids (TSS) removal and provide easy access for inspection and maintenance.

## THE ISOLATOR ROW

The Isolator Row is a row of StormTech chambers, either SC-160LP, SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-4500 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as storm water rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC- 310-3 and SC-740 models) allow storm water to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

Two different fabrics are used for the Isolator Row. A woven geotextile fabric is placed between the stone and the Isolator Row chambers. The tough geotextile provides a media for storm water filtration and provides a durable surface for maintenance operations. It is also designed to prevent scour of the underlying stone and remain intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the perforations in the sidewall of the chamber. The non-woven fabric is not required over the SC-160LP, DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row is typically designed to capture the “first flush” and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but typically includes a high flow weir such that storm water flowrates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other chambers.

The Isolator Row may also be part of a treatment train. By treating storm water prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured. Pre-treatment best management practices can be as simple as deep sump catch basins, oil-water separators or can be innovative storm water treatment devices. The design of the treatment train and selection of pretreatment devices by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, the Isolator Row is recommended by StormTech as an effective means to minimize maintenance requirements and maintenance costs.

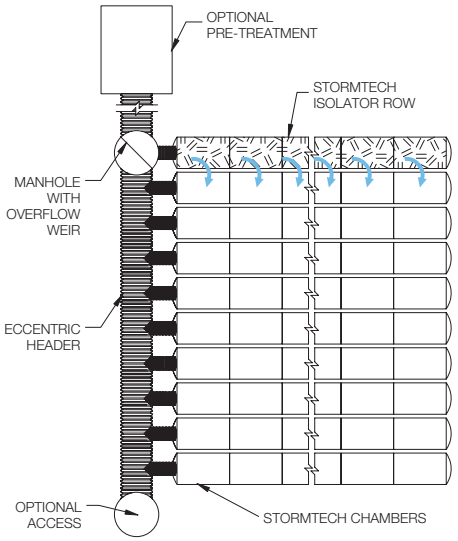
*Note: See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row.*



**Looking down the Isolator Row from the manhole opening, woven geotextile is shown between the chamber and stone base.**



**StormTech Isolator Row with Overflow Spillway** (not to scale)





# ISOLATOR ROW INSPECTION/MAINTENANCE

## INSPECTION

The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean-out should be performed.

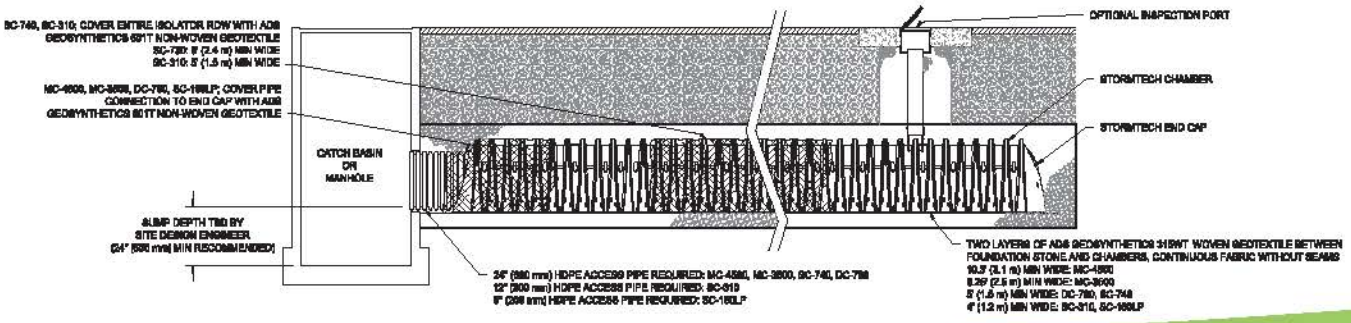
## MAINTENANCE

The Isolator Row was designed to reduce the cost of periodic maintenance. By "isolating" sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45" are best. Most JetVac reels have 400 feet of hose allowing maintenance of an Isolator Row up to 50 chambers long. **The JetVac process shall only be performed on StormTech Isolator Rows that have AASHTO class 1 woven geotextile (as specified by StormTech) over their angular base stone.**

**StormTech Isolator Row** (not to scale)

*Note: Non-woven fabric is only required over the inlet pipe connection into the end cap for SC-160LP, DC-780, MC-3500 and MC-4500 chamber models and is not required over the entire Isolator Row.*



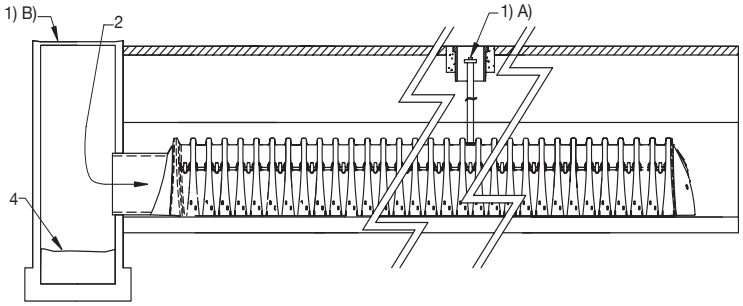
# ISOLATOR ROW STEP BY STEP MAINTENANCE PROCEDURES

**STEP 1**
Inspect Isolator Row for sediment.
- A) Inspection ports (if present)
  - i. Remove lid from floor box frame
  - ii. Remove cap from inspection riser
  - iii. Using a flashlight and stadia rod,measure depth of sediment and record results on maintenance log.
  - iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.
- B) All Isolator Rows
  - i. Remove cover from manhole at upstream end of Isolator Row
  - ii. Using a flashlight, inspect down Isolator Row through outlet pipe
    1. Mirrors on poles or cameras may be used to avoid a confined space entry
    2. Follow OSHA regulations for confined space entry if entering manhole
  - iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2. If not, proceed to Step 3.

**STEP 2**
Clean out Isolator Row using the JetVac process.
- A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
- B) Apply multiple passes of JetVac until backflush water is clean
- C) Vacuum manhole sump as required

**STEP 3**
Replace all caps, lids and covers, record observations and actions.

**STEP 4**
Inspect & clean catch basins and manholes upstream of the StormTech system.




**SAMPLE MAINTENANCE LOG**

| Date | Stadia Rod Readings | | Sediment Depth (1)–(2) | Observations/Actions | Inspector |
|---|---|---|---|---|---|
| | Fixed point to chamber bottom (1) | Fixed point to top of sediment (2) | | | |
| 3/15/11 | 6.3 ft | none | | New installation. Fixed point is CI frame at grade | DJM |
| 9/24/11 | | 6.2 | 0.1 ft | Some grit felt | SM |
| 6/20/13 | | 5.8 | 0.5 ft | Mucky feel, debris visible in manhole and in Isolator Row, maintenance due | NV |
| 7/7/13 | 6.3 ft | | 0 | System jetted and vacuumed | DJM |

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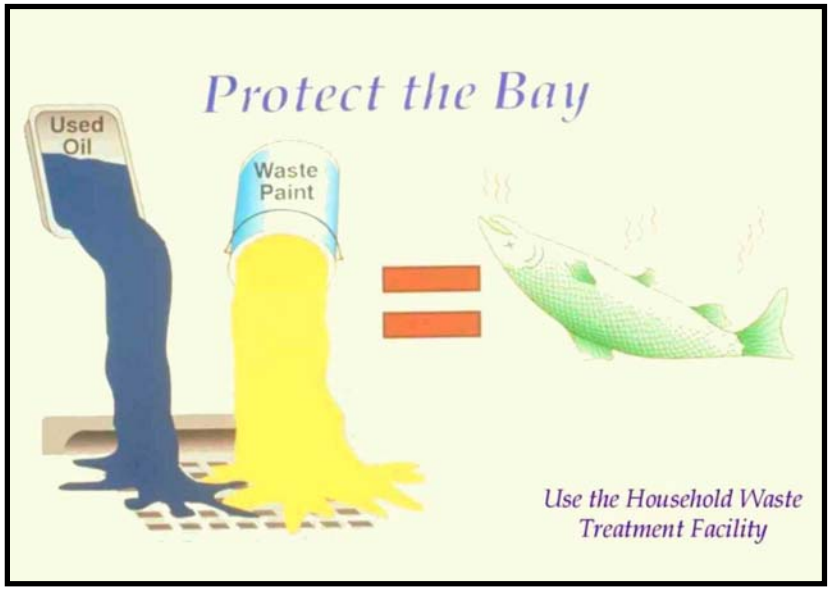
# APPENDIX D

# Maintenance and Covenant Agreement

# APPENDIX E

# Educational Materials

# Non-Stormwater Discharges SC-10




Art Credit: Margie Winter

## Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

## Targeted Constituents

| | |
|---|---|
| Sediment | |
| Nutrients | ✓ |
| Trash | |
| Metals | ✓ |
| Bacteria | ✓ |
| Oil and Grease | ✓ |
| Organics | ✓ |

## Description

Non-stormwater discharges are those flows that do not consist entirely of stormwater. Some non-stormwater discharges do not include pollutants and may be discharged to the storm drain. These include uncontaminated groundwater and natural springs. There are also some non-stormwater discharges that typically do not contain pollutants and may be discharged to the storm drain with conditions. These include car washing, air conditioner condensate, etc. However there are certain non-stormwater discharges that pose environmental concern. These discharges may originate from illegal dumping or from internal floor drains, appliances, industrial processes, sinks, and toilets that are connected to the nearby storm drainage system. These discharges (which may include: process waste waters, cooling waters, wash waters, and sanitary wastewater) can carry substances such as paint, oil, fuel and other automotive fluids, chemicals and other pollutants into storm drains. They can generally be detected through a combination of detection and elimination. The ultimate goal is to effectively eliminate non-stormwater discharges to the stormwater drainage system through implementation of measures to detect, correct, and enforce against illicit connections and illegal discharges of pollutants on streets and into the storm drain system and creeks.

## Approach

Initially the industry must make an assessment of non-stormwater discharges to determine which types must be eliminated or addressed through BMPs. The focus of the following approach is in the elimination of non-stormwater discharges.

CASQA California Stormwater Quality Association

***Pollution Prevention***

- Ensure that used oil, used antifreeze, and hazardous chemical recycling programs are being implemented. Encourage litter control.

***Suggested Protocols***

*Recommended Complaint Investigation Equipment*

- Field Screening Analysis
  - pH paper or meter
  - Commercial stormwater pollutant screening kit that can detect for reactive phosphorus, nitrate nitrogen, ammonium nitrogen, specific conductance, and turbidity
  - Sample jars
  - Sample collection pole
  - A tool to remove access hole covers
- Laboratory Analysis
  - Sample cooler
  - Ice
  - Sample jars and labels
  - Chain of custody forms
- Documentation
  - Camera
  - Notebook
  - Pens
  - Notice of Violation forms
  - Educational materials

*General*

- Develop clear protocols and lines of communication for effectively prohibiting non-stormwater discharges, especially those that are not classified as hazardous. These are often not responded to as effectively as they need to be.
- Stencil or demarcate storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as “Dump No Waste Drains to Stream” stenciled or demarcated next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.

- See SC44 Stormwater Drainage System Maintenance for additional information.

*Illicit Connections*

- Locate discharges from the industrial storm drainage system to the municipal storm drain system through review of "as-built" piping schematics.
- Isolate problem areas and plug illicit discharge points.
- Locate and evaluate all discharges to the industrial storm drain system.

*Visual Inspection and Inventory*

- Inventory and inspect each discharge point during dry weather.
- Keep in mind that drainage from a storm event can continue for a day or two following the end of a storm and groundwater may infiltrate the underground stormwater collection system. Also, non-stormwater discharges are often intermittent and may require periodic inspections.

*Review Infield Piping*

- A review of the "as-built" piping schematic is a way to determine if there are any connections to the stormwater collection system.
- Inspect the path of floor drains in older buildings.

*Smoke Testing*

- Smoke testing of wastewater and stormwater collection systems is used to detect connections between the two systems.
- During dry weather the stormwater collection system is filled with smoke and then traced to sources. The appearance of smoke at the base of a toilet indicates that there may be a connection between the sanitary and the stormwater system.

*Dye Testing*

- A dye test can be performed by simply releasing a dye into either your sanitary or process wastewater system and examining the discharge points from the stormwater collection system for discoloration.

*TV Inspection of Drainage System*

- TV Cameras can be employed to visually identify illicit connections to the industrial storm drainage system.

*Illegal Dumping*

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- On paved surfaces, clean up spills with as little water as possible. Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.

- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- For larger spills, a private spill cleanup company or Hazmat team may be necessary.

Once a site has been cleaned:

- Post "No Dumping" signs with a phone number for reporting dumping and disposal.
- Landscaping and beautification efforts of hot spots may also discourage future dumping, as well as provide open space and increase property values.
- Lighting or barriers may also be needed to discourage future dumping.
- See fact sheet SC11 Spill Prevention, Control, and Cleanup.

*Inspection*

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Conduct field investigations of the industrial storm drain system for potential sources of non-stormwater discharges.
- Pro-actively conduct investigations of high priority areas. Based on historical data, prioritize specific geographic areas and/or incident type for pro-active investigations.

*Reporting*

- A database is useful for defining and tracking the magnitude and location of the problem.
- Report prohibited non-stormwater discharges observed during the course of normal daily activities so they can be investigated, contained, and cleaned up or eliminated.
- Document that non-stormwater discharges have been eliminated by recording tests performed, methods used, dates of testing, and any on-site drainage points observed.
- Document and report annually the results of the program.
- Maintain documentation of illicit connection and illegal dumping incidents, including significant conditionally exempt discharges that are not properly managed.

***Training***

- Training of technical staff in identifying and documenting illegal dumping incidents is required.
- Consider posting the quick reference table near storm drains to reinforce training.
- Train employees to identify non-stormwater discharges and report discharges to the appropriate departments.

- Educate employees about spill prevention and cleanup.
- Well-trained employees can reduce human errors that lead to accidental releases or spills. The employee should have the tools and knowledge to immediately begin cleaning up a spill should one occur. Employees should be familiar with the Spill Prevention Control and Countermeasure Plan.
- Determine and implement appropriate outreach efforts to reduce non-permissible non-stormwater discharges.
- Conduct spill response drills annually (if no events occurred to evaluate your plan) in cooperation with other industries.
- When a responsible party is identified, educate the party on the impacts of his or her actions.

***Spill Response and Prevention***

- See SC11 Spill Prevention Control and Cleanup.

***Other Considerations***

- Many facilities do not have accurate, up-to-date schematic drawings.

## Requirements

***Costs (including capital and operation & maintenance)***

- The primary cost is for staff time and depends on how aggressively a program is implemented.
- Cost for containment and disposal is borne by the discharger.
- Illicit connections can be difficult to locate especially if there is groundwater infiltration.
- Indoor floor drains may require re-plumbing if cross-connections to storm drains are detected.

***Maintenance (including administrative and staffing)***

- Illegal dumping and illicit connection violations requires technical staff to detect and investigate them.

## Supplemental Information

***Further Detail of the BMP***

*Illegal Dumping*

- Substances illegally dumped on streets and into the storm drain systems and creeks include paints, used oil and other automotive fluids, construction debris, chemicals, fresh concrete, leaves, grass clippings, and pet wastes. All of these wastes cause stormwater and receiving water quality problems as well as clog the storm drain system itself.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots

- Types and quantities (in some cases) of wastes
- Patterns in time of occurrence (time of day/night, month, or year)
- Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
- Responsible parties

One of the keys to success of reducing or eliminating illegal dumping is increasing the number of people at the facility who are aware of the problem and who have the tools to at least identify the incident, if not correct it. Therefore, train field staff to recognize and report the incidents.

What constitutes a "non-stormwater" discharge?

- Non-stormwater discharges to the stormwater collection system may include any water used directly in the manufacturing process (process wastewater), air conditioning condensate and coolant, non-contact cooling water, cooling equipment condensate, outdoor secondary containment water, vehicle and equipment wash water, sink and drinking fountain wastewater, sanitary wastes, or other wastewaters.

*Permit Requirements*

- Facilities subject to stormwater permit requirements must include a certification that the stormwater collection system has been tested or evaluated for the presence of non-stormwater discharges. The State's General Industrial Stormwater Permit requires that non-stormwater discharges be eliminated prior to implementation of the facility's SWPPP.

*Performance Evaluation*

- Review annually internal investigation results; assess whether goals were met and what changes or improvements are necessary.
- Obtain feedback from personnel assigned to respond to, or inspect for, illicit connections and illegal dumping incidents.

## References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

# Spill Prevention, Control & Cleanup SC-11



Photo Credit: Geoff Brosseau

**Objectives**

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

## Description

Many activities that occur at an industrial or commercial site have the potential to cause accidental or illegal spills. Preparation for accidental or illegal spills, with proper training and reporting systems implemented, can minimize the discharge of pollutants to the environment.

Spills and leaks are one of the largest contributors of stormwater pollutants. Spill prevention and control plans are applicable to any site at which hazardous materials are stored or used. An effective plan should have spill prevention and response procedures that identify potential spill areas, specify material handling procedures, describe spill response procedures, and provide spill clean-up equipment. The plan should take steps to identify and characterize potential spills, eliminate and reduce spill potential, respond to spills when they occur in an effort to prevent pollutants from entering the stormwater drainage system, and train personnel to prevent and control future spills.

**Targeted Constituents**

| | |
|---|---|
| Sediment | |
| Nutrients | |
| Trash | |
| Metals | ✓ |
| Bacteria | |
| Oil and Grease | ✓ |
| Organics | ✓ |

## Approach

### *Pollution Prevention*

- Develop procedures to prevent/mitigate spills to storm drain systems. Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures.

- Develop a Spill Prevention Control and Countermeasure (SPCC) Plan. The plan should include:

- Description of the facility, owner and address, activities and chemicals present
- Facility map
- Notification and evacuation procedures
- Cleanup instructions
- Identification of responsible departments
- Identify key spill response personnel

- Recycle, reclaim, or reuse materials whenever possible. This will reduce the amount of process materials that are brought into the facility.

***Suggested Protocols (including equipment needs)***

*Spill Prevention*

- Develop procedures to prevent/mitigate spills to storm drain systems. Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures.

- If consistent illegal dumping is observed at the facility:
  - Post "No Dumping" signs with a phone number for reporting illegal dumping and disposal. Signs should also indicate fines and penalties applicable for illegal dumping.
  - Landscaping and beautification efforts may also discourage illegal dumping.
  - Bright lighting and/or entrance barriers may also be needed to discourage illegal dumping.

- Store and contain liquid materials in such a manner that if the tank is ruptured, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters, or groundwater.

- If the liquid is oil, gas, or other material that separates from and floats on water, install a spill control device (such as a tee section) in the catch basins that collects runoff from the storage tank area.

- Routine maintenance:
  - Place drip pans or absorbent materials beneath all mounted taps, and at all potential drip and spill locations during filling and unloading of tanks. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed.
  - Store and maintain appropriate spill cleanup materials in a location known to all near the tank storage area; and ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.
  - Sweep and clean the storage area monthly if it is paved, *do not hose down the area to a storm drain.*

  - Check tanks (and any containment sumps) daily for leaks and spills. Replace tanks that are leaking, corroded, or otherwise deteriorating with tanks in good condition. Collect all spilled liquids and properly dispose of them.

- Label all containers according to their contents (e.g., solvent, gasoline).
- Label hazardous substances regarding the potential hazard (corrosive, radioactive, flammable, explosive, poisonous).
- Prominently display required labels on transported hazardous and toxic materials (per US DOT regulations).
- Identify key spill response personnel.

*Spill Control and Cleanup Activities*

- Follow the Spill Prevention Control and Countermeasure Plan.
- Clean up leaks and spills immediately.
- Place a stockpile of spill cleanup materials where it will be readily accessible (e.g., near storage and maintenance areas).
- On paved surfaces, clean up spills with as little water as possible. Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste. Physical methods for the cleanup of dry chemicals include the use of brooms, shovels, sweepers, or plows.
- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Chemical cleanups of material can be achieved with the use of adsorbents, gels, and foams. Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- For larger spills, a private spill cleanup company or Hazmat team may be necessary.

*Reporting*

- Report spills that pose an immediate threat to human health or the environment to the Regional Water Quality Control Board.
- Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hour).
- Report spills to local agencies, such as the fire department; they can assist in cleanup.
- Establish a system for tracking incidents. The system should be designed to identify the following:

  - Types and quantities (in some cases) of wastes

  - Patterns in time of occurrence (time of day/night, month, or year)

- Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)

- Responsible parties

***Training***

- Educate employees about spill prevention and cleanup.

- Well-trained employees can reduce human errors that lead to accidental releases or spills:

  - The employee should have the tools and knowledge to immediately begin cleaning up a spill should one occur.

  - Employees should be familiar with the Spill Prevention Control and Countermeasure Plan.

- Employees should be educated about aboveground storage tank requirements. Employees responsible for aboveground storage tanks and liquid transfers should be thoroughly familiar with the Spill Prevention Control and Countermeasure Plan and the plan should be readily available.

- Train employees to recognize and report illegal dumping incidents.

***Other Considerations (Limitations and Regulations)***

- State regulations exist for facilities with a storage capacity of 10,000 gallons or more of petroleum to prepare a Spill Prevention Control and Countermeasure (SPCC) Plan (Health & Safety Code Chapter 6.67).

- State regulations also exist for storage of hazardous materials (Health & Safety Code Chapter 6.95), including the preparation of area and business plans for emergency response to the releases or threatened releases.

- Consider requiring smaller secondary containment areas (less than 200 sq. ft.) to be connected to the sanitary sewer, prohibiting any hard connections to the storm drain.

## Requirements

***Costs (including capital and operation & maintenance)***

- Will vary depending on the size of the facility and the necessary controls.

- Prevention of leaks and spills is inexpensive. Treatment and/or disposal of contaminated soil or water can be quite expensive.

***Maintenance (including administrative and staffing)***

- This BMP has no major administrative or staffing requirements. However, extra time is needed to properly handle and dispose of spills, which results in increased labor costs.

## Supplemental Information

***Further Detail of the BMP***

*Reporting*

Record keeping and internal reporting represent good operating practices because they can increase the efficiency of the facility and the effectiveness of BMPs. A good record keeping system helps the facility minimize incident recurrence, correctly respond with appropriate cleanup activities, and comply with legal requirements. A record keeping and reporting system should be set up for documenting spills, leaks, and other discharges, including discharges of hazardous substances in reportable quantities. Incident records describe the quality and quantity of non-stormwater discharges to the storm sewer. These records should contain the following information:

- Date and time of the incident
- Weather conditions
- Duration of the spill/leak/discharge
- Cause of the spill/leak/discharge
- Response procedures implemented
- Persons notified
- Environmental problems associated with the spill/leak/discharge

Separate record keeping systems should be established to document housekeeping and preventive maintenance inspections, and training activities. All housekeeping and preventive maintenance inspections should be documented. Inspection documentation should contain the following information:

- The date and time the inspection was performed
- Name of the inspector
- Items inspected
- Problems noted
- Corrective action required
- Date corrective action was taken

Other means to document and record inspection results are field notes, timed and dated photographs, videotapes, and drawings and maps.

*Aboveground Tank Leak and Spill Control*

Accidental releases of materials from aboveground liquid storage tanks present the potential for contaminating stormwater with many different pollutants. Materials spilled, leaked, or lost from

tanks may accumulate in soils or on impervious surfaces and be carried away by stormwater runoff.

The most common causes of unintentional releases are:

- Installation problems
- Failure of piping systems (pipes, pumps, flanges, couplings, hoses, and valves)
- External corrosion and structural failure
- Spills and overfills due to operator error
- Leaks during pumping of liquids or gases from truck or rail car to a storage tank or vice versa

Storage of reactive, ignitable, or flammable liquids should comply with the Uniform Fire Code and the National Electric Code. Practices listed below should be employed to enhance the code requirements:

- Tanks should be placed in a designated area.
- Tanks located in areas where firearms are discharged should be encapsulated in concrete or the equivalent.
- Designated areas should be impervious and paved with Portland cement concrete, free of cracks and gaps, in order to contain leaks and spills.
- Liquid materials should be stored in UL approved double walled tanks or surrounded by a curb or dike to provide the volume to contain 10 percent of the volume of all of the containers or 110 percent of the volume of the largest container, whichever is greater. The area inside the curb should slope to a drain.
- For used oil or dangerous waste, a dead-end sump should be installed in the drain.
- All other liquids should be drained to the sanitary sewer if available. The drain must have a positive control such as a lock, valve, or plug to prevent release of contaminated liquids.
- Accumulated stormwater in petroleum storage areas should be passed through an oil/water separator.

Maintenance is critical to preventing leaks and spills. Conduct routine inspections and:

- Check for external corrosion and structural failure.
- Check for spills and overfills due to operator error.
- Check for failure of piping system (pipes, pumps, flanger, coupling, hoses, and valves).
- Check for leaks or spills during pumping of liquids or gases from truck or rail car to a storage facility or vice versa.

- Visually inspect new tank or container installation for loose fittings, poor welding, and improper or poorly fitted gaskets.
- Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
- Frequently relocate accumulated stormwater during the wet season.
- Periodically conduct integrity testing by a qualified professional.

*Vehicle Leak and Spill Control*

Major spills on roadways and other public areas are generally handled by highly trained Hazmat teams from local fire departments or environmental health departments. The measures listed below pertain to leaks and smaller spills at vehicle maintenance shops.

In addition to implementing the spill prevention, control, and clean up practices above, use the following measures related to specific activities:

*Vehicle and Equipment Maintenance*

- Perform all vehicle fluid removal or changing inside or under cover to prevent the run-on of stormwater and the runoff of spills.
- Regularly inspect vehicles and equipment for leaks, and repair immediately.
- Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Immediately drain all fluids from wrecked vehicles.
- Store wrecked vehicles or damaged equipment under cover.
- Place drip pans or absorbent materials under heavy equipment when not in use.
- Use adsorbent materials on small spills rather than hosing down the spill.
- Remove the adsorbent materials promptly and dispose of properly.
- Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- Oil filters disposed of in trashcans or dumpsters can leak oil and contaminate stormwater. Place the oil filter in a funnel over a waste oil recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask your oil supplier or recycler about recycling oil filters.

- Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries, even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

*Vehicle and Equipment Fueling*

- Design the fueling area to prevent the run-on of stormwater and the runoff of spills:
  - Cover fueling area if possible.
  - Use a perimeter drain or slope pavement inward with drainage to a sump.
  - Pave fueling area with concrete rather than asphalt.
- If dead-end sump is not used to collect spills, install an oil/water separator.
- Install vapor recovery nozzles to help control drips as well as air pollution.
- Discourage "topping-off' of fuel tanks.
- Use secondary containment when transferring fuel from the tank truck to the fuel tank.
- Use adsorbent materials on small spills and general cleaning rather than hosing down the area. Remove the adsorbent materials promptly.
- Carry out all Federal and State requirements regarding underground storage tanks, or install above ground tanks.
- Do not use mobile fueling of mobile industrial equipment around the facility; rather, transport the equipment to designated fueling areas.
- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Train employees in proper fueling and cleanup procedures.

*Industrial Spill Prevention Response*

For the purposes of developing a spill prevention and response program to meet the stormwater regulations, facility managers should use information provided in this fact sheet and the spill prevention/response portions of the fact sheets in this handbook, for specific activities. The program should:

- Integrate with existing emergency response/hazardous materials programs (e.g., Fire Department)
- Develop procedures to prevent/mitigate spills to storm drain systems
- Identify responsible departments
- Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures
- Address spills at municipal facilities, as well as public areas

- Provide training concerning spill prevention, response and cleanup to all appropriate personnel

## References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Stormwater Managers Resource Center http://www.stormwatercenter.net/

# Outdoor Loading/Unloading SC-30



Photo Credit: Geoff Brosseau

## Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

## Description

The loading/unloading of materials usually takes place outside on docks or terminals; therefore, materials spilled, leaked, or lost during loading/unloading may collect in the soil or on other surfaces and have the potential to be carried away by stormwater runoff or when the area is cleaned. Additionally, rainfall may wash pollutants from machinery used to unload or move materials. Implementation of the following protocols will prevent or reduce the discharge of pollutants to stormwater from outdoor loading/unloading of materials.

## Targeted Constituents

| | |
|---|---|
| Sediment | ✓ |
| Nutrients | ✓ |
| Trash | |
| Metals | ✓ |
| Bacteria | |
| Oil and Grease | ✓ |
| Organics | ✓ |

## Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

### *Pollution Prevention*

- Keep accurate maintenance logs to evaluate materials removed and improvements made.
- Park tank trucks or delivery vehicles in designated areas so that spills or leaks can be contained.
- Limit exposure of material to rainfall whenever possible.
- Prevent stormwater run-on.
- Check equipment regularly for leaks.

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### *Suggested Protocols*

*Loading and Unloading – General Guidelines*

- Develop an operations plan that describes procedures for loading and/or unloading.
- Conduct loading and unloading in dry weather if possible.
- Cover designated loading/unloading areas to reduce exposure of materials to rain.
- Consider placing a seal or door skirt between delivery vehicles and building to prevent exposure to rain.
- Design loading/unloading area to prevent stormwater run-on, which would include grading or berming the area, and position roof downspouts so they direct stormwater away from the loading/unloading areas.
- Have employees load and unload all materials and equipment in covered areas such as building overhangs at loading docks if feasible.
- Load/unload only at designated loading areas.
- Use drip pans underneath hose and pipe connections and other leak-prone spots during liquid transfer operations, and when making and breaking connections. Several drip pans should be stored in a covered location near the liquid transfer area so that they are always available, yet protected from precipitation when not in use. Drip pans can be made specifically for railroad tracks. Drip pans must be cleaned periodically, and drip collected materials must be disposed of properly.
- Pave loading areas with concrete instead of asphalt.
- Avoid placing storm drains in the area.
- Grade and/or berm the loading/unloading area to a drain that is connected to a deadend.

*Inspection*

- Check loading and unloading equipment regularly for leaks, including valves, pumps, flanges and connections.
- Look for dust or fumes during loading or unloading operations.

### *Training*

- Train employees (e.g., fork lift operators) and contractors on proper spill containment and cleanup.
- Have employees trained in spill containment and cleanup present during loading/unloading.
- Train employees in proper handling techniques during liquid transfers to avoid spills.
- Make sure forklift operators are properly trained on loading and unloading procedures.

***Spill Response and Prevention***

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Contain leaks during transfer.
- Store and maintain appropriate spill cleanup materials in a location that is readily accessible and known to all and ensure that employees are familiar with the site's spill control plan and proper spill cleanup procedures.
- Have an emergency spill cleanup plan readily available.
- Use drip pans or comparable devices when transferring oils, solvents, and paints.

***Other Considerations (Limitations and Regulations)***

- Space and time limitations may preclude all transfers from being performed indoors or under cover.
- It may not be possible to conduct transfers only during dry weather.

## Requirements

***Costs***

Costs should be low except when covering a large loading/unloading area.

***Maintenance***

- Conduct regular inspections and make repairs as necessary. The frequency of repairs will depend on the age of the facility.
- Check loading and unloading equipment regularly for leaks.
- Conduct regular broom dry-sweeping of area.

## Supplemental Information

***Further Detail of the BMP***

*Special Circumstances for Indoor Loading/Unloading of Materials*

Loading or unloading of liquids should occur in the manufacturing building so that any spills that are not completely retained can be discharged to the sanitary sewer, treatment plant, or treated in a manner consistent with local sewer authorities and permit requirements.

- For loading and unloading tank trucks to above and below ground storage tanks, the following procedures should be used:
  - The area where the transfer takes place should be paved. If the liquid is reactive with the asphalt, Portland cement should be used to pave the area.
  - The transfer area should be designed to prevent run-on of stormwater from adjacent areas. Sloping the pad and using a curb, like a speed bump, around the uphill side of the transfer area should reduce run-on.

- The transfer area should be designed to prevent runoff of spilled liquids from the area. Sloping the area to a drain should prevent runoff. The drain should be connected to a dead-end sump or to the sanitary sewer. A positive control valve should be installed on the drain.

- For transfer from rail cars to storage tanks that must occur outside, use the following procedures:

  - Drip pans should be placed at locations where spillage may occur, such as hose connections, hose reels, and filler nozzles. Use drip pans when making and breaking connections.

  - Drip pan systems should be installed between the rails to collect spillage from tank cars.

## References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

# Outdoor Equipment Operations SC-32

## Description

Outside process equipment operations and maintenance can contaminate stormwater runoff. Activities, such as grinding, painting, coating, sanding, degreasing or parts cleaning, landfills and waste piles, solid waste treatment and disposal, are examples of process operations that can lead to contamination of stormwater runoff. Source controls for outdoor process equipment operations and maintenance include reducing the amount of waste created, enclosing or covering all or some of the equipment, installing secondary containment, and training employees.

**Objectives**

- Cover
- Contain
- Educate
- Reduce/Minimize

## Approach

### *Pollution Prevention*

- Perform the activity during dry periods.
- Use non-toxic chemicals for maintenance and minimize or eliminate the use of solvents.

**Targeted Constituents**

| | |
|---|---|
| Sediment | ✓ |
| Nutrients | |
| Trash | |
| Metals | ✓ |
| Bacteria | |
| Oil and Grease | ✓ |
| Organics | ✓ |

### *Suggested Protocols*

- Consider enclosing the activity in a building and connecting the floor drains to the sanitary sewer.
- Cover the work area with a permanent roof if possible.
- Minimize contact of stormwater with outside process equipment operations through berming and drainage routing (run-on prevention). If possible, connect process equipment area to public sewer or facility wastewater treatment system. Some municipalities require that secondary containment areas be connected to the sanitary sewer, prohibiting any hard connections to the storm drain.
- Dry clean the work area regularly.

### *Training*

- Train employees to perform the activity during dry periods only or substituting benign materials for more toxic ones.
- Train employee and contractors in proper techniques for spill containment and cleanup. Employees should have the tools and knowledge to immediately begin cleaning up a spill should one occur.

### *Spill Response and Prevention*

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.

- Have employees trained in emergency spill cleanup procedures present when dangerous waste, liquid chemicals, or other wastes are delivered.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Prevent operator errors by using engineering safe guards and thus reducing accidental releases of pollutant.
- Inspect storage areas regularly for leaks or spills. Also check for structural failure, spills and overfills due to operator error, and/or failure of piping system.

***Other Considerations***

- Providing cover may be expensive.
- Space limitations may preclude enclosing some equipment.
- Storage sheds often must meet building and fire code requirements.

## Requirements

***Costs***

Costs vary depending on the complexity of the operation and the amount of control necessary for stormwater pollution control.

***Maintenance***

- Conduct routine preventive maintenance, including checking process equipment for leaks.
- Clean the storm drain system regularly.

## Supplemental Information

***Further Detail of the BMP***

*Hydraulic/Treatment Modifications*

If stormwater becomes polluted, it should be captured and treated. If you do not have your own process wastewater treatment system, consider discharging to the public sewer system. Use of the public sewer might be allowed under the following conditions:

- If the activity area is very small (less than a few hundred square feet), the local sewer authority may be willing to allow the area to remain uncovered with the drain connected to the public sewer.
- It may be possible under unusual circumstances to connect a much larger area to the public sewer, as long as the rate of stormwater discharges does not exceed the capacity of the wastewater treatment plant. The stormwater could be stored during the storm and then transferred to the public sewer when the normal flow is low, such as at night.

Industries that generate large volumes of process wastewater typically have their own treatment system and corresponding permit. These industries have the discretion to use their wastewater treatment system to treat stormwater within the constraints of their permit requirements for process treatment. It may also be possible for the industry to discharge the stormwater directly to an effluent outfall without treatment as long as the total loading of the discharged process

water and stormwater does not exceed the loading had a stormwater treatment device been used. This could be achieved by reducing the loading from the process wastewater treatment system. Check with your Regional Water Quality Control Board or local sewering agency, as this option would be subject to permit constraints and potentially regular monitoring.

## References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Stormwater Managers Resource Center http://www.stormwatercenter.net

# Waste Handling & Disposal SC-34



Photo Credit: Geoff Brosseau

## Description

Improper storage and handling of solid wastes can allow toxic compounds, oils and greases, heavy metals, nutrients, suspended solids, and other pollutants to enter stormwater runoff. The discharge of pollutants to stormwater from waste handling and disposal can be prevented and reduced by tracking waste generation, storage, and disposal; reducing waste generation and disposal through source reduction, reuse, and recycling; and preventing run-on and runoff.

## Approach

### *Pollution Prevention*

- Accomplish reduction in the amount of waste generated using the following source controls:
  - Production planning and sequencing
  - Process or equipment modification
  - Raw material substitution or elimination
  - Loss prevention and housekeeping
  - Waste segregation and separation
  - Close loop recycling
- Establish a material tracking system to increase awareness about material usage. This may reduce spills and minimize contamination, thus reducing the amount of waste produced.
- Recycle materials whenever possible.

### Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

### Targeted Constituents

| | |
|---|---|
| Sediment | |
| Nutrients | |
| Trash | |
| Metals | ✓ |
| Bacteria | ✓ |
| Oil and Grease | ✓ |
| Organics | ✓ |

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***Suggested Protocols***

*General*

- Cover storage containers with leak proof lids or some other means. If waste is not in containers, cover all waste piles (plastic tarps are acceptable coverage) and prevent stormwater run-on and runoff with a berm. The waste containers or piles must be covered except when in use.
- Use drip pans or absorbent materials whenever grease containers are emptied by vacuum trucks or other means. Grease cannot be left on the ground. Collected grease must be properly disposed of as garbage.
- Check storage containers weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating.
- Sweep and clean the storage area regularly. If it is paved, do not hose down the area to a storm drain.
- Dispose of rinse and wash water from cleaning waste containers into a sanitary sewer if allowed by the local sewer authority. Do not discharge wash water to the street or storm drain.
- Transfer waste from damaged containers into safe containers.
- Take special care when loading or unloading wastes to minimize losses. Loading systems can be used to minimize spills and fugitive emission losses such as dust or mist. Vacuum transfer systems can minimize waste loss.

*Controlling Litter*

- Post "No Littering" signs and enforce anti-litter laws.
- Provide a sufficient number of litter receptacles for the facility.
- Clean out and cover litter receptacles frequently to prevent spillage.

*Waste Collection*

- Keep waste collection areas clean.
- Inspect solid waste containers for structural damage regularly. Repair or replace damaged containers as necessary.
- Secure solid waste containers; containers must be closed tightly when not in use.
- Do not fill waste containers with washout water or any other liquid.
- Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc., may not be disposed of in solid waste containers (see chemical/ hazardous waste collection section below).

- Do not mix wastes; this can cause chemical reactions, make recycling impossible, and complicate disposal.

*Good Housekeeping*

- Use all of the product before disposing of the container.
- Keep the waste management area clean at all times by sweeping and cleaning up spills immediately.
- Use dry methods when possible (e.g., sweeping, use of absorbents) when cleaning around restaurant/food handling dumpster areas. If water must be used after sweeping/using absorbents, collect water and discharge through grease interceptor to the sewer.

*Chemical/Hazardous Wastes*

- Select designated hazardous waste collection areas on-site.
- Store hazardous materials and wastes in covered containers and protect them from vandalism.
- Place hazardous waste containers in secondary containment.
- Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.
- Stencil or demarcate storm drains on the facility's property with prohibitive message regarding waste disposal.

*Run-on/Runoff Prevention*

- Prevent stormwater run-on from entering the waste management area by enclosing the area or building a berm around the area.
- Prevent waste materials from directly contacting rain.
- Cover waste piles with temporary covering material such as reinforced tarpaulin, polyethylene, polyurethane, polypropyleneor hypalon.
- Cover the area with a permanent roof if feasible.
- Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.
- Move the activity indoor after ensuring all safety concerns such as fire hazard and ventilation are addressed.

*Inspection*

- Inspect and replace faulty pumps or hoses regularly to minimize the potential of releases and spills.
- Check waste management areas for leaking containers or spills.

- Repair leaking equipment including valves, lines, seals, or pumps promptly.

***Training***

- Train staff in pollution prevention measures and proper disposal methods.
- Train employees and contractors in proper spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill should one occur.
- Train employees and subcontractors in proper hazardous waste management.

***Spill Response and Prevention***

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Have an emergency plan, equipment and trained personnel ready at all times to deal immediately with major spills
- Collect all spilled liquids and properly dispose of them.
- Store and maintain appropriate spill cleanup materials in a location known to all near the designated wash area.
- Ensure that vehicles transporting waste have spill prevention equipment that can prevent spills during transport. Spill prevention equipment includes:
  - Vehicles equipped with baffles for liquid waste
  - Trucks with sealed gates and spill guards for solid waste

***Other Considerations (Limitations and Regulations)***

Hazardous waste cannot be reused or recycled; it must be disposed of by a licensed hazardous waste hauler.

## Requirements

***Costs***

Capital and O&M costs for these programs will vary substantially depending on the size of the facility and the types of waste handled. Costs should be low if there is an inventory program in place.

***Maintenance***

- None except for maintaining equipment for material tracking program.

## Supplemental Information

***Further Detail of the BMP***

*Land Treatment System*

Minimize runoff of polluted stormwater from land application by:

- Choosing a site where slopes are under 6%, the soil is permeable, there is a low water table, it is located away from wetlands or marshes, and there is a closed drainage system

- Avoiding application of waste to the site when it is raining or when the ground is saturated with water
- Growing vegetation on land disposal areas to stabilize soils and reduce the volume of surface water runoff from the site
- Maintaining adequate barriers between the land application site and the receiving waters (planted strips are particularly good)
- Using erosion control techniques such as mulching and matting, filter fences, straw bales, diversion terracing, and sediment basins
- Performing routine maintenance to ensure the erosion control or site stabilization measures are working

***Examples***

The port of Long Beach has a state-of-the-art database for identifying potential pollutant sources, documenting facility management practices, and tracking pollutants.

## References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

Solid Waste Container Best Management Practices – Fact Sheet On-Line Resources – Environmental Health and Safety. Harvard University. 2002.

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

# Safer Alternative Products SC-35

## Description

Promote the use of less harmful products and products that contain little or no TMDL pollutants. Alternatives exist for most product classes including chemical fertilizers, pesticides, cleaning solutions, janitorial chemicals, automotive and paint products, and consumables (batteries, fluorescent lamps).

## Approach

Pattern a new program after the many established programs around the state and country. Integrate this best management practice as much as possible with existing programs at your facility.

Develop a comprehensive program based on:

- The "Precautionary Principle," which is an alternative to the "Risk Assessment" model that says it's acceptable to use a potentially harmful product until physical evidence of its harmful effects are established and deemed too costly from an environmental or public health perspective. For instance, a risk assessment approach might say it's acceptable to use a pesticide until there is direct proof of an environmental impact. The Precautionary Principle approach is used to evaluate whether a given product is safe, whether it is really necessary, and whether alternative products would perform just as well.
- Environmentally Preferable Purchasing Program to minimize the purchase of products containing hazardous ingredients used in the facility's custodial services, fleet maintenance, and facility maintenance in favor of using alternate products that pose less risk to employees and to the environment.
- Integrated Pest Management (IPM) or Less-Toxic Pesticide Program, which uses a pest management approach that minimizes the use of toxic chemicals and gets rid of pests by methods that pose a lower risk to employees, the public, and the environment.
- Energy Efficiency Program including no-cost and low-cost energy conservation and efficiency actions that can reduce both energy consumption and electricity bills, along with long-term energy efficiency investments.

Consider the following mechanisms for developing and implementing a comprehensive program:

- Policies

### Objectives

- Educate
- Reduce/Minimize
- Product Substitution

### Targeted Constituents

| | |
|---|---|
| Sediment | |
| Nutrients | ✓ |
| Trash | |
| Metals | ✓ |
| Bacteria | |
| Oil and Grease | ✓ |
| Organics | ✓ |

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- Procedures
  - Standard operating procedures (SOPs)
  - Purchasing guidelines and procedures
  - Bid packages (services and supplies)
- Materials
  - Preferred or approved product and supplier lists
  - Product and supplier evaluation criteria
  - Training sessions and manuals
  - Fact sheets for employees

Implement this BMP in conjunction with the Vehicle and Equipment Management fact sheets (SC20 – SC22) and SC41, Building and Grounds Maintenance.

***Training***

- Employees who handle potentially harmful materials in the use of safer alternatives.
- Purchasing departments should be encouraged to procure less hazardous materials and products that contain little or no harmful substances or TMDL pollutants.

***Regulations***

This BMP has no regulatory requirements. Existing regulations already encourage facilities to reduce the use of hazardous materials through incentives such as reduced:

- Specialized equipment storage and handling requirements,
- Storm water runoff sampling requirements,
- Training and licensing requirements, and
- Record keeping and reporting requirements.

***Equipment***

- There are no major equipment requirements to this BMP.

***Limitations***

- Alternative products may not be available, suitable, or effective in every case.

**Requirements**

***Cost Considerations***

- The primary cost is for staff time to: 1) develop new policies and procedures and 2) educate purchasing departments and employees who handle potentially harmful materials about the availability, procurement, and use of safer alternatives.

- Some alternative products may be slightly more expensive than conventional products.

### Supplemental Information

Employees and contractors / service providers can both be educated about safer alternatives by using information developed by a number of organizations including the references and resources listed below.

The following discussion provides some general information on safer alternatives. More specific information on particular hazardous materials and the available alternatives may be found in the references and resources listed below.

- Automotive products – Less toxic alternatives are not available for many automotive products, especially engine fluids. But there are alternatives to grease lubricants, car polishes, degreasers, and windshield washer solution. Rerefined motor oil is also available.
- Vehicle/Trailer lubrication – Fifth wheel bearings on trucks require routine lubrication. Adhesive lubricants are available to replace typical chassis grease.
- Cleaners – Vegetables-based or citrus-based soaps are available to replace petroleum-based soaps/detergents.
- Paint products – Water-based paints, wood preservatives, stains, and finishes are available.
- Pesticides – Specific alternative products or methods exist to control most insects, fungi, and weeds.
- Chemical Fertilizers – Compost and soil amendments are natural alternatives.
- Consumables – Manufacturers have either reduced or are in the process of reducing the amount of heavy metals in consumables such as batteries and fluorescent lamps. All fluorescent lamps contain mercury, however low-mercury containing lamps are now available from most hardware and lighting stores. Fluorescent lamps are also more energy efficient than the average incandescent lamp.
- Janitorial chemicals – Even biodegradable soap can harm fish and wildlife before it biodegrades. Biodegradable does not mean non-toxic. Safer products and procedures are available for floor stripping and cleaning, as well as carpet, glass, metal, and restroom cleaning and disinfecting.

#### *Examples*

There are a number of business and trade associations, and communities with effective programs. Some of the more prominent are listed below in the references and resources section.

### References and Resources

Note: Many of these references provide alternative products for materials that typically are used inside and disposed to the sanitary sewer as well as alternatives to products that usually end up in the storm drain.

***General Sustainable Practices and Pollution Prevention Including Pollutant-Specific Information***

California Department of Toxic Substances Control (www.dtsc.ca.gov)

California Integrated Waste Management Board (www.ciwmb.ca.gov)

City of Santa Monica (www.santa-monica.org/environment)

City of Palo Alto (www.city.palo-alto.ca.us/cleanbay)

City and County of San Francisco, Department of the Environment (www.ci.sf.ca.us/sfenvironment)

Earth 911 (www.earth911.org/master.asp)

Environmental Finance Center Region IX (www.greenstart.org/efc9)

Flex Your Power (www.flexyourpower.ca.gov)

GreenBiz.com (www.greenbiz.com)

Green Business Program (www.abag.org/bayarea/enviro/gbus/gb.html)

Pacific Industrial and Business Association (www.piba.org)

Sacramento Clean Water Business Partners (www.sacstormwater.org)

USEPA BMP fact sheet – Alternative products (http://cfpub.epa.gov/npdes/stormwater/menuofbmps/poll_2.cfm)

USEPA Region IX Pollution Prevention Program (www.epa.gov/region09/p2)

Western Regional Pollution Prevention Network (www.westp2net.org)

***Metals (mercury, copper)***

National Electrical Manufacturers Association - Environment, Health and Safety (www.nema.org)

Sustainable Conservation (www.suscon.org)

- Auto Recycling Project
- Brake Pad Partnership

***Pesticides and Chemical Fertilizers***

Bio-Integral Resource Center (www.birc.org)

California Department of Pesticide Regulation (www.cdpr.ca.gov)

University of California Statewide IPM Program (www.ipm.ucdavis.edu/default.html)

***Dioxins***

Bay Area Dioxins Project (http://dioxin.abag.ca.gov/)

# Building & Grounds Maintenance SC-41




## Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

## Targeted Constituents

| | |
|---|---|
| Sediment | ✓ |
| Nutrients | ✓ |
| Trash | |
| Metals | ✓ |
| Bacteria | ✓ |
| Oil and Grease | |
| Organics | |

## Description

Stormwater runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, abnormal pH, and oils and greases. Utilizing the protocols in this fact sheet will prevent or reduce the discharge of pollutants to stormwater from building and grounds maintenance activities by washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater collection system.

## Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

### *Pollution Prevention*

- Switch to non-toxic chemicals for maintenance when possible.
- Choose cleaning agents that can be recycled.
- Encourage proper lawn management and landscaping, including use of native vegetation.

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- Encourage use of Integrated Pest Management techniques for pest control.
- Encourage proper onsite recycling of yard trimmings.
- Recycle residual paints, solvents, lumber, and other material as much as possible.

***Suggested Protocols***

*Pressure Washing of Buildings, Rooftops, and Other Large Objects*

- In situations where soaps or detergents are used and the surrounding area is paved, pressure washers must use a water collection device that enables collection of wash water and associated solids. A sump pump, wet vacuum or similarly effective device must be used to collect the runoff and loose materials. The collected runoff and solids must be disposed of properly.
- If soaps or detergents are not used, and the surrounding area is paved, wash runoff does not have to be collected but must be screened. Pressure washers must use filter fabric or some other type of screen on the ground and/or in the catch basin to trap the particles in wash water runoff.
- If you are pressure washing on a grassed area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the grass and not drain to pavement.

*Landscaping Activities*

- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage, or by composting. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures on exposed soils.

*Building Repair, Remodeling, and Construction*

- Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain.
- Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of collected material daily.
- Use a ground cloth or oversized tub for activities such as paint mixing and tool cleaning.
- Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based paints, finishes, or other materials must be cleaned in a manner that enables collection of used solvents (e.g., paint thinner, turpentine, etc.) for recycling or proper disposal.
- Use a storm drain cover, filter fabric, or similarly effective runoff control mechanism if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. This is particularly necessary on rainy days. The containment device(s) must be in place at the beginning of the work day, and accumulated dirty runoff and solids must be collected and disposed of before removing the containment device(s) at the end of the work day.

- If you need to de-water an excavation site, you may need to filter the water before discharging to a catch basin or off-site. If directed off-site, you should direct the water through hay bales and filter fabric or use other sediment filters or traps.
- Store toxic material under cover during precipitation events and when not in use. A cover would include tarps or other temporary cover material.

*Mowing, Trimming, and Planting*

- Dispose of leaves, sticks, or other collected vegetation as garbage, by composting or at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures when soils are exposed.
- Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Consider an alternative approach when bailing out muddy water: do not put it in the storm drain; pour over landscaped areas.
- Use hand weeding where practical.

*Fertilizer and Pesticide Management*

- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- Use less toxic pesticides that will do the job when applicable. Avoid use of copper-based pesticides if possible.
- Do not use pesticides if rain is expected.
- Do not mix or prepare pesticides for application near storm drains.
- Use the minimum amount needed for the job.
- Calibrate fertilizer distributors to avoid excessive application.
- Employ techniques to minimize off-target application (e.g., spray drift) of pesticides, including consideration of alternative application techniques.
- Apply pesticides only when wind speeds are low.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Irrigate slowly to prevent runoff and then only as much as is needed.
- Clean pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Dispose of empty pesticide containers according to the instructions on the container label.

- Use up the pesticides. Rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Implement storage requirements for pesticide products with guidance from the local fire department and County Agricultural Commissioner. Provide secondary containment for pesticides.

*Inspection*

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering and repair leaks in the irrigation system as soon as they are observed.

***Training***

- Educate and train employees on pesticide use and in pesticide application techniques to prevent pollution.
- Train employees and contractors in proper techniques for spill containment and cleanup.
- Be sure the frequency of training takes into account the complexity of the operations and the nature of the staff.

***Spill Response and Prevention***

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials, such as brooms, dustpans, and vacuum sweepers (if desired) near the storage area where it will be readily accessible.
- Have employees trained in spill containment and cleanup present during the loading/unloading of dangerous wastes, liquid chemicals, or other materials.
- Familiarize employees with the Spill Prevention Control and Countermeasure Plan.
- Clean up spills immediately.

***Other Considerations***

Alternative pest/weed controls may not be available, suitable, or effective in many cases.

## Requirements

***Costs***

- Cost will vary depending on the type and size of facility.
- Overall costs should be low in comparison to other BMPs.

***Maintenance***

Sweep paved areas regularly to collect loose particles. Wipe up spills with rags and other absorbent material immediately, do not hose down the area to a storm drain.

## Supplemental Information

***Further Detail of the BMP***

*Fire Sprinkler Line Flushing*

Building fire sprinkler line flushing may be a source of non-stormwater runoff pollution. The water entering the system is usually potable water, though in some areas it may be non-potable reclaimed wastewater. There are subsequent factors that may drastically reduce the quality of the water in such systems. Black iron pipe is usually used since it is cheaper than potable piping, but it is subject to rusting and results in lower quality water. Initially, the black iron pipe has an oil coating to protect it from rusting between manufacture and installation; this will contaminate the water from the first flush but not from subsequent flushes. Nitrates, poly-phosphates and other corrosion inhibitors, as well as fire suppressants and antifreeze may be added to the sprinkler water system. Water generally remains in the sprinkler system a long time (typically a year) and between flushes may accumulate iron, manganese, lead, copper, nickel, and zinc. The water generally becomes anoxic and contains living and dead bacteria and breakdown products from chlorination. This may result in a significant BOD problem and the water often smells. Consequently dispose fire sprinkler line flush water into the sanitary sewer. Do not allow discharge to storm drain or infiltration due to potential high levels of pollutants in fire sprinkler line water.

## References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Mobile Cleaners Pilot Program: Final Report. 1997. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

# Building Repair and Construction SC-42




## Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Recycle

## Targeted Constituents

| | |
|---|---|
| Sediment | ✓ |
| Nutrients | |
| Trash | ✓ |
| Metals | ✓ |
| Bacteria | |
| Oil and Grease | ✓ |
| Organics | ✓ |

## Description

Modifications are common particularly at large industrial sites. The activity may vary from minor and normal building repair to major remodeling, or the construction of new facilities. These activities can generate pollutants including solvents, paints, paint and varnish removers, finishing residues, spent thinners, soap cleaners, kerosene, asphalt and concrete materials, adhesive residues, and old asbestos installation. Protocols in this fact sheet are intended to prevent or reduce the discharge of pollutants to stormwater from building repair, remodeling, and construction by using soil erosion controls, enclosing or covering building material storage areas, using good housekeeping practices, using safer alternative products, and training employees.

## Approach

### *Pollution Prevention*

- Recycle residual paints, solvents, lumber, and other materials to the maximum extent practical.
- Buy recycled products to the maximum extent practical.
- Inform on-site contractors of company policy on these matters and include appropriate provisions in their contract to ensure certain proper housekeeping and disposal practices are implemented.

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- Make sure that nearby storm drains are well marked to minimize the chance of inadvertent disposal of residual paints and other liquids.

***Suggested Protocols***

*Repair & Remodeling*

- Follow BMPs identified in Construction BMP Handbook.
- Maintain good housekeeping practices while work is underway.
- Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area.
- Cover materials of particular concern that must be left outside, particularly during the rainy season.
- Do not dump waste liquids down the storm drain.
- Dispose of wash water, sweepings, and sediments properly.
- Store materials properly that are normally used in repair and remodeling such as paints and solvents.
- Sweep out the gutter or wash the gutter and trap the particles at the outlet of the downspout if when repairing roofs, small particles have accumulated in the gutter. A sock or geofabric placed over the outlet may effectively trap the materials. If the downspout is tight lined, place a temporary plug at the first convenient point in the storm drain and pump out the water with a vactor truck, and clean the catch basin sump where you placed the plug.
- Properly store and dispose waste materials generated from construction activities. See Construction BMP Handbook.
- Clean the storm drain system in the immediate vicinity of the construction activity after it is completed.

*Painting*

- Enclose painting operations consistent with local air quality regulations and OSHA.
- Local air pollution regulations may, in many areas of the state, specify painting procedures which if properly carried out are usually sufficient to protect water quality.
- Develop paint handling procedures for proper use, storage, and disposal of paints.
- Transport paint and materials to and from job sites in containers with secure lids and tied down to the transport vehicle.
- Test and inspect spray equipment prior to starting to paint. Tighten all hoses and connections and do not overfill paint containers.
- Mix paint indoors before using so that any spill will not be exposed to rain. Do so even during dry weather because cleanup of a spill will never be 100% effective.
- Transfer and load paint and hot thermoplastic away from storm drain inlets.

- Do not transfer or load paint near storm drain inlets.
- Plug nearby storm drain inlets prior to starting painting and remove plugs when job is complete when there is significant risk of a spill reaching storm drains.
- Cover nearby storm drain inlets prior to starting work if sand blasting is used to remove paint.
- Use a ground cloth to collect the chips if painting requires scraping or sand blasting of the existing surface. Dispose the residue properly.
- Cover or enclose painting operations properly to avoid drift.
- Clean the application equipment in a sink that is connected to the sanitary sewer if using water based paints.
- Capture all cleanup-water and dispose of properly.
- Dispose of paints containing lead or tributyl tin and considered a hazardous waste properly.
- Store leftover paints if they are to be kept for the next job properly, or dispose properly.
- Recycle paint when possible. Dispose of paint at an appropriate household hazardous waste facility.

### *Training*

Proper education of off-site contractors is often overlooked. The conscientious efforts of well trained employees can be lost by unknowing off-site contractors, so make sure they are well informed about what they are expected to do.

### *Spill Response and Prevention*

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Clean up spills immediately.
- Excavate and remove the contaminated (stained) soil if a spill occurs on dirt.

### *Limitations*

- This BMP is for minor construction only. The State's General Construction Activity Stormwater Permit has more requirements for larger projects. The companion "Construction Best Management Practice Handbook" contains specific guidance and best management practices for larger-scale projects.
- Hazardous waste that cannot be reused or recycled must be disposed of by a licensed hazardous waste hauler.
- Be certain that actions to help stormwater quality are consistent with Cal- and Fed-OSHA and air quality regulations.

# SC-42 Building Repair and Construction

## Requirements

***Costs***

These BMPs are generally low to modest in cost.

***Maintenance***

N/A

## Supplemental Information

***Further Detail of the BMP***

*Soil/Erosion Control*

If the work involves exposing large areas of soil, employ the appropriate soil erosion and control techniques. See the Construction Best Management Practice Handbook. If old buildings are being torn down and not replaced in the near future, stabilize the site using measures described in SC-40 Contaminated or Erodible Areas.

If a building is to be placed over an open area with a storm drainage system, make sure the storm inlets within the building are covered or removed, or the storm line is connected to the sanitary sewer. If because of the remodeling a new drainage system is to be installed or the existing system is to be modified, consider installing catch basins as they serve as effective "in-line" treatment devices. See Treatment Control Fact Sheet TC-20 Wet Pond/Basin in Section 5 of the New Development and Redevelopment Handbook regarding design criteria. Include in the catch basin a "turn-down" elbow or similar device to trap floatables.

## References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

# Parking/Storage Area Maintenance SC-43



## Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

## Targeted Constituents

| | |
|---|---|
| Sediment | ✓ |
| Nutrients | |
| Trash | ✓ |
| Metals | ✓ |
| Bacteria | |
| Oil and Grease | ✓ |
| Organics | ✓ |

## Description

Parking lots and storage areas can contribute a number of substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals that can enter receiving waters through stormwater runoff or non-stormwater discharges. The protocols in this fact sheet are intended to prevent or reduce the discharge of pollutants from parking/storage areas and include using good housekeeping practices, following appropriate cleaning BMPs, and training employees.

## Approach

The goal of this program is to ensure stormwater pollution prevention practices are considered when conducting activities on or around parking areas and storage areas to reduce potential for pollutant discharge to receiving waters. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

### *Pollution Prevention*

- Encourage alternative designs and maintenance strategies for impervious parking lots. (See New Development and Redevelopment BMP Handbook)
- Keep accurate maintenance logs to evaluate BMP implementation.

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# SC-43 Parking/Storage Area Maintenance

***Suggested Protocols***

*General*

- Keep the parking and storage areas clean and orderly. Remove debris in a timely fashion.
- Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices.
- Utilize sand filters or oleophilic collectors for oily waste in low quantities.
- Arrange rooftop drains to prevent drainage directly onto paved surfaces.
- Design lot to include semi-permeable hardscape.
- Discharge soapy water remaining in mop or wash buckets to the sanitary sewer through a sink, toilet, clean-out, or wash area with drain.

*Controlling Litter*

- Post "No Littering" signs and enforce anti-litter laws.
- Provide an adequate number of litter receptacles.
- Clean out and cover litter receptacles frequently to prevent spillage.
- Provide trash receptacles in parking lots to discourage litter.
- Routinely sweep, shovel, and dispose of litter in the trash.

*Surface Cleaning*

- Use dry cleaning methods (e.g., sweeping, vacuuming) to prevent the discharge of pollutants into the stormwater conveyance system if possible.
- Establish frequency of public parking lot sweeping based on usage and field observations of waste accumulation.
- Sweep all parking lots at least once before the onset of the wet season.
- Follow the procedures below if water is used to clean surfaces:
  - Block the storm drain or contain runoff.
  - Collect and pump wash water to the sanitary sewer or discharge to a pervious surface. Do not allow wash water to enter storm drains.
  - Dispose of parking lot sweeping debris and dirt at a landfill.
- Follow the procedures below when cleaning heavy oily deposits:
  - Clean oily spots with absorbent materials.
  - Use a screen or filter fabric over inlet, then wash surfaces.

- Do not allow discharges to the storm drain.
- Vacuum/pump discharges to a tank or discharge to sanitary sewer.
- Appropriately dispose of spilled materials and absorbents.

*Surface Repair*

- Preheat, transfer or load hot bituminous material away from storm drain inlets.
- Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting stormwater runoff.
- Cover and seal nearby storm drain inlets where applicable (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal.
- Use only as much water as necessary for dust control, to avoid runoff.
- Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose of collected material and absorbents properly.

*Inspection*

- Have designated personnel conduct inspections of parking facilities and stormwater conveyance systems associated with parking facilities on a regular basis.
- Inspect cleaning equipment/sweepers for leaks on a regular basis.

### *Training*

- Provide regular training to field employees and/or contractors regarding cleaning of paved areas and proper operation of equipment.
- Train employees and contractors in proper techniques for spill containment and cleanup.

### *Spill Response and Prevention*

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials where it will be readily accessible or at a central location.
- Clean up fluid spills immediately with absorbent rags or material.
- Dispose of spilled material and absorbents properly.

### *Other Considerations*

Limitations related to sweeping activities at large parking facilities may include high equipment costs, the need for sweeper operator training, and the inability of current sweeper technology to remove oil and grease.

# SC-43 Parking/Storage Area Maintenance

## Requirements

### *Costs*

Cleaning/sweeping costs can be quite large. Construction and maintenance of stormwater structural controls can be quite expensive as well.

### *Maintenance*

- Sweep parking lot regularly to minimize cleaning with water.
- Clean out oil/water/sand separators regularly, especially after heavy storms.
- Clean parking facilities regularly to prevent accumulated wastes and pollutants from being discharged into conveyance systems during rainy conditions.

## Supplemental Information

### *Further Detail of the BMP*

*Surface Repair*

Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting stormwater runoff. Where applicable, cover and seal nearby storm drain inlets (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal. Only use only as much water as is necessary for dust control to avoid runoff.

## References and Resources


California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

# Drainage System Maintenance SC-44



**Objectives**

- Cover
- Contain
- Educate
- Reduce/Minimize

## Description

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff and stormwater that may contain certain pollutants. The protocols in this fact sheet are intended to reduce pollutants reaching receiving waters through proper conveyance system operation and maintenance.

**Targeted Constituents**

| | |
|---|---|
| Sediment | ✓ |
| Nutrients | |
| Trash | ✓ |
| Metals | |
| Bacteria | ✓ |
| Oil and Grease | |
| Organics | |

## Approach

### *Pollution Prevention*

Maintain catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis to remove pollutants, reduce high pollutant concentrations during the first flush of storms, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.

### *Suggested Protocols*

*Catch Basins/Inlet Structures*

- Staff should regularly inspect facilities to ensure compliance with the following:
  - Immediate repair of any deterioration threatening structural integrity.
  - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
  - Stenciling of catch basins and inlets (see SC34 Waste Handling and Disposal).

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- Clean catch basins, storm drain inlets, and other conveyance structures before the wet season to remove sediments and debris accumulated during the summer.
- Conduct inspections more frequently during the wet season for problem areas where sediment or trash accumulates more often. Clean and repair as needed.
- Keep accurate logs of the number of catch basins cleaned.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes if necessary with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed. Do not dewater near a storm drain or stream.

*Storm Drain Conveyance System*

- Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect and pump flushed effluent to the sanitary sewer for treatment whenever possible.

*Pump Stations*

- Clean all storm drain pump stations prior to the wet season to remove silt and trash.
- Do not allow discharge to reach the storm drain system when cleaning a storm drain pump station or other facility.
- Conduct routine maintenance at each pump station.
- Inspect, clean, and repair as necessary all outlet structures prior to the wet season.

*Open Channel*

- Modify storm channel characteristics to improve channel hydraulics, increase pollutant removals, and enhance channel/creek aesthetic and habitat value.
- Conduct channel modification/improvement in accordance with existing laws. Any person, government agency, or public utility proposing an activity that will change the natural (emphasis added) state of any river, stream, or lake in California, must enter into a Steam or Lake Alteration Agreement with the Department of Fish and Game. The developer-applicant should also contact local governments (city, county, special districts), other state agencies (SWRCB, RWQCB, Department of Forestry, Department of Water Resources), and Federal Corps of Engineers and USFWS.

*Illicit Connections and Discharges*

- Look for evidence of illegal discharges or illicit connections during routine maintenance of conveyance system and drainage structures:
  - Is there evidence of spills such as paints, discoloring, etc?

- Are there any odors associated with the drainage system?
- Record locations of apparent illegal discharges/illicit connections?
- Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of upgradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
- Eliminate the discharge once the origin of flow is established.

- Stencil or demarcate storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

*Illegal Dumping*

- Inspect and clean up hot spots and other storm drainage areas regularly where illegal dumping and disposal occurs.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots
  - Types and quantities (in some cases) of wastes
  - Patterns in time of occurrence (time of day/night, month, or year)
  - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
  - Responsible parties
- Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

### *Training*

- Train crews in proper maintenance activities, including record keeping and disposal.
- Allow only properly trained individuals to handle hazardous materials/wastes.
- Have staff involved in detection and removal of illicit connections trained in the following:
  - OSHA-required Health and Safety Training (29 CFR 1910.120) plus annual refresher training (as needed).

- OSHA Confined Space Entry training (Cal-OSHA Confined Space, Title 8 and Federal OSHA 29 CFR 1910.146).

- Procedural training (field screening, sampling, smoke/dye testing, TV inspection).

***Spill Response and Prevention***

- Investigate all reports of spills, leaks, and/or illegal dumping promptly.
- Clean up all spills and leaks using "dry" methods (with absorbent materials and/or rags) or dig up, remove, and properly dispose of contaminated soil.
- Refer to fact sheet SC-11 Spill Prevention, Control, and Cleanup.

***Other Considerations (Limitations and Regulations)***

- Clean-up activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.
- Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, liquid/sediment disposal, and prohibition against disposal of flushed effluent to sanitary sewer in some areas.
- Regulations may include adoption of substantial penalties for illegal dumping and disposal.
- Local municipal codes may include sections prohibiting discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.

## Requirements

***Costs***

- An aggressive catch basin cleaning program could require a significant capital and O&M budget.
- The elimination of illegal dumping is dependent on the availability, convenience, and cost of alternative means of disposal. The primary cost is for staff time. Cost depends on how aggressively a program is implemented. Other cost considerations for an illegal dumping program include:

  - Purchase and installation of signs.

  - Rental of vehicle(s) to haul illegally-disposed items and material to landfills.

  - Rental of heavy equipment to remove larger items (e.g., car bodies) from channels.

  - Purchase of landfill space to dispose of illegally-dumped items and material.

- Methods used for illicit connection detection (smoke testing, dye testing, visual inspection, and flow monitoring) can be costly and time-consuming. Site-specific factors, such as the level of impervious area, the density and ages of buildings, and type of land use will determine the level of investigation necessary.

***Maintenance***

- Two-person teams may be required to clean catch basins with vactor trucks.
- Teams of at least two people plus administrative personnel are required to identify illicit discharges, depending on the complexity of the storm sewer system.
- Arrangements must be made for proper disposal of collected wastes.
- Technical staff are required to detect and investigate illegal dumping violations.

## Supplemental Information

***Further Detail of the BMP***

*Storm Drain Flushing*

Flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in storm drainage systems. Flushing may be designed to hydraulically convey accumulated material to strategic locations, such as an open channel, another point where flushing will be initiated, or the sanitary sewer and the treatment facilities, thus preventing resuspension and overflow of a portion of the solids during storm events. Flushing prevents "plug flow" discharges of concentrated pollutant loadings and sediments. Deposits can hinder the designed conveyance capacity of the storm drain system and potentially cause backwater conditions in severe cases of clogging.

Storm drain flushing usually takes place along segments of pipe with grades that are too flat to maintain adequate velocity to keep particles in suspension. An upstream manhole is selected to place an inflatable device that temporarily plugs the pipe. Further upstream, water is pumped into the line to create a flushing wave. When the upstream reach of pipe is sufficiently full to cause a flushing wave, the inflated device is rapidly deflated with the assistance of a vacuum pump, thereby releasing the backed up water and resulting in the cleaning of the storm drain segment.

To further reduce impacts of stormwater pollution, a second inflatable device placed well downstream may be used to recollect the water after the force of the flushing wave has dissipated. A pump may then be used to transfer the water and accumulated material to the sanitary sewer for treatment. In some cases, an interceptor structure may be more practical or required to recollect the flushed waters.

It has been found that cleansing efficiency of periodic flush waves is dependent upon flush volume, flush discharge rate, sewer slope, sewer length, sewer flow rate, sewer diameter, and population density. As a rule of thumb, the length of line to be flushed should not exceed 700 feet. At this maximum recommended length, the percent removal efficiency ranges between 65-75% for organics and 55-65% for dry weather grit/inorganic material. The percent removal efficiency drops rapidly beyond that. Water is commonly supplied by a water truck, but fire hydrants can also supply water. To make the best use of water, it is recommended that reclaimed water be used or that fire hydrant line flushing coincide with storm sewer flushing.

## References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

Ferguson, B.K. 1991. Urban Stream Reclamation, p. 324-322, Journal of Soil and Water Conservation.

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Storm Drain System Cleaning. On line:
http://www.epa.gov/npdes/menuofbmps/poll_16.htm

# Drain Insert MP-52

## General Description

Drain inserts are manufactured filters or fabric placed in a drop inlet to remove sediment and debris. There are a multitude of inserts of various shapes and configurations, typically falling into one of three different groups: socks, boxes, and trays. The sock consists of a fabric, usually constructed of polypropylene. The fabric may be attached to a frame or the grate of the inlet holds the sock. Socks are meant for vertical (drop) inlets. Boxes are constructed of plastic or wire mesh. Typically a polypropylene "bag" is placed in the wire mesh box. The bag takes the form of the box. Most box products are one box; that is, the setting area and filtration through media occur in the same box. Some products consist of one or more trays or mesh grates. The trays may hold different types of media. Filtration media vary by manufacturer. Types include polypropylene, porous polymer, treated cellulose, and activated carbon.

## Inspection/Maintenance Considerations

Washout problems increase with rain intensity. Susceptibility of accumulated sediments to be re-suspended at low flow rates, can be corrected with an energy dissipater between gate and treatment areas.

| Inspection Activities | Suggested Frequency |
|---|---|
| ■ Inspect for sediment buildup and proper functioning. | At the beginning of the wet season and after significant storms |
| ■ Verify that stormwater enters the unit and does not leak around the perimeter. | After construction. |
| **Maintenance Activities** | **Suggested Frequency** |
| ■ Remove sediment as needed. | At the beginning of the wet season and as necessary |

## Maintenance Concerns, Objectives, and Goals

■ Sediment Removal

## Targeted Constituents

- ✓ Sediment
- ✓ Nutrients
- ✓ Trash
- ✓ Metals
- Bacteria
- ✓ Oil and Grease
- ✓ Organics

***Removal Effectiveness***

See New Development and Redevelopment Handbook-Section 5.

# Efficient Irrigation SD-12



**Design Objectives**

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

## Description

Irrigation water provided to landscaped areas may result in excess irrigation water being conveyed into stormwater drainage systems.

## Approach

Project plan designs for development and redevelopment should include application methods of irrigation water that minimize runoff of excess irrigation water into the stormwater conveyance system.

## Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

## Design Considerations

### *Designing New Installations*

The following methods to reduce excessive irrigation runoff should be considered, and incorporated and implemented where determined applicable and feasible by the Permittee:

- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc.

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- Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). Consider design features such as:
  - Using mulches (such as wood chips or bar) in planter areas without ground cover to minimize sediment in runoff
  - Installing appropriate plant materials for the location, in accordance with amount of sunlight and climate, and use native plant materials where possible and/or as recommended by the landscape architect
  - Leaving a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible
  - Choosing plants that minimize or eliminate the use of fertilizer or pesticides to sustain growth
- Employ other comparable, equally effective methods to reduce irrigation water runoff.

### *Redeveloping Existing Installations*

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

## Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

# Storm Drain Signage SD-13




**Design Objectives**

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

## Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

## Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

## Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

## Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

### *Designing New Installations*

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include “NO DUMPING

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– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

### *Redeveloping Existing Installations*

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

## Additional Information

### *Maintenance Considerations*

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

### *Placement*

- Signage on top of curbs tends to weather and fade.

- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

## Supplemental Information

### *Examples*

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

## Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

# Maintenance Bays & Docks SD-31



**Design Objectives**

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

## Description

Several measures can be taken to prevent operations at maintenance bays and loading docks from contributing a variety of toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to the stormwater conveyance system.

## Approach

In designs for maintenance bays and loading docks, containment is encouraged. Preventative measures include overflow containment structures and dead-end sumps. However, in the case of loading docks from grocery stores and warehouse/distribution centers, engineered infiltration systems may be considered.

## Suitable Applications

Appropriate applications include commercial and industrial areas planned for development or redevelopment.

## Design Considerations

Design requirements for vehicle maintenance and repair are governed by Building and Fire Codes, and by current local agency ordinances, and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code requirements.

### *Designing New Installations*

Designs of maintenance bays should consider the following:

- Repair/maintenance bays and vehicle parts with fluids should be indoors; or designed to preclude urban run-on and runoff.
- Repair/maintenance floor areas should be paved with Portland cement concrete (or equivalent smooth impervious surface).

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- Repair/maintenance bays should be designed to capture all wash water leaks and spills. Provide impermeable berms, drop inlets, trench catch basins, or overflow containment structures around repair bays to prevent spilled materials and wash-down waters form entering the storm drain system. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.

- Other features may be comparable and equally effective.

The following designs of loading/unloading dock areas should be considered:

- Loading dock areas should be covered, or drainage should be designed to preclude urban run-on and runoff.

- Direct connections into storm drains from depressed loading docks (truck wells) are prohibited.

- Below-grade loading docks from grocery stores and warehouse/distribution centers of fresh food items should drain through water quality inlets, or to an engineered infiltration system, or an equally effective alternative. Pre-treatment may also be required.

- Other features may be comparable and equally effective.

### *Redeveloping Existing Installations*

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

## Additional Information

Stormwater and non-stormwater will accumulate in containment areas and sumps with impervious surfaces. Contaminated accumulated water must be disposed of in accordance with applicable laws and cannot be discharged directly to the storm drain or sanitary sewer system without the appropriate permit.

## Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

# Trash Storage Areas SD-32

## Description

Trash storage areas are areas where a trash receptacle (s) are located for use as a repository for solid wastes. Stormwater runoff from areas where trash is stored or disposed of can be polluted. In addition, loose trash and debris can be easily transported by water or wind into nearby storm drain inlets, channels, and/or creeks. Waste handling operations that may be sources of stormwater pollution include dumpsters, litter control, and waste piles.

## Approach

This fact sheet contains details on the specific measures required to prevent or reduce pollutants in stormwater runoff associated with trash storage and handling. Preventative measures including enclosures, containment structures, and impervious pavements to mitigate spills, should be used to reduce the likelihood of contamination.

**Design Objectives**

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

## Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

## Design Considerations

Design requirements for waste handling areas are governed by Building and Fire Codes, and by current local agency ordinances and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code and ordinance requirements. Hazardous waste should be handled in accordance with legal requirements established in Title 22, California Code of Regulation.

Wastes from commercial and industrial sites are typically hauled by either public or commercial carriers that may have design or access requirements for waste storage areas. The design criteria in this fact sheet are recommendations and are not intended to be in conflict with requirements established by the waste hauler. The waste hauler should be contacted prior to the design of your site trash collection areas. Conflicts or issues should be discussed with the local agency.

### *Designing New Installations*

Trash storage areas should be designed to consider the following structural or treatment control BMPs:

- Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This might include berming or grading the waste handling area to prevent run-on of stormwater.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash.

- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

### *Redeveloping Existing Installations*

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

## Additional Information

### *Maintenance Considerations*

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

## Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

# APPENDIX F

# Infiltration Feasibility

PARTNER
Engineering and Science, Inc.



# PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

**Kirkhill**
12021 and 12023 Woodruff Avenue
Downey, California 90241

Report Date: September 26, 2018
Partner Project No. 18-220634.1



Prepared for:

**Prologis, Inc.**
Pier 1, Bay 1
San Francisco, California 94111

# EXECUTIVE SUMMARY

Partner Engineering and Science, Inc. (Partner) has performed a Phase I Environmental Site Assessment (ESA) in general accordance with the scope of work and limitations of ASTM Standard Practice E1527-13, the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312) and as set forth by the Master Services Agreement between Prologis and Partner dated April 18, 2013 for the property located at 12021 and 12023 Woodruff Avenue in the City of Downey, Los Angeles County, California (the "subject property"). The Phase I Environmental Site Assessment is designed to provide Prologis, Inc. with an assessment concerning environmental conditions (limited to those issues identified in the report) as they exist at the subject property.

### Property Description

The subject property is located on the west side of Woodruff Avenue just north of Washburn Road within an industrial area of Los Angeles County. Please refer to the table below for further description of the subject property:

| ***Subject Property Data*** | |
|---|---|
| **Addresses:** | 12021 and 12023 Woodruff Avenue, Downey, California 90241 |
| **Additional Addresses:** | None Identified |
| **Historical Addresses:** | None Identified |
| **Property Use:** | Industrial (zone M-2, General Manufacturing) |
| **Land Acreage (Ac):** | 6.31 +/- Ac (per Assessor's map) |
| **Number of Buildings:** | One (five separate additions) |
| **Number of Floors:** | One |
| **Gross Building Area (SF):** | 193,451 SF (per Assessor's records) |
| **Dates of Construction:** | 1951 to 1971 |
| **Assessor's Parcel Number (APN):** | 6284-025-018 |
| **Type of Construction:** | Concrete Tilt-Up/Concrete Block/Concrete Slab |
| **Current Tenants:** | Kirkhill, manufacturer of custom rubber products |
| **Site Assessment Performed By:** | Margaret Thomas and Kathy Lehnus of Partner |
| **Site Assessment Conducted On:** | September 6, 2018 |

The subject property is currently occupied by Kirkhill, a manufacturer of custom rubber products who has occupied all or part of the subject building since initial construction in 1951. The subject property consists of one large single-story building that was constructed in piecemeal fashion starting in 1951 that has a central open courtyard. Onsite operations consist of the manufacture of unvolcanized rubber from raw materials through a series of processes starting with large-scale mixing of a variety of polymers, fillers, and various grades of petroleum-based process oils through rubber injection molding, rubber compression molding, sponge rubber molding, and mold fabrication. Product is then warehoused and shipped through several loading dock areas. There are up to 30 hydraulic rubber presses on three lines within the eastern side of the manufacturing area, and various mixing equipment toward the west side of the manufacturing area. The building also includes two laboratories for research and development (R&D),

newer interior 2-story mixing equipment with batch-off conveyors, special mixing rooms, a cold room, warehouse storage, and office space.

Solid raw materials such as custom polymers, talc, neoprene, carbon black, monomers, and zinc are stored in 55-gallon drums and larger totes up to 300 gallons at the subject property. Liquids used in the process include petroleum hydrocarbons as lubricating oils, waste lubricating oil, and the process oils (classified as a solvent). In addition to the current structure, the subject property is also improved with paved parking and driveways that extend around the building, front landscaping and exterior storage of raw materials, large dumpsters, empty containers, and other miscellaneous active and idle equipment.

According to available historical sources, the subject property was formerly open farm land from at least 1928 until it was developed in 1951. The property appeared to be occupied by row crops with no farm structures identified in aerial photographs; however, the property may have been developed in the late 19th Century with a farm home Occupants of the subject property have included Kirkhill Inc. (et. al, including Kirkhill Chemical) on the southern/manufacturing areas of the subject property, as well as tenants including Charcoal Masters International, Immanuel Industries Inc., Source One Staffing, Felchco Investment Group LLC, Cal Pipe Industries Inc., Cal Pipe Manufacturing Inc., Carnaval Access, Discount Advertising Xpress, Ikeep Inventing Corporation, Kollaborator Productions, Inc., Monster Sells, Hector Moran, Nomad Trading, Perimeter Defense Tech Inc., PTG International Inc., Standard industries and Kong Pet Toys on the warehouse/northern portions. Based on interviews with the site contact, it appears that the northern side of the subject property was leased at various times for warehouse and office space and light manufacturing operations.

The immediately surrounding properties consist primarily of industrial facilities including some office usage to the south and a restaurant to the southeast. The adjacent properties are zoned M-2 for industrial usage. None of the adjacent properties were identified to present an immediate environmental concern.

According to information reported by the State Water Resources Control Board GeoTracker website for a property located approximately 0.53-miles south of the subject property, at 9851 Imperial Highway, the depth of groundwater in the vicinity of the subject property is inferred to be approximately 33 to 53 feet below ground surface (bgs), with groundwater flow reported toward the southeast. In addition, during a 2013 Phase II ESA investigation conducted at the subject property, groundwater was encountered at 45 feet bgs (not sampled at the time).

### Findings

A *recognized environmental condition (REC)* refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The following was identified during the course of this assessment:

- All or part of the subject property building has been occupied by Kirkhill, a manufacturer of custom rubber products, since initial construction in 1951, utilizing raw materials including polymers, talc, neoprene, carbon black, monomers, and zinc as well as petroleum hydrocarbons as

lubricating oils, waste lubricating oil, and the process oils (classified as a solvent). Process oils are currently stored in three interior aboveground storage tanks (ASTs) (two 3,000-gallon ASTs and one 4,000-gallon AST) within the manufacturing area. In addition, the manufacturing area includes an internal hydraulic system comprised of a network of below-grade trenches and overhead piping that deliver a recirculated water and hydraulic oil mixture to the rubber presses and molding machines. Additionally, a central clarifier is present that is used primarily for boiler blowdown and cooling tower discharges. The clarifier previously received rinse water from a former tank wash out area that included acid and caustic tanks and rinse water tanks, which were used to clean molds, as the molds would get covered with rubber and need to be washed, which then discharged through the clarifier. The subject property operates a small electrical substation that includes one large pad-mounted transformer and additional electrical equipment situated within a chain link fence within the central courtyard, with apparent associated equipment on the interior adjacent wall. The transformer was not labeled indicating PCB content. The electrical equipment is not original and has been replaced at least once or twice. No staining or leakage was observed in the vicinity of the transformer equipment.

A prior Phase II ESA was conducted at the subject property by S&S Commercial Environmental Services, Inc., dated November 9, 2005, that identified high concentrations of diesel range and oil range petroleum in the soil located in the courtyard area to a maximum depth of 20 feet. The investigation included the advancement of 14 soil borings in the central courtyard area adjacent to the clarifier/discharge channel and cooling tower. Concentrations of diesel were reported as high as 54,100 milligrams per kilogram (mg/kg) at 5 feet bgs and 21,300 mg/kg at 20 feet bgs at the Boring SS-5 location. No volatile organic compounds (VOCs) or semi-VOCs were detected at SS-5 (the only boring analyzed for VOCs). Arsenic was detected at concentrations slightly above Cal-Hazardous levels, which was later determined to be an isolated area of 3 to 6 cubic yards of soluble arsenic above threshold limits that was left in place due to the presence of a capped surface. Additionally, the diesel and oil impacted soils were left in place and not remediated due to a reported clean earth interval between the last identified diesel impacted soil at 20 feet bgs and the maximum depth explored to 45 feet bgs. This clean earth interval was evaluated at only one boring location (SS-5 Alt); therefore, Partner notes that diesel contaminated soils may extend deeper than 20 feet bgs in this general area.

Due to the known release of petroleum in the courtyard area and the number of years the subject property has operated as a rubber manufacturing plant. including the presence of subsurface conduits/trenches that carry a petroleum based cutting fluid and a clarifier that was previously used for wash down of rubber residues, soil beneath the concrete slab may be impacted with petroleum-based cutting oils or other constituents. Of note, polychlorinated biphenyls (PCBs) may be associated with historical usage of hydraulic equipment and electrical transformers on the subject property.

A *controlled recognized environmental condition (CREC)* refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable

regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following was identified during the course of this assessment:

- Partner did not identify controlled recognized environmental conditions during the course of this assessment.

A *historical recognized environmental condition (HREC)* refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The following was identified during the course of this assessment:

- A total of four steel underground storage tanks (USTs) were formerly operated at the subject property, three of which contained diesel to fuel the two boilers associated with rubber molding (when the rubber products produced were volcanized), and one of which contained naphthene cutting oil. Three of the USTs (Tanks 1, 2, and 3) were located along the exterior south side of the subject property and were removed in 1989. A fourth UST (Tank 4 containing diesel) was abandoned in place in the central courtyard area in or around 1989. During the removal of Tanks 1 through 3, soil samples from beneath the tanks were tested and a release was detected; therefore, additional site investigation, excavation, and remediation work was performed in this area under the oversight of the Los Angeles County Department of Public Works (LACDPW). Subsequently, a No Further Action (NFA) letter was issued for Closure Permit Number 5999B by the Los Angeles County Department of Public Works, Waste Management Division (currently Environmental Programs Division) dated August 6, 1992, which pertains to the three exterior removed USTs. The abandoned in-place UST was assigned a separate Closure Permit Number of 6000B, which was not listed on the NFA letter. However, based on preliminary conversations with LACDPW staff, this appears to be an error in which Tank 4 should have been noted, as all four USTs appear to have been closed under this NFA letter.

An *environmental issue* refers to environmental concerns identified by Partner, which do not qualify as RECs; however, warrant further discussion. The following was identified during the course of this assessment:

- Partner noted exterior storage at the subject property including raw materials (covered) and unused hydraulic equipment, as well as approximately eight 55-gallon drums with no secondary containment, predominantly on the exterior west side of the building. Due to the presence of excessive storage covered with plastic sheeting (to protect raw material from sun exposure), this area was not fully accessed and evaluated by Partner. Partner noted that the observed drums were labelled as Non-Resource Conservation and Recovery Act (RCRA) hazardous waste solid, which is an oily debris, and Non-RCRA liquid waste oil. Minor oil staining was observed on the pavement under one of the drums that was covered with an absorbent material. According to site personnel, the waste is routinely collected by Express Oil Company, a third party vendor, on a regular basis. Based on the nature of the reported contents issuance of a Stormwater Pollution

Prevention Plan (SWPPP), and lack of violations noted, the exterior storage is not expected to represent a significant environmental concern;

- The subject property formerly operated printing machinery, which is no longer conducted. The printing area was located in the southeast portion of the building that was constructed in 1973. This area is used for general storage at this time. According to reported information in a prior Environmental Audit Report dated 1990, small amounts of oil-based ink and methyl ethyl ketone (MEK) (35 gallons/year) were used. No drains or other subsurface conduits are located in this area. Former printing operations are not expected to present a significant environmental concern;
- Due to the age of the subject property buildings, there is a potential that asbestos-containing material (ACM) and/or lead-based paint (LBP) are present. Overall, all suspect ACMs and painted surfaces were observed in fair to good condition and do not pose a health and safety concern to the occupants of the subject property at this time. The identified suspect ACMs would need to be sampled to confirm the presence or absence of asbestos prior to any renovation or demolition activities to prevent potential exposure to workers and/or building occupants. A prior survey conducted in 1990 (Environmental Audit report by Tetra Tech February 1990) identified asbestos in drywall next to the cooling tower and office ceiling tiles (1,360 SF of material). The amount of asbestos containing drywall was not reported.

**Conclusions, Opinions and Recommendations**

Partner has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of 12021 and 12023 Woodruff Avenue in the City of Downey, Los Angeles County, California (the "subject property"). Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This assessment has revealed evidence of a recognized environmental condition and environmental issues in connection with the subject property. Based on the conclusions of this assessment, Partner recommends the following:

- A limited subsurface investigation should be conducted in order to determine the presence or absence of soil and/or soil vapor contamination due to the current and historical use of the subject property;
- A Soil Management Plan (SMP) should be prepared to appropriately handle the known oil releases at the subject property and any unknown releases associated with the current and former industrial use;
- The NFA letter dated August 6, 1992, pertaining to the historical USTs at the subject property should be revised to clearly include Closure Permit Number 6000B for the abandoned in-place UST to avoid confusion in the future as to whether it was officially closed.
- An asbestos survey conducted in 1990 identified asbestos in the subject property building. It is not known if the survey was conducted for all equipment and building materials at the time;

therefore, an asbestos survey should be performed and known ACM should be abated or removed for safety purposes (or an Operations and Maintenance (O&M) Program should be implemented in order to safely manage the known and suspect ACMs located at the subject property).

was collected during Second Quarter 2018 groundwater monitoring activities at this property. In addition, during a 2013 Phase II ESA investigation conducted at the subject property by PCI Environmental Services (PIC), groundwater was encountered at 45 feet bgs in two soil borings at PIC-1 and PIC-2 (but not sampled).

### *2.4.3 Geology/Soils*

The subject property is located within the San Gabriel River flood plain. Underlying soil consists of Pleistocene alluvial sediments. PIC's 2013 Phase II Investigation reviewed herein determined that to an approximate depth of 50 feet below surface, soil consists of brown, fine grained sand and silt overlying grey, clayey silt. The lithology is consistent with alluvial deposition within the San Gabriel River Flood Plain.

Based on information obtained from the USDA Natural Resources Conservation Service Web Soil Survey online database, the subject property is mapped as Urban land-Hueneme, drained-San Emigdio complex, 0 to 2 percent slopes (#1000). The landform is described as alluvial fans and the parent material is described as discontinuous human-transported material over mixed alluvium derived from granite and/or sedimentary rock.

### *2.4.4 Flood Zone Information*

Partner performed a review of the Flood Insurance Rate Map, published by the Federal Emergency Management Agency (FEMA). According to Community Panel Number 06037C1840F dated September 26, 2008, the subject property is mapped as located in Zone X, an area of 0.2 percent annual chance flood hazard.

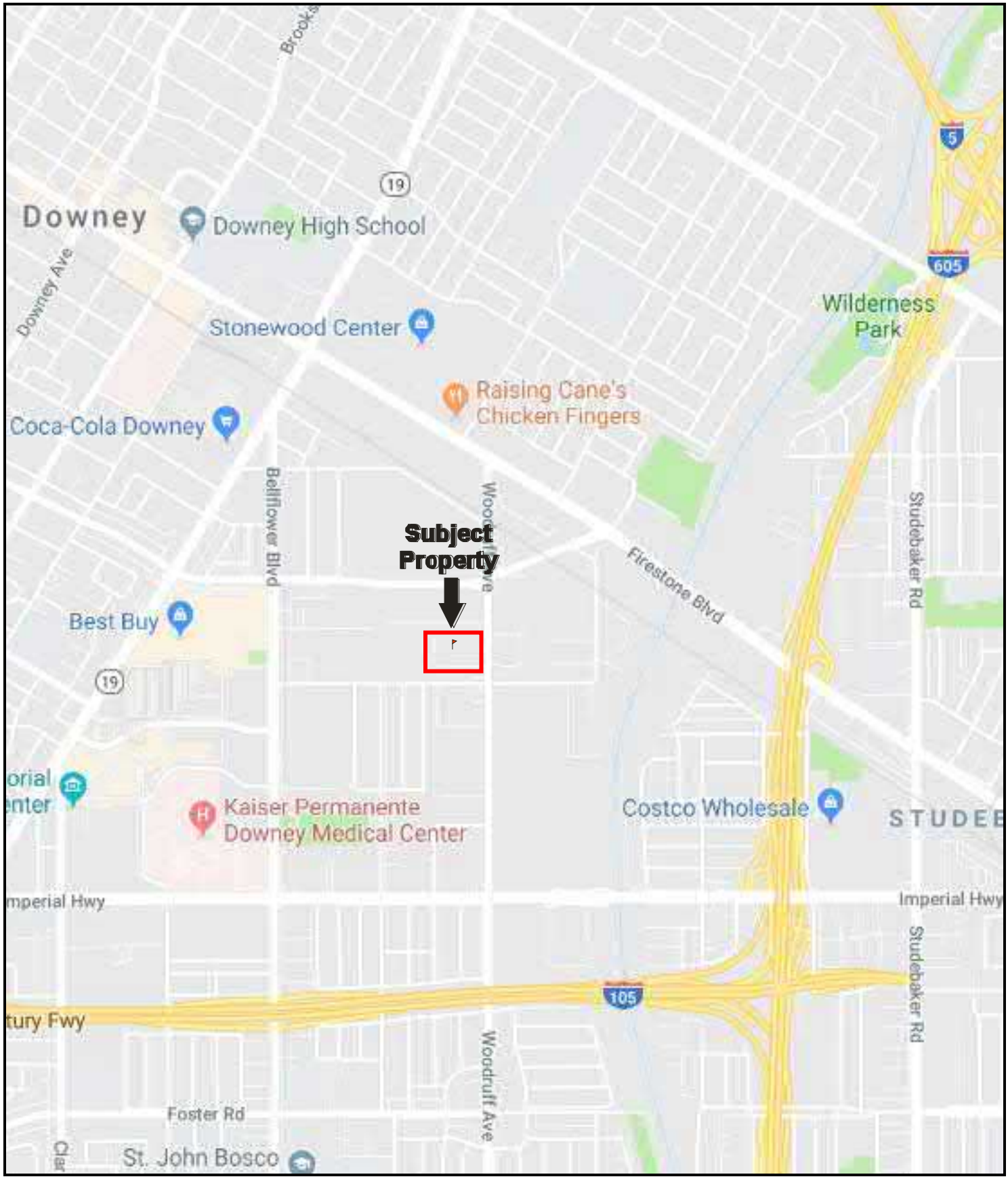
A copy of the reviewed flood map is included in Appendix B of this report.

# FIGURES

1 SITE LOCATION MAP

2 SITE PLAN

3 TOPOGRAPHIC MAP




N

Drawing Not To Scale

KEY:
Subject Property

**FIGURE 1: SITE LOCATION MAP**
**Project No. 18-220634.1**

PARTNER




**FIGURE 2: SITE PLAN**

**Project No. 18-220634.1**

PARTNER

# Appendix F-2

## Preliminary Hydraulics Study

# PRELIMINARY HYDROLOGY CALCULATIONS

FOR

**PROLOGIS DOWNEY**
**12021 WOODRUFF AVENUE**
DOWNEY, CA

PREPARED FOR

**12021 WOODRUFF LLC**
1800 WAZEE ST., SUITE 500
DENVER, CO 80202
P. (303) 567-5000
F. (303) 567-5903

JULY 19, 2019

JOB NO. 3700

PREPARED BY

THIENES ENGINEERING
14349 FIRESTONE BLVD.
LA MIRADA, CALIFORNIA 90638
P. (714) 521-4811
FAX (714) 521-4173

# PRELIMINARY HYDROLOGY CALCULATIONS

FOR

**PROLOGIS DOWNEY**
**12021 WOODRUFF AVENUE**

PREPARED UNDER
THE SUPERVISION OF

_____

REINHARD STENZEL DATE:
R.C.E. 56155
EXP. 12/31/2020

# INTRODUCTION

## A: PROJECT LOCATION

The project site is located at the northwest corner of Woodruff Avenue and Washburn Road in the city of Downey, CA. Please next page for vicinity map.

## B: STUDY PURPOSE

The purpose of this study is to determine 50-year peak flow rates for existing and proposed conditions from the project site.

## C: PROJECT STAFF:

Thienes Engineering staff involved in this study include:

Reinhard Stenzel
Matthew Cruz




Last Update:01/11/2019
O:\3500-3599\3584\3584VicMap.dwg

Thienes Engineering, Inc.
CIVIL ENGINEERING • LAND SURVEYING
14349 FIRESTONE BOULEVARD
LA MIRADA, CALIFORNIA 90638
PH.(714)521-4811 FAX(714)521-4173

# VICINITY MAP

FOR

## 12021 WOODRUFF AVENUE, DOWNEY CA

NTS

# DISCUSSION

The project site encompasses approximately 6.30 acres. Proposed improvements to the site include one industrial warehouse type building of 43,960 square feet. There will be two separate truck yards on both the north and south side of the building. Vehicle parking lots will be located on the east side of the building. Trailer stalls will be located on the northerly and southerly part of the site. Landscaping will be located along the easterly property line fronting Woodruff Avenue and throughout the easterly vehicle parking lot.

## County Hydrology

The project site is part of County subarea 2A and drains to the County maintained Woodruff Avenue Drain per as built drawing No. 494-D 2.1–2.8 (See County correspondence in referenced materials). Per the correspondence, the allocated peak flow rate for the site is 1.25 cfs/acre.

See Appendix "A" for county correspondence and as built storm drain plans.

## Existing Condition

The project site has an existing one story masonry and metal building of approximately 159,335 square feet. Vehicle parking is located along the perimeter of the site. A drive aisle wraps around the existing building.

Runoff from the majority of the site (Subarea 1A) drains southwesterly via valley gutter. The valley gutter jogs the northerly and westerly property line. Per existing topography, given the location of the roof drains along the building perimeter, most if not all of the roof runoff will drain to this valley gutter. Flows will be conveyed from the site through the southerly offsite property and eventually discharge to Washburn Road via parkway culvert. The 50-year peak flow rate is approximately 13.6 cfs.

Runoff from the vehicle parking lot and the landscaping fronting (Subarea 2B) Woodruff Avenue will sheet flow toward the street. Some flows will drain via parkway culvert located at the southeast portion of the site. The 50-year peak flow rate draining directly to Woodruff Avenue is approximately 2.8 cfs.

See Appendix "B" for existing condition hydrology calculations and Appendix "D" for existing condition hydrology map.

Proposed Condition

Runoff from the northerly half of the building and the northerly truck yard (Subarea 1A) drains to catch basins in the truck yard. The 50-year peak flow rate is approximately 9.3 cfs.

Runoff from the easterly vehicle parking lot (Subareas 2A and 3A) drain to catch basins within the parking lot. The 50-year peak flow rate for subareas 2A and 3A is approximately 0.5 cfs and 0.7 cfs, respectively.

Runoff from the southerly half of the building and the southerly truck yard (Subarea 4A) drains to catch basin in the southerly truck yard. The 50-year peak flow rate for this area is approximately 9.0 cfs. All flows from subareas 1A, 2A, 3A, and 4A are conveyed southeasterly of the site via onsite storm drain. Flows from the site will discharge to the 36" storm drain in Woodruff Avenue, located east of the site.

Runoff from portions of both driveways and landscaping fronting Woodruff will sheet flow to the public street.

See Appendix "B" for proposed condition hydrology calculations and Appendix "D" for proposed condition hydrology map.

Detention Analysis

As previously mentioned, runoff from the site is limited to 1.25 cfs/acre. Discharge from the site is limited to 7.9 cfs (6.30 acres x 1.25 cfs/acre). Both the northerly and southerly truck yard will be used to detain the peak flow rate. Runoff from the site is limited due to the shallow hydraulic grade line at the proposed connection to the existing 36" storm drain in Woodruff Avenue.

Hydraulics analysis of the proposed onsite storm drain was used to determine discharge from the site. Flows from the northerly truck yard will be limited to 1.8 cfs and flows from the southerly truck yard will be limited to 1.8 cfs. Flows from the easterly vehicle parking lot will drain from the site un-detained (0.5 cfs + 0.7 cfs = 1.2 cfs total). Flows from the driveway and landscape fronting Woodruff Avenue will drain from the site un-detained (0.9 cfs).

Hydrograph volumes for each truck yard was determined from the Hydro-Calc Excel spreadsheet. Cumulative volumes are shown up to the allowable peak flow rate before and after the peak occur. The difference in the volume before and after the peak (along with the volume of the allowable peak flow rate) is the volume to be detained in the truck yards. Max ponding in the northerly truck yard (Subarea 1A) is approximately 0.8', detaining 3,897 cf. Max ponding in the southerly truck yard (Subarea 4A) is approximately 0.8', detaining 3,618 cf.

During the 50-year storm event, discharge to the site is limited to 5.7 cfs (1.8 + 1.8 + 0.5 +0.7 + 0.9 cfs). This is less than the allowed rate of 7.9 cfs, therefore downstream facilities will not be negatively impacted by the development of this site.

See Appendix "C" for detention analysis and Appendix "D" for hydraulics calculations.

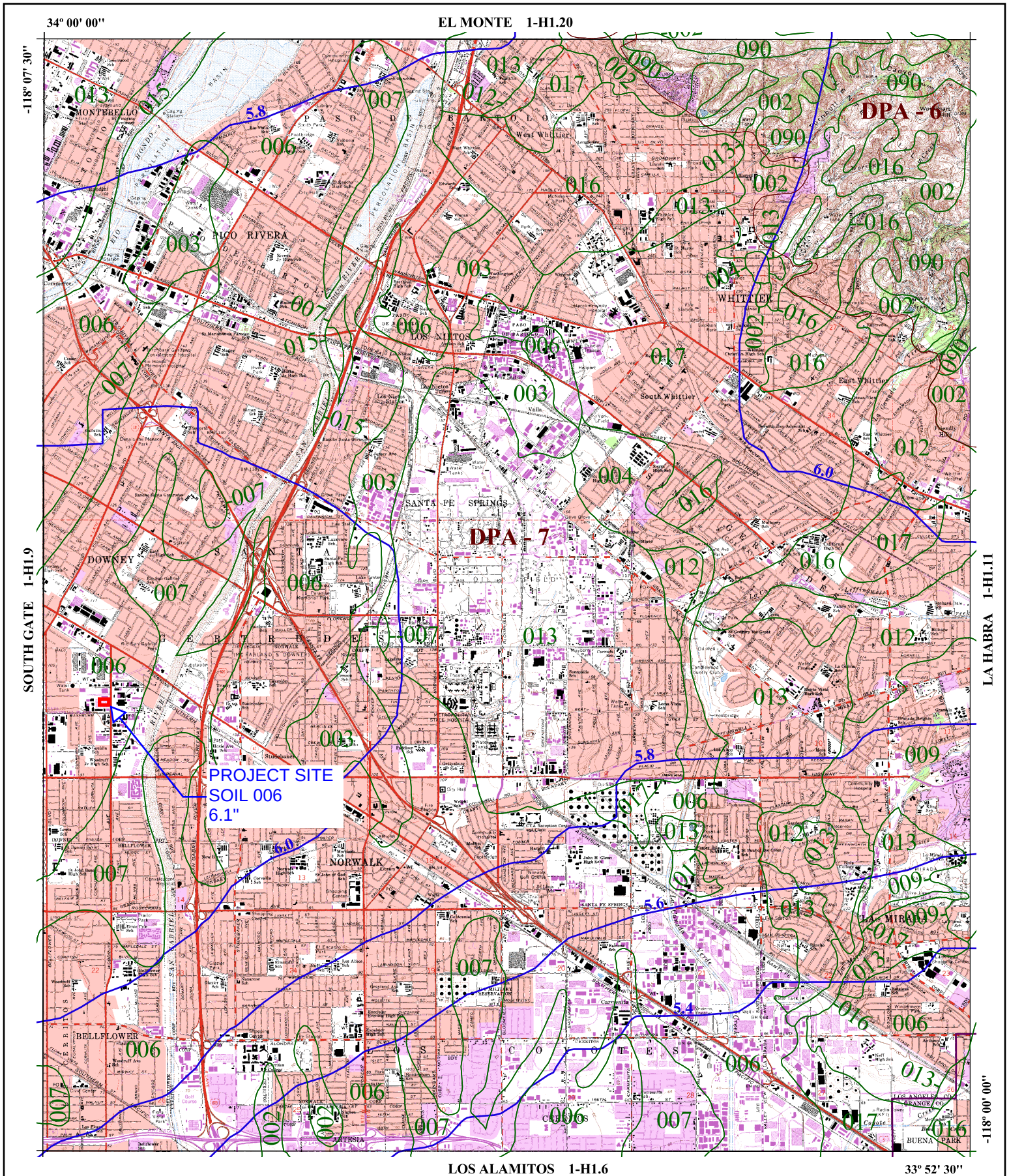
Methodology

Hydrology calculations were calculated using Los Angeles County Hydro-Calc spreadsheet. Detention calculations were calculated using Los Angeles County Hydro-Calc spreadsheet. Hydraulics calculations were calculated using WSPG software. The site is composed of soil type "6" and rainfall zone 6.1" per the 1991 Addendum to Hydrology Manual. (see referenced material in Appendix "A").

| APPENDIX | DESCRIPTION |
| --- | --- |
| A | REFERENCE MATERIALS |
| B | HYDROLOGY CALCULATIONS |
| C | DETENTION ANALYSIS |
| D | HYDRAULICS ANALYSIS |
| E | HYDROLOGY MAP |

# APPENDIX A

# REFERENCE MATERIALS


34° 00' 00"
EL MONTE 1-H1.20
-118° 07' 30"
SOUTH GATE 1-H1.9
LA HABRA 1-H1.11
-118° 00' 00"
LOS ALAMITOS 1-H1.6
33° 52' 30"
DPA - 6
DPA - 7
PROJECT SITE
SOIL 006
6.1"
MONTEBELLO
PICO RIVERA
WHITTIER
LOS NIETOS
SANTA FE SPRINGS
DOWNEY
NORWALK
BELLFLOWER
ARTESIA
West Whittier
East Whittier
South Whittier
BUENA PARK
016
SOIL CLASSIFICATION AREA
7.2
INCHES OF RAINFALL
DPA - 6
DEBRIS POTENTIAL AREA
N
W
E
S
1 0 1 2 Miles
25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714
W H I T T I E R
50-YEAR 24-HOUR ISOHYET
1-H1.10
LOS ANGELES COUNTY
PUBLIC WORKS
Public Service That Works

Office Use Only
☐ Sent Initials: _____
☐ Fax ☐ Email ☐ Other: _____
Date: _____ Time: _____

# LOS ANGELES COUNTY
# DEPARTMENT OF PUBLIC WORKS
## DESIGN DIVISION – HYDRAULIC ANALYSIS UNIT

## INFORMATION REQUEST SUMMARY

**INFORMATION REQUESTED BY**

*Requester's Name: James Wickenhaeuser
Company: Thienes Engineering, Inc
*Phone Number: 714-521-4811 Fax Number: 714-521-4173
*Email: jamesw@ThienesEng.com

Method of Contact: ☐ Walk-in ☐ Phone ☐ Fax ☒ Email ☐ Prelim. Mtg. Date: 12/6/2018

Intended Use: Research

Proposed Project Type: Industrial Acreage Involved: _____

*Will information be used in any litigation? ☐ YES ☒ NO
Case Info. Name: _____ No: _____ Location: _____

**INFORMATION REQUESTED** (Attach Assessor Map)

LACFCD Facility: Name: Woodruff Avenue Storm Drain
Unit: _____ Line: _____ Station: _____
City: Downey
*Street/Cross-street: Woodruff Ave and Washburn Rd
*Thomas Guide: Page: 706 Grid: C7 ☒ Site Map/Plans Submitted
Info. Requested:
- Hydrology Map
- Allowable 'Q'
- Hydraulic calcs

***Required Information. See Page 2 of 2 for Instructions.**

BELOW SECTION TO BE COMPLETED BY THE HYDRAULIC ANALYSIS UNIT

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS DESIGN DIVISION Hydraulic Analysis Unit RECORD DOCUMENT Issued By: GKA Date: 12/17/2018 Public Service That Works

**INFORMATION PROVIDED:**
Hydrology Data, As Built Drawings, Drainage Map.

**REFERENCES SEARCHED:**
Woodruff Avenue Drain Files and As Built Drawing No. 494-D 2.1-2.8

**COMMENTS, ETC:**
1- Sub Area No. "2A" Allowable Discharge Flow Q=1.25CFS/Acre.
2- See Woodruff Avenue Drain As Built Drawings to Obtain Hydraulic Grade Line.

**INFORMATION PROVIDED BY:** George K Aintablian Date: 12/17/2018

**INFORMATION REVIEWED BY:** Date:

Print Save a Copy

6284 | 25

SCALE 1" = 100'

1996

3266—3274

3274—3266

24

N. Line of S. ½ of that part N. of a line parallel with & dist. N. at R/A 175 ft. from E. & W. ℄ of Sec. 10, T. 3S., R. 12 W. and S. of S.P.R.R. R/W

632.27

S. Line of O.R. 46339-308

310.72

762.55

162.85

18.75

50

36

100

AVE.

10-7-57
3-24-58
4-1-58
4-7-58
1-28-60
12-22-60
4-2-62
5-28-64
6-23-64
2-1-65
660728
690819604
7108164I2
730409404
830418361
871102-88
95111507004001-27

21
0.64± Ac.

25
29,188 ±
3

179.18

179.31

162.83

18
6.92± Ac.
0.61± "(St)
6.31 ± Ac.

4.20± Ac.
0.21± "(St)
3.99 ± Ac.

800

22
0.49± Ac.

24
26,209 ±
2

132.53

132.53

160

161.86

396.15

E. ln. Sec. 10

27

POR. S.E. ¼, N.E. ¼, SEC. 10

POR. S.E. ¼, N.E. ¼, SEC. 10

50.50 55.34 57

23

32,879 ±

636.27

380

115

141.27

50

W. Line of SE. ¼ of NE. ¼ of Sec. 10, T. 3S., R. 12 W.

414.77

175

20
1.02± Ac.

272

203

201

9
1.53 ± Ac.
0.26 ± "(St)
1.27 ± Ac.

12

14
20340 ±

175

128

WOODRUFF

100

3266

3274

162.55

162.79

380

115

124.27

191.27

31072 East - West ℄ of Sec. 10, T. 3S., R. 12W.

*4431 1-13-58

30 60 30 30 60 30 55 25 55 30 25

WASHBURN

RD.

East-West ℄ of Sec 11, T. 3S., R. 12W.

DUNROBIN AVE.

EASTBROOK AVE.

CORNUTA AVE.

BK. 6283

3274

3266

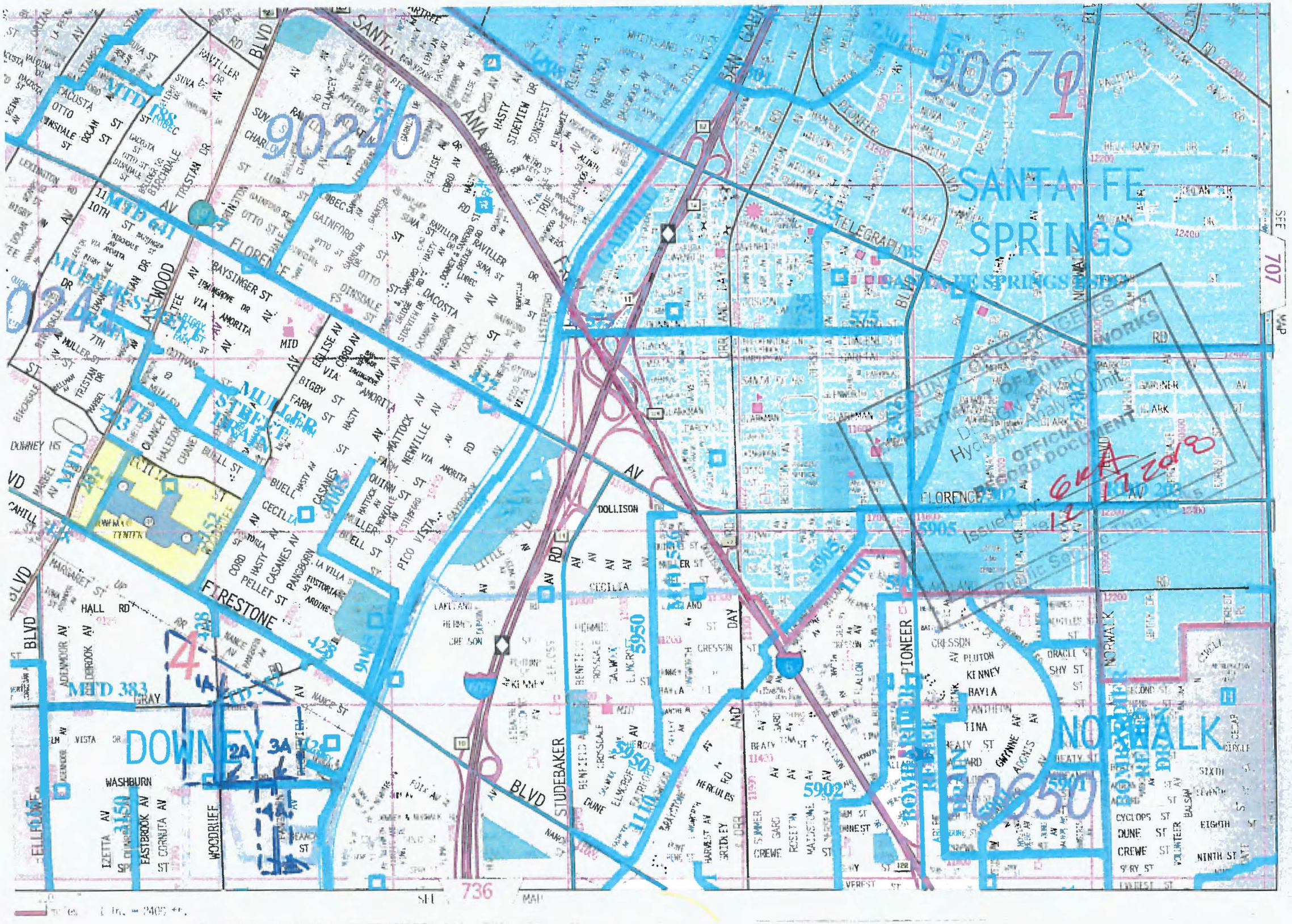
CODE
3266
3274

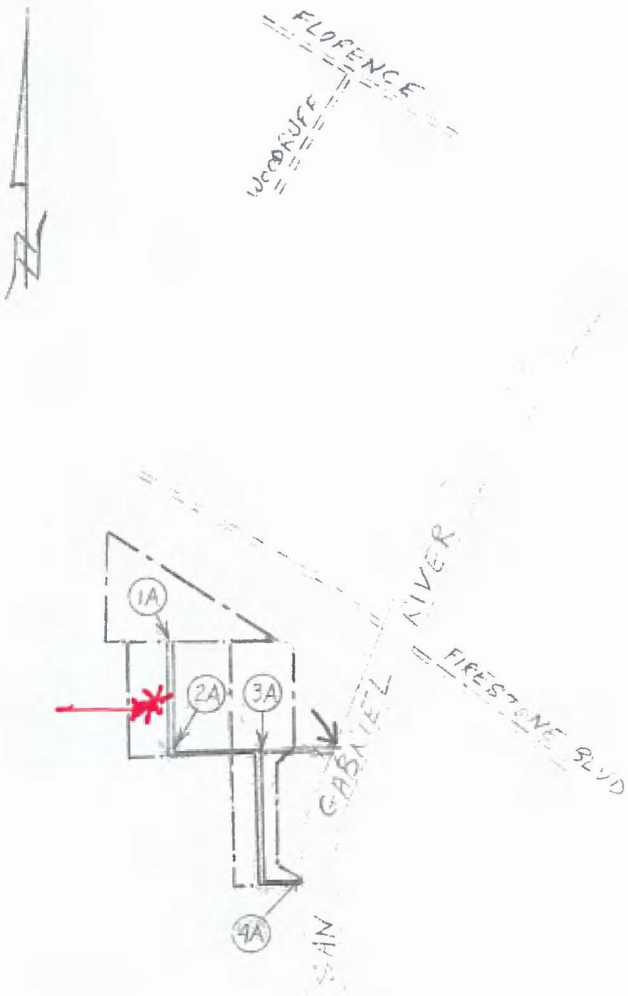
# RANCHO SANTA GERTRUDES
SECTIONS, TOWNSHIP AND RANGE
AS PER MISC. RECORDS BK. 32 P. 18
M.R. 32-18

# PARCEL MAP
P.M. 269-27-28

FOR PREV. ASSM'T. SEE:
6284 - 25

ASSESSOR'S MAP
COUNTY OF LOS ANGELES, CALIF.


90240
90670
SANTA FE SPRINGS
DOWNEY
NORWALK
MTD 383
MTD 433
MTD 203
MTD 433
MULLER STREET TRAP
FIRESTONE BLVD
FLORENCE AV
STUDEBAKER BLVD
ALEXWOOD
TELEGRAPH RD
PIONEER BLVD
BOMBARDIER
SANTA FE SPRINGS SPEC
SANTA FE SPRINGS CITY YARD
SUNKIST GROWERS
DEPARTMENT OF PUBLIC WORKS
OFFICIAL RECORD DOCUMENT
Issued: 6-4-12
Public Service
Final Map
SEE MAP 707
SEE MAP 736
0245
0650
5905
5902
5950
5950
5950




| REACH | Q(cfs) |
|---|---|
| 1A-2A | 25 |
| 2A-3A | 40 |
| 3A-4A | 65 |
| 4A-S.G. River | 80 |

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
DESIGN DIVISION
Hydraulic Analysis Unit
OFFICIAL RECORD DOCUMENT
Issued By: GKA
Date: 12/17/2018
Public Service That Works




WHITTIER QUAD

1000 0 1000 2000 3000

**LEGEND**

- WATERSHED BOUNDARY
- PROJECT DRAIN
- EXISTING DRAIN
- SUBAREA AND COLLECTION POINT
- PROBABLE FUTURE DRAIN
- STREET

| | |
|---|---|
| PREPARED K.J.K | LOS ANGELES COUNTY FLOOD CONTROL DISTRICT |
| DATE 8-20-73 | WOODRUFF AVE DRAIN |
| SCALE 1"=2000' | 10-YR FREQUENCY Q's |

## GENERAL NOTES

1. NUMBERS IN CIRCLES INDICATE ITEMS UNDER WHICH PAYMENT WILL BE MADE.
2. STATIONS SHOWN ON DRAWINGS ARE ALONG CENTER LINE OF CONDUIT OR ON A LINE NORMAL TO CENTER LINE OF CONDUIT.
3. ELEVATIONS SHOWN ARE IN FEET ABOVE THE U.S.G.S. MEAN SEA LEVEL DATUM, BASED ON LOS ANGELES COUNTY ENGINEER, 1962 ADJUSTMENT.
4. STATIONS AND INVERT ELEVATIONS OF PIPE INLETS SHOWN ON THE PROFILES ARE AT THE INSIDE FACE OF THE CONDUIT, UNLESS OTHERWISE SHOWN.
5. PIPE CONNECTIONS TO STORM DRAIN SHALL CONFORM TO STANDARD DRAWING 2-D 193, UNLESS OTHERWISE SHOWN.
6. ALL PIPE IN OPEN TRENCH SHALL BE BEDDED ACCORDING TO STANDARD DRAWING 2-D 177, CASE III, UNLESS OTHERWISE SHOWN. 'W' VALUES SHALL BE AS SPECIFIED ON STANDARD DRAWING 2-D 177 FOR CASE III BEDDING, NOTES 3(a), 3(b), AND 3(c). IF THE "W" VALUE AT THE TOP OF THE PIPE IS EXCEEDED, THE BEDDING SHALL BE MODIFIED, AND/OR PIPE OF ADDITIONAL STRENGTH SHALL BE APPROVED. THE PROPOSED MODIFICATION SHALL BE APPROVED BY THE DISTRICT.
7. CONCRETE BACKFILL SHALL BE PROVIDED AROUND PIPE 21 INCHES IN DIAMETER OR LESS WHERE THE COVER IS EQUAL TO OR LESS THAN 2'-0", AROUND PIPE GREATER THAN 21 INCHES IN DIAMETER BUT LESS THAN 39 INCHES WHERE THE COVER IS LESS THAN 1'-3", AND FOR PIPE 39 INCHES OR GREATER WHERE THE COVER IS LESS THAN 1'-0". THE CONCRETE BACKFILL SHALL BE AS SPECIFIED ON STANDARD DRAWING NO. 2-D 177, NOTE 3.
8. ASBESTOS CEMENT PIPE MAY BE USED IN LIEU OF REINFORCED CONCRETE PIPE 42 INCHES OR LESS IN DIAMETER.
9. THE REQUIRED D-LOAD FOR THE ASBESTOS CEMENT PIPE SHALL BE 1.5 TIMES THAT SPECIFIED ON THE PLANS FOR THE REINFORCED CONCRETE PIPE.
10. EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
11. ALL RESURFACING, CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS, AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED SHALL BE CONSTRUCTED AT THE SAME ELEVATION AND LOCATION AS THE EXISTING IMPROVEMENTS, UNLESS OTHERWISE NOTED.
12. STREET RESURFACING PLAN IS SHOWN ON SHEET 7.
13. UTILITIES DESIGNATED BY THE SYMBOL "#" WILL BE ABANDONED IN PLACE AND THE OWNER WILL INSTALL A NEW SECTION OF THE AFFECTED UTILITY AT A LOCATION IN CLOSE PROXIMITY TO, BUT WHICH DOES NOT PHYSICALLY INTERFERE WITH, THE PROPOSED STORM DRAIN CONDUIT AND APPURTENANT STRUCTURES.
14. UTILITIES DESIGNATED BY THE SYMBOL ✝ WILL BE REMOVED BY THE OWNER AND THE OWNER WILL REINSTALL A NEW SECTION OF THE AFFECTED UTILITY AT A LOCATION IN CLOSE PROXIMITY TO, BUT WHICH DOES NOT PHYSICALLY INTERFERE WITH, THE PROPOSED CONDUIT AND APPURTENANT STRUCTURES.
15. SANITARY SEWER HOUSE CONNECTION RECONSTRUCTION ON RECONNECTION SHALL BE IN ACCORDANCE WITH STANDARD DRAWING 2-D 250, UNLESS OTHERWISE SHOWN.
16. WHEN INDICATED ON THE DRAWINGS, SANITARY SEWERS AND HOUSE CONNECTIONS SHALL BE ENCASED OR BLANKETED IN ACCORDANCE WITH STANDARD DRAWING 2-D 251.
17. "Vi" IS THE DEPTH OF INLET OF CATCH BASINS IN SERIES MEASURED FROM TOP OF CURB TO INVERT OF CONNECTOR PIPE.
18. LOCATIONS SHOWN ON THE PLANS FOR EXISTING SANITARY SEWER HOUSE CONNECTIONS ARE APPROXIMATE ONLY.
19. TIES FOR CATCH BASINS, AS SHOWN ON THE DRAWINGS ARE FROM CURB RETURN TO CENTER LINE OF CATCH BASIN, UNLESS OTHERWISE SHOWN.
20. REFER TO SHEET 7 FOR TYPICAL CATCH BASIN CONNECTOR PIPE PROFILE.
21. LOCATIONS OF CATCH BASIN CONNECTOR PIPE JUNCTIONS WITH CATCH BASINS AS SHOWN ON THE DRAWINGS ARE SCHEMATIC. IT IS INTENDED THAT SUCH JUNCTIONS BE LOCATED AT THE DOWNSTREAM ENDS OF THE CATCH BASINS, UNLESS OTHERWISE SHOWN. IN ALL CASES, THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD TO MEET FIELD CONDITIONS.
22. MONOLITHIC CATCH BASIN CONNECTIONS SHALL BE CONSTRUCTED, WHERE APPLICABLE, PER STANDARD DRAWING 2-D 224.
23. STRUCTURAL NOTES WILL BE FOUND ON THE APPLICABLE STRUCTURAL SHEETS.
24. SOIL TEST BORINGS FOR THIS PROJECT WERE MADE ON MAY 16, MAY 17, AND AUGUST 2, 1974.

## ABBREVIATIONS

| | |
|---|---|
| A.C. | ASPHALITIC CONCRETE |
| B.C.R. | BEGINNING OF CURB RETURN |
| C.A.B. | CRUSHED AGGREGATE BASE |
| F.H. | FIRE HYDRANT |
| G.M. | GAS METER |
| G.T.M. | GENERAL TELEPHONE |
| G.W. | GUY WIRE |
| H.C. | HOUSE CONNECTION |
| L.P. | LIGHT POLE |
| Mac. | MACADAM |
| P.P. | POWER POLE |
| S.S. | SANITARY SEWER |
| S.H. | SPRINKLER HEAD |
| S.L. | STREET LIGHT |
| T.P.P. | TELEPHONE POWER POLE |
| T.S. | TRAFFIC SIGNAL |
| V.C.P. | VITRIFIED CLAY PIPE |
| W.M. | WATER METER |
| W.V. | WATER VALVE |

## INDEX TO STANDARD DRAWINGS

| DWG. NO. | DESCRIPTION |
|---|---|
| | L.A.C.F.C.D. |
| 2-D 88 | LOCAL DEPRESSION NO. 2 |
| 2-D 96 | STANDARD DROP STEP |
| 2-D 104 | MANHOLE NO. 3 |
| 2-D 107 | CONCRETE RINGS, REDUCER AND PIPE FOR MANHOLE SHAFT |
| 2-D 112 | JUNCTION STRUCTURE NO. 2 |
| 2-D 156 | MANHOLE FRAME AND COVER FOR CATCH BASINS |
| 2-D 157 | CATCH BASIN REINFORCEMENT FOR ROUND MANHOLES |
| 2-D 160 | CATCH BASIN NO. 1 |
| 2-D 163 | CATCH BASIN NO. 3 |
| 2-D 171 | STANDARD A615 REINFORCING BARS |
| 2-D 172 | CATCH BASIN REINFORCEMENT |
| 2-D 175 | REMOVABLE PROTECTION BAR FOR CATCH BASINS |
| 2-D 177 | PIPE BEDDING IN TRENCHES |
| 2-D 184 | MANHOLE NO. 2 |
| 2-D 189 | JUNCTION STRUCTURE NO. 1 |
| 2-D 193 | JUNCTION STRUCTURE NO. 4 |
| ~~2-D 213 1 TO 4~~ | ~~BULLETIN TABLES FOR DESIGN OF REINFORCED CONCRETE PIPE~~ |
| 2-D 224 | CONNECTION TO CATCH BASINS FOR PIPES 12 INCHES THROUGH 72 INCHES |
| 2-D 232 | DETAIL OF CATCH BASIN OPENING |
| 2-D 235 | TRANSITION STRUCTURE NO. 1 |
| 2-D 250 | REMODELING OF SANITARY SEWER HOUSE CONNECTIONS |
| 2-D 251 | PROTECTION FOR MAINLINE AND HOUSE CONNECTION SEWER |
| 2-D 264 | ADJUSTABLE PROTECTION BAR STIRRUP |
| 2-D 393 | CONCRETE COLLAR FOR PIPES 12 INCHES THROUGH 66 INCHES |
| 2-D 400 | SAMPLE SHEET FOR USE AS A GUIDE IN PREPARING CALCULATIONS FOR SHORING OF EXCAVATIONS |
| 2-D 413 | UNIFIED SOIL CLASSIFICATION SYSTEM |
| 2-D 415 | LOCAL DEPRESSION NO. 4 |
| 2-D 461 | MODIFICATIONS FOR SIDE OPENING CATCH BASINS |
| 2-D 466 | CRITERIA FOR THE DESIGN OF SHORING FOR EXCAVATIONS |
| 2-D 471 | CATCH BASIN NO. 9 |
| 2-D 472 | STANDARD 24 INCH MANHOLE FRAME AND COVER |
| ~~2-D 478~~ | ~~PORTABLE SECURITY FENCE FOR OPEN TRENCHES~~ |

### CITY OF DOWNEY

| | |
|---|---|
| 1-S | STANDARD MANHOLE |
| 4-ST | STANDARD TEE SUPPORT |
| 4-SY | STANDARD WYE SUPPORT |
| 7-S | STANDARD MANHOLE FRAME & COVER |

### COUNTY ENGINEER

| | |
|---|---|
| S-2 | MINIMUM PUBLIC SAFETY REQUIREMENTS |
| S-13 | BREAKING INTO EXISTING BRICK OR PRECAST CONCRETE MANHOLE |
| S-21 | BEDDING FOR SEWER PIPE |
| S-33 | ALLOWABLE TRENCH WIDTHS |

## UTILITIES

GAS LINES: SOUTHERN CALIFORNIA GAS COMPANY

GASOLINE LINES: MOBIL OIL COMPANY

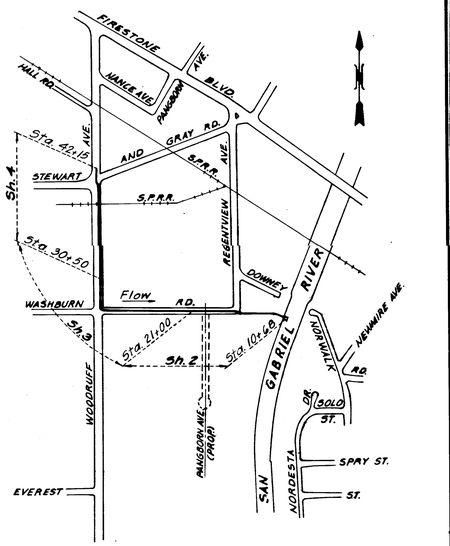
*POWER LINES: SOUTHERN CALIFORNIA EDISON COMPANY*

SANITARY SEWER LINES: CITY OF DOWNEY, LOS ANGELES COUNTY SANITATION DISTRICTS

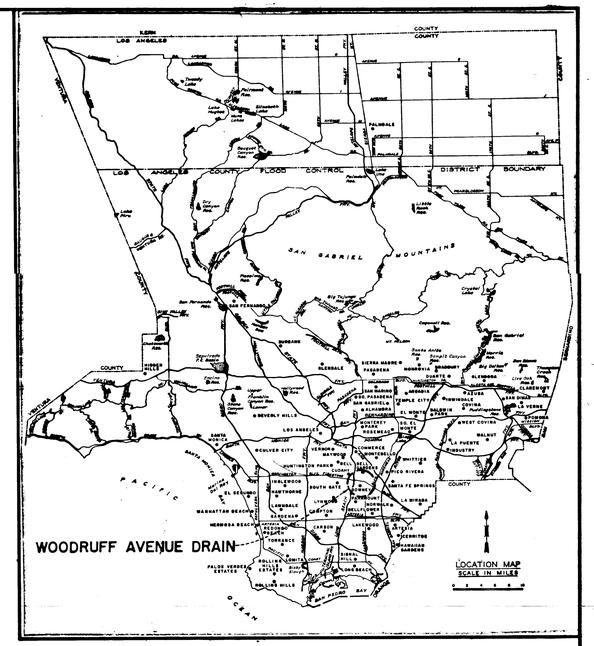
TELEPHONE LINES: GENERAL TELEPHONE COMPANY

TRAFFIC SIGNAL CONDUITS: CITY OF DOWNEY

WATER LINES: DOWNEY WATER COMPANY, METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, PARK WATER COMPANY




GENERAL PLAN
SCALE: 1" = 600'
250 0 500 1000




## BENCH MARKS

B.M. NO. 200 23007 — ELEV. 104.54

WOODRUFF AVE. AND STEWART AND GRAY RD., ON W. TRAFFIC ISLAND, APPROX. 35 FT. W OF C/L WOODRUFF AVE. AND APPROX. 50 FT. S OF STEWART AND GREY RD., A STD. F.C. DISK STAMPED BM WASH-7, 1973

B.M. NO. 200 23001 — ELEV. 103.90

SAN GABRIEL RIVER, ALONG THE NW'LY SIDE, APPROX. 500 FT. DOWNSTREAM OF BM 075-02945, APPROX. 1200 FT. S OF DRAIN OUTLET OF PROPOSED WOODRUFF DRAIN, A STANDARD 2 INCH F.C. DISK, STAMPED BM WASH-1, 1973.

B.M. NO. 200 23002 — ELEV. 98.88

PANGBORN AVE (PROPOSED), APPROX. 500 FT. E'LY OF BM WASH-1, 2 FT. N OF TRIPLE TRANSFORMER POLE, APPROX. 93 FT. ON LINE PROD OF E END OF BUILDING, A STANDARD F.C. MON FLUSH STAMPED BM WASH-2, 1973.

B.M. NO. 200 23003 — ELEV. 103.15

ON CROSSING OF PANGBORN AVE. AND WASHBURN RD., ON N SIDE, APPROX. 20 FT. E OF FIRE PLUG, ON TOP OF CURB, APPROX. 7 FT E OF E SIDE OF AMERICAN TRENCHER EQ. CO. BLDG PROD, A STD. F.C. DISK, STAMPED BM WASH-3, 1973.

B.M. NO. 200 23004 — ELEV. 102.09

ON N SIDE OF WASHBURN RD., APPROX 600 FT. W OF BM WASH-3, APPROX. 7 FT. E OF E END OF DRIVEWAY TO DOWNEY READY MIX CONC. COMPANY, APPROX. 50 FT. E OF DOUBLE P.P. NO 888180E, ON TOP OF CURB, A STD. F.C. DISK STAMPED BM WASH-4, 1973.

B.M. NO. 200 23005 — ELEV. 100.90

WOODRUFF AVE AND WASHBURN RD., SE COR., 6.5 FT. S OF BCR, A STD. F.C. DISK, STAMPED BM WASH-5, 1973.

B.M. NO. 200 23006 — ELEV. 102.44

ON E SIDE OF WOODRUFF AVE., APPROX. 530 FT. N OF C/L OF WASHBURN AVE., APPROX. 12 FT. N OF N END OF DRIVEWAY TO DARNELL CORP. LTD., 3 FT S OF P.P. (NO NUMBER), A STANDARD F.C. DISK, STAMPED BM WASH-6, 1973.

## INDEX TO DRAWINGS


| SHEET NO. | DESCRIPTION |
|---|---|
| 1 | LOCATION MAP, GENERAL PLAN, GENERAL NOTES, AND INDEX TO DRAWINGS |
| 2 | PLAN AND PROFILE - STA. 10+68 TO STA. 21+00 |
| 3 | PLAN AND PROFILE - STA. 21+00 TO STA. 30+50 |
| 4 | PLAN AND PROFILE - STA. 30+50 TO STA. 42+15 |
| 5 | SINGLE R.C. BOX - SCHEDULE AND DETAILS |
| 6 | OUTLET STRUCTURE - STRUCTURAL DETAILS |
| 7 | MISCELLANEOUS DETAILS |
| 8 | LOG OF BORINGS |


## REFERENCES

TOPOGRAPHY..... DWG. NOS. 491-T 1, T 2, & T 3

FIELD BOOK..... FC 3028 & FC 3324

RIGHT OF WAY..... DWG. NOS. 6-RW 16 & C.S.B. 1643

SAN GABRIEL RIVER CHANNEL... DWG. NOS. 6-F 1024.1 TO .38

"PD018896"

| REVISIONS | | |
|---|---|---|
| MK | DATE | DESCRIPTION |
| | | |

DESIGNED BY V. Lai
CHECKED BY J. Wechter
DRAWN BY G. Franco
PROJECT ENGINEER Paul Wechter

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

# WOODRUFF AVENUE DRAIN
SAN GABRIEL RIVER TO STEWART & GRAY ROAD
REINFORCED CONCRETE CONDUIT
LOCATION MAP, GENERAL PLAN,
GENERAL NOTES AND INDEX TO DRAWINGS

RECOMMENDED BY D.J. Milne — DIVISION ENGINEER (DESIGN)
DATE Dec. '74 | SCALE: A.S.
DWGS. APPROVED BY A.E. Rivington — CHIEF ENGINEER - CIVIL ENGINEER 8726
NO. 491-D2.1
SHEET 1 OF 8

PROFILE
SCALES: HORIZ. 1" = 40'
VERT. 1" = 4'

Q = 65 cfs | Q = 40 cfs | Q = 25 cfs

STA. 21+00 | STA. 30+50

SEE SH. 2 | SEE SH. 4 | MATCH LINE

110 | 100 | 90

(12) M.H. No. 2 Sta. 23+80

(13) M.H. No. 3 Sta. 28+80

Exist. street surface along ℄ const.

Exist. A.C. paving

H.G.L.

Invert

Invert of exist. 8" S.S.

Invert of exist. 15" S.S.

Invert of exist. 21" Trunk S.S.

El. 94.81

El. 94.62

El. 92.08

El. 92.20

El. 92.45

10" Inlet (N) Sta. 21+90 S=.0040

6" H.C. Blanket per Std. Dwg. No. D-2611, Case III, Half Sect. O.D.

21" Inlet (N) Sta. 27+85 El. 85.08

8" Inlet (N) Sta. 28+36 El. 85.14

S=.00168

277'- 51" RCP, 1000D

(4)

390'- 51" R.C.P., 1000D

(5)

158'- 36" R.C.P. 1000D

T.S. No. 1

Sta. 27+78.83

R.C. Sta. 27+98.83

E.C. Sta. 28+69.56

Sta. 28+80.56

5'-9" W x 2'-6" R.C. BOX Sect. Sh. 3

(25)

(14)

Q = 75 c.f.s. ℄ Const. 8" W

M.H. No. 3 Sta. 28+36.08

Sta. 28+89.56

Sta. 28+89.83

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PROFILE

SCALES: HORIZ. 1" = 40'
VERT. 1" = 4'

Q = 25 c.f.s.

SEE SH. 3

STA. 30+50

MATCH LINE

PROPOSED CONNECTION STA 30+64.74

Elev. 95.45

Invert of exist 21" trunk S.S.

Invert of exist 15" S.S.

18" Inlet (W) Sta 33+00

18" Inlet (E) Sta 33+15

M.H. No. 2 Sta 33+00

#10" W.

#8" W.

El. 99.09

El. 99.80

HGL

Invert

S = .00168

Exist street surface along & construction

M.H. No. 2 & Sta. 37+00

#6" W.

2.7'S.

Sta. 36+22.27 =

30' SPRR R/W

Sta. 36+71.27

Exist railroad tracks

El. 99.78

18" Inlet (E) Sta 38+92

18" Inlet (W) Sta 39+28

18" Inlet (W) Sta 40+12

18" Inlet (E) Sta 41+00

M.H. No. 2 Sta 41+00

#12" W.

2.6'S.

2.1'S.

El. 98.48

18" Inlet (W) Sta 41+25

18" Inlet (E) Sta 41+50

M.H. No. 2 Sta 41+85

El. 97.40

El. 97.21

Seal with 6" thick conc. wall & #4 @ 12" each way in center of wall.

Sta. 42+18.25

Sta. 42+15

24' S.S.

15" S.S.

21" S.S.

107'-36" R.C.P., 1000D

221'-36" R.C.P., 1000D

247'-36" R.C.P., 1000D (5)

395'-34" R.C.P., 1000D

191'-36" R.C.P. 1000D

82'-36" R.C.P. 3000D (Jack) (1A)

H.G.

8' S.S.

31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 42+00

C.B. No. 9, W=14, V=4'-6", 141'-18" R.C.P., 1500D L.D. No. 2 (19)

2" Gas, 15' N.S. R.

C.B. No. 1 72'-18" R.C.P. 1500D L.D. No. 4

Conc. slope

8" S. sewer; 7' N.S. R.

M12444Y

PP 1914257

L.P.

G.W.

S.S.M.H.

8'

GT 3501Y

T.S. vault

2.1'S. conduits

T.S.

GT 4511S

Remove & replace 2-1" fig trees

8" S. sewer; 38' ± N.S. R.

PP 9142382

C.B. No. 9, W=4'-3", V=4'-6" 109'-24" R.C.P., 1250D L.D. No. 2 (21) (6)

Exist R.C.B. culvert to remain

C.B. No. 3, W=10' 67'-18" R.C.P., 1500 D L.D. No. 2

P.I.N. 9274.402 E. 10029.318

1" Fig

± Relocate 2" T.S. conduit

20" Water, 37' N.S. R. (Downey Water Co.)

C.B. No. 3 83'-21" R.C.P. 1250 D L.D. No. 2 (19) (7)

STEWART AND GRAY RD.

24" Water, 15' E. W. R., Downey Water Co.)

15" S. sewer, 3' E. & St.

21" S. sewer, 14' E. & St.

4" Gas, 26' W.E. R.

8" Water, 15' W.E. R. (Downey Water Co.)

C.B. No. 1 12'-18" R.C.P., 1500 D L.D. No. 2

PP 1914246 E

C.B. No. 1 43'-18" R.C.P., 1500 D L.D. No. 2

Exist. R.C.B. culvert to remain

2" Gas Varies

8" S.S. Varies

2" Gas, 4' S.N.R.

Ex. A.C. swale

Provide a 3'-0" wide opening on backside of C.B. per Std. Dwg. 2-0238 with curb face =10" to accept flows from Ex. A.C. swale. Regrade & replace A.C. at opening of C.B. so that C.B. will function.

C.B. No. 3, W=10' 79'-18" R.C.P. 1500 D L.D. No. 2 (18) (23)

Relocate interfering parking sign P.I.N. 9067.845 E. 10033.367

T.P.P. 8881632 E

2" T.S. conduits

6" Water, 6' W.E. R. (Park Water Co.)

R.S.B. culvert

C.B. No. 1 T'-18" R.C.P. 1500 D, L.D. No. 4

Curve Data
Δ = 8°30'00"
R = 90'
L = 13.35'
T = 6.69'

Curve Data
Δ = 8°30'00"
R = 90'
L = 13.35'
T = 6.69'

J.S. No. 2 (16)

| STA. | A | B | C | D |
|---|---|---|---|---|
| 33+15 | 60° | 18" | 1.80' | 36" |
| 39+45 | 82° | 18" | 1.30' | 36" |
| 40+00 | 71° | 18" | 1.50' | 36" |
| 40+12 | 90° | 18" | 1.30' | 36" |
| 41+28 | 88° | 24" | 1.30' | 36" |
| 41+50 | 80° | 18" | 1.30' | 36" |
| 41+75 | 82° | 18" | 1.30' | 36" |

C.B. No. 1 72'-18" R.C.P. 1500 D L.D. No. 4 (17) (8) (23)

Sta. 33+10

Sta. 33+40

M.H. No. 2 Sta 33+00

Weep hole

Traffic plates

Boring No. 5

S.S.M.H.

WOODRUFF

& Const.

A.C. driveway

R.R. sign

R.R. signal

2" Signal conduit

Conc. islands

Gate

Jack

6" Water, 3' S. R. (Park Water Co.)

10" Water (Park Water Co.)

8" Water (Park Water Co.)

8" Water, 6' E.W. R. (Park Water Co.)

G.T. 58827

G.T. 58846

G.T. 14551Y

G.T. 3741Y

P.P. 8881635 E

4" Gas, 26' W.E. R.

21" S. sewer, 14' E. & St.

8" S.S.

M.H. No. 2 Sta 37+00

R.C.B. culvert Boring No. 6

S.P.R.R. tracks

S.P.R.R. R/W

R.R. Signal

2" Signal conduit

AVE.

R.R. signal

S.S.M.H.

P.P. 8881632 E

T.P.P. 8881632 E

2" T.S. conduits

6" Water, 6' W.E. R. (Park Water Co.)

C.B. No. 1 T'-18" R.C.P. 1500 D, L.D. No. 4

R.S.B. culvert

C.B. No. 3, W=10' 79'-18" R.C.P. 1500 D L.D. No. 2 (18) (23)

Relocate interfering parking sign P.I.N. 9067.845 E. 10033.367

Provide a 3'-0" wide opening on backside of C.B. per Std. Dwg. 2-0238 with curb face =10" to accept flows from Ex. A.C. swale. Regrade & replace A.C. at opening of C.B. so that C.B. will function.

N. 8,400

E. 10,200

PLAN

SCALE: 1" = 40'

25 0 50 100

TYPICAL SECTION

STA 36 + 00

SCALES: HORIZ. 1" = 20'
VERT. 1" = 4'

E. Woodruff Ave.

100'

10' 40' 40' 10'

E. Const.

32'

24'

14'

3'

44'

Exist A.C. paving

8" W

4" G

2-34" R.C.P.

15" S.S.

21" S.S.

REVISIONS

| MK | DATE | DESCRIPTION |
|---|---|---|

DESIGNED BY V. Lai

CHECKED BY S. Wechter

DRAWN BY A. Trask

PROJECT ENGINEER Saul Wechter

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

# WOODRUFF AVENUE DRAIN

SAN GABRIEL RIVER TO STEWART & GRAY ROAD

REINFORCED CONCRETE CONDUIT

PLAN AND PROFILE

STA. 30+50 TO STA. 42+15

RECOMMENDED BY D.J. Milne
DIVISION ENGINEER (DESIGN)

DATE Dec. '74 SCALE A.S.

NO. 491 - D2.4

SHEET 4 OF 8

*PD018899*

# APPENDIX B

# HYDROLOGY CALCULATIONS

# Peak Flow Hydrologic Analysis

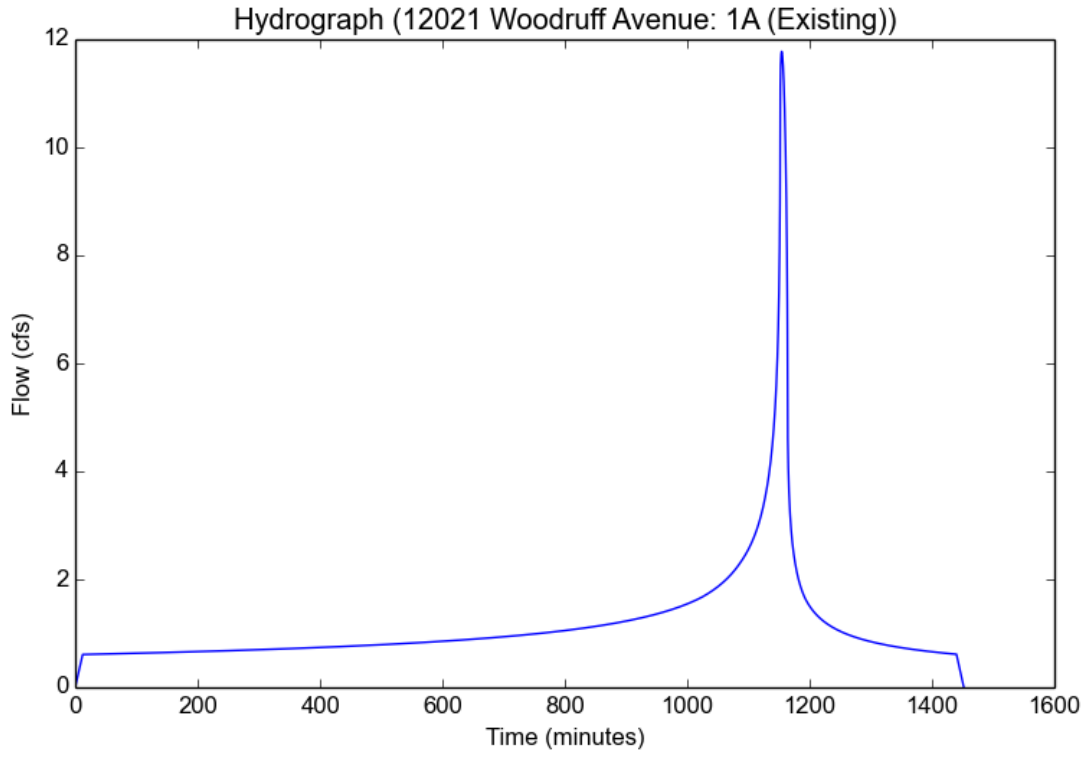
File location: O:/3700-3799/3700/HYDROLOGY/HYDROCALC/12021 Woodruff Avenue Report.pdf
Version: HydroCalc 1.0.2

## Input Parameters

| | |
|---|---|
| Project Name | 12021 Woodruff Avenue |
| Subarea ID | 1A (Existing) |
| Area (ac) | 5.5 |
| Flow Path Length (ft) | 896.0 |
| Flow Path Slope (vft/hft) | 0.00379 |
| 50-yr Rainfall Depth (in) | 6.1 |
| Percent Impervious | 0.9 |
| Soil Type | 6 |
| Design Storm Frequency | 50-yr |
| Fire Factor | 0 |
| LID | False |

## Output Results

| | |
|---|---|
| Modeled (50-yr) Rainfall Depth (in) | 6.1 |
| Peak Intensity (in/hr) | 2.4118 |
| Undeveloped Runoff Coefficient (Cu) | 0.7775 |
| Developed Runoff Coefficient (Cd) | 0.8877 |
| Time of Concentration (min) | 12.0 |
| Clear Peak Flow Rate (cfs) | 11.7757 |
| Burned Peak Flow Rate (cfs) | 11.7757 |
| 24-Hr Clear Runoff Volume (ac-ft) | 2.3061 |
| 24-Hr Clear Runoff Volume (cu-ft) | 100453.6572 |



# Peak Flow Hydrologic Analysis

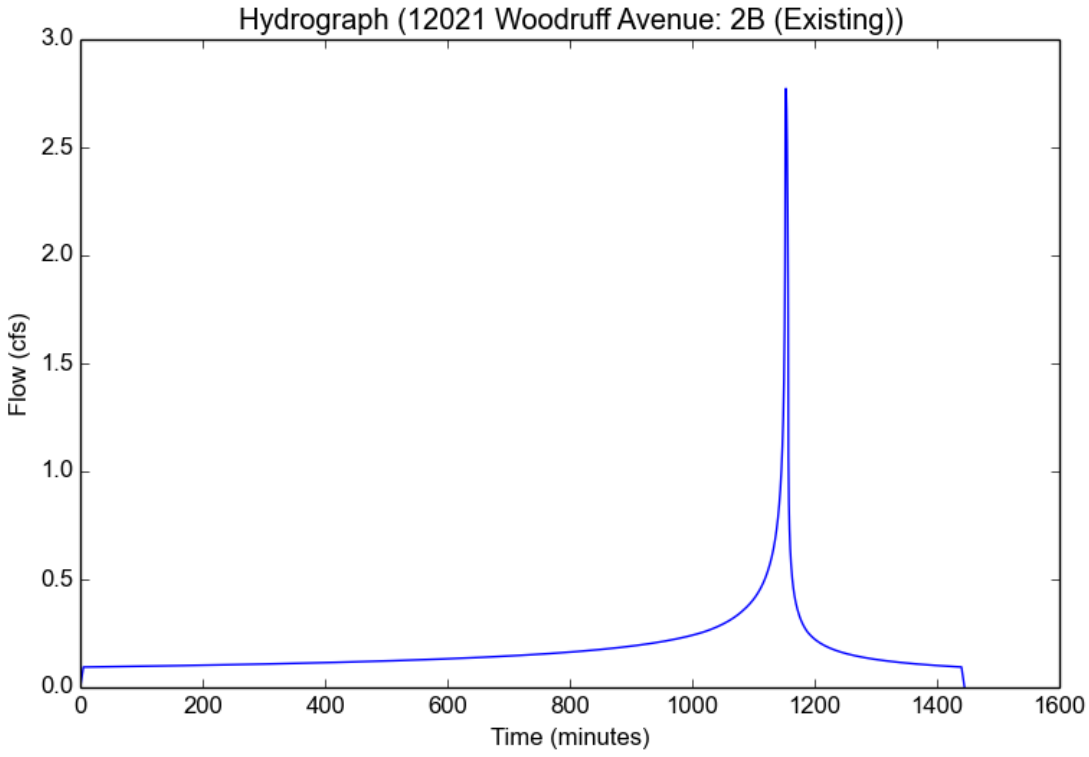
File location: O:/3700-3799/3700/HYDROLOGY/HYDROCALC/12021 Woodruff Avenue Report.pdf
Version: HydroCalc 1.0.2

## Input Parameters

| | |
|---|---|
| Project Name | 12021 Woodruff Avenue |
| Subarea ID | 2B (Existing) |
| Area (ac) | 0.85 |
| Flow Path Length (ft) | 212.0 |
| Flow Path Slope (vft/hft) | 0.00651 |
| 50-yr Rainfall Depth (in) | 6.1 |
| Percent Impervious | 0.9 |
| Soil Type | 6 |
| Design Storm Frequency | 50-yr |
| Fire Factor | 0 |
| LID | False |

## Output Results

| | |
|---|---|
| Modeled (50-yr) Rainfall Depth (in) | 6.1 |
| Peak Intensity (in/hr) | 3.6394 |
| Undeveloped Runoff Coefficient (Cu) | 0.8627 |
| Developed Runoff Coefficient (Cd) | 0.8963 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 2.7726 |
| Burned Peak Flow Rate (cfs) | 2.7726 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.3565 |
| 24-Hr Clear Runoff Volume (cu-ft) | 15528.0157 |



# Peak Flow Hydrologic Analysis

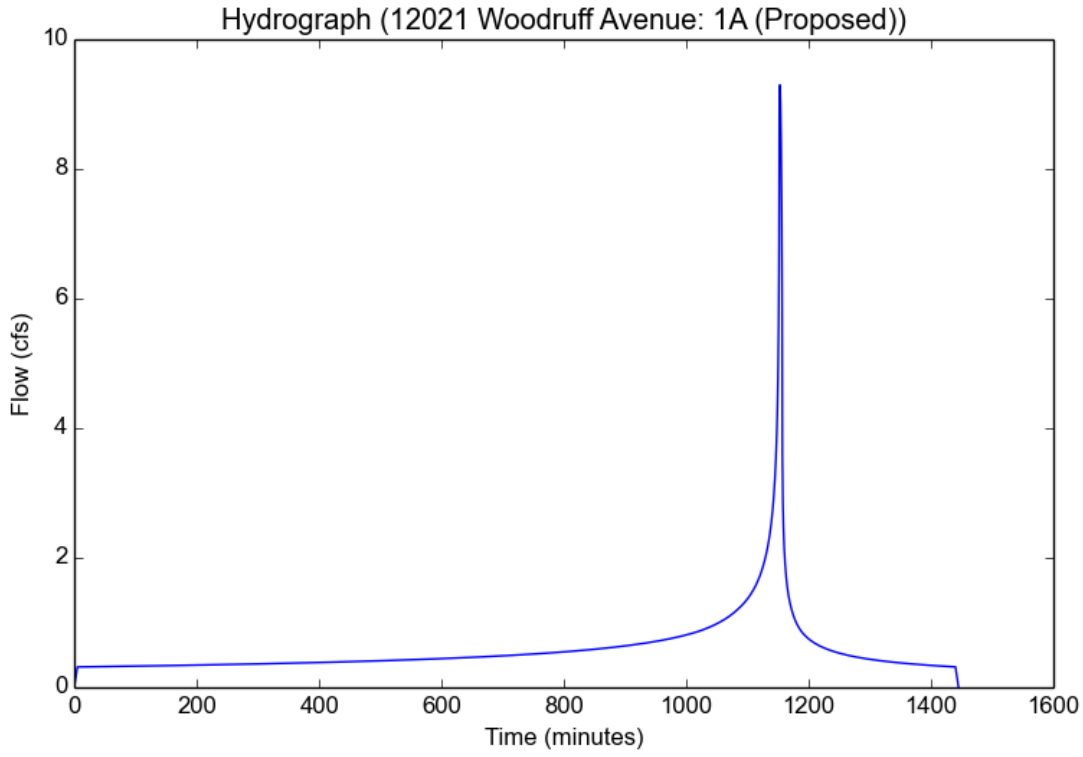
File location: O:/3700-3799/3700/HYDROLOGY/HYDROCALC/12021 Woodruff Avenue Report.pdf
Version: HydroCalc 1.0.2

## Input Parameters

| | |
|---|---|
| Project Name | 12021 Woodruff Avenue |
| Subarea ID | 1A (Proposed) |
| Area (ac) | 2.85 |
| Flow Path Length (ft) | 266.0 |
| Flow Path Slope (vft/hft) | 0.0067 |
| 50-yr Rainfall Depth (in) | 6.1 |
| Percent Impervious | 0.9 |
| Soil Type | 6 |
| Design Storm Frequency | 50-yr |
| Fire Factor | 0 |
| LID | False |

## Output Results

| | |
|---|---|
| Modeled (50-yr) Rainfall Depth (in) | 6.1 |
| Peak Intensity (in/hr) | 3.6394 |
| Undeveloped Runoff Coefficient (Cu) | 0.8627 |
| Developed Runoff Coefficient (Cd) | 0.8963 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 9.2965 |
| Burned Peak Flow Rate (cfs) | 9.2965 |
| 24-Hr Clear Runoff Volume (ac-ft) | 1.1952 |
| 24-Hr Clear Runoff Volume (cu-ft) | 52064.5231 |



# Peak Flow Hydrologic Analysis

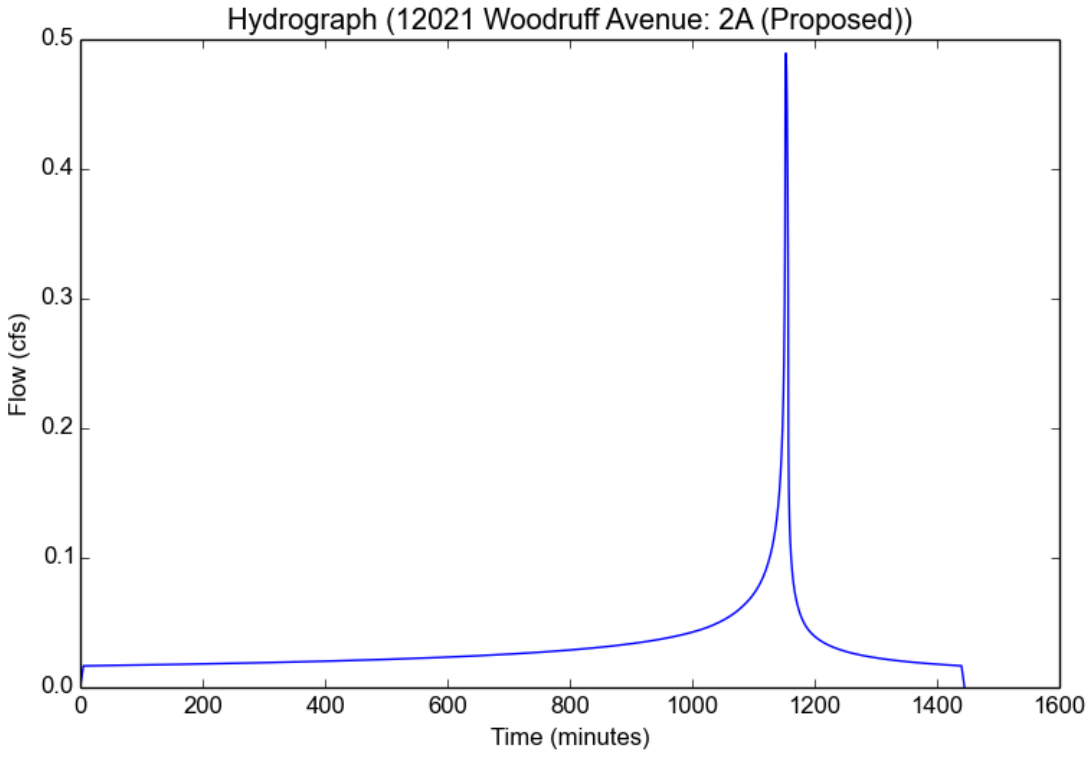
File location: O:/3700-3799/3700/HYDROLOGY/HYDROCALC/12021 Woodruff Avenue Report.pdf
Version: HydroCalc 1.0.2

## Input Parameters

| | |
|---|---|
| Project Name | 12021 Woodruff Avenue |
| Subarea ID | 2A (Proposed) |
| Area (ac) | 0.15 |
| Flow Path Length (ft) | 107.0 |
| Flow Path Slope (vft/hft) | 0.0094 |
| 50-yr Rainfall Depth (in) | 6.1 |
| Percent Impervious | 0.9 |
| Soil Type | 6 |
| Design Storm Frequency | 50-yr |
| Fire Factor | 0 |
| LID | False |

## Output Results

| | |
|---|---|
| Modeled (50-yr) Rainfall Depth (in) | 6.1 |
| Peak Intensity (in/hr) | 3.6394 |
| Undeveloped Runoff Coefficient (Cu) | 0.8627 |
| Developed Runoff Coefficient (Cd) | 0.8963 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 0.4893 |
| Burned Peak Flow Rate (cfs) | 0.4893 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0629 |
| 24-Hr Clear Runoff Volume (cu-ft) | 2740.2381 |



# Peak Flow Hydrologic Analysis

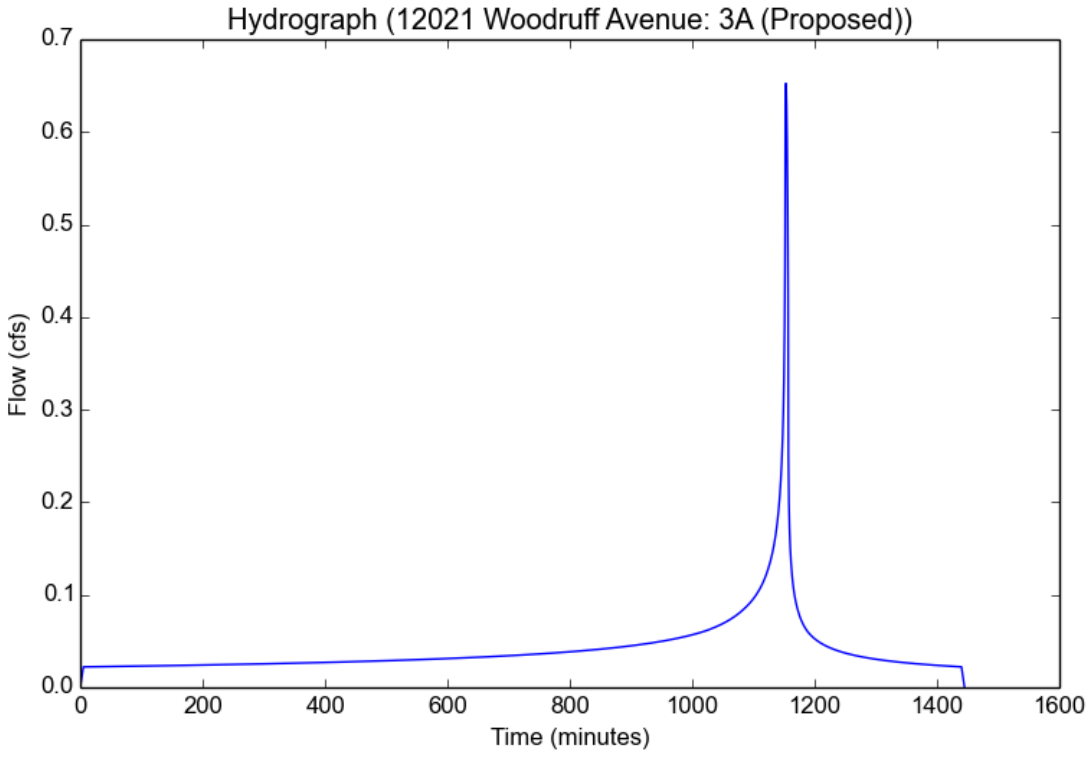
File location: O:/3700-3799/3700/HYDROLOGY/HYDROCALC/12021 Woodruff Avenue Report.pdf
Version: HydroCalc 1.0.2

## Input Parameters

| | |
|---|---|
| Project Name | 12021 Woodruff Avenue |
| Subarea ID | 3A (Proposed) |
| Area (ac) | 0.2 |
| Flow Path Length (ft) | 137.0 |
| Flow Path Slope (vft/hft) | 0.0084 |
| 50-yr Rainfall Depth (in) | 6.1 |
| Percent Impervious | 0.9 |
| Soil Type | 6 |
| Design Storm Frequency | 50-yr |
| Fire Factor | 0 |
| LID | False |

## Output Results

| | |
|---|---|
| Modeled (50-yr) Rainfall Depth (in) | 6.1 |
| Peak Intensity (in/hr) | 3.6394 |
| Undeveloped Runoff Coefficient (Cu) | 0.8627 |
| Developed Runoff Coefficient (Cd) | 0.8963 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 0.6524 |
| Burned Peak Flow Rate (cfs) | 0.6524 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0839 |
| 24-Hr Clear Runoff Volume (cu-ft) | 3653.6507 |



# Peak Flow Hydrologic Analysis

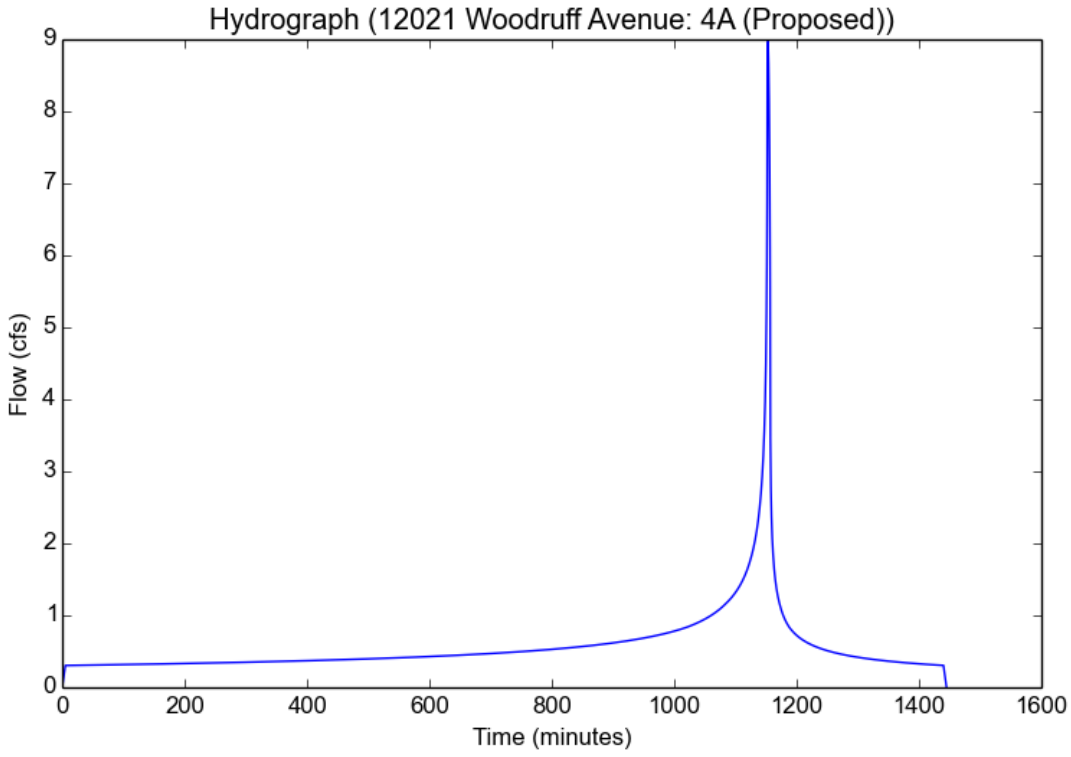
File location: O:/3700-3799/3700/HYDROLOGY/HYDROCALC/12021 Woodruff Avenue Report.pdf
Version: HydroCalc 1.0.2

## Input Parameters

| | |
|---|---|
| Project Name | 12021 Woodruff Avenue |
| Subarea ID | 4A (Proposed) |
| Area (ac) | 2.75 |
| Flow Path Length (ft) | 314.0 |
| Flow Path Slope (vft/hft) | 0.0078 |
| 50-yr Rainfall Depth (in) | 6.1 |
| Percent Impervious | 0.9 |
| Soil Type | 6 |
| Design Storm Frequency | 50-yr |
| Fire Factor | 0 |
| LID | False |

## Output Results

| | |
|---|---|
| Modeled (50-yr) Rainfall Depth (in) | 6.1 |
| Peak Intensity (in/hr) | 3.6394 |
| Undeveloped Runoff Coefficient (Cu) | 0.8627 |
| Developed Runoff Coefficient (Cd) | 0.8963 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 8.9703 |
| Burned Peak Flow Rate (cfs) | 8.9703 |
| 24-Hr Clear Runoff Volume (ac-ft) | 1.1533 |
| 24-Hr Clear Runoff Volume (cu-ft) | 50237.6977 |



# Peak Flow Hydrologic Analysis

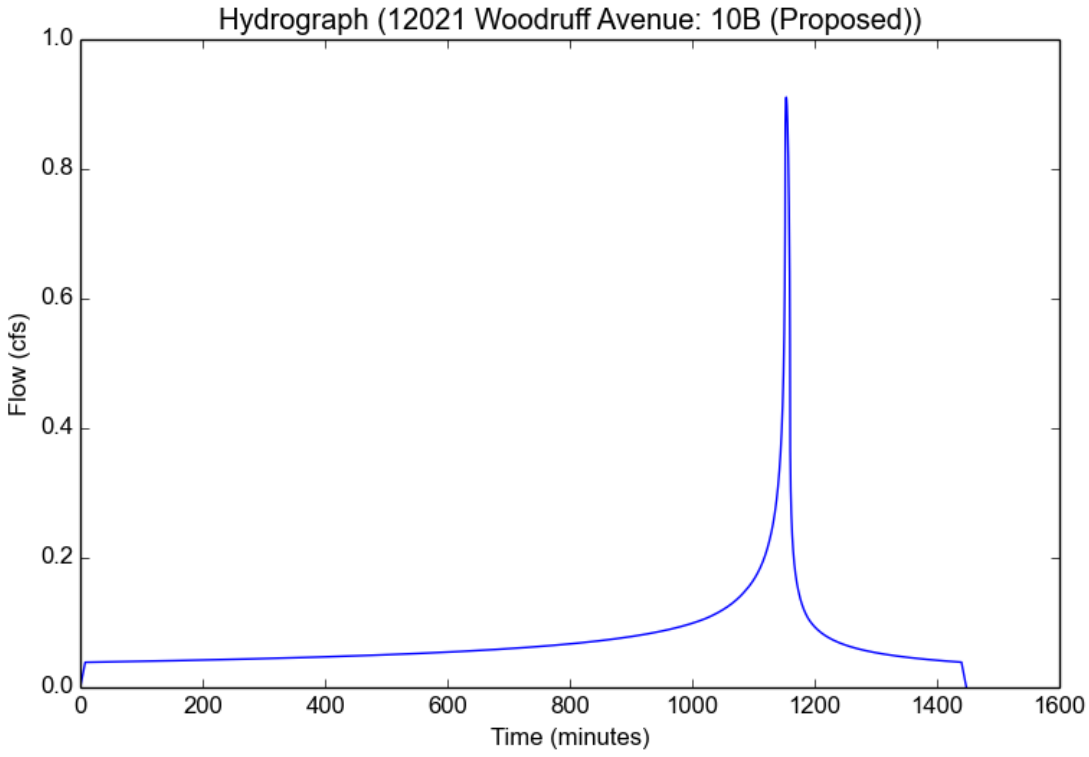
File location: O:/3700-3799/3700/HYDROLOGY/HYDROCALC/12021 Woodruff Avenue Report.pdf
Version: HydroCalc 1.0.2

## Input Parameters

| | |
|---|---|
| Project Name | 12021 Woodruff Avenue |
| Subarea ID | 10B (Proposed) |
| Area (ac) | 0.35 |
| Flow Path Length (ft) | 453.0 |
| Flow Path Slope (vft/hft) | 0.0034 |
| 50-yr Rainfall Depth (in) | 6.1 |
| Percent Impervious | 0.9 |
| Soil Type | 6 |
| Design Storm Frequency | 50-yr |
| Fire Factor | 0 |
| LID | False |

## Output Results

| | |
|---|---|
| Modeled (50-yr) Rainfall Depth (in) | 6.1 |
| Peak Intensity (in/hr) | 2.9181 |
| Undeveloped Runoff Coefficient (Cu) | 0.8165 |
| Developed Runoff Coefficient (Cd) | 0.8917 |
| Time of Concentration (min) | 8.0 |
| Clear Peak Flow Rate (cfs) | 0.9107 |
| Burned Peak Flow Rate (cfs) | 0.9107 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.1468 |
| 24-Hr Clear Runoff Volume (cu-ft) | 6393.2176 |



# APPENDIX C

# DETENTION ANALYSIS

Job # 3700 12021 Woodruff Avenue, Downey
Volume at North Truck Yard (1A)

| Elevation | Depth (feet) | Area (sq. ft.) | Volume (c.f.) | ∑ Volume (c.f.) | ∑ Volume (ac-ft) |
|---|---|---|---|---|---|
| 102.44 | 0.00 | 0 | | | |
| | | | 14 | 14 | 0.00 |
| 102.60 | 0.16 | 174 | | | |
| | | | 236 | 250 | 0.01 |
| 102.80 | 0.36 | 2183 | | | |
| | | | 986 | 1235 | 0.03 |
| 103.00 | 0.56 | 7672 | | | |
| | | | 2406 | 3641 | 0.08 |
| 103.20 | 0.76 | 16383 | | | |
| | | | 4409 | 8049 | 0.18 |
| 103.40 | 0.96 | 27704 | | | |
| | | | 6852 | 14901 | 0.34 |
| 103.60 | 1.16 | 40812 | | | |
| | | | 9490 | 24391 | 0.56 |
| 103.80 | 1.36 | 54090 | | | |
| | | | 12256 | 36647 | 0.84 |
| 104.00 | 1.56 | 68467 | | | |

# Peak Flow Hydrologic Analysis

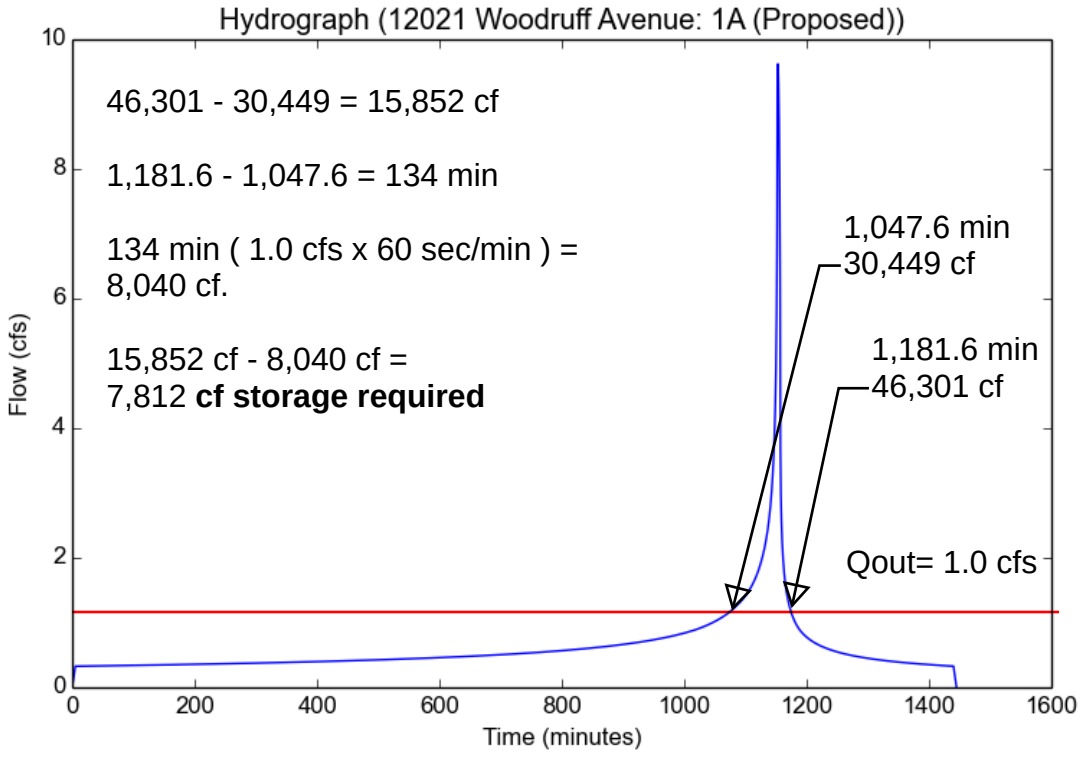
File location: O:/3700-3799/3700/HYDROLOGY/HYDROCALC/12021 Woodruff Avenue Report.pdf
Version: HydroCalc 1.0.2

## Input Parameters

| | |
|---|---|
| Project Name | 12021 Woodruff Avenue |
| Subarea ID | 1A (Proposed) |
| Area (ac) | 2.95 |
| Flow Path Length (ft) | 260.0 |
| Flow Path Slope (vft/hft) | 0.00654 |
| 50-yr Rainfall Depth (in) | 6.1 |
| Percent Impervious | 0.9 |
| Soil Type | 6 |
| Design Storm Frequency | 50-yr |
| Fire Factor | 0 |
| LID | False |

## Output Results

| | |
|---|---|
| Modeled (50-yr) Rainfall Depth (in) | 6.1 |
| Peak Intensity (in/hr) | 3.6394 |
| Undeveloped Runoff Coefficient (Cu) | 0.8627 |
| Developed Runoff Coefficient (Cd) | 0.8963 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 9.6226 |
| Burned Peak Flow Rate (cfs) | 9.6226 |
| 24-Hr Clear Runoff Volume (ac-ft) | 1.2372 |
| 24-Hr Clear Runoff Volume (cu-ft) | 53891.3484 |



Inputs: 12021 Woodruff Avenue

| Subarea ID | Area (ac) | Flow Path Leng | Flow Path | 50-yr Rainfall Dept | Percent Imperviou | Soil Type | Design Storm F | Fire Factor |
|---|---|---|---|---|---|---|---|---|
| 1A (Proposec | 2.95 | 260 | 0.00654 | 6.1 | 0.9 | 6 | 50-yr | 0 |

Outputs: 12021 Woodruff Avenue

| Area (ac) | Modeled (50- | Time of Concer | Clear Peak | 24-Hr Clear Runoff | Burned Peak Flow | Peak Intensit | Undeveloped F | Developed Ru |
|---|---|---|---|---|---|---|---|---|
| 1A (Proposec | 6.1 | 5 | 9.623 | 1.237175125 | 9.622647488 | 3.63942742 | 0.862713164 | 0.89627132 |

Hydrograph: 12021 Woodruff Avenue - 1A (Proposed)

| Time (min) | Incremental N | Incremental De | Intensity (i | Undeveloped Runc | Developed Runoff | Clear Peak Flc | Incremental Vc | Cumulative Vc |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0.2 | 7.36E-05 | 0.000449046 | 0 | 0 | 0 | 0.0130477 | 0.078286208 | 0.07828621 |
| 0.4 | 0.00014723 | 0.000898129 | 0 | 0 | 0 | 0.0260954 | 0.234858623 | 0.31314483 |
| 0.6 | 0.00022086 | 0.001347248 | 0 | 0 | 0 | 0.0391431 | 0.391431039 | 0.70457587 |
| 0.8 | 0.00029449 | 0.001796404 | 0 | 0 | 0 | 0.05219081 | 0.548003454 | 1.25257932 |
| 1 | 0.00036813 | 0.002245597 | 0 | 0 | 0 | 0.06523851 | 0.70457587 | 1.95715519 |
| 1.2 | 0.00044177 | 0.002694827 | 0 | 0 | 0 | 0.07828621 | 0.861148286 | 2.81830348 |
| 1.4 | 0.00051543 | 0.003144093 | 0 | 0 | 0 | 0.09133391 | 1.017720701 | 3.83602418 |
| 1.6 | 0.00058908 | 0.003593395 | 0 | 0 | 0 | 0.10438161 | 1.174293117 | 5.0103173 |
| 1.8 | 0.00066274 | 0.004042735 | 0 | 0 | 0 | 0.11742931 | 1.330865532 | 6.34118283 |
| 2 | 0.00073641 | 0.004492111 | 0 | 0 | 0 | 0.13047701 | 1.487437948 | 7.82862078 |
| 2.2 | 0.00081009 | 0.004941524 | 0 | 0 | 0 | 0.14352471 | 1.644010363 | 9.47263114 |
| 2.4 | 0.00088377 | 0.005390974 | 0 | 0 | 0 | 0.15657242 | 1.800582779 | 11.2732139 |
| 2.6 | 0.00095745 | 0.005840461 | 0 | 0 | 0 | 0.16962012 | 1.957155195 | 13.2303691 |
| 2.8 | 0.00103114 | 0.006289984 | 0 | 0 | 0 | 0.18266782 | 2.11372761 | 15.3440967 |
| 3 | 0.00110484 | 0.006739544 | 0 | 0 | 0 | 0.19571552 | 2.270300026 | 17.6143968 |
| 3.2 | 0.00117855 | 0.007189141 | 0 | 0 | 0 | 0.20876322 | 2.426872441 | 20.0412692 |
| 3.4 | 0.00125226 | 0.007638774 | 0 | 0 | 0 | 0.22181092 | 2.583444857 | 22.624714 |
| 3.6 | 0.00132597 | 0.008088445 | 0 | 0 | 0 | 0.23485862 | 2.740017272 | 25.3647313 |
| 3.8 | 0.0013997 | 0.008538152 | 0 | 0 | 0 | 0.24790632 | 2.896589688 | 28.261321 |
| 4 | 0.00147343 | 0.008987896 | 0 | 0 | 0 | 0.26095403 | 3.053162103 | 31.3144831 |
| 4.2 | 0.00154716 | 0.009437677 | 0 | 0 | 0 | 0.27400173 | 3.209734519 | 34.5242176 |
| 4.4 | 0.0016209 | 0.009887494 | 0 | 0 | 0 | 0.28704943 | 3.366306935 | 37.8905246 |
| 4.6 | 0.00169465 | 0.010337349 | 0 | 0 | 0 | 0.30009713 | 3.52287935 | 41.4134039 |
| 4.8 | 0.0017684 | 0.01078724 | 0 | 0 | 0 | 0.31314483 | 3.679451766 | 45.0928557 |
| 5 | 0.00184216 | 0.011237169 | 0.134846 | 0.1 | 0.82 | 0.32619253 | 3.836024181 | 48.9288799 |
| 5.2 | 0.00191592 | 0.011687134 | 0.134857 | 0.1 | 0.82 | 0.32621921 | 3.914470456 | 52.8433503 |
| 5.4 | 0.00198969 | 0.012137136 | 0.134868 | 0.1 | 0.82 | 0.32624589 | 3.91479063 | 56.7581409 |
| 5.6 | 0.00206347 | 0.012587175 | 0.134879 | 0.1 | 0.82 | 0.32627259 | 3.915110886 | 60.6732518 |
| 5.8 | 0.00213725 | 0.013037251 | 0.13489 | 0.1 | 0.82 | 0.32629928 | 3.915431224 | 64.5886831 |
| 6 | 0.00221104 | 0.013487363 | 0.134901 | 0.1 | 0.82 | 0.32632599 | 3.915751644 | 68.5044347 |
| 6.2 | 0.00228484 | 0.013937513 | 0.134912 | 0.1 | 0.82 | 0.3263527 | 3.916072146 | 72.4205068 |
| 6.4 | 0.00235864 | 0.0143877 | 0.134923 | 0.1 | 0.82 | 0.32637942 | 3.91639273 | 76.3368996 |
| 6.6 | 0.00243245 | 0.014837923 | 0.134934 | 0.1 | 0.82 | 0.32640615 | 3.916713396 | 80.253613 |
| 6.8 | 0.00250626 | 0.015288184 | 0.134945 | 0.1 | 0.82 | 0.32643288 | 3.917034144 | 84.1706471 |
| 7 | 0.00258008 | 0.015738481 | 0.134956 | 0.1 | 0.82 | 0.32645962 | 3.917354975 | 88.0880021 |
| 7.2 | 0.0026539 | 0.016188815 | 0.134967 | 0.1 | 0.82 | 0.32648636 | 3.917675888 | 92.005678 |
| 7.4 | 0.00272774 | 0.016639187 | 0.134979 | 0.1 | 0.82 | 0.32651312 | 3.917996883 | 95.9236749 |
| 7.6 | 0.00280157 | 0.017089595 | 0.13499 | 0.1 | 0.82 | 0.32653988 | 3.91831796 | 99.8419928 |
| 7.8 | 0.00287542 | 0.01754004 | 0.135001 | 0.1 | 0.82 | 0.32656664 | 3.918639119 | 103.760632 |
| 8 | 0.00294927 | 0.017990523 | 0.135012 | 0.1 | 0.82 | 0.32659342 | 3.918960361 | 107.679592 |
| 8.2 | 0.00302312 | 0.018441042 | 0.135023 | 0.1 | 0.82 | 0.3266202 | 3.919281685 | 111.598874 |
| 8.4 | 0.00309698 | 0.018891599 | 0.135034 | 0.1 | 0.82 | 0.32664698 | 3.919603092 | 115.518477 |
| 8.6 | 0.00317085 | 0.019342192 | 0.135045 | 0.1 | 0.82 | 0.32667378 | 3.919924581 | 119.438402 |

Hydrograph: 12021 Woodruff Avenue - 1A (Proposed)

| Time (min) | Incremental I | Incremental De | Intensity (i | Undeveloped Runc | Developed Runoff | Clear Peak Flc | Incremental Vc | Cumulative Vc |
|---|---|---|---|---|---|---|---|---|
| 1045.6 | 0.57364023 | 3.499205429 | 0.408226 | 0.16567815 | 0.826567815 | 0.99540746 | 11.93930328 | 30329.3565 |
| 1045.8 | 0.57386584 | 3.500581641 | 0.408579 | 0.166284557 | 0.826628456 | 0.99634115 | 11.95049167 | 30341.3069 |
| 1046 | 0.57409165 | 3.501959071 | 0.408933 | 0.166892608 | 0.826689261 | 0.99727749 | 11.96171187 | 30353.2687 |
| 1046.2 | 0.57431766 | 3.503337724 | 0.409287 | 0.167502309 | 0.826750231 | 0.99821651 | 11.97296402 | 30365.2416 |
| 1046.4 | 0.57454387 | 3.504717601 | 0.409643 | 0.168113668 | 0.826811367 | 0.9991582 | 11.98424828 | 30377.2259 |
| 1046.6 | 0.57477028 | 3.506098708 | 0.41 | 0.168726693 | 0.826872669 | 1.00010259 | 11.9955648 | 30389.2214 |
| 1046.8 | 0.57499689 | 3.507481047 | 0.410358 | 0.169341391 | 0.826934139 | 1.00104969 | 12.00691373 | 30401.2284 |
| 1047 | 0.57522371 | 3.508864622 | 0.410717 | 0.169957771 | 0.826995777 | 1.00199951 | 12.01829523 | 30413.2466 |
| 1047.2 | 0.57545073 | 3.510249436 | 0.411076 | 0.170575839 | 0.827057584 | 1.00295206 | 12.02970945 | 30425.2764 |
| 1047.4 | 0.57567795 | 3.511635493 | 0.411437 | 0.171195604 | 0.82711956 | 1.00390736 | 12.04115654 | 30437.3175 |
| 1047.6 | 0.57590538 | 3.513022796 | 0.411799 | 0.171817073 | 0.827181707 | 1.00486542 | 12.05263668 | 30449.3701 |
| 1047.8 | 0.57613301 | 3.514411348 | 0.412161 | 0.172440254 | 0.827244025 | 1.00582625 | 12.06415001 | 30461.4343 |
| 1048 | 0.57636084 | 3.515801154 | 0.412525 | 0.173065156 | 0.827306516 | 1.00678987 | 12.07569669 | 30473.51 |
| 1048.2 | 0.57658889 | 3.517192216 | 0.41289 | 0.173691786 | 0.827369179 | 1.00775628 | 12.08727689 | 30485.5973 |
| 1048.4 | 0.57681714 | 3.518584539 | 0.413256 | 0.174320152 | 0.827432015 | 1.00872551 | 12.09889077 | 30497.6962 |
| 1048.6 | 0.57704559 | 3.519978125 | 0.413622 | 0.174950263 | 0.827495026 | 1.00969757 | 12.11053849 | 30509.8067 |
| 1048.8 | 0.57727426 | 3.521372979 | 0.41399 | 0.175582126 | 0.827558213 | 1.01067247 | 12.12222021 | 30521.9289 |
| 1049 | 0.57750313 | 3.522769105 | 0.414359 | 0.17621575 | 0.827621575 | 1.01165022 | 12.1339361 | 30534.0629 |
| 1049.2 | 0.57773221 | 3.524166504 | 0.414729 | 0.176851143 | 0.827685114 | 1.01263084 | 12.14568633 | 30546.2085 |
| 1049.4 | 0.57796151 | 3.525565183 | 0.415099 | 0.177488313 | 0.827748831 | 1.01361434 | 12.15747106 | 30558.366 |
| 1049.6 | 0.57819101 | 3.526965143 | 0.415471 | 0.178127269 | 0.827812727 | 1.01460074 | 12.16929046 | 30570.5353 |
| 1049.8 | 0.57842072 | 3.528366389 | 0.415844 | 0.178768019 | 0.827876802 | 1.01559005 | 12.1811447 | 30582.7165 |
| 1050 | 0.57865064 | 3.529768924 | 0.416218 | 0.179410572 | 0.827941057 | 1.01658228 | 12.19303395 | 30594.9095 |
| 1050.2 | 0.57888078 | 3.531172753 | 0.416593 | 0.180054936 | 0.828005494 | 1.01757745 | 12.20495839 | 30607.1144 |
| 1050.4 | 0.57911113 | 3.532577878 | 0.416969 | 0.18070112 | 0.828070112 | 1.01857558 | 12.21691818 | 30619.3314 |
| 1050.6 | 0.57934169 | 3.533984304 | 0.417347 | 0.181349132 | 0.828134913 | 1.01957667 | 12.22891351 | 30631.5603 |
| 1050.8 | 0.57957246 | 3.535392034 | 0.417725 | 0.181998981 | 0.828199898 | 1.02058075 | 12.24094454 | 30643.8012 |
| 1051 | 0.57980345 | 3.536801073 | 0.418104 | 0.182650676 | 0.828265068 | 1.02158783 | 12.25301145 | 30656.0542 |
| 1051.2 | 0.58003466 | 3.538211424 | 0.418484 | 0.183304226 | 0.828330423 | 1.02259791 | 12.26511443 | 30668.3193 |
| 1051.4 | 0.58026608 | 3.53962309 | 0.418866 | 0.18395964 | 0.828395964 | 1.02361103 | 12.27725365 | 30680.5966 |
| 1051.6 | 0.58049772 | 3.541036076 | 0.419248 | 0.184616926 | 0.828461693 | 1.02462719 | 12.28942929 | 30692.886 |
| 1051.8 | 0.58072957 | 3.542450386 | 0.419632 | 0.185276093 | 0.828527609 | 1.0256464 | 12.30164153 | 30705.1877 |
| 1052 | 0.58096164 | 3.543866023 | 0.420017 | 0.185937151 | 0.828593715 | 1.02666869 | 12.31389056 | 30717.5016 |
| 1052.2 | 0.58119393 | 3.545282991 | 0.420403 | 0.186600109 | 0.828660011 | 1.02769407 | 12.32617656 | 30729.8277 |
| 1052.4 | 0.58142644 | 3.546701295 | 0.42079 | 0.187264976 | 0.828726498 | 1.02872255 | 12.33849972 | 30742.1662 |
| 1052.6 | 0.58165917 | 3.548120937 | 0.421178 | 0.187931761 | 0.828793176 | 1.02975415 | 12.35086022 | 30754.5171 |
| 1052.8 | 0.58189212 | 3.549541923 | 0.421567 | 0.188600474 | 0.828860047 | 1.03078889 | 12.36325825 | 30766.8804 |
| 1053 | 0.58212529 | 3.550964256 | 0.421957 | 0.189271124 | 0.828927112 | 1.03182678 | 12.375694 | 30779.256 |
| 1053.2 | 0.58235868 | 3.55238794 | 0.422349 | 0.18994372 | 0.828994372 | 1.03286783 | 12.38816766 | 30791.6442 |
| 1053.4 | 0.58259229 | 3.55381298 | 0.422741 | 0.190618272 | 0.829061827 | 1.03391207 | 12.40067943 | 30804.0449 |
| 1053.6 | 0.58282613 | 3.555239378 | 0.423135 | 0.191294789 | 0.829129479 | 1.03495951 | 12.4132295 | 30816.4581 |
| 1053.8 | 0.58306019 | 3.55666714 | 0.42353 | 0.191973281 | 0.829197328 | 1.03601016 | 12.42581805 | 30828.8839 |
| 1054 | 0.58329447 | 3.558096269 | 0.423926 | 0.192653758 | 0.829265376 | 1.03706405 | 12.4384453 | 30841.3224 |
| 1054.2 | 0.58352898 | 3.55952677 | 0.424323 | 0.19333623 | 0.829333623 | 1.03812119 | 12.45111143 | 30853.7735 |
| 1054.4 | 0.58376371 | 3.560958646 | 0.424722 | 0.194020706 | 0.829402071 | 1.03918159 | 12.46381665 | 30866.2373 |
| 1054.6 | 0.58399867 | 3.562391902 | 0.425121 | 0.194707197 | 0.82947072 | 1.04024527 | 12.47656115 | 30878.7139 |
| 1054.8 | 0.58423386 | 3.563826542 | 0.425522 | 0.195395712 | 0.829539571 | 1.04131225 | 12.48934515 | 30891.2032 |
| 1055 | 0.58446927 | 3.56526257 | 0.425924 | 0.196086261 | 0.829608626 | 1.04238255 | 12.50216883 | 30903.7054 |
| 1055.2 | 0.58470492 | 3.56669999 | 0.426327 | 0.196778855 | 0.829677885 | 1.04345618 | 12.51503241 | 30916.2204 |
| 1055.4 | 0.58494079 | 3.568138807 | 0.426731 | 0.197473503 | 0.82974735 | 1.04453317 | 12.52793609 | 30928.7484 |
| 1055.6 | 0.58517689 | 3.569579025 | 0.427137 | 0.198170217 | 0.829817022 | 1.04561352 | 12.54088009 | 30941.2892 |
| 1055.8 | 0.58541322 | 3.571020647 | 0.427543 | 0.198869005 | 0.829886901 | 1.04669725 | 12.5538646 | 30953.8431 |
| 1056 | 0.58564978 | 3.572463679 | 0.427951 | 0.19956988 | 0.829956988 | 1.04778439 | 12.56688985 | 30966.41 |
| 1056.2 | 0.58588658 | 3.573908125 | 0.42836 | 0.20027285 | 0.830027285 | 1.04887495 | 12.57995604 | 30978.99 |

Hydrograph: 12021 Woodruff Avenue - 1A (Proposed)

| Time (min) | Incremental I | Incremental De | Intensity (i | Undeveloped Runc | Developed Runoff | Clear Peak Flc | Incremental Vc | Cumulative Vc |
|---|---|---|---|---|---|---|---|---|
| 1175.2 | 0.8526333 | 5.201063137 | 0.465089 | 0.263379043 | 0.836337904 | 1.14746668 | 13.80436309 | 45890.4296 |
| 1175.4 | 0.8528733 | 5.202527104 | 0.462977 | 0.25975012 | 0.835975012 | 1.1417601 | 13.73536064 | 45904.1649 |
| 1175.6 | 0.85311233 | 5.203985202 | 0.460895 | 0.25617249 | 0.835617249 | 1.13613861 | 13.66739222 | 45917.8323 |
| 1175.8 | 0.85335041 | 5.205437503 | 0.458842 | 0.252644941 | 0.835264494 | 1.13060011 | 13.60043229 | 45931.4327 |
| 1176 | 0.85358755 | 5.20688408 | 0.456817 | 0.2491663 | 0.83491663 | 1.12514259 | 13.53445618 | 45944.9672 |
| 1176.2 | 0.85382377 | 5.208325002 | 0.45482 | 0.245735435 | 0.834573543 | 1.11976409 | 13.46944006 | 45958.4366 |
| 1176.4 | 0.85405907 | 5.209760338 | 0.452851 | 0.242351247 | 0.834235125 | 1.11446272 | 13.40536088 | 45971.842 |
| 1176.6 | 0.85429347 | 5.211190155 | 0.450908 | 0.239012676 | 0.833901268 | 1.10923667 | 13.34219639 | 45985.1842 |
| 1176.8 | 0.85452697 | 5.212614519 | 0.44899 | 0.235718692 | 0.833571869 | 1.10408417 | 13.27992505 | 45998.4641 |
| 1177 | 0.85475959 | 5.214033494 | 0.447099 | 0.232468301 | 0.83324683 | 1.0990035 | 13.21852603 | 46011.6826 |
| 1177.2 | 0.85499134 | 5.215447144 | 0.445232 | 0.229260537 | 0.832926054 | 1.09399303 | 13.15797918 | 46024.8406 |
| 1177.4 | 0.85522222 | 5.21685553 | 0.443389 | 0.226094466 | 0.832609447 | 1.08905114 | 13.09826499 | 46037.9389 |
| 1177.6 | 0.85545225 | 5.218258714 | 0.44157 | 0.222969182 | 0.832296918 | 1.08417629 | 13.03936456 | 46050.9782 |
| 1177.8 | 0.85568144 | 5.219656755 | 0.439774 | 0.219883806 | 0.831988381 | 1.07936698 | 12.98125961 | 46063.9595 |
| 1178 | 0.85590979 | 5.221049712 | 0.438001 | 0.216837486 | 0.831683749 | 1.07462175 | 12.9239324 | 46076.8834 |
| 1178.2 | 0.85613732 | 5.222437641 | 0.436251 | 0.213829395 | 0.831382939 | 1.06993921 | 12.86736576 | 46089.7508 |
| 1178.4 | 0.85636403 | 5.2238206 | 0.434522 | 0.210858731 | 0.831085873 | 1.06531797 | 12.81154305 | 46102.5623 |
| 1178.6 | 0.85658994 | 5.225198643 | 0.432814 | 0.207924716 | 0.830792472 | 1.06075672 | 12.75644811 | 46115.3188 |
| 1178.8 | 0.85681505 | 5.226571825 | 0.431127 | 0.205026593 | 0.830502659 | 1.05625416 | 12.70206529 | 46128.0209 |
| 1179 | 0.85703938 | 5.227940199 | 0.429461 | 0.202163628 | 0.830216363 | 1.05180907 | 12.64837939 | 46140.6692 |
| 1179.2 | 0.85726292 | 5.229303817 | 0.427815 | 0.199335108 | 0.829933511 | 1.04742021 | 12.59537568 | 46153.2646 |
| 1179.4 | 0.85748569 | 5.230662731 | 0.426188 | 0.19654034 | 0.829654034 | 1.04308643 | 12.54303985 | 46165.8077 |
| 1179.6 | 0.8577077 | 5.23201699 | 0.424581 | 0.19377865 | 0.829377865 | 1.03880657 | 12.491358 | 46178.299 |
| 1179.8 | 0.85792896 | 5.233366646 | 0.422992 | 0.191049384 | 0.829104938 | 1.03457954 | 12.44031665 | 46190.7393 |
| 1180 | 0.85814947 | 5.234711745 | 0.421422 | 0.188351904 | 0.82883519 | 1.03040425 | 12.38990269 | 46203.1292 |
| 1180.2 | 0.85836924 | 5.236052336 | 0.41987 | 0.185685593 | 0.828568559 | 1.02627965 | 12.34010339 | 46215.4693 |
| 1180.4 | 0.85858827 | 5.237388466 | 0.418336 | 0.183049847 | 0.828304985 | 1.02220474 | 12.29090637 | 46227.7602 |
| 1180.6 | 0.85880659 | 5.238720181 | 0.41682 | 0.180444081 | 0.828044408 | 1.01817853 | 12.24229961 | 46240.0025 |
| 1180.8 | 0.85902418 | 5.240047526 | 0.41532 | 0.177867723 | 0.827786772 | 1.01420004 | 12.19427141 | 46252.1968 |
| 1181 | 0.85924107 | 5.241370545 | 0.413838 | 0.17532022 | 0.827532022 | 1.01026836 | 12.1468104 | 46264.3436 |
| 1181.2 | 0.85945726 | 5.242689283 | 0.412371 | 0.172801031 | 0.827280103 | 1.00638256 | 12.09990552 | 46276.4435 |
| 1181.4 | 0.85967275 | 5.244003783 | 0.410921 | 0.170309629 | 0.827030963 | 1.00254177 | 12.053546 | 46288.4971 |
| 1181.6 | 0.85988756 | 5.245314087 | 0.409487 | 0.167845502 | 0.82678455 | 0.99874512 | 12.00772137 | 46300.5048 |
| 1181.8 | 0.86010168 | 5.246620236 | 0.408069 | 0.16540815 | 0.826540815 | 0.99499178 | 11.96242145 | 46312.4672 |
| 1182 | 0.86031513 | 5.247922271 | 0.406665 | 0.162997087 | 0.826299709 | 0.99128093 | 11.91763629 | 46324.3849 |
| 1182.2 | 0.86052791 | 5.249220233 | 0.405277 | 0.160611839 | 0.826061184 | 0.98761178 | 11.87335624 | 46336.2582 |
| 1182.4 | 0.86074003 | 5.250514161 | 0.403904 | 0.158251942 | 0.825825194 | 0.98398354 | 11.8295719 | 46348.0878 |
| 1182.6 | 0.86095149 | 5.251804095 | 0.402545 | 0.155916947 | 0.825591695 | 0.98039547 | 11.78627408 | 46359.8741 |
| 1182.8 | 0.86116231 | 5.253090071 | 0.4012 | 0.153606414 | 0.825360641 | 0.97684684 | 11.74345385 | 46371.6175 |
| 1183 | 0.86137248 | 5.25437213 | 0.399869 | 0.151319914 | 0.825131991 | 0.97333692 | 11.70110252 | 46383.3186 |
| 1183.2 | 0.86158202 | 5.255650306 | 0.398552 | 0.14905703 | 0.824905703 | 0.96986502 | 11.6592116 | 46394.9778 |
| 1183.4 | 0.86179092 | 5.256924637 | 0.397248 | 0.146817352 | 0.824681735 | 0.96643045 | 11.61777281 | 46406.5956 |
| 1183.6 | 0.86199921 | 5.258195159 | 0.395958 | 0.144600484 | 0.824460048 | 0.96303256 | 11.57677809 | 46418.1724 |
| 1183.8 | 0.86220687 | 5.259461908 | 0.394681 | 0.142406035 | 0.824240604 | 0.9596707 | 11.53621958 | 46429.7086 |
| 1184 | 0.86241392 | 5.260724917 | 0.393417 | 0.140233629 | 0.824023363 | 0.95634423 | 11.4960896 | 46441.2047 |
| 1184.2 | 0.86262036 | 5.261984222 | 0.392165 | 0.138082892 | 0.823808289 | 0.95305255 | 11.45638067 | 46452.6611 |
| 1184.4 | 0.86282621 | 5.263239855 | 0.390925 | 0.135953466 | 0.823595347 | 0.94979504 | 11.41708549 | 46464.0782 |
| 1184.6 | 0.86303145 | 5.264491851 | 0.389698 | 0.133844995 | 0.823384499 | 0.94657112 | 11.37819693 | 46475.4564 |
| 1184.8 | 0.86323611 | 5.265740243 | 0.388483 | 0.131757135 | 0.823175713 | 0.94338022 | 11.33970804 | 46486.7961 |
| 1185 | 0.86344017 | 5.266985061 | 0.38728 | 0.129689549 | 0.822968955 | 0.94022178 | 11.30161202 | 46498.0977 |
| 1185.2 | 0.86364366 | 5.268226339 | 0.386088 | 0.127641907 | 0.822764191 | 0.93709526 | 11.26390224 | 46509.3616 |
| 1185.4 | 0.86384657 | 5.269464107 | 0.384908 | 0.125613888 | 0.822561389 | 0.93400011 | 11.22657224 | 46520.5881 |
| 1185.6 | 0.86404892 | 5.270698397 | 0.383739 | 0.123605178 | 0.822360518 | 0.93093583 | 11.18961568 | 46531.7778 |
| 1185.8 | 0.86425069 | 5.271929238 | 0.382581 | 0.121615467 | 0.822161547 | 0.9279019 | 11.15302638 | 46542.9308 |

Job # 3700 12021 Woodruff Avenue, Downey
Volume at North Truck Yard (4A)

| Elevation | Depth (feet) | Area (sq. ft.) | Volume (c.f.) | ∑ Volume (c.f.) | ∑ Volume (ac-ft) |
|---|---|---|---|---|---|
| 102.24 | 0.00 | 1251 | | | |
| | | | 114 | 114 | 0.00 |
| 102.40 | 0.16 | 176 | | | |
| | | | 254 | 368 | 0.01 |
| 102.60 | 0.36 | 2362 | | | |
| | | | 1078 | 1445 | 0.03 |
| 102.80 | 0.56 | 8413 | | | |
| | | | 2656 | 4101 | 0.09 |
| 103.00 | 0.76 | 18147 | | | |
| | | | 5336 | 9437 | 0.22 |
| 103.20 | 0.96 | 35208 | | | |
| | | | 8133 | 17569 | 0.40 |
| 103.40 | 1.16 | 46117 | | | |

# Peak Flow Hydrologic Analysis

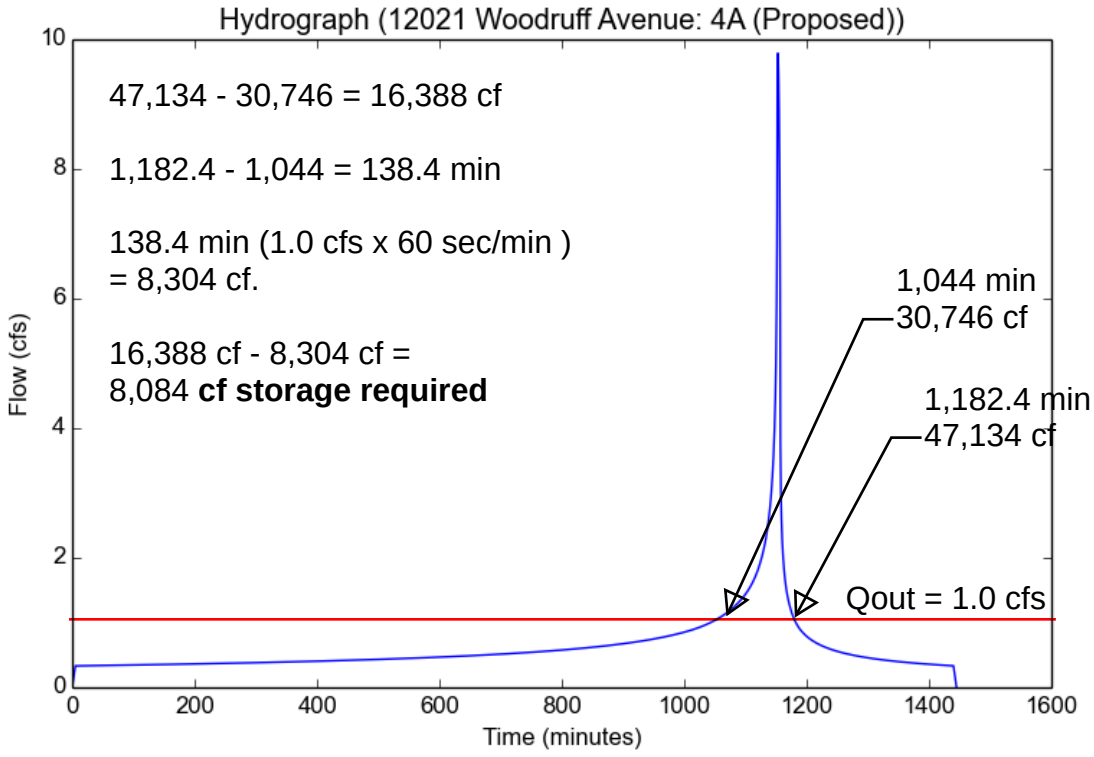
File location: O:/3700-3799/3700/HYDROLOGY/HYDROCALC/12021 Woodruff Avenue Report.pdf
Version: HydroCalc 1.0.2

## Input Parameters

| | |
|---|---|
| Project Name | 12021 Woodruff Avenue |
| Subarea ID | 4A (Proposed) |
| Area (ac) | 3.0 |
| Flow Path Length (ft) | 355.0 |
| Flow Path Slope (vft/hft) | 0.0182 |
| 50-yr Rainfall Depth (in) | 6.1 |
| Percent Impervious | 0.9 |
| Soil Type | 6 |
| Design Storm Frequency | 50-yr |
| Fire Factor | 0 |
| LID | False |

## Output Results

| | |
|---|---|
| Modeled (50-yr) Rainfall Depth (in) | 6.1 |
| Peak Intensity (in/hr) | 3.6394 |
| Undeveloped Runoff Coefficient (Cu) | 0.8627 |
| Developed Runoff Coefficient (Cd) | 0.8963 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 9.7857 |
| Burned Peak Flow Rate (cfs) | 9.7857 |
| 24-Hr Clear Runoff Volume (ac-ft) | 1.2581 |
| 24-Hr Clear Runoff Volume (cu-ft) | 54804.7611 |



Inputs: 12021 Woodruff Avenue

| Subarea ID | Area (ac) | Flow Path Leng | Flow Path | 50-yr Rainfall Dept | Percent Imperviou | Soil Type | Design Storm F | Fire Factor |
|---|---|---|---|---|---|---|---|---|
| 4A (Proposec | 3 | 355 | 0.0182 | 6.1 | 0.9 | 6 | 50-yr | 0 |

Outputs: 12021 Woodruff Avenue

| Area (ac) | Modeled (50- | Time of Concer | Clear Peak | 24-Hr Clear Runoff | Burned Peak Flow | Peak Intensit | Undeveloped F | Developed Ru |
|---|---|---|---|---|---|---|---|---|
| 4A (Proposec | 6.1 | 5 | 9.786 | 1.258144195 | 9.785743208 | 3.63942742 | 0.862713164 | 0.89627132 |

Hydrograph: 12021 Woodruff Avenue - 4A (Proposed)

| Time (min) | Incremental N | Incremental De | Intensity (i | Undeveloped Runc | Developed Runoff | Clear Peak Flc | Incremental Vc | Cumulative Vc |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0.2 | 7.36E-05 | 0.000449046 | 0 | 0 | 0 | 0.01326885 | 0.079613093 | 0.07961309 |
| 0.4 | 0.00014723 | 0.000898129 | 0 | 0 | 0 | 0.0265377 | 0.238839278 | 0.31845237 |
| 0.6 | 0.00022086 | 0.001347248 | 0 | 0 | 0 | 0.03980655 | 0.398065463 | 0.71651783 |
| 0.8 | 0.00029449 | 0.001796404 | 0 | 0 | 0 | 0.0530754 | 0.557291649 | 1.27380948 |
| 1 | 0.00036813 | 0.002245597 | 0 | 0 | 0 | 0.06634424 | 0.716517834 | 1.99032732 |
| 1.2 | 0.00044177 | 0.002694827 | 0 | 0 | 0 | 0.07961309 | 0.875744019 | 2.86607134 |
| 1.4 | 0.00051543 | 0.003144093 | 0 | 0 | 0 | 0.09288194 | 1.034970205 | 3.90104154 |
| 1.6 | 0.00058908 | 0.003593395 | 0 | 0 | 0 | 0.10615079 | 1.19419639 | 5.09523793 |
| 1.8 | 0.00066274 | 0.004042735 | 0 | 0 | 0 | 0.11941964 | 1.353422575 | 6.44866051 |
| 2 | 0.00073641 | 0.004492111 | 0 | 0 | 0 | 0.13268849 | 1.512648761 | 7.96130927 |
| 2.2 | 0.00081009 | 0.004941524 | 0 | 0 | 0 | 0.14595734 | 1.671874946 | 9.63318421 |
| 2.4 | 0.00088377 | 0.005390974 | 0 | 0 | 0 | 0.15922619 | 1.831101131 | 11.4642853 |
| 2.6 | 0.00095745 | 0.005840461 | 0 | 0 | 0 | 0.17249503 | 1.990327316 | 13.4546127 |
| 2.8 | 0.00103114 | 0.006289984 | 0 | 0 | 0 | 0.18576388 | 2.149553502 | 15.6041662 |
| 3 | 0.00110484 | 0.006739544 | 0 | 0 | 0 | 0.19903273 | 2.308779687 | 17.9129458 |
| 3.2 | 0.00117855 | 0.007189141 | 0 | 0 | 0 | 0.21230158 | 2.468005872 | 20.3809517 |
| 3.4 | 0.00125226 | 0.007638774 | 0 | 0 | 0 | 0.22557043 | 2.627232058 | 23.0081838 |
| 3.6 | 0.00132597 | 0.008088445 | 0 | 0 | 0 | 0.23883928 | 2.786458243 | 25.794642 |
| 3.8 | 0.0013997 | 0.008538152 | 0 | 0 | 0 | 0.25210813 | 2.945684428 | 28.7403264 |
| 4 | 0.00147343 | 0.008987896 | 0 | 0 | 0 | 0.26537698 | 3.104910614 | 31.8452371 |
| 4.2 | 0.00154716 | 0.009437677 | 0 | 0 | 0 | 0.27864582 | 3.264136799 | 35.1093739 |
| 4.4 | 0.0016209 | 0.009887494 | 0 | 0 | 0 | 0.29191467 | 3.423362984 | 38.5327368 |
| 4.6 | 0.00169465 | 0.010337349 | 0 | 0 | 0 | 0.30518352 | 3.58258917 | 42.115326 |
| 4.8 | 0.0017684 | 0.01078724 | 0 | 0 | 0 | 0.31845237 | 3.741815355 | 45.8571414 |
| 5 | 0.00184216 | 0.011237169 | 0.134846 | 0.1 | 0.82 | 0.33172122 | 3.90104154 | 49.7581829 |
| 5.2 | 0.00191592 | 0.011687134 | 0.134857 | 0.1 | 0.82 | 0.33174835 | 3.980817413 | 53.7390003 |
| 5.4 | 0.00198969 | 0.012137136 | 0.134868 | 0.1 | 0.82 | 0.33177549 | 3.981143013 | 57.7201433 |
| 5.6 | 0.00206347 | 0.012587175 | 0.134879 | 0.1 | 0.82 | 0.33180263 | 3.981468697 | 61.701612 |
| 5.8 | 0.00213725 | 0.013037251 | 0.13489 | 0.1 | 0.82 | 0.33182978 | 3.981794465 | 65.6834065 |
| 6 | 0.00221104 | 0.013487363 | 0.134901 | 0.1 | 0.82 | 0.33185694 | 3.982120316 | 69.6655268 |
| 6.2 | 0.00228484 | 0.013937513 | 0.134912 | 0.1 | 0.82 | 0.3318841 | 3.98244625 | 73.6479731 |
| 6.4 | 0.00235864 | 0.0143877 | 0.134923 | 0.1 | 0.82 | 0.33191127 | 3.982772268 | 77.6307453 |
| 6.6 | 0.00243245 | 0.014837923 | 0.134934 | 0.1 | 0.82 | 0.33193845 | 3.983098369 | 81.6138437 |
| 6.8 | 0.00250626 | 0.015288184 | 0.134945 | 0.1 | 0.82 | 0.33196564 | 3.983424554 | 85.5972683 |
| 7 | 0.00258008 | 0.015738481 | 0.134956 | 0.1 | 0.82 | 0.33199283 | 3.983750822 | 89.5810191 |
| 7.2 | 0.0026539 | 0.016188815 | 0.134967 | 0.1 | 0.82 | 0.33202003 | 3.984077174 | 93.5650963 |
| 7.4 | 0.00272774 | 0.016639187 | 0.134979 | 0.1 | 0.82 | 0.33204724 | 3.984403609 | 97.5494999 |
| 7.6 | 0.00280157 | 0.017089595 | 0.13499 | 0.1 | 0.82 | 0.33207445 | 3.984730129 | 101.53423 |
| 7.8 | 0.00287542 | 0.01754004 | 0.135001 | 0.1 | 0.82 | 0.33210167 | 3.985056731 | 105.519287 |
| 8 | 0.00294927 | 0.017990523 | 0.135012 | 0.1 | 0.82 | 0.3321289 | 3.985383418 | 109.50467 |
| 8.2 | 0.00302312 | 0.018441042 | 0.135023 | 0.1 | 0.82 | 0.33215613 | 3.985710188 | 113.49038 |
| 8.4 | 0.00309698 | 0.018891599 | 0.135034 | 0.1 | 0.82 | 0.33218337 | 3.986037043 | 117.476417 |
| 8.6 | 0.00317085 | 0.019342192 | 0.135045 | 0.1 | 0.82 | 0.33221062 | 3.986363981 | 121.462781 |

Hydrograph: 12021 Woodruff Avenue - 4A (Proposed)

| Time (min) | Incremental I | Incremental De | Intensity (i | Undeveloped Runc | Developed Runoff | Clear Peak Flc | Incremental Vc | Cumulative Vc |
|---|---|---|---|---|---|---|---|---|
| 1110.4 | 0.66239328 | 4.040599017 | 0.624528 | 0.411307465 | 0.851130746 | 1.59466488 | 19.1145673 | 35669.775 |
| 1110.6 | 0.66274431 | 4.042740298 | 0.625866 | 0.412252242 | 0.851225224 | 1.59825812 | 19.157538 | 35688.9326 |
| 1110.8 | 0.66309614 | 4.044886446 | 0.627213 | 0.413203385 | 0.851320339 | 1.60187633 | 19.20080669 | 35708.1334 |
| 1111 | 0.66344877 | 4.047037496 | 0.628568 | 0.414160966 | 0.851416097 | 1.60551981 | 19.24437684 | 35727.3778 |
| 1111.2 | 0.66380221 | 4.049193483 | 0.629934 | 0.415125059 | 0.851512506 | 1.60918885 | 19.28825197 | 35746.666 |
| 1111.4 | 0.66415647 | 4.051354443 | 0.631308 | 0.416095738 | 0.851609574 | 1.61288376 | 19.33243566 | 35765.9984 |
| 1111.6 | 0.66451154 | 4.053520413 | 0.632692 | 0.41707308 | 0.851707308 | 1.61660483 | 19.37693156 | 35785.3754 |
| 1111.8 | 0.66486745 | 4.055691428 | 0.634085 | 0.418057162 | 0.851805716 | 1.62035239 | 19.42174336 | 35804.7971 |
| 1112 | 0.66522418 | 4.057867525 | 0.635488 | 0.419048062 | 0.851904806 | 1.62412675 | 19.46687482 | 35824.264 |
| 1112.2 | 0.66558176 | 4.060048742 | 0.636901 | 0.42004586 | 0.852004586 | 1.62792822 | 19.51232978 | 35843.7763 |
| 1112.4 | 0.66594018 | 4.062235117 | 0.638324 | 0.421050638 | 0.852105064 | 1.63175714 | 19.55811212 | 35863.3344 |
| 1112.6 | 0.66629946 | 4.064426689 | 0.639757 | 0.422062477 | 0.852206248 | 1.63561383 | 19.6042258 | 35882.9387 |
| 1112.8 | 0.66665959 | 4.066623494 | 0.641199 | 0.423081463 | 0.852308146 | 1.63949864 | 19.65067483 | 35902.5893 |
| 1113 | 0.66702059 | 4.068825575 | 0.642653 | 0.424107679 | 0.852410768 | 1.64341191 | 19.69746333 | 35922.2868 |
| 1113.2 | 0.66738245 | 4.071032969 | 0.644116 | 0.425141214 | 0.852514121 | 1.64735399 | 19.74459544 | 35942.0314 |
| 1113.4 | 0.6677452 | 4.073245717 | 0.64559 | 0.426182154 | 0.852618215 | 1.65132524 | 19.79207539 | 35961.8235 |
| 1113.6 | 0.66810883 | 4.075463861 | 0.647074 | 0.42723059 | 0.852723059 | 1.65532601 | 19.83990751 | 35981.6634 |
| 1113.8 | 0.66847335 | 4.077687441 | 0.64857 | 0.428286614 | 0.852828661 | 1.65935668 | 19.88809617 | 36001.5515 |
| 1114 | 0.66883877 | 4.0799165 | 0.650076 | 0.429350317 | 0.852935032 | 1.66341762 | 19.93664582 | 36021.4881 |
| 1114.2 | 0.66920509 | 4.082151079 | 0.651593 | 0.430421795 | 0.853042179 | 1.66750921 | 19.98556101 | 36041.4737 |
| 1114.4 | 0.66957233 | 4.084391222 | 0.653121 | 0.431501143 | 0.853150114 | 1.67163185 | 20.03484636 | 36061.5085 |
| 1114.6 | 0.66994049 | 4.086636973 | 0.654661 | 0.432588459 | 0.853258846 | 1.67578592 | 20.08450657 | 36081.593 |
| 1114.8 | 0.67030957 | 4.088888375 | 0.656212 | 0.433683843 | 0.853368384 | 1.67997182 | 20.13454642 | 36101.7276 |
| 1115 | 0.67067959 | 4.091145474 | 0.657775 | 0.434787396 | 0.85347874 | 1.68418997 | 20.18497078 | 36121.9126 |
| 1115.2 | 0.67105054 | 4.093408314 | 0.659349 | 0.43589922 | 0.853589922 | 1.68844079 | 20.2357846 | 36142.1483 |
| 1115.4 | 0.67142245 | 4.095676941 | 0.660935 | 0.437019421 | 0.853701942 | 1.6927247 | 20.28699295 | 36162.4353 |
| 1115.6 | 0.67179531 | 4.097951403 | 0.662533 | 0.438148106 | 0.853814811 | 1.69704213 | 20.33860095 | 36182.7739 |
| 1115.8 | 0.67216914 | 4.100231745 | 0.664144 | 0.439285383 | 0.853928538 | 1.70139352 | 20.39061385 | 36203.1645 |
| 1116 | 0.67254394 | 4.102518017 | 0.665766 | 0.440431363 | 0.854043136 | 1.70577931 | 20.44303698 | 36223.6076 |
| 1116.2 | 0.67291972 | 4.104810267 | 0.667401 | 0.441586158 | 0.854158616 | 1.71019998 | 20.49587576 | 36244.1035 |
| 1116.4 | 0.67329648 | 4.107108543 | 0.669049 | 0.442749884 | 0.854274988 | 1.71465597 | 20.54913572 | 36264.6526 |
| 1116.6 | 0.67367425 | 4.109412896 | 0.67071 | 0.443922656 | 0.854392266 | 1.71914778 | 20.60282251 | 36285.2554 |
| 1116.8 | 0.67405301 | 4.111723375 | 0.672383 | 0.445104594 | 0.854510459 | 1.72367587 | 20.65694186 | 36305.9124 |
| 1117 | 0.67443279 | 4.114040033 | 0.67407 | 0.446295819 | 0.854629582 | 1.72824074 | 20.71149962 | 36326.6239 |
| 1117.2 | 0.67481359 | 4.116362922 | 0.67577 | 0.447496455 | 0.854749646 | 1.73284289 | 20.76650176 | 36347.3904 |
| 1117.4 | 0.67519543 | 4.118692093 | 0.677484 | 0.448706627 | 0.854870663 | 1.73748284 | 20.82195435 | 36368.2123 |
| 1117.6 | 0.6755783 | 4.121027601 | 0.679211 | 0.449926464 | 0.854992646 | 1.7421611 | 20.87786358 | 36389.0902 |
| 1117.8 | 0.67596221 | 4.123369499 | 0.680952 | 0.451156096 | 0.85511561 | 1.7468782 | 20.93423577 | 36410.0244 |
| 1118 | 0.67634719 | 4.125717843 | 0.682707 | 0.452395656 | 0.855239566 | 1.75163469 | 20.99107735 | 36431.0155 |
| 1118.2 | 0.67673323 | 4.128072689 | 0.684477 | 0.45364528 | 0.855364528 | 1.75643112 | 21.04839488 | 36452.0639 |
| 1118.4 | 0.67712034 | 4.130434093 | 0.686261 | 0.454905106 | 0.855490511 | 1.76126805 | 21.10619506 | 36473.1701 |
| 1118.6 | 0.67750854 | 4.132802112 | 0.688059 | 0.456175275 | 0.855617528 | 1.76614606 | 21.1644847 | 36494.3346 |
| 1118.8 | 0.67789784 | 4.135176806 | 0.689872 | 0.457455931 | 0.855745593 | 1.77106573 | 21.22327077 | 36515.5578 |
| 1119 | 0.67828823 | 4.137558232 | 0.691701 | 0.458747221 | 0.855874722 | 1.77602766 | 21.28256036 | 36536.8404 |
| 1119.2 | 0.67867975 | 4.139946452 | 0.693544 | 0.460049293 | 0.856004929 | 1.78103246 | 21.34236072 | 36558.1828 |
| 1119.4 | 0.67907238 | 4.142341525 | 0.695404 | 0.4613623 | 0.85613623 | 1.78608075 | 21.40267924 | 36579.5854 |
| 1119.6 | 0.67946615 | 4.144743515 | 0.697279 | 0.462686398 | 0.85626864 | 1.79117316 | 21.46352344 | 36601.049 |
| 1119.8 | 0.67986106 | 4.147152484 | 0.699169 | 0.464021746 | 0.856402175 | 1.79631035 | 21.52490103 | 36622.5739 |
| 1120 | 0.68025713 | 4.149568496 | 0.701076 | 0.465368504 | 0.85653685 | 1.80149296 | 21.58681986 | 36644.1607 |
| 1120.2 | 0.68065436 | 4.151991615 | 0.703 | 0.466726839 | 0.856672684 | 1.80672169 | 21.64928795 | 36665.81 |
| 1120.4 | 0.68105277 | 4.154421907 | 0.70494 | 0.468096918 | 0.856809692 | 1.81199722 | 21.71231346 | 36687.5223 |
| 1120.6 | 0.68145237 | 4.156859439 | 0.706896 | 0.469478914 | 0.856947891 | 1.81732024 | 21.77590477 | 36709.2982 |
| 1120.8 | 0.68185316 | 4.15930428 | 0.70887 | 0.470873002 | 0.8570873 | 1.82269149 | 21.8400704 | 36731.1383 |
| 1121 | 0.68225516 | 4.161756498 | 0.710862 | 0.472279361 | 0.857227936 | 1.82811169 | 21.90481906 | 36753.0431 |

Hydrograph: 12021 Woodruff Avenue - 4A (Proposed)

| Time (min) | Incremental I | Incremental De | Intensity (i | Undeveloped Runc | Developed Runoff | Clear Peak Flc | Incremental Vc | Cumulative Vc |
|---|---|---|---|---|---|---|---|---|
| 1175.2 | 0.8526333 | 5.201063137 | 0.465089 | 0.263379043 | 0.836337904 | 1.16691526 | 14.03833534 | 46668.2334 |
| 1175.4 | 0.8528733 | 5.202527104 | 0.462977 | 0.25975012 | 0.835975012 | 1.16111196 | 13.96816336 | 46682.2016 |
| 1175.6 | 0.85311233 | 5.203985202 | 0.460895 | 0.25617249 | 0.835617249 | 1.15539519 | 13.89904294 | 46696.1006 |
| 1175.8 | 0.85335041 | 5.205437503 | 0.458842 | 0.252644941 | 0.835264494 | 1.14976282 | 13.83094809 | 46709.9316 |
| 1176 | 0.85358755 | 5.20688408 | 0.456817 | 0.2491663 | 0.83491663 | 1.1442128 | 13.76385374 | 46723.6954 |
| 1176.2 | 0.85382377 | 5.208325002 | 0.45482 | 0.245735435 | 0.834573543 | 1.13874314 | 13.69773565 | 46737.3932 |
| 1176.4 | 0.85405907 | 5.209760338 | 0.452851 | 0.242351247 | 0.834235125 | 1.13335192 | 13.63257039 | 46751.0258 |
| 1176.6 | 0.85429347 | 5.211190155 | 0.450908 | 0.239012676 | 0.833901268 | 1.12803729 | 13.56833531 | 46764.5941 |
| 1176.8 | 0.85452697 | 5.212614519 | 0.44899 | 0.235718692 | 0.833571869 | 1.12279746 | 13.50500852 | 46778.0991 |
| 1177 | 0.85475959 | 5.214033494 | 0.447099 | 0.232468301 | 0.83324683 | 1.11763068 | 13.44256885 | 46791.5417 |
| 1177.2 | 0.85499134 | 5.215447144 | 0.445232 | 0.229260537 | 0.832926054 | 1.11253528 | 13.38099578 | 46804.9227 |
| 1177.4 | 0.85522222 | 5.21685553 | 0.443389 | 0.226094466 | 0.832609447 | 1.10750963 | 13.32026948 | 46818.2429 |
| 1177.6 | 0.85545225 | 5.218258714 | 0.44157 | 0.222969182 | 0.832296918 | 1.10255216 | 13.26037074 | 46831.5033 |
| 1177.8 | 0.85568144 | 5.219656755 | 0.439774 | 0.219883806 | 0.831988381 | 1.09766133 | 13.20128096 | 46844.7046 |
| 1178 | 0.85590979 | 5.221049712 | 0.438001 | 0.216837486 | 0.831683749 | 1.09283568 | 13.1429821 | 46857.8476 |
| 1178.2 | 0.85613732 | 5.222437641 | 0.436251 | 0.213829395 | 0.831382939 | 1.08807377 | 13.08545671 | 46870.933 |
| 1178.4 | 0.85636403 | 5.2238206 | 0.434522 | 0.210858731 | 0.831085873 | 1.08337421 | 13.02868785 | 46883.9617 |
| 1178.6 | 0.85658994 | 5.225198643 | 0.432814 | 0.207924716 | 0.830792472 | 1.07873564 | 12.97265909 | 46896.9344 |
| 1178.8 | 0.85681505 | 5.226571825 | 0.431127 | 0.205026593 | 0.830502659 | 1.07415678 | 12.91735453 | 46909.8517 |
| 1179 | 0.85703938 | 5.227940199 | 0.429461 | 0.202163628 | 0.830216363 | 1.06963634 | 12.8627587 | 46922.7145 |
| 1179.2 | 0.85726292 | 5.229303817 | 0.427815 | 0.199335108 | 0.829933511 | 1.0651731 | 12.80885663 | 46935.5233 |
| 1179.4 | 0.85748569 | 5.230662731 | 0.426188 | 0.19654034 | 0.829654034 | 1.06076586 | 12.75563375 | 46948.279 |
| 1179.6 | 0.8577077 | 5.23201699 | 0.424581 | 0.19377865 | 0.829377865 | 1.05641346 | 12.70307594 | 46960.9821 |
| 1179.8 | 0.85792896 | 5.233366646 | 0.422992 | 0.191049384 | 0.829104938 | 1.05211478 | 12.65116948 | 46973.6332 |
| 1180 | 0.85814947 | 5.234711745 | 0.421422 | 0.188351904 | 0.82883519 | 1.04786872 | 12.59990104 | 46986.2331 |
| 1180.2 | 0.85836924 | 5.236052336 | 0.41987 | 0.185685593 | 0.828568559 | 1.04367422 | 12.54925768 | 46998.7824 |
| 1180.4 | 0.85858827 | 5.237388466 | 0.418336 | 0.183049847 | 0.828304985 | 1.03953025 | 12.49922682 | 47011.2816 |
| 1180.6 | 0.85880659 | 5.238720181 | 0.41682 | 0.180444081 | 0.828044408 | 1.03543579 | 12.44979621 | 47023.7314 |
| 1180.8 | 0.85902418 | 5.240047526 | 0.41532 | 0.177867723 | 0.827786772 | 1.03138987 | 12.40095397 | 47036.1324 |
| 1181 | 0.85924107 | 5.241370545 | 0.413838 | 0.17532022 | 0.827532022 | 1.02739155 | 12.35268854 | 47048.485 |
| 1181.2 | 0.85945726 | 5.242689283 | 0.412371 | 0.172801031 | 0.827280103 | 1.02343989 | 12.30498866 | 47060.79 |
| 1181.4 | 0.85967275 | 5.244003783 | 0.410921 | 0.170309629 | 0.827030963 | 1.019534 | 12.25784339 | 47073.0479 |
| 1181.6 | 0.85988756 | 5.245314087 | 0.409487 | 0.167845502 | 0.82678455 | 1.01567301 | 12.21124208 | 47085.2591 |
| 1181.8 | 0.86010168 | 5.246620236 | 0.408069 | 0.16540815 | 0.826540815 | 1.01185605 | 12.16517435 | 47097.4243 |
| 1182 | 0.86031513 | 5.247922271 | 0.406665 | 0.162997087 | 0.826299709 | 1.0080823 | 12.11963013 | 47109.5439 |
| 1182.2 | 0.86052791 | 5.249220233 | 0.405277 | 0.160611839 | 0.826061184 | 1.00435096 | 12.07459957 | 47121.6185 |
| 1182.4 | 0.86074003 | 5.250514161 | 0.403904 | 0.158251942 | 0.825825194 | 1.00066123 | 12.03007311 | 47133.6486 |
| 1182.6 | 0.86095149 | 5.251804095 | 0.402545 | 0.155916947 | 0.825591695 | 0.99701234 | 11.98604143 | 47145.6346 |
| 1182.8 | 0.86116231 | 5.253090071 | 0.4012 | 0.153606414 | 0.825360641 | 0.99340356 | 11.94249544 | 47157.5771 |
| 1183 | 0.86137248 | 5.25437213 | 0.399869 | 0.151319914 | 0.825131991 | 0.98983415 | 11.89942629 | 47169.4766 |
| 1183.2 | 0.86158202 | 5.255650306 | 0.398552 | 0.14905703 | 0.824905703 | 0.98630341 | 11.85682535 | 47181.3334 |
| 1183.4 | 0.86179092 | 5.256924637 | 0.397248 | 0.146817352 | 0.824681735 | 0.98281063 | 11.81468421 | 47193.1481 |
| 1183.6 | 0.86199921 | 5.258195159 | 0.395958 | 0.144600484 | 0.824460048 | 0.97935515 | 11.77299467 | 47204.9211 |
| 1183.8 | 0.86220687 | 5.259461908 | 0.394681 | 0.142406035 | 0.824240604 | 0.97593631 | 11.73174872 | 47216.6528 |
| 1184 | 0.86241392 | 5.260724917 | 0.393417 | 0.140233629 | 0.824023363 | 0.97255346 | 11.69093857 | 47228.3437 |
| 1184.2 | 0.86262036 | 5.261984222 | 0.392165 | 0.138082892 | 0.823808289 | 0.96920598 | 11.65055661 | 47239.9943 |
| 1184.4 | 0.86282621 | 5.263239855 | 0.390925 | 0.135953466 | 0.823595347 | 0.96589326 | 11.61059541 | 47251.6049 |
| 1184.6 | 0.86303145 | 5.264491851 | 0.389698 | 0.133844995 | 0.823384499 | 0.9626147 | 11.57104773 | 47263.1759 |
| 1184.8 | 0.86323611 | 5.265740243 | 0.388483 | 0.131757135 | 0.823175713 | 0.95936972 | 11.53190648 | 47274.7079 |
| 1185 | 0.86344017 | 5.266985061 | 0.38728 | 0.129689549 | 0.822968955 | 0.95615774 | 11.49316476 | 47286.201 |
| 1185.2 | 0.86364366 | 5.268226339 | 0.386088 | 0.127641907 | 0.822764191 | 0.95297823 | 11.45481584 | 47297.6558 |
| 1185.4 | 0.86384657 | 5.269464107 | 0.384908 | 0.125613888 | 0.822561389 | 0.94983063 | 11.41685312 | 47309.0727 |
| 1185.6 | 0.86404892 | 5.270698397 | 0.383739 | 0.123605178 | 0.822360518 | 0.9467144 | 11.37927018 | 47320.452 |
| 1185.8 | 0.86425069 | 5.271929238 | 0.382581 | 0.121615467 | 0.822161547 | 0.94362905 | 11.34206073 | 47331.794 |

# APPENDIX D

# HYDRAULICS CALCULATIONS

DATE: 7/24/2019
TIME: 11:42

F0515P
WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING PAGE 1

| CARD CODE | SECT NO | CHN TYPE | NO OF PIERS | AVE PIER WIDTH | HEIGHT 1 DIAMETER | BASE WIDTH | ZL | ZR | INV DROP | Y(1) | Y(2) | Y(3) | Y(4) | Y(5) | Y(6) | Y(7) | Y(8) | Y(9) | Y(10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CD | 18 | 4 | | | 1.50 | | | | | | | | | | | | | | |
| CD | 15 | 4 | | | 1.25 | | | | | | | | | | | | | | |
| CD | 12 | 4 | | | 1.00 | | | | | | | | | | | | | | |
| CD | 24 | 4 | | | 2.00 | | | | | | | | | | | | | | |

F 0 5 1 5 P PAGE NO 3

WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -

3700 - WOODRUFF AVENUE

HEADING LINE NO 2 IS -

LINE A

HEADING LINE NO 3 IS -

50

F 0 5 1 5 P PAGE NO 2

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET * * *

| U/S DATA | STATION | INVERT | SECT | W S ELEV |
|---|---|---|---|---|
| | 1000.00 | 98.68 | 15 | 102.68 |

ELEMENT NO 2 IS A REACH * * *

| U/S DATA | STATION | INVERT | SECT | N | RADIUS | ANGLE | ANG PT | MAN H |
|---|---|---|---|---|---|---|---|---|
| | 1001.83 | 98.68 | 15 | 0.012 | 22.50 | 45.00 | 0.00 | 0 |

ELEMENT NO 3 IS A REACH * * *

| U/S DATA | STATION | INVERT | SECT | N | RADIUS | ANGLE | ANG PT | MAN H |
|---|---|---|---|---|---|---|---|---|
| | 1118.29 | 98.98 | 15 | 0.012 | 0.00 | 0.00 | 0.00 | 0 |

ELEMENT NO 4 IS A JUNCTION * * * * * * *

| U/S DATA | STATION | INVERT | SECT | LAT-1 | LAT-2 | N | Q3 | Q4 | INVERT-3 | INVERT-4 | PHI 3 | PHI 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1122.29 | 98.99 | 12 | 12 | 0 | 0.012 | 2.7 | 0.0 | 98.99 | 0.00 | 45.00 | 0.00 |

ELEMENT NO 5 IS A REACH * * *

| U/S DATA | STATION | INVERT | SECT | N | RADIUS | ANGLE | ANG PT | MAN H |
|---|---|---|---|---|---|---|---|---|
| | 1331.73 | 99.46 | 12 | 0.012 | 0.00 | 0.00 | 0.00 | 0 |

ELEMENT NO 6 IS A SYSTEM HEADWORKS * *

| U/S DATA | STATION | INVERT | SECT | W S ELEV |
|---|---|---|---|---|
| | 1331.73 | 99.46 | 12 | 0.00 |

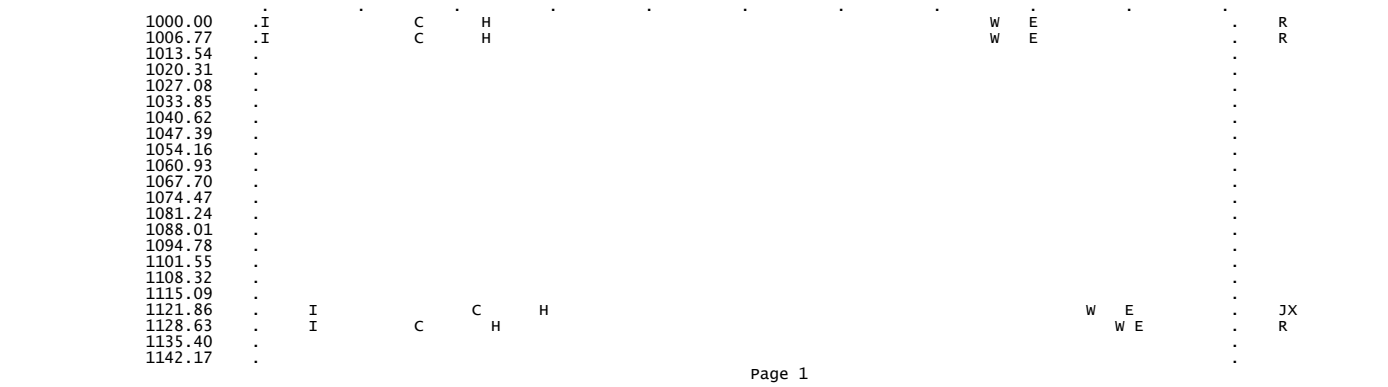
NO EDIT ERRORS ENCOUNTERED-COMPUTATION IS NOW BEGINNING
** WARNING NO. 2 ** - WATER SURFACE ELEVATION GIVEN IS LESS THAN OR EQUALS INVERT ELEVATION IN HDWKDS, W.S.ELEV = INV + DC
LICENSEE: THIENES ENGINEERING F0515P PAGE 1

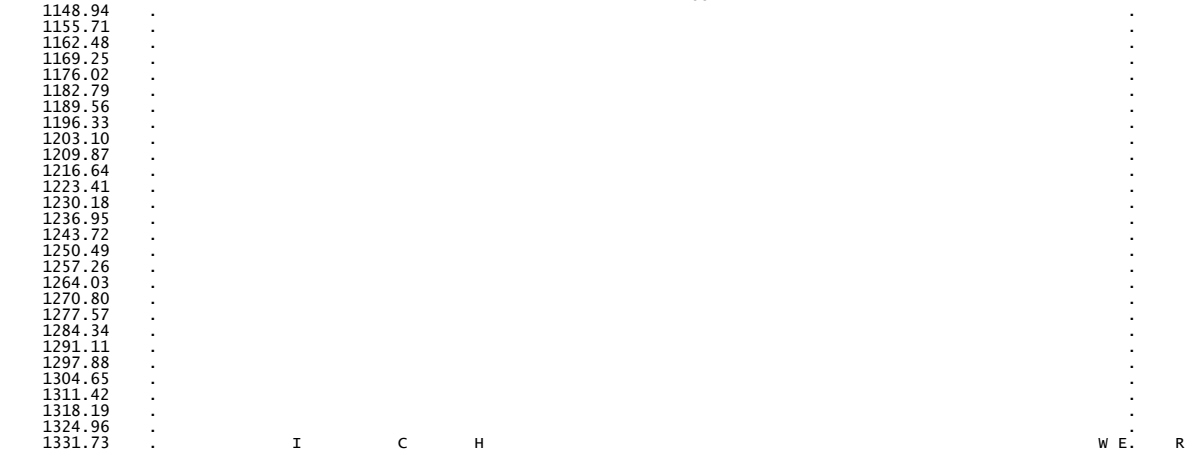
WATER SURFACE PROFILE LISTING

3700 - WOODRUFF AVENUE
LINE A
50

| STATION | INVERT ELEV | DEPTH OF FLOW | W.S. ELEV | Q | VEL | VEL HEAD | ENERGY GRD.EL. | SUPER ELEV | CRITICAL DEPTH | HGT/ DIA | BASE/ ID NO. | ZL | NO PIER | AVBPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L/ELEM | SO | | | | SF AVE | HF | | | NORM DEPTH | | | ZR | | |
| 1000.00 | 98.68 | 4.000 | 102.680 | 4.5 | 3.67 | 0.209 | 102.889 | 0.00 | 0.860 | 1.25 | 0.00 | 0.00 | 0 | 0.00 |
| 1.83 | 0.00000 | | | | .004135 | 0.01 | | | 0.000 | | | 0.00 | | |
| 1001.83 | 98.68 | 4.037 | 102.717 | 4.5 | 3.67 | 0.209 | 102.926 | 0.00 | 0.860 | 1.25 | 0.00 | 0.00 | 0 | 0.00 |
| 116.46 | 0.00258 | | | | .004135 | 0.48 | | | 1.250 | | | 0.00 | | |
| 1118.29 | 98.98 | 4.219 | 103.199 | 4.5 | 3.67 | 0.209 | 103.408 | 0.00 | 0.860 | 1.25 | 0.00 | 0.00 | 0 | 0.00 |
| JUNCT STR | 0.00250 | | | | .003155 | 0.01 | | | | | | 0.00 | | |
| 1122.29 | 98.99 | 4.401 | 103.391 | 1.8 | 2.29 | 0.082 | 103.473 | 0.00 | 0.571 | 1.00 | 0.00 | 0.00 | 0 | 0.00 |
| 209.44 | 0.00224 | | | | .002175 | 0.46 | | | 0.800 | | | 0.00 | | |
| 1331.73 | 99.46 | 4.386 | 103.846 | 1.8 | 2.29 | 0.082 | 103.928 | 0.00 | 0.571 | 1.00 | 0.00 | 0.00 | 0 | 0.00 |

3700 - WOODRUFF AVENUE
LINE A
50






N O T E S
1. GLOSSARY
   I = INVERT ELEVATION
   C = CRITICAL DEPTH
   W = WATER SURFACE ELEVATION
   H = HEIGHT OF CHANNEL
   E = ENERGY GRADE LINE
   X = CURVES CROSSING OVER
   B = BRIDGE ENTRANCE OR EXIT
   Y = WALL ENTRANCE OR EXIT
2. STATIONS FOR POINTS AT A JUMP MAY NOT BE PLOTTED EXACTLY♀

DATE: 7/24/2019
TIME: 11:43

F0515P
WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING PAGE 1

| CARD CODE | SECT NO | CHN TYPE | NO OF PIERS | AVE PIER WIDTH | HEIGHT 1 DIAMETER | BASE WIDTH | ZL | ZR | INV DROP | Y(1) | Y(2) | Y(3) | Y(4) | Y(5) | Y(6) | Y(7) | Y(8) | Y(9) | Y(10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CD | 12 | 4 | | | 1.00 | | | | | | | | | | | | | | |
| CD | 15 | 4 | | | 1.25 | | | | | | | | | | | | | | |

F 0 5 1 5 P PAGE NO 3

WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -

3700 - WOODRUFF AVENUE

HEADING LINE NO 2 IS -

LINE B

HEADING LINE NO 3 IS -

50

F 0 5 1 5 P PAGE NO 2

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET * * *

| | U/S DATA | STATION | INVERT | SECT | | | | | | | | W S ELEV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1000.00 | 98.98 | 15 | | | | | | | | 103.39 |

ELEMENT NO 2 IS A REACH * * *

| | U/S DATA | STATION | INVERT | SECT | | N | | | | | RADIUS | ANGLE | ANG PT | MAN H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1004.36 | 98.99 | 15 | | 0.012 | | | | | 0.00 | 0.00 | 0.00 | 0 |

ELEMENT NO 3 IS A REACH * * *

| | U/S DATA | STATION | INVERT | SECT | | N | | | | | RADIUS | ANGLE | ANG PT | MAN H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1022.03 | 99.04 | 15 | | 0.012 | | | | | 22.50 | 45.00 | 0.00 | 0 |

ELEMENT NO 4 IS A REACH * * *

| | U/S DATA | STATION | INVERT | SECT | | N | | | | | RADIUS | ANGLE | ANG PT | MAN H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1022.82 | 99.04 | 15 | | 0.012 | | | | | 0.00 | 0.00 | 0.00 | 0 |

ELEMENT NO 5 IS A JUNCTION * * * * * * * *

| | U/S DATA | STATION | INVERT | SECT | LAT-1 | LAT-2 | N | Q3 | Q4 | INVERT-3 | INVERT-4 | PHI 3 | PHI 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1022.82 | 99.05 | 15 | 12 | 0 | 0.012 | 0.7 | 0.0 | 99.06 | 0.00 | 70.00 | 0.00 |

ELEMENT NO 6 IS A REACH * * *

| | U/S DATA | STATION | INVERT | SECT | | N | | | | | RADIUS | ANGLE | ANG PT | MAN H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1239.13 | 99.57 | 15 | | 0.012 | | | | | 0.00 | 0.00 | 0.00 | 0 |

ELEMENT NO 7 IS A JUNCTION * * * * * * * *

| | U/S DATA | STATION | INVERT | SECT | LAT-1 | LAT-2 | N | Q3 | Q4 | INVERT-3 | INVERT-4 | PHI 3 | PHI 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1243.13 | 99.61 | 12 | 12 | 0 | 0.012 | 0.5 | 0.0 | 99.61 | 0.00 | 45.00 | 0.00 |

ELEMENT NO 8 IS A REACH * * *

| | U/S DATA | STATION | INVERT | SECT | | N | | | | | RADIUS | ANGLE | ANG PT | MAN H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1249.32 | 99.61 | 12 | | 0.012 | | | | | 0.00 | 0.00 | 0.00 | 0 |

ELEMENT NO 9 IS A REACH * * *

| | U/S DATA | STATION | INVERT | SECT | | N | | | | | RADIUS | ANGLE | ANG PT | MAN H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1284.49 | 99.70 | 12 | | 0.012 | | | | | 22.50 | 90.00 | 0.00 | 0 |

ELEMENT NO 10 IS A REACH * * *

| | U/S DATA | STATION | INVERT | SECT | | N | | | | | RADIUS | ANGLE | ANG PT | MAN H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1443.19 | 100.11 | 12 | | 0.012 | | | | | 0.00 | 0.00 | 0.00 | 0 |

ELEMENT NO 11 IS A SYSTEM HEADWORKS * *

| | U/S DATA | STATION | INVERT | SECT | | | | | | | | W S ELEV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1443.19 | 100.11 | 12 | | | | | | | | 0.00 |

NO EDIT ERRORS ENCOUNTERED-COMPUTATION IS NOW BEGINNING
** WARNING NO. 2 ** - WATER SURFACE ELEVATION GIVEN IS LESS THAN OR EQUALS INVERT ELEVATION IN HDWKDS, W.S.ELEV = INV + DC
LICENSEE: THIENES ENGINEERING F0515P PAGE 1

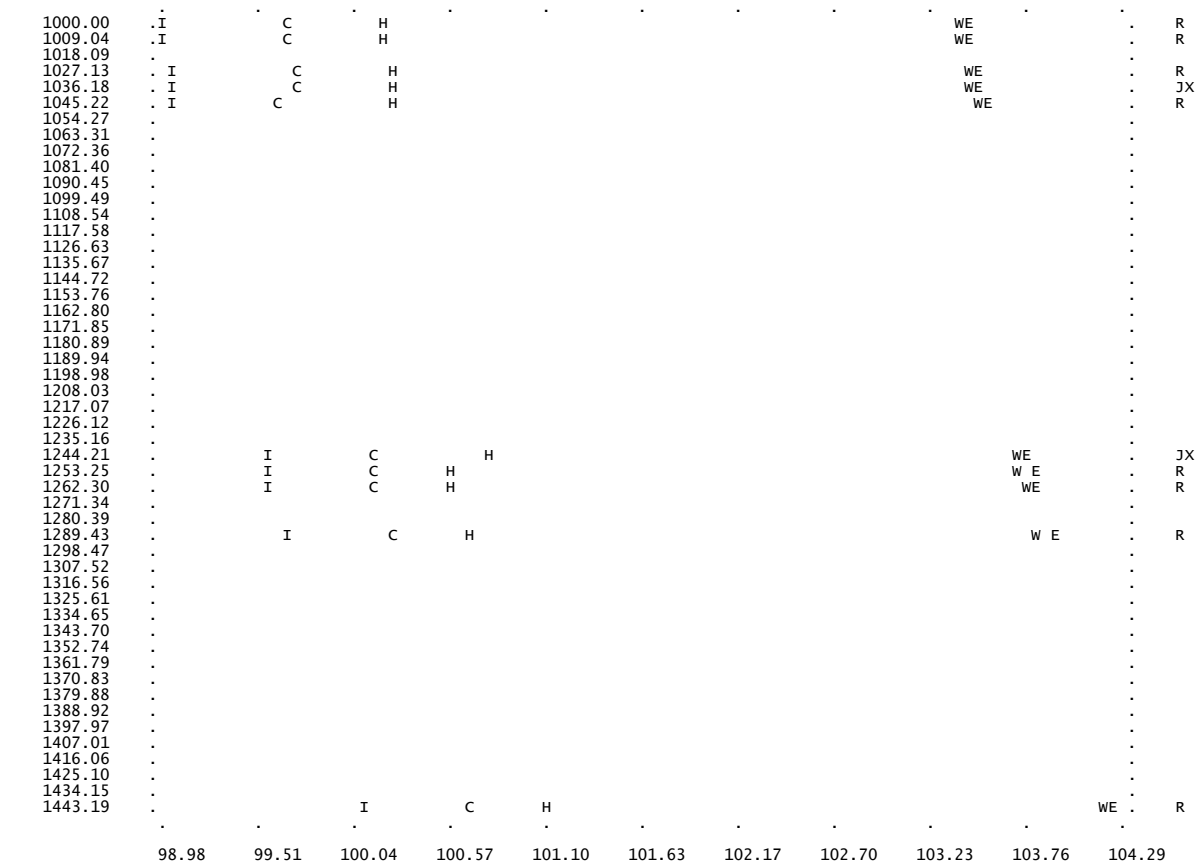
WATER SURFACE PROFILE LISTING

3700 - WOODRUFF AVENUE
LINE B
50

| STATION | INVERT ELEV | DEPTH OF FLOW | W.S. ELEV | Q | VEL | VEL HEAD | ENERGY GRD.EL. | SUPER ELEV | CRITICAL DEPTH | HGT/ DIA | BASE/ ID NO. | ZL | NO PIER | AVBPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L/ELEM | SO | | | | | SF AVE | HF | | NORM DEPTH | | | ZR | | |
| 1000.00 | 98.98 | 4.410 | 103.390 | 3.0 | 2.44 | 0.093 | 103.483 | 0.00 | 0.697 | 1.25 | 0.00 | 0.00 | 0 | 0.00 |
| 4.36 | 0.00229 | | | | | .001838 | 0.01 | | 0.920 | | | 0.00 | | |
| 1004.36 | 98.99 | 4.408 | 103.398 | 3.0 | 2.44 | 0.093 | 103.491 | 0.00 | 0.697 | 1.25 | 0.00 | 0.00 | 0 | 0.00 |
| 17.67 | 0.00283 | | | | | .001838 | 0.03 | | 0.850 | | | 0.00 | | |
| 1022.03 | 99.04 | 4.404 | 103.444 | 3.0 | 2.44 | 0.093 | 103.537 | 0.00 | 0.697 | 1.25 | 0.00 | 0.00 | 0 | 0.00 |
| 0.79 | 0.00000 | | | | | .001838 | 0.00 | | 0.000 | | | 0.00 | | |
| 1022.82 | 99.04 | 4.405 | 103.445 | 3.0 | 2.44 | 0.093 | 103.538 | 0.00 | 0.697 | 1.25 | 0.00 | 0.00 | 0 | 0.00 |
| JUNCT STR | 0.00000 | | | | | .001459 | 0.00 | | | | | 0.00 | | |
| 1022.82 | 99.05 | 4.466 | 103.516 | 2.3 | 1.87 | 0.055 | 103.571 | 0.00 | 0.606 | 1.25 | 0.00 | 0.00 | 0 | 0.00 |
| 216.31 | 0.00240 | | | | | .001080 | 0.23 | | 0.750 | | | 0.00 | | |
| 1239.13 | 99.57 | 4.180 | 103.750 | 2.3 | 1.87 | 0.055 | 103.805 | 0.00 | 0.606 | 1.25 | 0.00 | 0.00 | 0 | 0.00 |
| JUNCT STR | 0.01000 | | | | | .001628 | 0.01 | | | | | 0.00 | | |
| 1243.13 | 99.61 | 4.145 | 103.755 | 1.8 | 2.29 | 0.082 | 103.837 | 0.00 | 0.571 | 1.00 | 0.00 | 0.00 | 0 | 0.00 |
| 6.19 | 0.00000 | | | | | .002175 | 0.01 | | 0.000 | | | 0.00 | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1249.32 | 99.61 | 4.159 | 103.769 | 1.8 | 2.29 | 0.082 | 103.851 | 0.00 | 0.571 | | 1.00 | 0.00 | 0.00 | 0 | 0.00 |
| 35.17 | 0.00256 | | | | | .002175 | 0.08 | | | 0.750 | | | 0.00 | | |
| 1284.49 | 99.70 | 4.161 | 103.861 | 1.8 | 2.29 | 0.082 | 103.943 | 0.00 | 0.571 | | 1.00 | 0.00 | 0.00 | 0 | 0.00 |
| 158.70 | 0.00258 | | | | | .002175 | 0.35 | | | 0.750 | | | 0.00 | | |
| 1443.19 | 100.11 | 4.097 | 104.207 | 1.8 | 2.29 | 0.082 | 104.289 | 0.00 | 0.571 | | 1.00 | 0.00 | 0.00 | 0 | 0.00♀ |

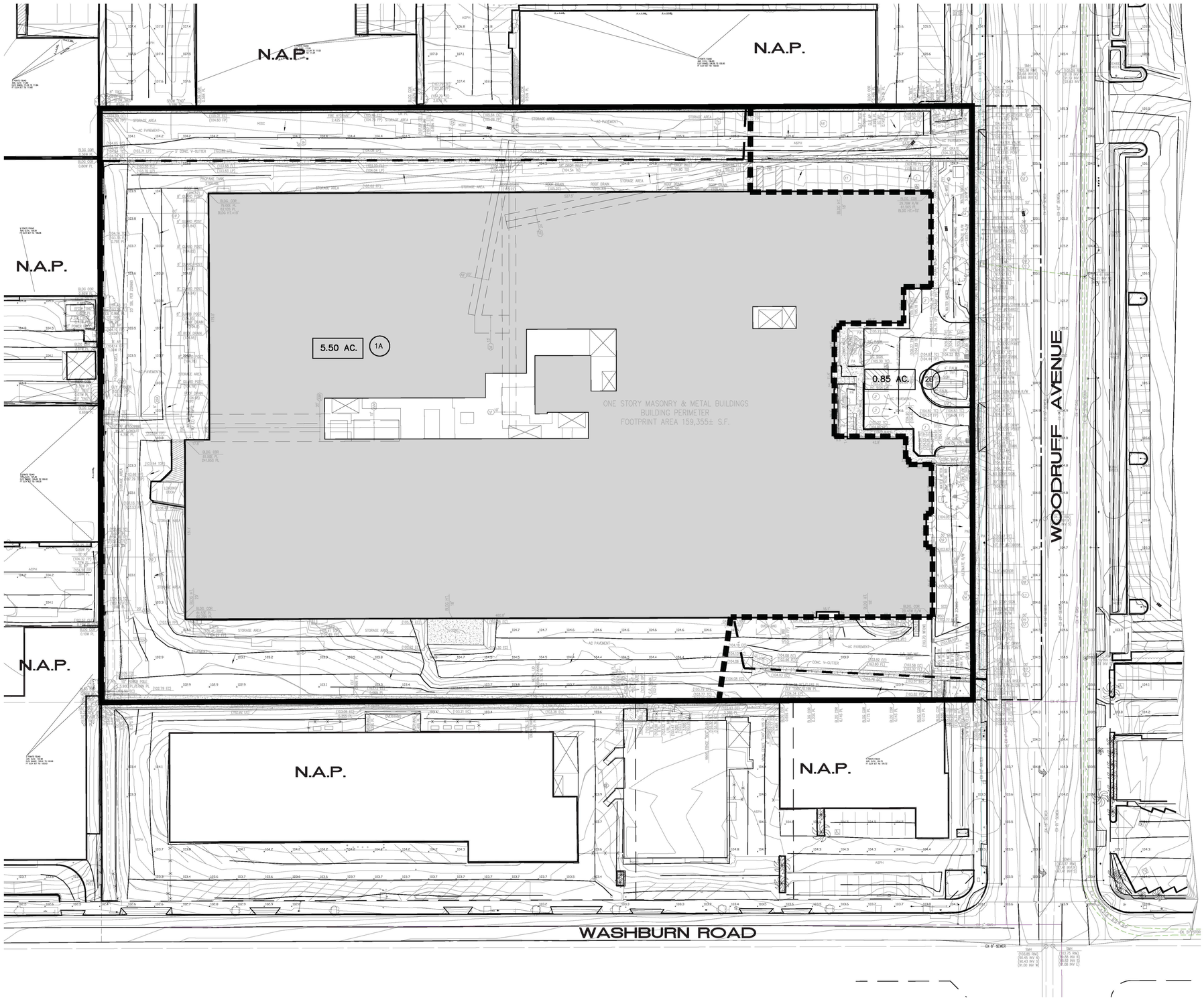
3700 - WOODRUFF AVENUE
LINE B
50

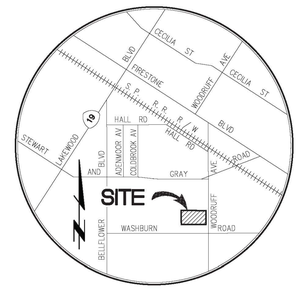



N O T E S
1. GLOSSARY
   I = INVERT ELEVATION
   C = CRITICAL DEPTH
   W = WATER SURFACE ELEVATION
   H = HEIGHT OF CHANNEL
   E = ENERGY GRADE LINE
   X = CURVES CROSSING OVER
   B = BRIDGE ENTRANCE OR EXIT
   Y = WALL ENTRANCE OR EXIT
2. STATIONS FOR POINTS AT A JUMP MAY NOT BE PLOTTED EXACTLY♀

# APPENDIX E

# HYDROLOGY MAPS




*VICINITY MAP*

N.T.S.

LEGEND

- PROJECT BOUNDARY
- SUBAREA BOUNDARY
- FLOW PATH
- 1.00 AC. — SUBAREA AREA
- 100 — NODE NUMBER
- FLOW ARROW

Last Update: 1/3/19
D:\3700-3799\3700\3700HYD-EX.dwg

0 15 30 60 90

SCALE: 1"=30'

**PREPARED FOR:**

12021 WOODRUFF LLC
1800 WAZEE ST., SUITE 500
DENVER, CO 80202
PHONE: (303) 567-5000
FAX: (303) 567-5903

Thienes Engineering, Inc.
CIVIL ENGINEERING * LAND SURVEYING
14349 FIRESTONE BOULEVARD
LA MIRADA, CALIFORNIA 90638
PH.(714)521-4811 FAX(714)521-4173

# CITY OF DOWNEY
PUBLIC WORKS DEPARTMENT

## EXISTING HYDROLOGY MAP

## PROLOGIS
## 12021 WOODRUFF AVENUE

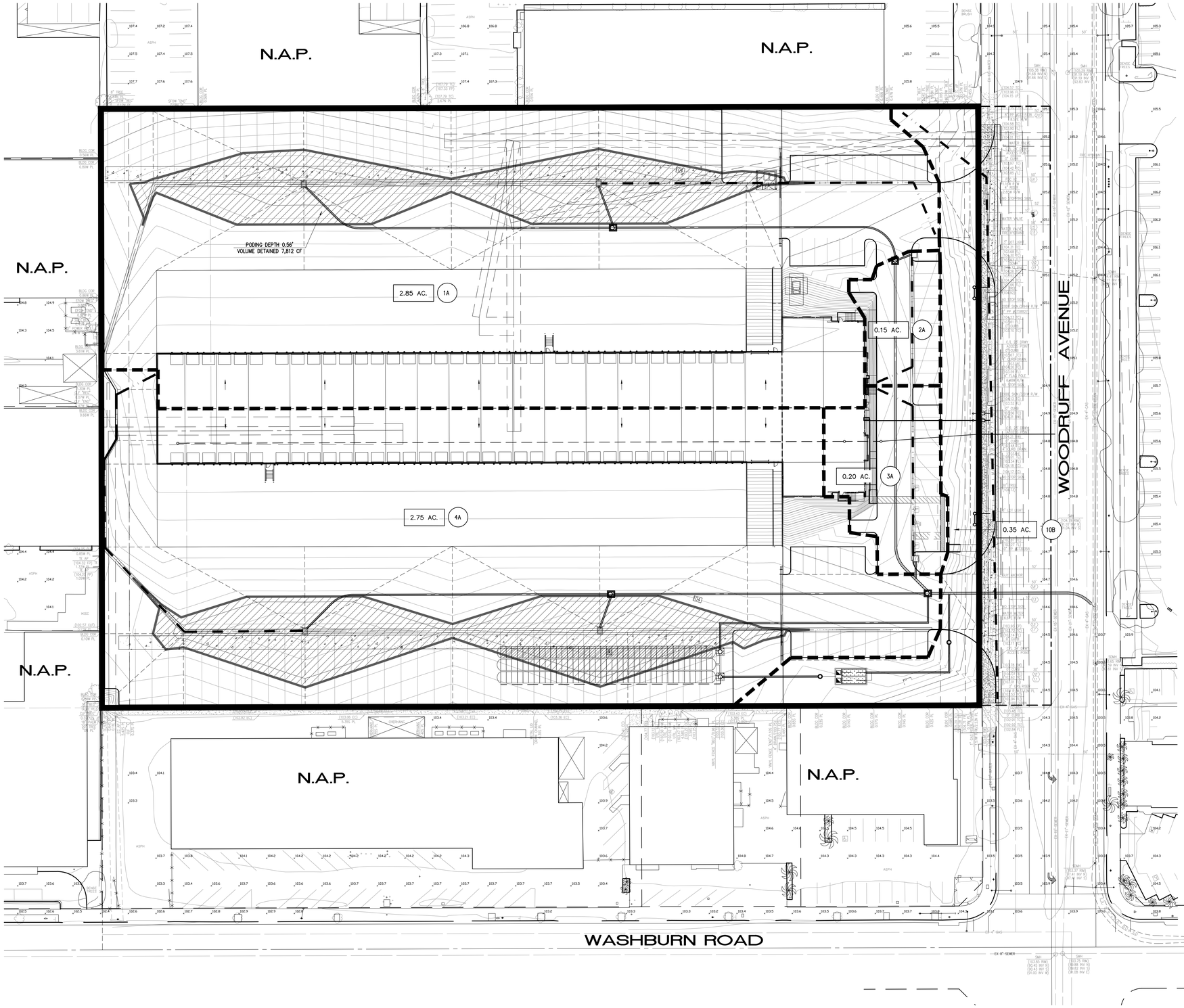
Designed by _____ Date _____
Checked by _____ Date _____
Designed by _____ Date _____
Checked by _____ Date _____

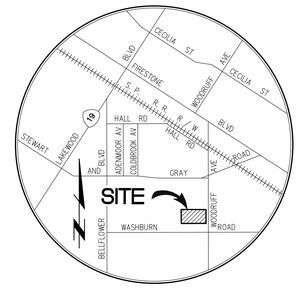
Approved by _____ Date _____

Public Works Director _____ R.C.E. XXXXX

Sheet 1 of 1 Sheets

1




VICINITY MAP

N.T.S.

| LEGEND | |
|---|---|
| | PROJECT BOUNDARY |
| | SUBAREA BOUNDARY |
| | FLOW PATH |
| 4.10 AC. | SUBAREA AREA |
| 100 | NODE NUMBER |
| | FLOW DIRECTION |
| | PONDING LIMITS |

0 15 30 60 90

SCALE: 1" = 30'

Last Update: 7/25/19
O:\3700-3799\3700\3700HYD.dwg

**PREPARED FOR:**

12021 WOODRUFF LLC
1800 WAZEE ST., SUITE 500
DENVER, CO 80202
PHONE: (303) 567-5000
FAX: (303) 567-5903


Thienes Engineering, Inc.
CIVIL ENGINEERING • LAND SURVEYING
14349 FIRESTONE BOULEVARD
LA MIRADA, CALIFORNIA 90638
PH.(714)521-4811 FAX(714)521-4173


CITY OF DOWNEY
PUBLIC WORKS DEPARTMENT

# PROPOSED HYDROLOGY MAP

PROLOGIS
12021 WOODRUFF AVENUE

| | | | |
|---|---|---|---|
| Designed by | | Approved by | Date |
| Date | | | |
| Checked by | | | |
| Date | | | |
| Designed by | | Public Works Director | R.C.E. XXXXX |
| Date | | | |
| Checked by | | | |
| Date | | Sheet 1 of 1 Sheets | |

1

# Appendix G

## Noise Modeling Inputs and Outputs

# APPENDIX G-1

*Field Noise Data Sheets*

DUDEK

# FIELD NOISE MEASUREMENT DATA

PROJECT: DOWNEY TRUCK TERMINAL — PROJECT #: 2818
SITE ID:
SITE ADDRESS: — OBSERVER(S): PEYE VIYAR
START DATE: 7/8/20 — END DATE: 7/8/20
START TIME: — END TIME:

**METEOROLOGICAL CONDITIONS**

TEMP: 82 F — HUMIDITY: 46 % R.H. — WIND: CALM (LIGHT) MODERATE
WINDSPD: 6 MPH — DIR. N NE E SE S SW W NW — VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) — OVRCAST PRTLY CLDY FOG RAIN

**ACOUSTIC MEASUREMENTS**

MEAS. INSTRUMENT: PICCOLO SLM-3 — TYPE 1 2 — SERIAL #: 10309270 46
CALIBRATOR: BSWA CA 114 — SERIAL #: 490151
CALIBRATION CHECK — PRE-TEST: ____ dBA SPL — POST-TEST: ____ dBA SPL — WINDSCRN: YES

SETTINGS: (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

| (ST1) REC. # | BEGIN | END | Leq | Lmax | Lmin | L90 | L50 | L10 | OTHER (SPECIFY METRIC |
|---|---|---|---|---|---|---|---|---|---|
| 21-22 | 14:00 | 14:15 | 71.0 | 87.8 | 57.7 | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

COMMENTS: READING TAKEN IN FRONT OF 12112 WOODRUFF AVE (CURB); PRIMARY NOISE SOURCE IS TRAFFIC ON WOODRUFF AVE AND ON WASHBURN RD TO THE NORTH.

**SOURCE INFO AND TRAFFIC COUNTS**

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR EOP: 35' FROM WOODRUFF C/L

TRAFFIC COUNT DURATION: 15 MIN — SPEED

| COUNT 1 (OR RDWY 1) DIRECTION | NB/EB | SB/WB | NB/EB | SB/WB |
|---|---|---|---|---|
| AUTOS | 225 | | | |
| MED TRKS | 4 | | | |
| HVY TRKS | 12 | | | |
| BUSES | 0 | | | |
| MOTRCLS | 1 | | | |

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

TRAFFIC ON WOODRUFF AVE

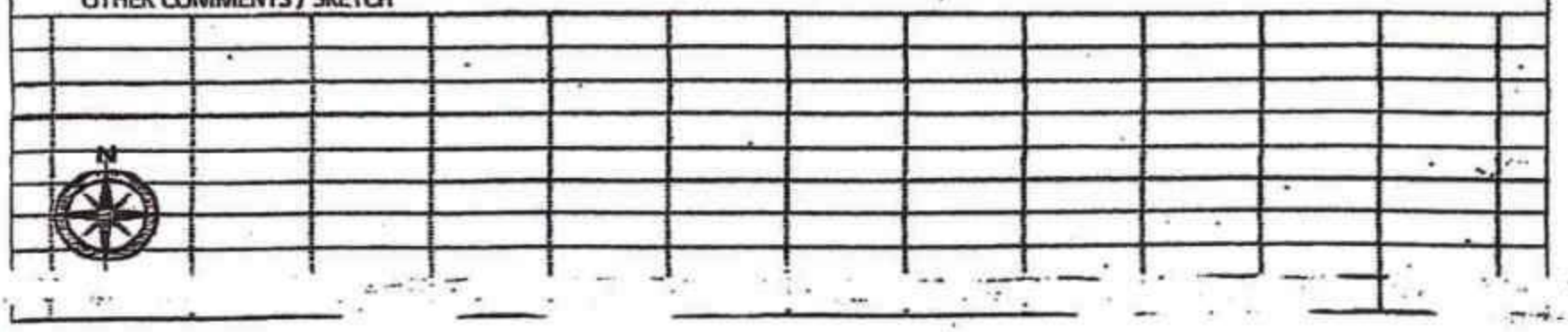
| COUNT 2 (OR RDWY 2) | ___ MIN | | SPEED | |
|---|---|---|---|---|
| | NB/EB | SB/WB | NB/EB | SB/WB |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY: 40 MPH

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

**DESCRIPTION / SKETCH**

TERRAIN: (HARD) SOFT MIXED FLAT OTHER:
PHOTOS: 8370; 8371; 8372; 8373; 8374; 8375; 8376
OTHER COMMENTS / SKETCH



DUDEK

# FIELD NOISE MEASUREMENT DATA

PROJECT: DOWNER TRUCK TERMINAL — PROJECT #: 12818
SITE ID:
SITE ADDRESS: — OBSERVER(S): PETE VITAR
START DATE: 7/8/20 — END DATE: 7/8/20
START TIME: — END TIME:

**METEOROLOGICAL CONDITIONS**

TEMP: 82 F — HUMIDITY: 46 % R.H. — WIND: CALM (LIGHT) MODERATE
WINDSPD: 6 MPH — DIR. N NE E SE S SW W NW — VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG — RAIN

**ACOUSTIC MEASUREMENTS**

MEAS. INSTRUMENT: PICCOLO SLM-3 — TYPE 1 2 — SERIAL #: 10309270446
CALIBRATOR: BSVA CA 114 — SERIAL #: 490151
CALIBRATION CHECK — PRE-TEST: ____ dBA SPL — POST-TEST: ____ dBA SPL — WINDSCRN: YES

SETTINGS: (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI — OTHER:

| REC. # | BEGIN | END | Leq | Lmax | Lmin | L90 | L50 | L10 | OTHER (SPECIFY METRIC |
|---|---|---|---|---|---|---|---|---|---|
| (ST 2) 23-24 | 14:26 | 14:41 | 62.6 | 83.3 | 52.2 | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

COMMENTS: READING TAKEN IN FRONT OF 12102 CORNUTA AVE (RESIDENTIAL) ALONG WASHBURN RD; PRIMARY NOISE SOURCE IS TRAFFIC ON WASHBURN RD;

**SOURCE INFO AND TRAFFIC COUNTS**

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR EOP: 35' FROM WASHBURN RD C/L
TRAFFIC COUNT DURATION: 15 MIN — SPEED ___ MIN

| COUNT 1 (OR RDWY 1) DIRECTION | NB/EB | SB/WB | NB/EB SPEED | SB/WB SPEED |
|---|---|---|---|---|
| AUTOS | 73 | | | |
| MED TRKS | 1 | | | |
| HVY TRKS | 0 | | | |
| BUSES | 0 | | | |
| MOTRCLS | 0 | | | |

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

| COUNT 2 (OR RDWY 2) | NB/EB | SB/WB | NB/EB SPEED | SB/WB SPEED |
|---|---|---|---|---|
| | | | | |

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT (RUSTLING LEAVES) DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

**DESCRIPTION / SKETCH**

TERRAIN: HARD SOFT (MIXED) FLAT OTHER:
PHOTOS: 8379; 8380; 8381; 8382;
OTHER COMMENTS / SKETCH



DUDEK

# FIELD NOISE MEASUREMENT DATA

PROJECT: DIAMOND TRUCK TERMINAL — PROJECT #: 12818
SITE ID:
SITE ADDRESS: — OBSERVER(S): REYE VITAR
START DATE: 7/8/20 — END DATE: 7/8/20
START TIME: — END TIME:

**METEOROLOGICAL CONDITIONS**

TEMP: 82 F — HUMIDITY: 45 % R.H. — WIND: CALM (LIGHT) MODERATE
WINDSPD: 1 MPH — DIR. N NE S SE S SW W NW — VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) — OVRCAST — PRTLY CLDY — FOG — RAIN

**ACOUSTIC MEASUREMENTS**

MEAS. INSTRUMENT: PICCOLO SLM-3 — TYPE 1 2 — SERIAL # 10309270446
CALIBRATOR: BSWA CA 114 — SERIAL # 490151
CALIBRATION CHECK — PRE-TEST ____ dBA SPL — POST-TEST ____ dBA SPL — WINDSCRN YES

SETTINGS: (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

| | REC. # | BEGIN | END | Leq | Lmax | Lmin | L90 | L50 | L10 | OTHER (SPECIFY METRIC |
|---|---|---|---|---|---|---|---|---|---|---|
| (ST3) | 25-26 | 14:57 | 15:12 | 70.2 | 86.2 | 59.8 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

COMMENTS: READING TAKEN IN FRONT OF 12265 WOODRUFF AVE (ACE MOBILE HOME PARK); PRIMARY NOISE SOURCE IS TRAFFIC ON WOODRUFF AVE;

**SOURCE INFO AND TRAFFIC COUNTS**

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR (EOP): 20' FROM EOP
TRAFFIC COUNT DURATION: 15 MIN — ____ MIN

| COUNT 1 (OR RDWY 1) | DIRECTION | NB/EB | SB/WB | SPEED NB/EB | SPEED SB/WB |
|---|---|---|---|---|---|
| | AUTOS | 250 | | | |
| | MED TRKS | 14 | | | |
| | HVY TRKS | 14 | | | |
| | BUSES | 0 | | | |
| | MOTRCLS | 1 | | | |

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

| COUNT 2 (OR RDWY 2) | NB/EB | SB/WB | SPEED NB/EB | SPEED SB/WB |
|---|---|---|---|---|
| | | | | |

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: SOME DISTNT CONSTNUCTN NOISE (SANDER / GRINDER);

**DESCRIPTION / SKETCH**

TERRAIN: (HARD) SOFT MIXED FLAT OTHER:
PHOTOS: 8384; 8385; 8386; 8387; 8588; 8389
OTHER COMMENTS / SKETCH



DUDEK

# FIELD NOISE MEASUREMENT DATA

PROJECT: DOWNEY TRUCK TERMINAL — PROJECT #: 12818
SITE ID:
SITE ADDRESS: — OBSERVER(S): PETE VITAR
START DATE: 7/8/20 — END DATE: 7/8/20
START TIME: — END TIME:

**METEOROLOGICAL CONDITIONS**

TEMP: 82 F — HUMIDITY: 45 % R.H. — WIND: CALM (LIGHT) MODERATE
WINDSPD: 7 MPH — DIR. N NE S SE S SW W NW — VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) — OVRCAST — PRTLY CLDY — FOG — RAIN

**ACOUSTIC MEASUREMENTS**

MEAS. INSTRUMENT: PICCOLO SLM-3 — TYPE 1 2 — SERIAL #: 10309270 46
CALIBRATOR: BSWA CA 114 — SERIAL #: 490151
CALIBRATION CHECK — PRE-TEST ____ dBA SPL — POST-TEST ____ dBA SPL — WINDSCRN: YES

SETTINGS: (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

| | REC. # | BEGIN | END | Leq | Lmax | Lmin | L90 | L50 | L10 | OTHER (SPECIFY METRIC |
|---|---|---|---|---|---|---|---|---|---|---|
| (ST4) | 27-28 | 15:33 | 15:48 | 70.9 | 87.4 | 53.9 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

COMMENTS: READING TAKEN IN FRONT OF 11248 WOODRUFF AVE (RESIDENTIAL); PRIMARY NOISE SOURCE IS TRAFFIC ON WOODRUFF AVE;

**SOURCE INFO AND TRAFFIC COUNTS**

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR (EOP): 15' TO EOP
TRAFFIC COUNT DURATION: 15 MIN — SPEED ___ MIN SPEED

| COUNT 1 (OR RDWY 1) | DIRECTION | NB/EB | SB/WB | NB/EB | SB/WB |
|---|---|---|---|---|---|
| | AUTOS | 293 | | | |
| | MED TRKS | 5 | | | |
| | HVY TRKS | 1 | | | |
| | BUSES | 0 | | | |
| | MOTRCLS | 0 | | | |

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

| COUNT 2 (OR RDWY 2) | NB/EB | SB/WB | NB/EB | SB/WB |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

**DESCRIPTION / SKETCH**

TERRAIN: HARD SOFT (MIXED) FLAT OTHER:
PHOTOS: 8391; 8392; 8393; 8394; 8595; 8396
OTHER COMMENTS / SKETCH



DUDEK

# FIELD NOISE MEASUREMENT DATA

PROJECT: DOWNEY TROLLEY TERMINAL — PROJECT #: 12818
SITE ID:
SITE ADDRESS:
OBSERVER(S): PETE VITAR
START DATE: 7/8/20 — END DATE: 7/8/20
START TIME: — END TIME:

**METEOROLOGICAL CONDITIONS**

TEMP: 82 F — HUMIDITY: 44 % R.H. — WIND: CALM (LIGHT) MODERATE
WINDSPD: 8 MPH — DIR. N NE E SE S SW W NW — VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) — OVRCAST PRTLY CLDY FOG — RAIN

**ACOUSTIC MEASUREMENTS**

MEAS. INSTRUMENT: PICCOLO SLM-3 — TYPE 1 2 — SERIAL # 10309270446
CALIBRATOR: BSWA CA 114 — SERIAL #: 490151
CALIBRATION CHECK — PRE-TEST: ____ dBA SPL — POST-TEST: ____ dBA SPL — WINDSCRN: YES

SETTINGS: (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

| | REC. # | BEGIN | END | Leq | Lmax | Lmin | L90 | L50 | L10 | OTHER (SPECIFY METRIC |
|---|---|---|---|---|---|---|---|---|---|---|
| (ST 5) | 2930 | 16:18 | 16:33 | 72.2 | 88.4 | 65.7 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

COMMENTS
READNG TAKEN AT NORTH EAST CORNER OF PROPERTY AT 11253 1/2 REGENTVIEW AVE. AT NW CORNER OF INTERSECTION OF REGENTVIEW AVE. & STEWART AND GRAY RD; PRIMARY NOISE SOURCE IS TRAFFIC ON STWART AND GRAY RD. SECONDARY IS COMPRESSOR AT COMMERCIAL PROPERTY ACROSS STREET;

**SOURCE INFO AND TRAFFIC COUNTS**

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: AS PAVED — DIST. TO RDWY C/L OR (EOP): 2' TO STEWART AND GRAY RD EOP

TRAFFIC COUNT DURATION: 15 MIN — SPEED

| COUNT 1 (OR RDWY 1) | DIRECTION | NB/EB | SB/WB | NB/EB | SB/WB |
|---|---|---|---|---|---|
| | AUTOS | 227 | | | |
| | MED TRKS | 7 | | | |
| | HVY TRKS | 3 | | | |
| | BUSES | 0 | | | |
| | MOTRCLS | 0 | | | |

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

| COUNT 2 (OR RDWY 2) | NB/EB | SB/WB | NB/EB | SB/WB |
|---|---|---|---|---|
| | | | | |

___ MIN — SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: ROOSTER CROWING; OCCASIONAL TOOL NOISE FROM TIRE CENTER ACROSS STREET;

**DESCRIPTION / SKETCH**

TERRAIN: (HARD) SOFT MIXED FLAT OTHER:
PHOTOS: 8398; 8399; 8400; 8401; 8402; 8403;
OTHER COMMENTS / SKETCH



# APPENDIX G-2

*Construction Noise Modeling*
*Input and Output*

Report date: 8/28/2020
Case Description: Woodruff Ave Truck Terminal Project - Demolition

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| Residences - Nearest Dis | Residential | 65 | 60 | 55 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Concrete Saw | No | 20 | | 89.6 | 220 | 0 |
| Excavator | No | 40 | | 80.7 | 230 | 0 |
| Excavator | No | 40 | | 80.7 | 250 | 5 |
| Excavator | No | 40 | | 80.7 | 300 | 5 |
| Rock Crusher and Batch Plant | Yes | 40 | | 96 | 400 | 5 |

| Equipment | Calculated (dBA) *Lmax | Leq | Results Day Lmax | Noise Limits (dBA) Day Leq | Evening Lmax | Evening Leq |
|---|---|---|---|---|---|---|
| Concrete Saw | 76.7 | 69.7 | N/A | N/A | N/A | N/A |
| Excavator | 67.5 | 63.5 | N/A | N/A | N/A | N/A |
| Excavator | 61.7 | 57.8 | N/A | N/A | N/A | N/A |
| Excavator | 60.1 | 56.2 | N/A | N/A | N/A | N/A |
| Rock Crusher and Batch Plant | 72.9 | 69 | N/A | N/A | N/A | N/A |
| Total | 76.7 | 73.1 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| Residences - Typical Dist | Residential | 65 | 60 | 55 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Concrete Saw | No | 20 | | 89.6 | 400 | 5 |
| Excavator | No | 40 | | 80.7 | 400 | 5 |
| Excavator | No | 40 | | 80.7 | 400 | 5 |
| Excavator | No | 40 | | 80.7 | 400 | 5 |
| Rock Crusher and Batch Plant | Yes | 40 | | 96 | 400 | 5 |

Results

| Equipment | Calculated (dBA) *Lmax | Leq | Noise Limits (dBA) Day Lmax | Day Leq | Evening Lmax | Evening Leq |
|---|---|---|---|---|---|---|
| Concrete Saw | 66.5 | 59.5 | N/A | N/A | N/A | N/A |
| Excavator | 57.6 | 53.7 | N/A | N/A | N/A | N/A |
| Excavator | 57.6 | 53.7 | N/A | N/A | N/A | N/A |
| Excavator | 57.6 | 53.7 | N/A | N/A | N/A | N/A |
| Rock Crusher and Batch Plant | 72.9 | 69 | N/A | N/A | N/A | N/A |
| Total | 72.9 | 69.8 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| Church - Nearest | Residential | 65 | 60 | 55 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Concrete Saw | No | 20 | | 89.6 | 350 | 5 |
| Excavator | No | 40 | | 80.7 | 370 | 5 |
| Excavator | No | 40 | | 80.7 | 400 | 5 |
| Excavator | No | 40 | | 80.7 | 450 | 5 |
| Rock Crusher and Batch Plant | Yes | 40 | | 96 | 500 | 5 |

Results

| Equipment | Calculated (dBA) *Lmax | Leq | Noise Limits (dBA) Day Lmax | Day Leq | Evening Lmax | Evening Leq |
|---|---|---|---|---|---|---|
| Concrete Saw | 67.7 | 60.7 | N/A | N/A | N/A | N/A |
| Excavator | 58.3 | 54.3 | N/A | N/A | N/A | N/A |
| Excavator | 57.6 | 53.7 | N/A | N/A | N/A | N/A |
| Excavator | 56.6 | 52.6 | N/A | N/A | N/A | N/A |
| Rock Crusher and Batch Plant | 71 | 67 | N/A | N/A | N/A | N/A |
| Total | 71 | 68.4 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| Church - Typical | Residential | 65 | 60 | 55 |

Equipment

| | Spec | Actual | Receptor | Estimated |
|---|---|---|---|---|

| Description | Impact Device | Usage(%) | Lmax (dBA) | Lmax (dBA) | Distance (feet) | Shielding (dBA) |
|---|---|---|---|---|---|---|
| Concrete Saw | No | 20 | | 89.6 | 550 | 5 |
| Excavator | No | 40 | | 80.7 | 550 | 5 |
| Excavator | No | 40 | | 80.7 | 550 | 5 |
| Excavator | No | 40 | | 80.7 | 550 | 5 |
| Rock Crusher and Batch Plant | Yes | 40 | | 96 | 550 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Concrete Saw | 63.8 | 56.8 | N/A | N/A | N/A | N/A |
| Excavator | 54.9 | 50.9 | N/A | N/A | N/A | N/A |
| Excavator | 54.9 | 50.9 | N/A | N/A | N/A | N/A |
| Excavator | 54.9 | 50.9 | N/A | N/A | N/A | N/A |
| Rock Crusher and Batch Plant | 70.2 | 66.2 | N/A | N/A | N/A | N/A |
| Total | 70.2 | 67 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 8/28/2020
Case Description: Woodruff Ave Truck Terminal Project - Site Preparation

---- Receptor #1 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residences - Nearest Dis | Residential | 65 | 60 | 55 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 220 | 0 |
| Dozer | No | 40 | | 81.7 | 230 | 5 |
| Dozer | No | 40 | | 81.7 | 250 | 5 |
| Backhoe | No | 40 | | 77.6 | 300 | 0 |
| Front End Loader | No | 40 | | 79.1 | 400 | 5 |
| Tractor | No | 40 | 84 | | 350 | 5 |
| Backhoe | No | 40 | | 77.6 | 450 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | 81.7 | 73.7 | N/A | N/A | N/A | N/A |
| Dozer | 81.7 | 73.7 | N/A | N/A | N/A | N/A |
| Dozer | 81.7 | 73.7 | N/A | N/A | N/A | N/A |
| Backhoe | 77.6 | 73.6 | N/A | N/A | N/A | N/A |
| Front End Loader | 79.1 | 73.1 | N/A | N/A | N/A | N/A |
| Tractor | 84 | 80 | N/A | N/A | N/A | N/A |
| Backhoe | 77.6 | 73.6 | N/A | N/A | N/A | N/A |
| Total | 84 | 80 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

| Equipment | | *Lmax | Leq | Day Lmax | Day Leq | Evening Lmax | Evening Leq |
|---|---|---|---|---|---|---|---|
| Dozer | | 68.8 | 64.8 | N/A | N/A | N/A | N/A |
| Dozer | | 63.4 | 59.4 | N/A | N/A | N/A | N/A |
| Dozer | | 62.7 | 58.7 | N/A | N/A | N/A | N/A |
| Backhoe | | 62 | 58 | N/A | N/A | N/A | N/A |
| Front End Loader | | 56 | 52.1 | N/A | N/A | N/A | N/A |
| Tractor | | 62.1 | 58.1 | N/A | N/A | N/A | N/A |
| Backhoe | | 53.5 | 49.5 | N/A | N/A | N/A | N/A |
| | Total | 68.8 | 67.9 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences - Typical Dist | Residential | 65 | 60 | 55 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 400 | 5 |
| Dozer | No | 40 | | 81.7 | 400 | 5 |
| Dozer | No | 40 | | 81.7 | 400 | 5 |
| Backhoe | No | 40 | | 77.6 | 400 | 5 |
| Front End Loader | No | 40 | | 79.1 | 400 | 5 |
| Tractor | No | 40 | 84 | | 400 | 5 |
| Backhoe | No | 40 | | 77.6 | 400 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| Equipment | *Lmax | Leq | Day Lmax | Day Leq | Evening Lmax | Evening Leq |
| Dozer | 58.6 | 54.6 | N/A | N/A | N/A | N/A |
| Dozer | 58.6 | 54.6 | N/A | N/A | N/A | N/A |
| Dozer | 58.6 | 54.6 | N/A | N/A | N/A | N/A |
| Backhoe | 54.5 | 50.5 | N/A | N/A | N/A | N/A |
| Front End Loader | 56 | 52.1 | N/A | N/A | N/A | N/A |
| Tractor | 60.9 | 57 | N/A | N/A | N/A | N/A |
| Backhoe | 54.5 | 50.5 | N/A | N/A | N/A | N/A |
| Total | 60.9 | 62.4 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Church - Nearest | Residential | 65 | 60 | 55 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 350 | 5 |
| Dozer | No | 40 | | 81.7 | 370 | 5 |
| Dozer | No | 40 | | 81.7 | 400 | 5 |
| Backhoe | No | 40 | | 77.6 | 450 | 5 |
| Front End Loader | No | 40 | | 79.1 | 500 | 5 |
| Tractor | No | 40 | 84 | | 550 | 5 |
| Backhoe | No | 40 | | 77.6 | 400 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | 59.8 | 55.8 | N/A | N/A | N/A | N/A |
| Dozer | 59.3 | 55.3 | N/A | N/A | N/A | N/A |
| Dozer | 58.6 | 54.6 | N/A | N/A | N/A | N/A |
| Backhoe | 53.5 | 49.5 | N/A | N/A | N/A | N/A |
| Front End Loader | 54.1 | 50.1 | N/A | N/A | N/A | N/A |
| Tractor | 58.2 | 54.2 | N/A | N/A | N/A | N/A |
| Backhoe | 54.5 | 50.5 | N/A | N/A | N/A | N/A |
| Total | 59.8 | 62 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Church - Typical | Residential | 65 | 60 | 55 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 550 | 5 |
| Dozer | No | 40 | | 81.7 | 550 | 5 |
| Dozer | No | 40 | | 81.7 | 550 | 5 |
| Backhoe | No | 40 | | 77.6 | 550 | 5 |
| Front End Loader | No | 40 | | 79.1 | 550 | 5 |
| Tractor | No | 40 | 84 | | 550 | 5 |
| Backhoe | No | 40 | | 77.6 | 550 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |

| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
|---|---|---|---|---|---|---|---|
| Dozer | | 55.8 | 51.9 | N/A | N/A | N/A | N/A |
| Dozer | | 55.8 | 51.9 | N/A | N/A | N/A | N/A |
| Dozer | | 55.8 | 51.9 | N/A | N/A | N/A | N/A |
| Backhoe | | 51.7 | 47.8 | N/A | N/A | N/A | N/A |
| Front End Loader | | 53.3 | 49.3 | N/A | N/A | N/A | N/A |
| Tractor | | 58.2 | 54.2 | N/A | N/A | N/A | N/A |
| Backhoe | | 51.7 | 47.8 | N/A | N/A | N/A | N/A |
| | Total | 58.2 | 59.7 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 8/28/2020
Case Description: Woodruff Ave Truck Terminal Project - Grading

---- Receptor #1 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residences - Nearest Dis | Residential | 65 | 60 | 55 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 220 | 0 |
| Grader | No | 40 | 85 | | 230 | 5 |
| Dozer | No | 40 | | 81.7 | 250 | 5 |
| Backhoe | No | 40 | | 77.6 | 300 | 5 |
| Front End Loader | No | 40 | | 79.1 | 400 | 5 |
| Tractor | No | 40 | 84 | | 350 | 5 |

| | | Results | | | | | |
|---|---|---|---|---|---|---|---|
| | | Calculated (dBA) | | Noise Limits (dBA) | | | |
| | | | | Day | | Evening | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Excavator | | 67.8 | 63.9 | N/A | N/A | N/A | N/A |
| Grader | | 66.7 | 62.8 | N/A | N/A | N/A | N/A |
| Dozer | | 62.7 | 58.7 | N/A | N/A | N/A | N/A |
| Backhoe | | 57 | 53 | N/A | N/A | N/A | N/A |
| Front End Loader | | 56 | 52.1 | N/A | N/A | N/A | N/A |
| Tractor | | 62.1 | 58.1 | N/A | N/A | N/A | N/A |
| | Total | 67.8 | 67.8 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residences - Typical Dist | Residential | 65 | 60 | 55 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Excavator | No | 40 | | 80.7 | 400 | 5 |
| Grader | No | 40 | 85 | | 400 | 5 |
| Dozer | No | 40 | | 81.7 | 400 | 5 |
| Backhoe | No | 40 | | 77.6 | 400 | 5 |
| Front End Loader | No | 40 | | 79.1 | 400 | 5 |
| Tractor | No | 40 | 84 | | 400 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Excavator | 57.6 | 53.7 | N/A | N/A | N/A | N/A |
| Grader | 61.9 | 58 | N/A | N/A | N/A | N/A |
| Dozer | 58.6 | 54.6 | N/A | N/A | N/A | N/A |
| Backhoe | 54.5 | 50.5 | N/A | N/A | N/A | N/A |
| Front End Loader | 56 | 52.1 | N/A | N/A | N/A | N/A |
| Tractor | 60.9 | 57 | N/A | N/A | N/A | N/A |
| Total | 61.9 | 62.8 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Church - Nearest | Residential | 65 | 60 | 55 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Excavator | No | 40 | | 80.7 | 350 | 5 |
| Grader | No | 40 | 85 | | 370 | 5 |
| Dozer | No | 40 | | 81.7 | 400 | 5 |
| Backhoe | No | 40 | | 77.6 | 450 | 5 |
| Front End Loader | No | 40 | | 79.1 | 500 | 5 |
| Tractor | No | 40 | 84 | | 550 | 5 |

Results

| | | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Day | | Evening | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Excavator | | 58.8 | 54.8 | N/A | N/A | N/A | N/A |
| Grader | | 62.6 | 58.6 | N/A | N/A | N/A | N/A |
| Dozer | | 58.6 | 54.6 | N/A | N/A | N/A | N/A |
| Backhoe | | 53.5 | 49.5 | N/A | N/A | N/A | N/A |
| Front End Loader | | 54.1 | 50.1 | N/A | N/A | N/A | N/A |
| Tractor | | 58.2 | 54.2 | N/A | N/A | N/A | N/A |
| | Total | 62.6 | 62.5 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Church - Typical | Residential | 65 | 60 | 55 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Excavator | No | 40 | | 80.7 | 550 | 5 |
| Grader | No | 40 | 85 | | 550 | 5 |
| Dozer | No | 40 | | 81.7 | 550 | 5 |
| Backhoe | No | 40 | | 77.6 | 550 | 5 |
| Front End Loader | No | 40 | | 79.1 | 550 | 5 |
| Tractor | No | 40 | 84 | | 550 | 5 |

Results

| | | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Day | | Evening | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Excavator | | 54.9 | 50.9 | N/A | N/A | N/A | N/A |
| Grader | | 59.2 | 55.2 | N/A | N/A | N/A | N/A |
| Dozer | | 55.8 | 51.9 | N/A | N/A | N/A | N/A |
| Backhoe | | 51.7 | 47.8 | N/A | N/A | N/A | N/A |
| Front End Loader | | 53.3 | 49.3 | N/A | N/A | N/A | N/A |
| Tractor | | 58.2 | 54.2 | N/A | N/A | N/A | N/A |
| | Total | 59.2 | 60.1 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Case Description: Woodruff Ave Truck Terminal Project - Bldg Const

---- Receptor #1 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residences - Nearest Dis | Residential | 65 | 60 | 55 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Crane | No | 16 | | 80.6 | 220 | 0 |
| Man Lift | No | 20 | | 74.7 | 230 | 5 |
| Man Lift | No | 20 | | 74.7 | 250 | 5 |
| Man Lift | No | 20 | | 74.7 | 300 | 5 |
| Front End Loader | No | 40 | | 79.1 | 400 | 5 |
| Tractor | No | 40 | 84 | | 350 | 5 |
| Backhoe | No | 40 | | 77.6 | 450 | 5 |
| Welder / Torch | No | 40 | | 74 | 400 | 5 |

| | | Results | | | | | |
|---|---|---|---|---|---|---|---|
| | | Calculated (dBA) | | Noise Limits (dBA) | | | |
| | | | | Day | | Evening | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Crane | | 67.7 | 59.7 | N/A | N/A | N/A | N/A |
| Man Lift | | 56.4 | 49.5 | N/A | N/A | N/A | N/A |
| Man Lift | | 55.7 | 48.7 | N/A | N/A | N/A | N/A |
| Man Lift | | 54.1 | 47.1 | N/A | N/A | N/A | N/A |
| Front End Loader | | 56 | 52.1 | N/A | N/A | N/A | N/A |
| Tractor | | 62.1 | 58.1 | N/A | N/A | N/A | N/A |
| Backhoe | | 53.5 | 49.5 | N/A | N/A | N/A | N/A |
| Welder / Torch | | 50.9 | 47 | N/A | N/A | N/A | N/A |
| | Total | 67.7 | 63.2 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residences - Typical Dist | Residential | 65 | 60 | 55 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Crane | No | 16 | | 80.6 | 400 | 5 |
| Man Lift | No | 20 | | 74.7 | 400 | 5 |
| Man Lift | No | 20 | | 74.7 | 400 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Man Lift | No | 20 | | 74.7 | 400 | 5 |
| Front End Loader | No | 40 | | 79.1 | 400 | 5 |
| Tractor | No | 40 | 84 | | 400 | 5 |
| Backhoe | No | 40 | | 77.6 | 400 | 5 |
| Welder / Torch | No | 40 | | 74 | 400 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Crane | 57.5 | 49.5 | N/A | N/A | N/A | N/A |
| Man Lift | 51.6 | 44.6 | N/A | N/A | N/A | N/A |
| Man Lift | 51.6 | 44.6 | N/A | N/A | N/A | N/A |
| Man Lift | 51.6 | 44.6 | N/A | N/A | N/A | N/A |
| Front End Loader | 56 | 52.1 | N/A | N/A | N/A | N/A |
| Tractor | 60.9 | 57 | N/A | N/A | N/A | N/A |
| Backhoe | 54.5 | 50.5 | N/A | N/A | N/A | N/A |
| Welder / Torch | 50.9 | 47 | N/A | N/A | N/A | N/A |
| Total | 60.9 | 60 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Church - Nearest | Residential | 65 | 60 | 55 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Crane | No | 16 | | 80.6 | 350 | 5 |
| Man Lift | No | 20 | | 74.7 | 370 | 5 |
| Man Lift | No | 20 | | 74.7 | 400 | 5 |
| Man Lift | No | 20 | | 74.7 | 450 | 5 |
| Front End Loader | No | 40 | | 79.1 | 500 | 5 |
| Tractor | No | 40 | 84 | | 550 | 5 |
| Backhoe | No | 40 | | 77.6 | 400 | 5 |
| Welder / Torch | No | 40 | | 74 | 450 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Crane | 58.6 | 50.7 | N/A | N/A | N/A | N/A |
| Man Lift | 52.3 | 45.3 | N/A | N/A | N/A | N/A |
| Man Lift | 51.6 | 44.6 | N/A | N/A | N/A | N/A |
| Man Lift | 50.6 | 43.6 | N/A | N/A | N/A | N/A |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Front End Loader | | 54.1 | 50.1 | N/A | N/A | N/A | N/A |
| Tractor | | 58.2 | 54.2 | N/A | N/A | N/A | N/A |
| Backhoe | | 54.5 | 50.5 | N/A | N/A | N/A | N/A |
| Welder / Torch | | 49.9 | 45.9 | N/A | N/A | N/A | N/A |
| | Total | 58.6 | 58.6 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Church - Typical | Residential | 65 | 60 | 55 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Crane | No | 16 | | 80.6 | 550 | 5 |
| Man Lift | No | 20 | | 74.7 | 550 | 5 |
| Man Lift | No | 20 | | 74.7 | 550 | 5 |
| Man Lift | No | 20 | | 74.7 | 550 | 5 |
| Front End Loader | No | 40 | | 79.1 | 550 | 5 |
| Tractor | No | 40 | 84 | | 550 | 5 |
| Backhoe | No | 40 | | 77.6 | 550 | 5 |
| Welder / Torch | No | 40 | | 74 | 550 | 5 |

| | Calculated (dBA) | | Results Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Crane | 54.7 | 46.8 | N/A | N/A | N/A | N/A |
| Man Lift | 48.9 | 41.9 | N/A | N/A | N/A | N/A |
| Man Lift | 48.9 | 41.9 | N/A | N/A | N/A | N/A |
| Man Lift | 48.9 | 41.9 | N/A | N/A | N/A | N/A |
| Front End Loader | 53.3 | 49.3 | N/A | N/A | N/A | N/A |
| Tractor | 58.2 | 54.2 | N/A | N/A | N/A | N/A |
| Backhoe | 51.7 | 47.8 | N/A | N/A | N/A | N/A |
| Welder / Torch | 48.2 | 44.2 | N/A | N/A | N/A | N/A |
| Total | 58.2 | 57.2 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.



Report date: 8/28/2020
Case Description: Woodruff Ave Truck Terminal Project - Paving

---- Receptor #1 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residences - Nearest Dis | Residential | 65 | 60 | 55 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Paver | No | 50 | | 77.2 | 220 | 0 |
| Paver | No | 50 | | 77.2 | 230 | 5 |
| Concrete Mixer Truck | No | 40 | | 78.8 | 250 | 5 |
| Concrete Pump Truck | No | 20 | | 81.4 | 300 | 5 |
| Roller | No | 20 | | 80 | 400 | 5 |
| Roller | No | 20 | | 80 | 350 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Paver | 64.4 | 61.3 | N/A | N/A | N/A | N/A |
| Paver | 59 | 56 | N/A | N/A | N/A | N/A |
| Concrete Mixer Truck | 59.8 | 55.8 | N/A | N/A | N/A | N/A |
| Concrete Pump Truck | 60.8 | 53.8 | N/A | N/A | N/A | N/A |
| Roller | 56.9 | 49.9 | N/A | N/A | N/A | N/A |
| Roller | 58.1 | 51.1 | N/A | N/A | N/A | N/A |
| Total | 64.4 | 64.2 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residences - Typical Dist | Residential | 65 | 60 | 55 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Paver | No | 50 | | 77.2 | 400 | 5 |
| Paver | No | 50 | | 77.2 | 400 | 5 |
| Concrete Mixer Truck | No | 40 | | 78.8 | 400 | 5 |
| Concrete Pump Truck | No | 20 | | 81.4 | 400 | 5 |
| Roller | No | 20 | | 80 | 400 | 5 |
| Roller | No | 20 | | 80 | 400 | 5 |

Results

| | | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Day | | Evening | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Paver | | 54.2 | 51.1 | N/A | N/A | N/A | N/A |
| Paver | | 54.2 | 51.1 | N/A | N/A | N/A | N/A |
| Concrete Mixer Truck | | 55.7 | 51.8 | N/A | N/A | N/A | N/A |
| Concrete Pump Truck | | 58.3 | 51.3 | N/A | N/A | N/A | N/A |
| Roller | | 56.9 | 49.9 | N/A | N/A | N/A | N/A |
| Roller | | 56.9 | 49.9 | N/A | N/A | N/A | N/A |
| | Total | 58.3 | 58.7 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Church - Nearest | Residential | 65 | 60 | 55 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Paver | No | 50 | | 77.2 | 350 | 5 |
| Paver | No | 50 | | 77.2 | 370 | 5 |
| Concrete Mixer Truck | No | 40 | | 78.8 | 400 | 5 |
| Concrete Pump Truck | No | 20 | | 81.4 | 450 | 5 |
| Roller | No | 20 | | 80 | 500 | 5 |
| Roller | No | 20 | | 80 | 550 | 5 |

Results

| | | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Day | | Evening | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Paver | | 55.3 | 52.3 | N/A | N/A | N/A | N/A |
| Paver | | 54.8 | 51.8 | N/A | N/A | N/A | N/A |
| Concrete Mixer Truck | | 55.7 | 51.8 | N/A | N/A | N/A | N/A |
| Concrete Pump Truck | | 57.3 | 50.3 | N/A | N/A | N/A | N/A |
| Roller | | 55 | 48 | N/A | N/A | N/A | N/A |
| Roller | | 54.2 | 47.2 | N/A | N/A | N/A | N/A |
| | Total | 57.3 | 58.4 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Church - Typical | Residential | 65 | 60 | 55 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Paver | No | 50 | | 77.2 | 550 | 5 |
| Paver | No | 50 | | 77.2 | 550 | 5 |
| Concrete Mixer Truck | No | 40 | | 78.8 | 550 | 5 |
| Concrete Pump Truck | No | 20 | | 81.4 | 550 | 5 |
| Roller | No | 20 | | 80 | 550 | 5 |
| Roller | No | 20 | | 80 | 550 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Paver | 51.4 | 48.4 | N/A | N/A | N/A | N/A |
| Paver | 51.4 | 48.4 | N/A | N/A | N/A | N/A |
| Concrete Mixer Truck | 53 | 49 | N/A | N/A | N/A | N/A |
| Concrete Pump Truck | 55.6 | 48.6 | N/A | N/A | N/A | N/A |
| Roller | 54.2 | 47.2 | N/A | N/A | N/A | N/A |
| Roller | 54.2 | 47.2 | N/A | N/A | N/A | N/A |
| Total | 55.6 | 56 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 8/28/2020
Case Description: Woodruff Ave Truck Terminal Project - Architectural Coating

---- Receptor #1 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residences - Nearest Dis | Residential | 65 | 60 | 55 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Compressor (air) | No | 40 | | 77.7 | 220 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Compressor (air) | 64.8 | 60.8 | N/A | N/A | N/A | N/A |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Total | 64.8 | 60.8 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Residences - Typical Dist | Residential | 65 | 60 | 55 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Compressor (air) | No | 40 | | 77.7 | 400 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Compressor (air) | 54.6 | 50.6 | N/A | N/A | N/A | N/A |
| Total | 54.6 | 50.6 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Church - Nearest | Residential | 65 | 60 | 55 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Compressor (air) | No | 40 | | 77.7 | 350 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Compressor (air) | 55.8 | 51.8 | N/A | N/A | N/A | N/A |
| Total | 55.8 | 51.8 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| Church - Typical | Residential | 65 | 60 | 55 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Compressor (air) | No | 40 | | 77.7 | 550 | 5 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | |
|---|---|---|---|---|---|---|
| | | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Compressor (air) | 51.8 | 47.9 | N/A | N/A | N/A | N/A |
| Total | 51.8 | 47.9 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

# APPENDIX G-3

*Traffic Noise*
*Calculations*

| | |
|---|---|
| Dudek | 28 September 2020 |
| CB | TNM 2.5 |

| | |
|---|---|
| INPUT: ROADWAYS | Average pavement type shall be used unless |
| PROJECT/CONTRACT: | Downey Truck Terminal a State highway agency substantiates the use |
| RUN: | Existing_Rev 092020 of a different type with the approval of FHWA |

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | ft | | | ft | ft | ft | | mph | % | | |
| Roadway1 | 35.0 | point1 | 1 | 1,301,802.8 | 12,318,675.0 | 0.00 | | | | Average | |
| | | point2 | 2 | 1,301,812.2 | 12,319,388.0 | 0.00 | | | | Average | |
| | | point3 | 3 | 1,301,813.1 | 12,319,791.0 | 0.00 | | | | Average | |
| | | point4 | 4 | 1,301,818.2 | 12,320,025.0 | 0.00 | | | | | |
| Roadway2 | 35.0 | point5 | 5 | 1,301,775.8 | 12,320,044.0 | 0.00 | | | | Average | |
| | | point6 | 6 | 1,301,771.5 | 12,319,272.0 | 0.00 | | | | Average | |
| | | point7 | 7 | 1,301,764.2 | 12,318,654.0 | 0.00 | | | | | |
| Stewart and Grey Rd | 30.0 | point8 | 8 | 1,301,733.9 | 12,318,612.0 | 0.00 | | | | Average | |
| | | point9 | 9 | 1,301,546.5 | 12,318,566.0 | 0.00 | | | | Average | |
| | | point10 | 10 | 1,301,213.0 | 12,318,568.0 | 0.00 | | | | Average | |
| | | point11 | 11 | 1,300,873.2 | 12,318,569.0 | 0.00 | | | | Average | |
| | | point12 | 12 | 1,300,488.6 | 12,318,572.0 | 0.00 | | | | Average | |
| | | point13 | 13 | 1,300,224.5 | 12,318,604.0 | 0.00 | | | | | |
| Roadway4 | 30.0 | point14 | 14 | 1,300,223.6 | 12,318,565.0 | 0.00 | | | | Average | |
| | | point15 | 15 | 1,300,461.6 | 12,318,538.0 | 0.00 | | | | Average | |
| | | point16 | 16 | 1,300,663.5 | 12,318,535.0 | 0.00 | | | | Average | |
| | | point17 | 17 | 1,301,138.2 | 12,318,537.0 | 0.00 | | | | Average | |
| | | point18 | 18 | 1,301,563.2 | 12,318,537.0 | 0.00 | | | | Average | |
| | | point19 | 19 | 1,301,723.0 | 12,318,575.0 | 0.00 | | | | | |
| Roadway5 | 30.0 | point20 | 20 | 1,301,824.2 | 12,318,643.0 | 0.00 | | | | Average | |
| | | point21 | 21 | 1,302,166.0 | 12,318,772.0 | 0.00 | | | | Average | |
| | | point22 | 22 | 1,302,518.8 | 12,318,898.0 | 0.00 | | | | Average | |
| | | point23 | 23 | 1,302,995.2 | 12,319,088.0 | 0.00 | | | | | |
| Roadway6 | 30.0 | point24 | 24 | 1,303,010.1 | 12,319,051.0 | 0.00 | | | | Average | |
| | | point25 | 25 | 1,302,580.6 | 12,318,898.0 | 0.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | point26 | 26 | 1,302,339.8 | 12,318,807.0 | 0.00 | | | | Average | |
| | | point27 | 27 | 1,301,821.5 | 12,318,610.0 | 0.00 | | | | | |
| Roadway7 | 35.0 | point28 | 28 | 1,301,804.4 | 12,318,575.0 | 0.00 | | | | Average | |
| | | point29 | 29 | 1,301,798.5 | 12,318,109.0 | 0.00 | | | | | |
| Roadway8 | 35.0 | point32 | 32 | 1,301,753.9 | 12,317,361.0 | 0.00 | | | | Average | |
| | | point33 | 33 | 1,301,761.4 | 12,318,112.0 | 0.00 | | | | | |
| Washburn rd | 20.0 | point36 | 36 | 1,300,261.4 | 12,317,343.0 | 0.00 | | | | Average | |
| | | point37 | 37 | 1,300,859.2 | 12,317,339.0 | 0.00 | | | | Average | |
| | | point38 | 38 | 1,301,737.0 | 12,317,332.0 | 0.00 | | | | | |
| Roadway10 | 20.0 | point39 | 39 | 1,300,263.8 | 12,317,331.0 | 0.00 | | | | Average | |
| | | point40 | 40 | 1,300,564.4 | 12,317,329.0 | 0.00 | | | | Average | |
| | | point41 | 41 | 1,300,834.5 | 12,317,323.0 | 0.00 | | | | Average | |
| | | point42 | 42 | 1,301,108.6 | 12,317,322.0 | 0.00 | | | | Average | |
| | | point43 | 43 | 1,301,329.6 | 12,317,317.0 | 0.00 | | | | Average | |
| | | point44 | 44 | 1,301,734.6 | 12,317,312.0 | 0.00 | | | | | |
| Washburn Rd | 20.0 | point45 | 45 | 1,302,603.4 | 12,317,325.0 | 0.00 | | | | Average | |
| | | point46 | 46 | 1,302,359.1 | 12,317,328.0 | 0.00 | | | | Average | |
| | | point47 | 47 | 1,302,086.2 | 12,317,332.0 | 0.00 | | | | Average | |
| | | point48 | 48 | 1,301,826.6 | 12,317,335.0 | 0.00 | | | | | |
| Roadway12 | 20.0 | point49 | 49 | 1,302,600.1 | 12,317,309.0 | 0.00 | | | | Average | |
| | | point50 | 50 | 1,302,494.5 | 12,317,307.0 | 0.00 | | | | Average | |
| | | point51 | 51 | 1,302,184.8 | 12,317,307.0 | 0.00 | | | | Average | |
| | | point52 | 52 | 1,301,829.0 | 12,317,317.0 | 0.00 | | | | | |
| Woodruff Ave | 35.0 | point53 | 53 | 1,301,797.5 | 12,317,291.0 | 0.00 | | | | Average | |
| | | point54 | 54 | 1,301,791.5 | 12,317,098.0 | 0.00 | | | | Average | |
| | | point55 | 55 | 1,301,788.9 | 12,316,696.0 | 0.00 | | | | Average | |
| | | point56 | 56 | 1,301,784.9 | 12,316,359.0 | 0.00 | | | | Average | |
| | | point57 | 57 | 1,301,781.8 | 12,315,989.0 | 0.00 | | | | Average | |
| | | point58 | 58 | 1,301,774.5 | 12,315,550.0 | 0.00 | | | | Average | |
| | | point59 | 59 | 1,301,772.9 | 12,315,185.0 | 0.00 | | | | Average | |
| | | point60 | 60 | 1,301,771.0 | 12,315,041.0 | 0.00 | | | | Average | |
| | | point61 | 61 | 1,301,770.9 | 12,314,749.0 | 0.00 | | | | | |
| Roadway14 | 35.0 | point62 | 62 | 1,301,731.6 | 12,314,750.0 | 0.00 | | | | Average | |
| | | point63 | 63 | 1,301,740.9 | 12,315,737.0 | 0.00 | | | | Average | |
| | | point64 | 64 | 1,301,747.4 | 12,316,334.0 | 0.00 | | | | Average | |
| | | point65 | 65 | 1,301,751.9 | 12,316,864.0 | 0.00 | | | | Average | |
| | | point66 | 66 | 1,301,752.6 | 12,317,290.0 | 0.00 | | | | | |
| Roadway8-2 | 35.0 | point67 | 67 | 1,301,761.4 | 12,318,112.0 | 0.00 | | | | Average | |
| | | point34 | 34 | 1,301,762.2 | 12,318,288.0 | 0.00 | | | | Average | |

**Dudek** **28 September 2020**
**CB** **TNM 2.5**

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**PROJECT/CONTRACT:** **Downey Truck Terminal**
**RUN:** **Existing_Rev 092020**

| Roadway | Points | | Segment | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | mph | veh/hr | mph | veh/hr | mph | veh/hr | mph | veh/hr | mph |
| Roadway1 | point1 | 1 | 698 | 40 | 22 | 40 | 15 | 40 | 0 | 0 | 0 | 0 |
| | point2 | 2 | 698 | 40 | 22 | 40 | 15 | 40 | 0 | 0 | 0 | 0 |
| | point3 | 3 | 698 | 40 | 22 | 40 | 15 | 40 | 0 | 0 | 0 | 0 |
| | point4 | 4 | | | | | | | | | | |
| Roadway2 | point5 | 5 | 698 | 40 | 22 | 40 | 15 | 40 | 0 | 0 | 0 | 0 |
| | point6 | 6 | 698 | 40 | 22 | 40 | 15 | 40 | 0 | 0 | 0 | 0 |
| | point7 | 7 | | | | | | | | | | |
| Stewart and Grey Rd | point8 | 8 | 333 | 40 | 11 | 40 | 7 | 40 | 0 | 0 | 0 | 0 |
| | point9 | 9 | 333 | 40 | 11 | 40 | 7 | 40 | 0 | 0 | 0 | 0 |
| | point10 | 10 | 333 | 40 | 11 | 40 | 7 | 40 | 0 | 0 | 0 | 0 |
| | point11 | 11 | 333 | 40 | 11 | 40 | 7 | 40 | 0 | 0 | 0 | 0 |
| | point12 | 12 | 333 | 40 | 11 | 40 | 7 | 40 | 0 | 0 | 0 | 0 |
| | point13 | 13 | | | | | | | | | | |
| Roadway4 | point14 | 14 | 333 | 40 | 11 | 40 | 7 | 40 | 0 | 0 | 0 | 0 |
| | point15 | 15 | 333 | 40 | 11 | 40 | 7 | 40 | 0 | 0 | 0 | 0 |
| | point16 | 16 | 333 | 40 | 11 | 40 | 7 | 40 | 0 | 0 | 0 | 0 |
| | point17 | 17 | 333 | 40 | 11 | 40 | 7 | 40 | 0 | 0 | 0 | 0 |
| | point18 | 18 | 333 | 40 | 11 | 40 | 7 | 40 | 0 | 0 | 0 | 0 |
| | point19 | 19 | | | | | | | | | | |
| Roadway5 | point20 | 20 | 536 | 40 | 17 | 40 | 11 | 40 | 0 | 0 | 0 | 0 |
| | point21 | 21 | 536 | 40 | 17 | 40 | 11 | 40 | 0 | 0 | 0 | 0 |
| | point22 | 22 | 536 | 40 | 17 | 40 | 11 | 40 | 0 | 0 | 0 | 0 |
| | point23 | 23 | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Roadway6 | point24 | 24 | 536 | 40 | 17 | 40 | 11 | 40 | 0 | 0 | 0 | 0 |
| | point25 | 25 | 536 | 40 | 17 | 40 | 11 | 40 | 0 | 0 | 0 | 0 |
| | point26 | 26 | 536 | 40 | 17 | 40 | 11 | 40 | 0 | 0 | 0 | 0 |
| | point27 | 27 | | | | | | | | | | |
| Roadway7 | point28 | 28 | 779 | 40 | 25 | 40 | 16 | 40 | 0 | 0 | 0 | 0 |
| | point29 | 29 | | | | | | | | | | |
| Roadway8 | point32 | 32 | 813 | 40 | 26 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point33 | 33 | | | | | | | | | | |
| Washburn rd | point36 | 36 | 161 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point37 | 37 | 161 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point38 | 38 | | | | | | | | | | |
| Roadway10 | point39 | 39 | 161 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point40 | 40 | 161 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point41 | 41 | 161 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point42 | 42 | 161 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point43 | 43 | 161 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point44 | 44 | | | | | | | | | | |
| Washburn Rd | point45 | 45 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point46 | 46 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point47 | 47 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point48 | 48 | | | | | | | | | | |
| Roadway12 | point49 | 49 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point50 | 50 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point51 | 51 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point52 | 52 | | | | | | | | | | |
| Woodruff Ave | point53 | 53 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point54 | 54 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point55 | 55 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point56 | 56 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point57 | 57 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point58 | 58 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point59 | 59 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point60 | 60 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point61 | 61 | | | | | | | | | | |
| Roadway14 | point62 | 62 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point63 | 63 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | point64 | 64 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point65 | 65 | 851 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point66 | 66 | | | | | | | | | | |
| Roadway8-2 | point67 | 67 | 779 | 40 | 25 | 40 | 16 | 40 | 0 | 0 | 0 | 0 |
| | point34 | 34 | 779 | 40 | 25 | 40 | 16 | 40 | 0 | 0 | 0 | 0 |
| | point35 | 35 | | | | | | | | | | |
| Roadway7-2 | point68 | 68 | 813 | 40 | 26 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point30 | 30 | 813 | 40 | 26 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point31 | 31 | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dudek** | | | | | | **28 September 2020** | | | | | |
| **CB** | | | | | | **TNM 2.5** | | | | | |
| **INPUT: RECEIVERS** | | | | | | | | | | | |
| **PROJECT/CONTRACT:** | **Downey Truck Terminal** | | | | | | | | | | |
| **RUN:** | **Existing_Rev 092020** | | | | | | | | | | |
| **Receiver** | | | | | | | | | | | |
| **Name** | **No.** | **#DUs** | **Coordinates (ground)** | | | **Height** | **Input Sound Levels and Criteria** | | | | **Active** |
| | | | **X** | **Y** | **Z** | **above** | **Existing** | **Impact Criteria** | | **NR** | **in** |
| | | | | | | **Ground** | **LAeq1h** | **LAeq1h** | **Sub'l** | **Goal** | **Calc.** |
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| ST1 | 1 | 1 | 1,301,863.8 | 12,317,281.0 | 0.00 | 4.92 | 71.00 | 66 | 10.0 | 8.0 | Y |
| ST2 | 2 | 1 | 1,301,004.6 | 12,317,287.0 | 0.00 | 4.92 | 62.60 | 66 | 10.0 | 8.0 | Y |
| ST3 | 3 | 1 | 1,301,703.9 | 12,316,154.0 | 0.00 | 4.92 | 70.20 | 66 | 10.0 | 8.0 | Y |
| ST4 | 4 | 1 | 1,301,843.2 | 12,319,423.0 | 0.00 | 4.92 | 70.90 | 66 | 10.0 | 8.0 | Y |
| ST5 | 5 | 1 | 1,302,831.0 | 12,318,965.0 | 0.00 | 4.92 | 72.20 | 66 | 10.0 | 8.0 | Y |

Dudek 28 September 2020
CB TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: Downey Truck Terminal
RUN: Existing_Rev 092020

| Barrier | | | | | | | | | Points | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Type | Height | | If Wall | If Berm | | | Add'tnl | Name | No. | Coordinates (bottom) | | | Height | Segment | | | | |
| | | Min | Max | $ per Unit Area | $ per Unit Vol. | Top Width | Run:Rise | $ per Unit Length | | | X | Y | Z | at Point | Seg Ht Increment | #Up | #Dn | On Struct? | Important Reflections? |
| | | ft | ft | $/sq ft | $/cu yd | ft | ft:ft | $/ft | | | ft | ft | ft | ft | ft | | | | |
| Barrier1 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point2 | 2 | 1,301,646.6 | 12,318,321.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point3 | 3 | 1,300,519.8 | 12,318,329.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point4 | 4 | 1,300,518.9 | 12,318,230.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point5 | 5 | 1,300,519.6 | 12,318,230.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point6 | 6 | 1,300,519.6 | 12,318,226.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point7 | 7 | 1,300,578.8 | 12,318,225.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point8 | 8 | 1,300,578.5 | 12,318,180.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point9 | 9 | 1,300,650.2 | 12,318,179.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point10 | 10 | 1,300,650.6 | 12,318,225.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point11 | 11 | 1,300,722.8 | 12,318,224.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point12 | 12 | 1,300,722.4 | 12,318,178.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point13 | 13 | 1,300,758.5 | 12,318,178.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point14 | 14 | 1,300,758.2 | 12,318,152.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point15 | 15 | 1,301,645.2 | 12,318,145.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point16 | 16 | 1,301,646.6 | 12,318,321.0 | 0.00 | 35.00 | | | | | |
| Barrier2 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point18 | 18 | 1,301,692.8 | 12,317,672.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point19 | 19 | 1,301,693.9 | 12,317,692.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point20 | 20 | 1,301,630.4 | 12,317,694.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point21 | 21 | 1,301,626.2 | 12,317,767.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point22 | 22 | 1,301,680.9 | 12,317,768.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point23 | 23 | 1,301,681.1 | 12,317,799.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point24 | 24 | 1,301,700.6 | 12,317,799.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point25 | 25 | 1,301,695.8 | 12,317,873.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point26 | 26 | 1,301,169.5 | 12,317,878.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point27 | 27 | 1,301,168.4 | 12,317,698.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point28 | 28 | 1,301,148.0 | 12,317,698.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point29 | 29 | 1,301,144.1 | 12,317,564.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point30 | 30 | 1,301,693.2 | 12,317,560.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point31 | 31 | 1,301,692.8 | 12,317,672.0 | 0.00 | 20.00 | | | | | |
| Barrier3 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point33 | 33 | 1,302,427.6 | 12,317,524.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point34 | 34 | 1,302,430.2 | 12,317,860.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point35 | 35 | 1,302,405.9 | 12,317,860.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point36 | 36 | 1,302,407.8 | 12,318,100.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point37 | 37 | 1,302,265.1 | 12,318,101.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point38 | 38 | 1,302,263.4 | 12,317,862.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point39 | 39 | 1,302,238.8 | 12,317,862.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point40 | 40 | 1,302,236.1 | 12,317,525.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point41 | 41 | 1,302,427.6 | 12,317,524.0 | 0.00 | 35.00 | | | | | |
| Barrier4 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point43 | 43 | 1,301,892.0 | 12,318,029.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point44 | 44 | 1,302,179.6 | 12,318,027.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point45 | 45 | 1,302,180.1 | 12,318,082.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point46 | 46 | 1,302,203.5 | 12,318,081.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point47 | 47 | 1,302,204.2 | 12,318,176.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point48 | 48 | 1,301,893.1 | 12,318,179.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point49 | 49 | 1,301,892.0 | 12,318,029.0 | 0.00 | 35.00 | | | | | |
| Barrier5 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point51 | 51 | 1,301,912.1 | 12,317,874.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point52 | 52 | 1,301,909.9 | 12,317,574.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point53 | 53 | 1,301,934.4 | 12,317,574.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point54 | 54 | 1,301,979.2 | 12,317,537.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point55 | 55 | 1,302,076.9 | 12,317,536.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point56 | 56 | 1,302,079.5 | 12,317,873.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point57 | 57 | 1,301,912.1 | 12,317,874.0 | 0.00 | 15.00 | | | | | |
| Barrier6 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point59 | 59 | 1,301,957.6 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point60 | 60 | 1,302,111.6 | 12,318,245.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point61 | 61 | 1,302,112.0 | 12,318,326.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point62 | 62 | 1,301,930.9 | 12,318,327.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point63 | 63 | 1,301,930.5 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point64 | 64 | 1,301,934.1 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point65 | 65 | 1,301,934.0 | 12,318,239.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point66 | 66 | 1,301,957.6 | 12,318,239.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point67 | 67 | 1,301,957.6 | 12,318,246.0 | 0.00 | 15.00 | | | | | |
| Barrier7 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point69 | 69 | 1,301,895.4 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point70 | 70 | 1,301,895.4 | 12,317,466.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point71 | 71 | 1,301,893.6 | 12,317,469.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point72 | 72 | 1,301,890.6 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point73 | 73 | 1,301,888.6 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point74 | 74 | 1,301,870.5 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point75 | 75 | 1,301,869.0 | 12,317,474.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point76 | 76 | 1,301,856.9 | 12,317,474.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point77 | 77 | 1,301,855.4 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point78 | 78 | 1,301,826.2 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point79 | 79 | 1,301,826.2 | 12,317,425.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point80 | 80 | 1,301,836.6 | 12,317,425.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point81 | 81 | 1,301,836.6 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point82 | 82 | 1,301,895.4 | 12,317,419.0 | 0.00 | 15.00 | | | | | |
| Barrier8 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point84 | 84 | 1,302,088.6 | 12,317,495.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point85 | 85 | 1,301,992.1 | 12,317,495.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point86 | 86 | 1,301,991.5 | 12,317,423.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point87 | 87 | 1,302,015.9 | 12,317,423.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point88 | 88 | 1,302,015.4 | 12,317,375.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point89 | 89 | 1,302,087.6 | 12,317,375.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point90 | 90 | 1,302,088.6 | 12,317,495.0 | 0.00 | 15.00 | | | | | |
| Barrier9 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point92 | 92 | 1,301,469.8 | 12,317,486.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point93 | 93 | 1,301,468.6 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point94 | 94 | 1,301,473.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point95 | 95 | 1,301,473.4 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point96 | 96 | 1,301,489.8 | 12,317,381.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point97 | 97 | 1,301,489.8 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point98 | 98 | 1,301,494.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point99 | 99 | 1,301,494.2 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point100 | 100 | 1,301,513.4 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point101 | 101 | 1,301,513.5 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point102 | 102 | 1,301,531.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point103 | 103 | 1,301,531.2 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point104 | 104 | 1,301,543.0 | 12,317,381.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point105 | 105 | 1,301,543.0 | 12,317,385.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point106 | 106 | 1,301,543.6 | 12,317,385.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point107 | 107 | 1,301,544.8 | 12,317,485.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point108 | 108 | 1,301,469.8 | 12,317,486.0 | 0.00 | 15.00 | | | | | |
| Barrier10 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point110 | 110 | 1,301,703.6 | 12,317,497.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point111 | 111 | 1,301,583.5 | 12,317,498.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point112 | 112 | 1,301,582.9 | 12,317,420.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point113 | 113 | 1,301,683.6 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point114 | 114 | 1,301,683.4 | 12,317,398.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point115 | 115 | 1,301,705.9 | 12,317,398.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point116 | 116 | 1,301,706.2 | 12,317,444.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point117 | 117 | 1,301,703.2 | 12,317,444.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point118 | 118 | 1,301,703.6 | 12,317,497.0 | 0.00 | 15.00 | | | | | |
| Barrier12 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point122 | 122 | 1,301,040.5 | 12,317,389.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point123 | 123 | 1,301,076.6 | 12,317,389.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point124 | 124 | 1,301,077.4 | 12,317,508.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point125 | 125 | 1,301,088.6 | 12,317,508.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point126 | 126 | 1,301,088.9 | 12,317,558.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point127 | 127 | 1,301,013.5 | 12,317,558.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point128 | 128 | 1,301,013.4 | 12,317,528.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point129 | 129 | 1,300,978.0 | 12,317,528.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point130 | 130 | 1,300,972.1 | 12,317,402.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point131 | 131 | 1,300,972.0 | 12,317,384.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point132 | 132 | 1,301,040.5 | 12,317,383.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point133 | 133 | 1,301,040.5 | 12,317,389.0 | 0.00 | 15.00 | | | | | |
| Barrier13 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point135 | 135 | 1,300,969.4 | 12,317,621.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point136 | 136 | 1,301,088.9 | 12,317,620.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point137 | 137 | 1,301,090.2 | 12,317,720.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point138 | 138 | 1,300,969.6 | 12,317,721.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point139 | 139 | 1,300,969.4 | 12,317,703.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point140 | 140 | 1,300,967.8 | 12,317,703.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point141 | 141 | 1,300,963.2 | 12,317,671.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point142 | 142 | 1,300,966.9 | 12,317,639.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point143 | 143 | 1,300,969.5 | 12,317,639.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point144 | 144 | 1,300,969.4 | 12,317,621.0 | 0.00 | 15.00 | | | | | |
| Barrier14 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point146 | 146 | 1,300,766.4 | 12,317,608.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point147 | 147 | 1,300,861.1 | 12,317,608.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point148 | 148 | 1,300,861.2 | 12,317,645.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point149 | 149 | 1,300,864.0 | 12,317,645.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point150 | 150 | 1,300,864.1 | 12,317,669.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point151 | 151 | 1,300,861.1 | 12,317,669.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point152 | 152 | 1,300,861.2 | 12,317,707.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point153 | 153 | 1,300,766.6 | 12,317,707.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point154 | 154 | 1,300,766.4 | 12,317,608.0 | 0.00 | 15.00 | | | | | |
| Barrier15 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point156 | 156 | 1,301,280.9 | 12,317,479.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point157 | 157 | 1,301,138.0 | 12,317,480.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point158 | 158 | 1,301,137.4 | 12,317,400.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point159 | 159 | 1,301,355.5 | 12,317,399.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point160 | 160 | 1,301,355.4 | 12,317,384.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point161 | 161 | 1,301,434.9 | 12,317,383.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point162 | 162 | 1,301,435.2 | 12,317,431.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point163 | 163 | 1,301,417.9 | 12,317,431.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point164 | 164 | 1,301,418.1 | 12,317,478.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point165 | 165 | 1,301,319.1 | 12,317,479.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point166 | 166 | 1,301,319.2 | 12,317,494.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point167 | 167 | 1,301,280.9 | 12,317,494.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point168 | 168 | 1,301,280.9 | 12,317,479.0 | 0.00 | 15.00 | | | | | |
| Barrier16 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point170 | 170 | 1,300,858.9 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point171 | 171 | 1,300,927.0 | 12,317,794.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point172 | 172 | 1,300,927.8 | 12,317,894.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point173 | 173 | 1,300,768.1 | 12,317,896.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point174 | 174 | 1,300,767.4 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point175 | 175 | 1,300,836.0 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point176 | 176 | 1,300,836.0 | 12,317,791.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point177 | 177 | 1,300,858.9 | 12,317,791.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point178 | 178 | 1,300,858.9 | 12,317,795.0 | 0.00 | 15.00 | | | | | |
| Barrier17 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point180 | 180 | 1,301,099.5 | 12,317,893.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point181 | 181 | 1,300,939.5 | 12,317,895.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point182 | 182 | 1,300,938.5 | 12,317,785.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point183 | 183 | 1,300,973.4 | 12,317,785.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point184 | 184 | 1,300,973.4 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point185 | 185 | 1,301,098.6 | 12,317,794.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point186 | 186 | 1,301,099.5 | 12,317,893.0 | 0.00 | 15.00 | | | | | |
| Barrier18 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point188 | 188 | 1,300,827.4 | 12,317,903.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point189 | 189 | 1,301,091.4 | 12,317,901.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point190 | 190 | 1,301,092.0 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point191 | 191 | 1,301,032.6 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point192 | 192 | 1,301,032.9 | 12,318,033.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point193 | 193 | 1,300,829.2 | 12,318,034.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point194 | 194 | 1,300,828.8 | 12,317,945.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point195 | 195 | 1,300,760.9 | 12,317,946.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point196 | 196 | 1,300,761.4 | 12,318,036.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point197 | 197 | 1,300,557.4 | 12,318,037.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point198 | 198 | 1,300,557.4 | 12,318,041.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point199 | 199 | 1,300,522.4 | 12,318,042.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point200 | 200 | 1,300,521.6 | 12,317,925.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point202 | 202 | 1,300,761.5 | 12,317,923.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point203 | 203 | 1,300,770.6 | 12,317,924.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point204 | 204 | 1,300,770.5 | 12,317,905.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point206 | 206 | 1,300,827.4 | 12,317,904.0 | 0.00 | 15.00 | | | | | |
| Barrier19 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point208 | 208 | 1,301,163.0 | 12,317,936.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point209 | 209 | 1,301,323.4 | 12,317,935.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point210 | 210 | 1,301,323.9 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point211 | 211 | 1,301,279.6 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point212 | 212 | 1,301,279.9 | 12,318,033.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point213 | 213 | 1,301,163.8 | 12,318,034.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point214 | 214 | 1,301,163.0 | 12,317,936.0 | 0.00 | 15.00 | | | | | |
| Barrier20 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point216 | 216 | 1,301,398.2 | 12,317,933.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point217 | 217 | 1,301,658.4 | 12,317,933.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point218 | 218 | 1,301,658.6 | 12,318,002.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point219 | 219 | 1,301,398.5 | 12,318,003.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point220 | 220 | 1,301,398.2 | 12,317,933.0 | 0.00 | 15.00 | | | | | |

Dudek
CB

28 September 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Downey Truck Terminal
RUN: Existing_Rev 092020
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| ST1 | 1 | 1 | 71.0 | 67.3 | 66 | -3.7 | 10 | Snd Lvl | 67.3 | 0.0 | 8 | -8.0 |
| ST2 | 2 | 1 | 62.6 | 63.5 | 66 | 0.9 | 10 | ---- | 63.5 | 0.0 | 8 | -8.0 |
| ST3 | 3 | 1 | 70.2 | 69.1 | 66 | -1.1 | 10 | Snd Lvl | 69.1 | 0.0 | 8 | -8.0 |
| ST4 | 4 | 1 | 70.9 | 69.4 | 66 | -1.5 | 10 | Snd Lvl | 69.4 | 0.0 | 8 | -8.0 |
| ST5 | 5 | 1 | 72.2 | 69.6 | 66 | -2.6 | 10 | Snd Lvl | 69.6 | 0.0 | 8 | -8.0 |

| Dwelling Units | # DUs | Noise Reduction Min | Avg | Max |
|---|---|---|---|---|
| | | dB | dB | dB |
| All Selected | 5 | 0.0 | 0.0 | 0.0 |
| All Impacted | 4 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

| | |
|---|---|
| Dudek | 28 September 2020 |
| CB | TNM 2.5 |

| | |
|---|---|
| INPUT: ROADWAYS | Average pavement type shall be used unless |
| PROJECT/CONTRACT: | Downey Truck Terminal a State highway agency substantiates the use |
| RUN: | Existing + Project 092020 of a different type with the approval of FHWA |

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | ft | | | ft | ft | ft | | mph | % | | |
| Roadway1 | 35.0 | point1 | 1 | 1,301,802.8 | 12,318,675.0 | 0.00 | | | | Average | |
| | | point2 | 2 | 1,301,812.2 | 12,319,388.0 | 0.00 | | | | Average | |
| | | point3 | 3 | 1,301,813.1 | 12,319,791.0 | 0.00 | | | | Average | |
| | | point4 | 4 | 1,301,818.2 | 12,320,025.0 | 0.00 | | | | | |
| Roadway2 | 35.0 | point5 | 5 | 1,301,775.8 | 12,320,044.0 | 0.00 | | | | Average | |
| | | point6 | 6 | 1,301,771.5 | 12,319,272.0 | 0.00 | | | | Average | |
| | | point7 | 7 | 1,301,764.2 | 12,318,654.0 | 0.00 | | | | | |
| Stewart and Grey Rd | 30.0 | point8 | 8 | 1,301,733.9 | 12,318,612.0 | 0.00 | | | | Average | |
| | | point9 | 9 | 1,301,546.5 | 12,318,566.0 | 0.00 | | | | Average | |
| | | point10 | 10 | 1,301,213.0 | 12,318,568.0 | 0.00 | | | | Average | |
| | | point11 | 11 | 1,300,873.2 | 12,318,569.0 | 0.00 | | | | Average | |
| | | point12 | 12 | 1,300,488.6 | 12,318,572.0 | 0.00 | | | | Average | |
| | | point13 | 13 | 1,300,224.5 | 12,318,604.0 | 0.00 | | | | | |
| Stewart and Grey Rd e | 30.0 | point14 | 14 | 1,300,223.6 | 12,318,565.0 | 0.00 | | | | Average | |
| | | point15 | 15 | 1,300,461.6 | 12,318,538.0 | 0.00 | | | | Average | |
| | | point16 | 16 | 1,300,663.5 | 12,318,535.0 | 0.00 | | | | Average | |
| | | point17 | 17 | 1,301,138.2 | 12,318,537.0 | 0.00 | | | | Average | |
| | | point18 | 18 | 1,301,563.2 | 12,318,537.0 | 0.00 | | | | Average | |
| | | point19 | 19 | 1,301,723.0 | 12,318,575.0 | 0.00 | | | | | |
| Stewart and Grey Rd w | 30.0 | point20 | 20 | 1,301,824.2 | 12,318,643.0 | 0.00 | | | | Average | |
| | | point21 | 21 | 1,302,166.0 | 12,318,772.0 | 0.00 | | | | Average | |
| | | point22 | 22 | 1,302,518.8 | 12,318,898.0 | 0.00 | | | | Average | |
| | | point23 | 23 | 1,302,995.2 | 12,319,088.0 | 0.00 | | | | | |
| Roadway6 | 30.0 | point24 | 24 | 1,303,010.1 | 12,319,051.0 | 0.00 | | | | Average | |
| | | point25 | 25 | 1,302,580.6 | 12,318,898.0 | 0.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | point26 | 26 | 1,302,339.8 | 12,318,807.0 | 0.00 | | | | Average | |
| | | point27 | 27 | 1,301,821.5 | 12,318,610.0 | 0.00 | | | | | |
| Roadway7 | 35.0 | point28 | 28 | 1,301,804.4 | 12,318,575.0 | 0.00 | | | | Average | |
| | | point29 | 29 | 1,301,798.5 | 12,318,109.0 | 0.00 | | | | | |
| Woodruff Ave s | 35.0 | point32 | 32 | 1,301,753.9 | 12,317,361.0 | 0.00 | | | | Average | |
| | | point33 | 33 | 1,301,761.4 | 12,318,112.0 | 0.00 | | | | | |
| Washburn rd | 20.0 | point36 | 36 | 1,300,261.4 | 12,317,343.0 | 0.00 | | | | Average | |
| | | point37 | 37 | 1,300,859.2 | 12,317,339.0 | 0.00 | | | | Average | |
| | | point38 | 38 | 1,301,737.0 | 12,317,332.0 | 0.00 | | | | | |
| Roadway10 | 20.0 | point39 | 39 | 1,300,263.8 | 12,317,331.0 | 0.00 | | | | Average | |
| | | point40 | 40 | 1,300,564.4 | 12,317,329.0 | 0.00 | | | | Average | |
| | | point41 | 41 | 1,300,834.5 | 12,317,323.0 | 0.00 | | | | Average | |
| | | point42 | 42 | 1,301,108.6 | 12,317,322.0 | 0.00 | | | | Average | |
| | | point43 | 43 | 1,301,329.6 | 12,317,317.0 | 0.00 | | | | Average | |
| | | point44 | 44 | 1,301,734.6 | 12,317,312.0 | 0.00 | | | | | |
| Washburn Rd | 20.0 | point45 | 45 | 1,302,603.4 | 12,317,325.0 | 0.00 | | | | Average | |
| | | point46 | 46 | 1,302,359.1 | 12,317,328.0 | 0.00 | | | | Average | |
| | | point47 | 47 | 1,302,086.2 | 12,317,332.0 | 0.00 | | | | Average | |
| | | point48 | 48 | 1,301,826.6 | 12,317,335.0 | 0.00 | | | | | |
| Roadway12 | 20.0 | point49 | 49 | 1,302,600.1 | 12,317,309.0 | 0.00 | | | | Average | |
| | | point50 | 50 | 1,302,494.5 | 12,317,307.0 | 0.00 | | | | Average | |
| | | point51 | 51 | 1,302,184.8 | 12,317,307.0 | 0.00 | | | | Average | |
| | | point52 | 52 | 1,301,829.0 | 12,317,317.0 | 0.00 | | | | | |
| Woodruff Ave | 35.0 | point53 | 53 | 1,301,797.5 | 12,317,291.0 | 0.00 | | | | Average | |
| | | point54 | 54 | 1,301,791.5 | 12,317,098.0 | 0.00 | | | | Average | |
| | | point55 | 55 | 1,301,788.9 | 12,316,696.0 | 0.00 | | | | Average | |
| | | point56 | 56 | 1,301,784.9 | 12,316,359.0 | 0.00 | | | | Average | |
| | | point57 | 57 | 1,301,781.8 | 12,315,989.0 | 0.00 | | | | Average | |
| | | point58 | 58 | 1,301,774.5 | 12,315,550.0 | 0.00 | | | | Average | |
| | | point59 | 59 | 1,301,772.9 | 12,315,185.0 | 0.00 | | | | Average | |
| | | point60 | 60 | 1,301,771.0 | 12,315,041.0 | 0.00 | | | | Average | |
| | | point61 | 61 | 1,301,770.9 | 12,314,749.0 | 0.00 | | | | | |
| Woodruff Ave s | 35.0 | point62 | 62 | 1,301,731.6 | 12,314,750.0 | 0.00 | | | | Average | |
| | | point63 | 63 | 1,301,740.9 | 12,315,737.0 | 0.00 | | | | Average | |
| | | point64 | 64 | 1,301,747.4 | 12,316,334.0 | 0.00 | | | | Average | |
| | | point65 | 65 | 1,301,751.9 | 12,316,864.0 | 0.00 | | | | Average | |
| | | point66 | 66 | 1,301,752.6 | 12,317,290.0 | 0.00 | | | | | |
| Roadway8-2 | 35.0 | point67 | 67 | 1,301,761.4 | 12,318,112.0 | 0.00 | | | | Average | |
| | | point34 | 34 | 1,301,762.2 | 12,318,288.0 | 0.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | point35 | 35 | 1,301,767.2 | 12,318,564.0 | 0.00 | | | | | |
| Woodruff Ave n | 35.0 | point68 | 68 | 1,301,798.5 | 12,318,109.0 | 0.00 | | | | Average | |
| | | point30 | 30 | 1,301,795.2 | 12,317,816.0 | 0.00 | | | | Average | |
| | | point31 | 31 | 1,301,794.0 | 12,317,364.0 | 0.00 | | | | | |

**Dudek** **28 September 2020**
**CB** **TNM 2.5**

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**PROJECT/CONTRACT:** **Downey Truck Terminal**
**RUN:** **Existing + Project 092020**

| Roadway | Points | | Segment | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | mph | veh/hr | mph | veh/hr | mph | veh/hr | mph | veh/hr | mph |
| Roadway1 | point1 | 1 | 700 | 40 | 22 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point2 | 2 | 700 | 40 | 22 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point3 | 3 | 700 | 40 | 22 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point4 | 4 | | | | | | | | | | |
| Roadway2 | point5 | 5 | 700 | 40 | 22 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point6 | 6 | 700 | 40 | 22 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point7 | 7 | | | | | | | | | | |
| Stewart and Grey Rd | point8 | 8 | 335 | 40 | 11 | 40 | 9 | 40 | 0 | 0 | 0 | 0 |
| | point9 | 9 | 335 | 40 | 11 | 40 | 9 | 40 | 0 | 0 | 0 | 0 |
| | point10 | 10 | 335 | 40 | 11 | 40 | 9 | 40 | 0 | 0 | 0 | 0 |
| | point11 | 11 | 335 | 40 | 11 | 40 | 9 | 40 | 0 | 0 | 0 | 0 |
| | point12 | 12 | 335 | 40 | 11 | 40 | 9 | 40 | 0 | 0 | 0 | 0 |
| | point13 | 13 | | | | | | | | | | |
| Stewart and Grey Rd e | point14 | 14 | 335 | 40 | 11 | 40 | 9 | 40 | 0 | 0 | 0 | 0 |
| | point15 | 15 | 335 | 40 | 11 | 40 | 9 | 40 | 0 | 0 | 0 | 0 |
| | point16 | 16 | 335 | 40 | 11 | 40 | 9 | 40 | 0 | 0 | 0 | 0 |
| | point17 | 17 | 335 | 40 | 11 | 40 | 9 | 40 | 0 | 0 | 0 | 0 |
| | point18 | 18 | 335 | 40 | 11 | 40 | 9 | 40 | 0 | 0 | 0 | 0 |
| | point19 | 19 | | | | | | | | | | |
| Stewart and Grey Rd w | point20 | 20 | 559 | 40 | 20 | 40 | 35 | 40 | 0 | 0 | 0 | 0 |
| | point21 | 21 | 559 | 40 | 20 | 40 | 35 | 40 | 0 | 0 | 0 | 0 |
| | point22 | 22 | 559 | 40 | 20 | 40 | 35 | 40 | 0 | 0 | 0 | 0 |
| | point23 | 23 | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Roadway6 | point24 | 24 | 559 | 40 | 20 | 40 | 35 | 40 | 0 | 0 | 0 | 0 |
| | point25 | 25 | 559 | 40 | 20 | 40 | 35 | 40 | 0 | 0 | 0 | 0 |
| | point26 | 26 | 559 | 40 | 20 | 40 | 35 | 40 | 0 | 0 | 0 | 0 |
| | point27 | 27 | | | | | | | | | | |
| Roadway7 | point28 | 28 | 806 | 40 | 28 | 40 | 44 | 40 | 0 | 0 | 0 | 0 |
| | point29 | 29 | | | | | | | | | | |
| Woodruff Ave s | point32 | 32 | 817 | 40 | 26 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point33 | 33 | | | | | | | | | | |
| Washburn rd | point36 | 36 | 162 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point37 | 37 | 162 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point38 | 38 | | | | | | | | | | |
| Roadway10 | point39 | 39 | 162 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point40 | 40 | 162 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point41 | 41 | 162 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point42 | 42 | 162 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point43 | 43 | 162 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point44 | 44 | | | | | | | | | | |
| Washburn Rd | point45 | 45 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point46 | 46 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point47 | 47 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point48 | 48 | | | | | | | | | | |
| Roadway12 | point49 | 49 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point50 | 50 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point51 | 51 | 145 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point52 | 52 | | | | | | | | | | |
| Woodruff Ave | point53 | 53 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point54 | 54 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point55 | 55 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point56 | 56 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point57 | 57 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point58 | 58 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point59 | 59 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point60 | 60 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point61 | 61 | | | | | | | | | | |
| Woodruff Ave s | point62 | 62 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point63 | 63 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | point64 | 64 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point65 | 65 | 854 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point66 | 66 | | | | | | | | | | |
| Roadway8-2 | point67 | 67 | 806 | 40 | 28 | 40 | 44 | 40 | 0 | 0 | 0 | 0 |
| | point34 | 34 | 806 | 40 | 28 | 40 | 44 | 40 | 0 | 0 | 0 | 0 |
| | point35 | 35 | | | | | | | | | | |
| Woodruff Ave n | point68 | 68 | 817 | 40 | 26 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point30 | 30 | 817 | 40 | 26 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point31 | 31 | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dudek** | | | | | | **28 September 2020** | | | | | |
| **CB** | | | | | | **TNM 2.5** | | | | | |
| **INPUT: RECEIVERS** | | | | | | | | | | | |
| **PROJECT/CONTRACT:** | **Downey Truck Terminal** | | | | | | | | | | |
| **RUN:** | **Existing + Project 092020** | | | | | | | | | | |
| **Receiver** | | | | | | | | | | | |
| **Name** | **No.** | **#DUs** | **Coordinates (ground)** | | | **Height** | **Input Sound Levels and Criteria** | | | | **Active** |
| | | | **X** | **Y** | **Z** | **above** | **Existing** | **Impact Criteria** | | **NR** | **in** |
| | | | | | | **Ground** | **LAeq1h** | **LAeq1h** | **Sub'l** | **Goal** | **Calc.** |
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| ST1 | 1 | 1 | 1,301,863.8 | 12,317,281.0 | 0.00 | 4.92 | 71.00 | 66 | 10.0 | 8.0 | Y |
| ST2 | 2 | 1 | 1,301,004.6 | 12,317,287.0 | 0.00 | 4.92 | 62.60 | 66 | 10.0 | 8.0 | Y |
| ST3 | 3 | 1 | 1,301,703.9 | 12,316,154.0 | 0.00 | 4.92 | 70.20 | 66 | 10.0 | 8.0 | Y |
| ST4 | 4 | 1 | 1,301,843.2 | 12,319,423.0 | 0.00 | 4.92 | 70.90 | 66 | 10.0 | 8.0 | Y |
| ST5 | 5 | 1 | 1,302,831.0 | 12,318,956.0 | 0.00 | 4.92 | 72.20 | 66 | 10.0 | 8.0 | Y |

Dudek 28 September 2020
CB TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: Downey Truck Terminal
RUN: Existing + Project 092020

| Barrier | | | | | | | | | Points | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Type | Height | | If Wall | If Berm | | | Add'tnl | Name | No. | Coordinates (bottom) | | | Height | Segment | | | | |
| | | Min | Max | $ per Unit Area | $ per Unit Vol. | Top Width | Run:Rise | $ per Unit Length | | | X | Y | Z | at Point | Seg Ht Increment | Perturbs #Up | #Dn | On Struct? | Important Reflections? |
| | | ft | ft | $/sq ft | $/cu yd | ft | ft:ft | $/ft | | | ft | ft | ft | ft | ft | | | | |
| Barrier1 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point2 | 2 | 1,301,646.6 | 12,318,321.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point3 | 3 | 1,300,519.8 | 12,318,329.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point4 | 4 | 1,300,518.9 | 12,318,230.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point5 | 5 | 1,300,519.6 | 12,318,230.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point6 | 6 | 1,300,519.6 | 12,318,226.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point7 | 7 | 1,300,578.8 | 12,318,225.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point8 | 8 | 1,300,578.5 | 12,318,180.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point9 | 9 | 1,300,650.2 | 12,318,179.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point10 | 10 | 1,300,650.6 | 12,318,225.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point11 | 11 | 1,300,722.8 | 12,318,224.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point12 | 12 | 1,300,722.4 | 12,318,178.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point13 | 13 | 1,300,758.5 | 12,318,178.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point14 | 14 | 1,300,758.2 | 12,318,152.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point15 | 15 | 1,301,645.2 | 12,318,145.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point16 | 16 | 1,301,646.6 | 12,318,321.0 | 0.00 | 35.00 | | | | | |
| Barrier2 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point18 | 18 | 1,301,692.8 | 12,317,672.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point19 | 19 | 1,301,693.9 | 12,317,692.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point20 | 20 | 1,301,630.4 | 12,317,694.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point21 | 21 | 1,301,626.2 | 12,317,767.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point22 | 22 | 1,301,680.9 | 12,317,768.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point23 | 23 | 1,301,681.1 | 12,317,799.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point24 | 24 | 1,301,700.6 | 12,317,799.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point25 | 25 | 1,301,695.8 | 12,317,873.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point26 | 26 | 1,301,169.5 | 12,317,878.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point27 | 27 | 1,301,168.4 | 12,317,698.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point28 | 28 | 1,301,148.0 | 12,317,698.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point29 | 29 | 1,301,144.1 | 12,317,564.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point30 | 30 | 1,301,693.2 | 12,317,560.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point31 | 31 | 1,301,692.8 | 12,317,672.0 | 0.00 | 20.00 | | | | | |
| Barrier3 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point33 | 33 | 1,302,427.6 | 12,317,524.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point34 | 34 | 1,302,430.2 | 12,317,860.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point35 | 35 | 1,302,405.9 | 12,317,860.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point36 | 36 | 1,302,407.8 | 12,318,100.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point37 | 37 | 1,302,265.1 | 12,318,101.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point38 | 38 | 1,302,263.4 | 12,317,862.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point39 | 39 | 1,302,238.8 | 12,317,862.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point40 | 40 | 1,302,236.1 | 12,317,525.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point41 | 41 | 1,302,427.6 | 12,317,524.0 | 0.00 | 35.00 | | | | | |
| Barrier4 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point43 | 43 | 1,301,892.0 | 12,318,029.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point44 | 44 | 1,302,179.6 | 12,318,027.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point45 | 45 | 1,302,180.1 | 12,318,082.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point46 | 46 | 1,302,203.5 | 12,318,081.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point47 | 47 | 1,302,204.2 | 12,318,176.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point48 | 48 | 1,301,893.1 | 12,318,179.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point49 | 49 | 1,301,892.0 | 12,318,029.0 | 0.00 | 35.00 | | | | | |
| Barrier5 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point51 | 51 | 1,301,912.1 | 12,317,874.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point52 | 52 | 1,301,909.9 | 12,317,574.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point53 | 53 | 1,301,934.4 | 12,317,574.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point54 | 54 | 1,301,979.2 | 12,317,537.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point55 | 55 | 1,302,076.9 | 12,317,536.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point56 | 56 | 1,302,079.5 | 12,317,873.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point57 | 57 | 1,301,912.1 | 12,317,874.0 | 0.00 | 15.00 | | | | | |
| Barrier6 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point59 | 59 | 1,301,957.6 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point60 | 60 | 1,302,111.6 | 12,318,245.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point61 | 61 | 1,302,112.0 | 12,318,326.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point62 | 62 | 1,301,930.9 | 12,318,327.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point63 | 63 | 1,301,930.5 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point64 | 64 | 1,301,934.1 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point65 | 65 | 1,301,934.0 | 12,318,239.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point66 | 66 | 1,301,957.6 | 12,318,239.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point67 | 67 | 1,301,957.6 | 12,318,246.0 | 0.00 | 15.00 | | | | | |
| Barrier7 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point69 | 69 | 1,301,895.4 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point70 | 70 | 1,301,895.4 | 12,317,466.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point71 | 71 | 1,301,893.6 | 12,317,469.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point72 | 72 | 1,301,890.6 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point73 | 73 | 1,301,888.6 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point74 | 74 | 1,301,870.5 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point75 | 75 | 1,301,869.0 | 12,317,474.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point76 | 76 | 1,301,856.9 | 12,317,474.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point77 | 77 | 1,301,855.4 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point78 | 78 | 1,301,826.2 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point79 | 79 | 1,301,826.2 | 12,317,425.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point80 | 80 | 1,301,836.6 | 12,317,425.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point81 | 81 | 1,301,836.6 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point82 | 82 | 1,301,895.4 | 12,317,419.0 | 0.00 | 15.00 | | | | | |
| Barrier8 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point84 | 84 | 1,302,088.6 | 12,317,495.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point85 | 85 | 1,301,992.1 | 12,317,495.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point86 | 86 | 1,301,991.5 | 12,317,423.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point87 | 87 | 1,302,015.9 | 12,317,423.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point88 | 88 | 1,302,015.4 | 12,317,375.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point89 | 89 | 1,302,087.6 | 12,317,375.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point90 | 90 | 1,302,088.6 | 12,317,495.0 | 0.00 | 15.00 | | | | | |
| Barrier9 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point92 | 92 | 1,301,469.8 | 12,317,486.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point93 | 93 | 1,301,468.6 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point94 | 94 | 1,301,473.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point95 | 95 | 1,301,473.4 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point96 | 96 | 1,301,489.8 | 12,317,381.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point97 | 97 | 1,301,489.8 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point98 | 98 | 1,301,494.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point99 | 99 | 1,301,494.2 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point100 | 100 | 1,301,513.4 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point101 | 101 | 1,301,513.5 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point102 | 102 | 1,301,531.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point103 | 103 | 1,301,531.2 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point104 | 104 | 1,301,543.0 | 12,317,381.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point105 | 105 | 1,301,543.0 | 12,317,385.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point106 | 106 | 1,301,543.6 | 12,317,385.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point107 | 107 | 1,301,544.8 | 12,317,485.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point108 | 108 | 1,301,469.8 | 12,317,486.0 | 0.00 | 15.00 | | | | | |
| Barrier10 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point110 | 110 | 1,301,703.6 | 12,317,497.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point111 | 111 | 1,301,583.5 | 12,317,498.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point112 | 112 | 1,301,582.9 | 12,317,420.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point113 | 113 | 1,301,683.6 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point114 | 114 | 1,301,683.4 | 12,317,398.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point115 | 115 | 1,301,705.9 | 12,317,398.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point116 | 116 | 1,301,706.2 | 12,317,444.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point117 | 117 | 1,301,703.2 | 12,317,444.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point118 | 118 | 1,301,703.6 | 12,317,497.0 | 0.00 | 15.00 | | | | | |
| Barrier12 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point122 | 122 | 1,301,040.5 | 12,317,389.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point123 | 123 | 1,301,076.6 | 12,317,389.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point124 | 124 | 1,301,077.4 | 12,317,508.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point125 | 125 | 1,301,088.6 | 12,317,508.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point126 | 126 | 1,301,088.9 | 12,317,558.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point127 | 127 | 1,301,013.5 | 12,317,558.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point128 | 128 | 1,301,013.4 | 12,317,528.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point129 | 129 | 1,300,978.0 | 12,317,528.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point130 | 130 | 1,300,972.1 | 12,317,402.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point131 | 131 | 1,300,972.0 | 12,317,384.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point132 | 132 | 1,301,040.5 | 12,317,383.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point133 | 133 | 1,301,040.5 | 12,317,389.0 | 0.00 | 15.00 | | | | | |
| Barrier13 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point135 | 135 | 1,300,969.4 | 12,317,621.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point136 | 136 | 1,301,088.9 | 12,317,620.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point137 | 137 | 1,301,090.2 | 12,317,720.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point138 | 138 | 1,300,969.6 | 12,317,721.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point139 | 139 | 1,300,969.4 | 12,317,703.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point140 | 140 | 1,300,967.8 | 12,317,703.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point141 | 141 | 1,300,963.2 | 12,317,671.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point142 | 142 | 1,300,966.9 | 12,317,639.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point143 | 143 | 1,300,969.5 | 12,317,639.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point144 | 144 | 1,300,969.4 | 12,317,621.0 | 0.00 | 15.00 | | | | | |
| Barrier14 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point146 | 146 | 1,300,766.4 | 12,317,608.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point147 | 147 | 1,300,861.1 | 12,317,608.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point148 | 148 | 1,300,861.2 | 12,317,645.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point149 | 149 | 1,300,864.0 | 12,317,645.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point150 | 150 | 1,300,864.1 | 12,317,669.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point151 | 151 | 1,300,861.1 | 12,317,669.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point152 | 152 | 1,300,861.2 | 12,317,707.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point153 | 153 | 1,300,766.6 | 12,317,707.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point154 | 154 | 1,300,766.4 | 12,317,608.0 | 0.00 | 15.00 | | | | | |
| Barrier15 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point156 | 156 | 1,301,280.9 | 12,317,479.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point157 | 157 | 1,301,138.0 | 12,317,480.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point158 | 158 | 1,301,137.4 | 12,317,400.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point159 | 159 | 1,301,355.5 | 12,317,399.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point160 | 160 | 1,301,355.4 | 12,317,384.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point161 | 161 | 1,301,434.9 | 12,317,383.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point162 | 162 | 1,301,435.2 | 12,317,431.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point163 | 163 | 1,301,417.9 | 12,317,431.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point164 | 164 | 1,301,418.1 | 12,317,478.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point165 | 165 | 1,301,319.1 | 12,317,479.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point166 | 166 | 1,301,319.2 | 12,317,494.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point167 | 167 | 1,301,280.9 | 12,317,494.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point168 | 168 | 1,301,280.9 | 12,317,479.0 | 0.00 | 15.00 | | | | | |
| Barrier16 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point170 | 170 | 1,300,858.9 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point171 | 171 | 1,300,927.0 | 12,317,794.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point172 | 172 | 1,300,927.8 | 12,317,894.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point173 | 173 | 1,300,768.1 | 12,317,896.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point174 | 174 | 1,300,767.4 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point175 | 175 | 1,300,836.0 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point176 | 176 | 1,300,836.0 | 12,317,791.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point177 | 177 | 1,300,858.9 | 12,317,791.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point178 | 178 | 1,300,858.9 | 12,317,795.0 | 0.00 | 15.00 | | | | | |
| Barrier17 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point180 | 180 | 1,301,099.5 | 12,317,893.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point181 | 181 | 1,300,939.5 | 12,317,895.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point182 | 182 | 1,300,938.5 | 12,317,785.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point183 | 183 | 1,300,973.4 | 12,317,785.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point184 | 184 | 1,300,973.4 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point185 | 185 | 1,301,098.6 | 12,317,794.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point186 | 186 | 1,301,099.5 | 12,317,893.0 | 0.00 | 15.00 | | | | | |
| Barrier18 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point188 | 188 | 1,300,827.4 | 12,317,903.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point189 | 189 | 1,301,091.4 | 12,317,901.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point190 | 190 | 1,301,092.0 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point191 | 191 | 1,301,032.6 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point192 | 192 | 1,301,032.9 | 12,318,033.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point193 | 193 | 1,300,829.2 | 12,318,034.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point194 | 194 | 1,300,828.8 | 12,317,945.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point195 | 195 | 1,300,760.9 | 12,317,946.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point196 | 196 | 1,300,761.4 | 12,318,036.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point197 | 197 | 1,300,557.4 | 12,318,037.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point198 | 198 | 1,300,557.4 | 12,318,041.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point199 | 199 | 1,300,522.4 | 12,318,042.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point200 | 200 | 1,300,521.6 | 12,317,925.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point202 | 202 | 1,300,761.5 | 12,317,923.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point203 | 203 | 1,300,770.6 | 12,317,924.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point204 | 204 | 1,300,770.5 | 12,317,905.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point206 | 206 | 1,300,827.4 | 12,317,904.0 | 0.00 | 15.00 | | | | | |
| Barrier19 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point208 | 208 | 1,301,163.0 | 12,317,936.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point209 | 209 | 1,301,323.4 | 12,317,935.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point210 | 210 | 1,301,323.9 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point211 | 211 | 1,301,279.6 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point212 | 212 | 1,301,279.9 | 12,318,033.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point213 | 213 | 1,301,163.8 | 12,318,034.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point214 | 214 | 1,301,163.0 | 12,317,936.0 | 0.00 | 15.00 | | | | | |
| Barrier20 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point216 | 216 | 1,301,398.2 | 12,317,933.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point217 | 217 | 1,301,658.4 | 12,317,933.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point218 | 218 | 1,301,658.6 | 12,318,002.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point219 | 219 | 1,301,398.5 | 12,318,003.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point220 | 220 | 1,301,398.2 | 12,317,933.0 | 0.00 | 15.00 | | | | | |

Dudek
CB

28 September 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Downey Truck Terminal
RUN: Existing + Project 092020
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| ST1 | 1 | 1 | 71.0 | 67.4 | 66 | -3.6 | 10 | Snd Lvl | 67.4 | 0.0 | 8 | -8.0 |
| ST2 | 2 | 1 | 62.6 | 63.7 | 66 | 1.1 | 10 | ---- | 63.7 | 0.0 | 8 | -8.0 |
| ST3 | 3 | 1 | 70.2 | 69.2 | 66 | -1.0 | 10 | Snd Lvl | 69.2 | 0.0 | 8 | -8.0 |
| ST4 | 4 | 1 | 70.9 | 69.5 | 66 | -1.4 | 10 | Snd Lvl | 69.5 | 0.0 | 8 | -8.0 |
| ST5 | 5 | 1 | 72.2 | 69.9 | 66 | -2.3 | 10 | Snd Lvl | 69.9 | 0.0 | 8 | -8.0 |

| Dwelling Units | # DUs | Noise Reduction Min | Avg | Max |
|---|---|---|---|---|
| | | dB | dB | dB |
| All Selected | 5 | 0.0 | 0.0 | 0.0 |
| All Impacted | 4 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dudek** | | | | | **28 September 2020** | | | | | | |
| **CB** | | | | | **TNM 2.5** | | | | | | |
| | | | | | | | | | | | |
| **INPUT: ROADWAYS** | | | | | | | **Average pavement type shall be used unless** | | | | |
| **PROJECT/CONTRACT:** | **Downey Truck Terminal** | | | | | | **a State highway agency substantiates the use** | | | | |
| **RUN:** | **Opening Year 092020** | | | | | | **of a different type with the approval of FHWA** | | | | |
| **Roadway** | | **Points** | | | | | | | | | |
| **Name** | **Width** | **Name** | **No.** | **Coordinates (pavement)** | | | **Flow Control** | | | **Segment** | |
| | | | | **X** | **Y** | **Z** | **Control Device** | **Speed Constraint** | **Percent Vehicles Affected** | **Pvmt Type** | **On Struct?** |
| | ft | | | ft | ft | ft | | mph | % | | |
| Roadway1 | 35.0 | point1 | 1 | 1,301,802.8 | 12,318,675.0 | 0.00 | | | | Average | |
| | | point2 | 2 | 1,301,812.2 | 12,319,388.0 | 0.00 | | | | Average | |
| | | point3 | 3 | 1,301,813.1 | 12,319,791.0 | 0.00 | | | | Average | |
| | | point4 | 4 | 1,301,818.2 | 12,320,025.0 | 0.00 | | | | | |
| Roadway2 | 35.0 | point5 | 5 | 1,301,775.8 | 12,320,044.0 | 0.00 | | | | Average | |
| | | point6 | 6 | 1,301,771.5 | 12,319,272.0 | 0.00 | | | | Average | |
| | | point7 | 7 | 1,301,764.2 | 12,318,654.0 | 0.00 | | | | | |
| Stewart and Grey Rd | 30.0 | point8 | 8 | 1,301,733.9 | 12,318,612.0 | 0.00 | | | | Average | |
| | | point9 | 9 | 1,301,546.5 | 12,318,566.0 | 0.00 | | | | Average | |
| | | point10 | 10 | 1,301,213.0 | 12,318,568.0 | 0.00 | | | | Average | |
| | | point11 | 11 | 1,300,873.2 | 12,318,569.0 | 0.00 | | | | Average | |
| | | point12 | 12 | 1,300,488.6 | 12,318,572.0 | 0.00 | | | | Average | |
| | | point13 | 13 | 1,300,224.5 | 12,318,604.0 | 0.00 | | | | | |
| Roadway4 | 30.0 | point14 | 14 | 1,300,223.6 | 12,318,565.0 | 0.00 | | | | Average | |
| | | point15 | 15 | 1,300,461.6 | 12,318,538.0 | 0.00 | | | | Average | |
| | | point16 | 16 | 1,300,663.5 | 12,318,535.0 | 0.00 | | | | Average | |
| | | point17 | 17 | 1,301,138.2 | 12,318,537.0 | 0.00 | | | | Average | |
| | | point18 | 18 | 1,301,563.2 | 12,318,537.0 | 0.00 | | | | Average | |
| | | point19 | 19 | 1,301,723.0 | 12,318,575.0 | 0.00 | | | | | |
| Roadway5 | 30.0 | point20 | 20 | 1,301,824.2 | 12,318,643.0 | 0.00 | | | | Average | |
| | | point21 | 21 | 1,302,166.0 | 12,318,772.0 | 0.00 | | | | Average | |
| | | point22 | 22 | 1,302,518.8 | 12,318,898.0 | 0.00 | | | | Average | |
| | | point23 | 23 | 1,302,995.2 | 12,319,088.0 | 0.00 | | | | | |
| Roadway6 | 30.0 | point24 | 24 | 1,303,010.1 | 12,319,051.0 | 0.00 | | | | Average | |
| | | point25 | 25 | 1,302,580.6 | 12,318,898.0 | 0.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | point26 | 26 | 1,302,339.8 | 12,318,807.0 | 0.00 | | | | Average | |
| | | point27 | 27 | 1,301,821.5 | 12,318,610.0 | 0.00 | | | | | |
| Roadway7 | 35.0 | point28 | 28 | 1,301,804.4 | 12,318,575.0 | 0.00 | | | | Average | |
| | | point29 | 29 | 1,301,798.5 | 12,318,109.0 | 0.00 | | | | | |
| Roadway8 | 35.0 | point32 | 32 | 1,301,753.9 | 12,317,361.0 | 0.00 | | | | Average | |
| | | point33 | 33 | 1,301,761.4 | 12,318,112.0 | 0.00 | | | | | |
| Washburn rd | 20.0 | point36 | 36 | 1,300,261.4 | 12,317,343.0 | 0.00 | | | | Average | |
| | | point37 | 37 | 1,300,859.2 | 12,317,339.0 | 0.00 | | | | Average | |
| | | point38 | 38 | 1,301,737.0 | 12,317,332.0 | 0.00 | | | | | |
| Roadway10 | 20.0 | point39 | 39 | 1,300,263.8 | 12,317,331.0 | 0.00 | | | | Average | |
| | | point40 | 40 | 1,300,564.4 | 12,317,329.0 | 0.00 | | | | Average | |
| | | point41 | 41 | 1,300,834.5 | 12,317,323.0 | 0.00 | | | | Average | |
| | | point42 | 42 | 1,301,108.6 | 12,317,322.0 | 0.00 | | | | Average | |
| | | point43 | 43 | 1,301,329.6 | 12,317,317.0 | 0.00 | | | | Average | |
| | | point44 | 44 | 1,301,734.6 | 12,317,312.0 | 0.00 | | | | | |
| Washburn Rd | 20.0 | point45 | 45 | 1,302,603.4 | 12,317,325.0 | 0.00 | | | | Average | |
| | | point46 | 46 | 1,302,359.1 | 12,317,328.0 | 0.00 | | | | Average | |
| | | point47 | 47 | 1,302,086.2 | 12,317,332.0 | 0.00 | | | | Average | |
| | | point48 | 48 | 1,301,826.6 | 12,317,335.0 | 0.00 | | | | | |
| Roadway12 | 20.0 | point49 | 49 | 1,302,600.1 | 12,317,309.0 | 0.00 | | | | Average | |
| | | point50 | 50 | 1,302,494.5 | 12,317,307.0 | 0.00 | | | | Average | |
| | | point51 | 51 | 1,302,184.8 | 12,317,307.0 | 0.00 | | | | Average | |
| | | point52 | 52 | 1,301,829.0 | 12,317,317.0 | 0.00 | | | | | |
| Woodruff Ave | 35.0 | point53 | 53 | 1,301,797.5 | 12,317,291.0 | 0.00 | | | | Average | |
| | | point54 | 54 | 1,301,791.5 | 12,317,098.0 | 0.00 | | | | Average | |
| | | point55 | 55 | 1,301,788.9 | 12,316,696.0 | 0.00 | | | | Average | |
| | | point56 | 56 | 1,301,784.9 | 12,316,359.0 | 0.00 | | | | Average | |
| | | point57 | 57 | 1,301,781.8 | 12,315,989.0 | 0.00 | | | | Average | |
| | | point58 | 58 | 1,301,774.5 | 12,315,550.0 | 0.00 | | | | Average | |
| | | point59 | 59 | 1,301,772.9 | 12,315,185.0 | 0.00 | | | | Average | |
| | | point60 | 60 | 1,301,771.0 | 12,315,041.0 | 0.00 | | | | Average | |
| | | point61 | 61 | 1,301,770.9 | 12,314,749.0 | 0.00 | | | | | |
| Roadway14 | 35.0 | point62 | 62 | 1,301,731.6 | 12,314,750.0 | 0.00 | | | | Average | |
| | | point63 | 63 | 1,301,740.9 | 12,315,737.0 | 0.00 | | | | Average | |
| | | point64 | 64 | 1,301,747.4 | 12,316,334.0 | 0.00 | | | | Average | |
| | | point65 | 65 | 1,301,751.9 | 12,316,864.0 | 0.00 | | | | Average | |
| | | point66 | 66 | 1,301,752.6 | 12,317,290.0 | 0.00 | | | | | |
| Roadway8-2 | 35.0 | point67 | 67 | 1,301,761.4 | 12,318,112.0 | 0.00 | | | | Average | |
| | | point34 | 34 | 1,301,762.2 | 12,318,288.0 | 0.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | point35 | 35 | 1,301,767.2 | 12,318,564.0 | 0.00 | | | | | |
| Roadway7-2 | 35.0 | point68 | 68 | 1,301,798.5 | 12,318,109.0 | 0.00 | | | | Average | |
| | | point30 | 30 | 1,301,795.2 | 12,317,816.0 | 0.00 | | | | Average | |
| | | point31 | 31 | 1,301,794.0 | 12,317,364.0 | 0.00 | | | | | |

**Dudek** **28 September 2020**
**CB** **TNM 2.5**

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**PROJECT/CONTRACT:** **Downey Truck Terminal**
**RUN:** **Opening Year 092020**

| Roadway | Points | | Segment | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | mph | veh/hr | mph | veh/hr | mph | veh/hr | mph | veh/hr | mph |
| Roadway1 | point1 | 1 | 764 | 40 | 24 | 40 | 16 | 40 | 0 | 0 | 0 | 0 |
| | point2 | 2 | 764 | 40 | 24 | 40 | 16 | 40 | 0 | 0 | 0 | 0 |
| | point3 | 3 | 764 | 40 | 24 | 40 | 16 | 40 | 0 | 0 | 0 | 0 |
| | point4 | 4 | | | | | | | | | | |
| Roadway2 | point5 | 5 | 764 | 40 | 24 | 40 | 16 | 40 | 0 | 0 | 0 | 0 |
| | point6 | 6 | 764 | 40 | 24 | 40 | 16 | 40 | 0 | 0 | 0 | 0 |
| | point7 | 7 | | | | | | | | | | |
| Stewart and Grey Rd | point8 | 8 | 911 | 40 | 29 | 40 | 19 | 40 | 0 | 0 | 0 | 0 |
| | point9 | 9 | 911 | 40 | 29 | 40 | 19 | 40 | 0 | 0 | 0 | 0 |
| | point10 | 10 | 911 | 40 | 29 | 40 | 19 | 40 | 0 | 0 | 0 | 0 |
| | point11 | 11 | 911 | 40 | 29 | 40 | 19 | 40 | 0 | 0 | 0 | 0 |
| | point12 | 12 | 911 | 40 | 29 | 40 | 19 | 40 | 0 | 0 | 0 | 0 |
| | point13 | 13 | | | | | | | | | | |
| Roadway4 | point14 | 14 | 911 | 40 | 29 | 40 | 19 | 40 | 0 | 0 | 0 | 0 |
| | point15 | 15 | 911 | 40 | 29 | 40 | 19 | 40 | 0 | 0 | 0 | 0 |
| | point16 | 16 | 911 | 40 | 29 | 40 | 19 | 40 | 0 | 0 | 0 | 0 |
| | point17 | 17 | 911 | 40 | 29 | 40 | 19 | 40 | 0 | 0 | 0 | 0 |
| | point18 | 18 | 911 | 40 | 29 | 40 | 19 | 40 | 0 | 0 | 0 | 0 |
| | point19 | 19 | | | | | | | | | | |
| Roadway5 | point20 | 20 | 561 | 40 | 18 | 40 | 12 | 40 | 0 | 0 | 0 | 0 |
| | point21 | 21 | 561 | 40 | 18 | 40 | 12 | 40 | 0 | 0 | 0 | 0 |
| | point22 | 22 | 561 | 40 | 18 | 40 | 12 | 40 | 0 | 0 | 0 | 0 |
| | point23 | 23 | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Roadway6 | point24 | 24 | 561 | 40 | 18 | 40 | 12 | 40 | 0 | 0 | 0 | 0 |
| | point25 | 25 | 561 | 40 | 18 | 40 | 12 | 40 | 0 | 0 | 0 | 0 |
| | point26 | 26 | 561 | 40 | 18 | 40 | 12 | 40 | 0 | 0 | 0 | 0 |
| | point27 | 27 | | | | | | | | | | |
| Roadway7 | point28 | 28 | 820 | 40 | 26 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point29 | 29 | | | | | | | | | | |
| Roadway8 | point32 | 32 | 827 | 40 | 26 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point33 | 33 | | | | | | | | | | |
| Washburn rd | point36 | 36 | 166 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point37 | 37 | 166 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point38 | 38 | | | | | | | | | | |
| Roadway10 | point39 | 39 | 166 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point40 | 40 | 166 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point41 | 41 | 166 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point42 | 42 | 166 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point43 | 43 | 166 | 40 | 5 | 40 | 3 | 40 | 0 | 0 | 0 | 0 |
| | point44 | 44 | | | | | | | | | | |
| Washburn Rd | point45 | 45 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point46 | 46 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point47 | 47 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point48 | 48 | | | | | | | | | | |
| Roadway12 | point49 | 49 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point50 | 50 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point51 | 51 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point52 | 52 | | | | | | | | | | |
| Woodruff Ave | point53 | 53 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point54 | 54 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point55 | 55 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point56 | 56 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point57 | 57 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point58 | 58 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point59 | 59 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point60 | 60 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point61 | 61 | | | | | | | | | | |
| Roadway14 | point62 | 62 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point63 | 63 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | point64 | 64 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point65 | 65 | 855 | 40 | 27 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point66 | 66 | | | | | | | | | | |
| Roadway8-2 | point67 | 67 | 820 | 40 | 26 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point34 | 34 | 820 | 40 | 26 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point35 | 35 | | | | | | | | | | |
| Roadway7-2 | point68 | 68 | 827 | 40 | 26 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point30 | 30 | 827 | 40 | 26 | 40 | 17 | 40 | 0 | 0 | 0 | 0 |
| | point31 | 31 | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dudek** | | | | | | **28 September 2020** | | | | | |
| **CB** | | | | | | **TNM 2.5** | | | | | |
| **INPUT: RECEIVERS** | | | | | | | | | | | |
| **PROJECT/CONTRACT:** | **Downey Truck Terminal** | | | | | | | | | | |
| **RUN:** | **Opening Year 092020** | | | | | | | | | | |
| **Receiver** | | | | | | | | | | | |
| **Name** | **No.** | **#DUs** | **Coordinates (ground)** | | | **Height** | **Input Sound Levels and Criteria** | | | | **Active** |
| | | | **X** | **Y** | **Z** | **above** | **Existing** | **Impact Criteria** | | **NR** | **in** |
| | | | | | | **Ground** | **LAeq1h** | **LAeq1h** | **Sub'l** | **Goal** | **Calc.** |
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| ST1 | 1 | 1 | 1,301,863.8 | 12,317,281.0 | 0.00 | 4.92 | 71.00 | 66 | 10.0 | 8.0 | Y |
| ST2 | 2 | 1 | 1,301,004.6 | 12,317,287.0 | 0.00 | 4.92 | 62.60 | 66 | 10.0 | 8.0 | Y |
| ST3 | 3 | 1 | 1,301,703.9 | 12,316,154.0 | 0.00 | 4.92 | 70.20 | 66 | 10.0 | 8.0 | Y |
| ST4 | 4 | 1 | 1,301,843.2 | 12,319,423.0 | 0.00 | 4.92 | 70.90 | 66 | 10.0 | 8.0 | Y |
| ST5 | 5 | 1 | 1,302,831.0 | 12,318,965.0 | 0.00 | 4.92 | 72.20 | 66 | 10.0 | 8.0 | Y |

Dudek 28 September 2020
CB TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: Downey Truck Terminal
RUN: Opening Year 092020

| Barrier | | | | | | | | | Points | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Type | Height | | If Wall | If Berm | | | Add'tnl | Name | No. | Coordinates (bottom) | | | Height | Segment | | | | |
| | | Min | Max | $ per Unit Area | $ per Unit Vol. | Top Width | Run:Rise | $ per Unit Length | | | X | Y | Z | at Point | Seg Ht Incre-ment | Perturbs #Up | #Dn | On Struct? | Important Reflec-tions? |
| | | ft | ft | $/sq ft | $/cu yd | ft | ft:ft | $/ft | | | ft | ft | ft | ft | ft | | | | |
| Barrier1 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point2 | 2 | 1,301,646.6 | 12,318,321.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point3 | 3 | 1,300,519.8 | 12,318,329.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point4 | 4 | 1,300,518.9 | 12,318,230.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point5 | 5 | 1,300,519.6 | 12,318,230.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point6 | 6 | 1,300,519.6 | 12,318,226.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point7 | 7 | 1,300,578.8 | 12,318,225.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point8 | 8 | 1,300,578.5 | 12,318,180.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point9 | 9 | 1,300,650.2 | 12,318,179.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point10 | 10 | 1,300,650.6 | 12,318,225.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point11 | 11 | 1,300,722.8 | 12,318,224.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point12 | 12 | 1,300,722.4 | 12,318,178.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point13 | 13 | 1,300,758.5 | 12,318,178.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point14 | 14 | 1,300,758.2 | 12,318,152.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point15 | 15 | 1,301,645.2 | 12,318,145.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point16 | 16 | 1,301,646.6 | 12,318,321.0 | 0.00 | 35.00 | | | | | |
| Barrier2 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point18 | 18 | 1,301,692.8 | 12,317,672.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point19 | 19 | 1,301,693.9 | 12,317,692.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point20 | 20 | 1,301,630.4 | 12,317,694.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point21 | 21 | 1,301,626.2 | 12,317,767.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point22 | 22 | 1,301,680.9 | 12,317,768.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point23 | 23 | 1,301,681.1 | 12,317,799.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point24 | 24 | 1,301,700.6 | 12,317,799.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point25 | 25 | 1,301,695.8 | 12,317,873.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point26 | 26 | 1,301,169.5 | 12,317,878.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point27 | 27 | 1,301,168.4 | 12,317,698.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point28 | 28 | 1,301,148.0 | 12,317,698.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point29 | 29 | 1,301,144.1 | 12,317,564.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point30 | 30 | 1,301,693.2 | 12,317,560.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point31 | 31 | 1,301,692.8 | 12,317,672.0 | 0.00 | 20.00 | | | | | |
| Barrier3 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point33 | 33 | 1,302,427.6 | 12,317,524.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point34 | 34 | 1,302,430.2 | 12,317,860.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point35 | 35 | 1,302,405.9 | 12,317,860.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point36 | 36 | 1,302,407.8 | 12,318,100.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point37 | 37 | 1,302,265.1 | 12,318,101.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point38 | 38 | 1,302,263.4 | 12,317,862.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point39 | 39 | 1,302,238.8 | 12,317,862.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point40 | 40 | 1,302,236.1 | 12,317,525.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point41 | 41 | 1,302,427.6 | 12,317,524.0 | 0.00 | 35.00 | | | | | |
| Barrier4 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point43 | 43 | 1,301,892.0 | 12,318,029.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point44 | 44 | 1,302,179.6 | 12,318,027.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point45 | 45 | 1,302,180.1 | 12,318,082.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point46 | 46 | 1,302,203.5 | 12,318,081.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point47 | 47 | 1,302,204.2 | 12,318,176.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point48 | 48 | 1,301,893.1 | 12,318,179.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point49 | 49 | 1,301,892.0 | 12,318,029.0 | 0.00 | 35.00 | | | | | |
| Barrier5 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point51 | 51 | 1,301,912.1 | 12,317,874.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point52 | 52 | 1,301,909.9 | 12,317,574.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point53 | 53 | 1,301,934.4 | 12,317,574.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point54 | 54 | 1,301,979.2 | 12,317,537.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point55 | 55 | 1,302,076.9 | 12,317,536.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point56 | 56 | 1,302,079.5 | 12,317,873.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point57 | 57 | 1,301,912.1 | 12,317,874.0 | 0.00 | 15.00 | | | | | |
| Barrier6 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point59 | 59 | 1,301,957.6 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point60 | 60 | 1,302,111.6 | 12,318,245.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point61 | 61 | 1,302,112.0 | 12,318,326.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point62 | 62 | 1,301,930.9 | 12,318,327.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point63 | 63 | 1,301,930.5 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point64 | 64 | 1,301,934.1 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point65 | 65 | 1,301,934.0 | 12,318,239.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point66 | 66 | 1,301,957.6 | 12,318,239.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point67 | 67 | 1,301,957.6 | 12,318,246.0 | 0.00 | 15.00 | | | | | |
| Barrier7 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point69 | 69 | 1,301,895.4 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point70 | 70 | 1,301,895.4 | 12,317,466.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point71 | 71 | 1,301,893.6 | 12,317,469.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point72 | 72 | 1,301,890.6 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point73 | 73 | 1,301,888.6 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point74 | 74 | 1,301,870.5 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point75 | 75 | 1,301,869.0 | 12,317,474.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point76 | 76 | 1,301,856.9 | 12,317,474.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point77 | 77 | 1,301,855.4 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point78 | 78 | 1,301,826.2 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point79 | 79 | 1,301,826.2 | 12,317,425.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point80 | 80 | 1,301,836.6 | 12,317,425.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point81 | 81 | 1,301,836.6 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point82 | 82 | 1,301,895.4 | 12,317,419.0 | 0.00 | 15.00 | | | | | |
| Barrier8 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point84 | 84 | 1,302,088.6 | 12,317,495.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point85 | 85 | 1,301,992.1 | 12,317,495.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point86 | 86 | 1,301,991.5 | 12,317,423.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point87 | 87 | 1,302,015.9 | 12,317,423.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point88 | 88 | 1,302,015.4 | 12,317,375.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point89 | 89 | 1,302,087.6 | 12,317,375.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point90 | 90 | 1,302,088.6 | 12,317,495.0 | 0.00 | 15.00 | | | | | |
| Barrier9 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point92 | 92 | 1,301,469.8 | 12,317,486.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point93 | 93 | 1,301,468.6 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point94 | 94 | 1,301,473.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point95 | 95 | 1,301,473.4 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point96 | 96 | 1,301,489.8 | 12,317,381.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point97 | 97 | 1,301,489.8 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point98 | 98 | 1,301,494.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point99 | 99 | 1,301,494.2 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point100 | 100 | 1,301,513.4 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point101 | 101 | 1,301,513.5 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point102 | 102 | 1,301,531.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point103 | 103 | 1,301,531.2 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point104 | 104 | 1,301,543.0 | 12,317,381.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point105 | 105 | 1,301,543.0 | 12,317,385.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point106 | 106 | 1,301,543.6 | 12,317,385.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point107 | 107 | 1,301,544.8 | 12,317,485.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point108 | 108 | 1,301,469.8 | 12,317,486.0 | 0.00 | 15.00 | | | | | |
| Barrier10 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point110 | 110 | 1,301,703.6 | 12,317,497.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point111 | 111 | 1,301,583.5 | 12,317,498.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point112 | 112 | 1,301,582.9 | 12,317,420.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point113 | 113 | 1,301,683.6 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point114 | 114 | 1,301,683.4 | 12,317,398.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point115 | 115 | 1,301,705.9 | 12,317,398.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point116 | 116 | 1,301,706.2 | 12,317,444.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point117 | 117 | 1,301,703.2 | 12,317,444.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point118 | 118 | 1,301,703.6 | 12,317,497.0 | 0.00 | 15.00 | | | | | |
| Barrier12 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point122 | 122 | 1,301,040.5 | 12,317,389.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point123 | 123 | 1,301,076.6 | 12,317,389.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point124 | 124 | 1,301,077.4 | 12,317,508.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point125 | 125 | 1,301,088.6 | 12,317,508.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point126 | 126 | 1,301,088.9 | 12,317,558.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point127 | 127 | 1,301,013.5 | 12,317,558.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point128 | 128 | 1,301,013.4 | 12,317,528.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point129 | 129 | 1,300,978.0 | 12,317,528.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point130 | 130 | 1,300,972.1 | 12,317,402.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point131 | 131 | 1,300,972.0 | 12,317,384.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point132 | 132 | 1,301,040.5 | 12,317,383.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point133 | 133 | 1,301,040.5 | 12,317,389.0 | 0.00 | 15.00 | | | | | |
| Barrier13 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point135 | 135 | 1,300,969.4 | 12,317,621.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point136 | 136 | 1,301,088.9 | 12,317,620.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point137 | 137 | 1,301,090.2 | 12,317,720.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point138 | 138 | 1,300,969.6 | 12,317,721.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point139 | 139 | 1,300,969.4 | 12,317,703.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point140 | 140 | 1,300,967.8 | 12,317,703.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point141 | 141 | 1,300,963.2 | 12,317,671.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point142 | 142 | 1,300,966.9 | 12,317,639.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point143 | 143 | 1,300,969.5 | 12,317,639.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point144 | 144 | 1,300,969.4 | 12,317,621.0 | 0.00 | 15.00 | | | | | |
| Barrier14 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point146 | 146 | 1,300,766.4 | 12,317,608.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point147 | 147 | 1,300,861.1 | 12,317,608.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point148 | 148 | 1,300,861.2 | 12,317,645.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point149 | 149 | 1,300,864.0 | 12,317,645.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point150 | 150 | 1,300,864.1 | 12,317,669.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point151 | 151 | 1,300,861.1 | 12,317,669.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point152 | 152 | 1,300,861.2 | 12,317,707.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point153 | 153 | 1,300,766.6 | 12,317,707.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point154 | 154 | 1,300,766.4 | 12,317,608.0 | 0.00 | 15.00 | | | | | |
| Barrier15 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point156 | 156 | 1,301,280.9 | 12,317,479.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point157 | 157 | 1,301,138.0 | 12,317,480.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point158 | 158 | 1,301,137.4 | 12,317,400.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point159 | 159 | 1,301,355.5 | 12,317,399.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point160 | 160 | 1,301,355.4 | 12,317,384.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point161 | 161 | 1,301,434.9 | 12,317,383.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point162 | 162 | 1,301,435.2 | 12,317,431.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point163 | 163 | 1,301,417.9 | 12,317,431.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point164 | 164 | 1,301,418.1 | 12,317,478.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point165 | 165 | 1,301,319.1 | 12,317,479.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point166 | 166 | 1,301,319.2 | 12,317,494.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point167 | 167 | 1,301,280.9 | 12,317,494.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point168 | 168 | 1,301,280.9 | 12,317,479.0 | 0.00 | 15.00 | | | | | |
| Barrier16 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point170 | 170 | 1,300,858.9 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point171 | 171 | 1,300,927.0 | 12,317,794.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point172 | 172 | 1,300,927.8 | 12,317,894.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point173 | 173 | 1,300,768.1 | 12,317,896.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point174 | 174 | 1,300,767.4 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point175 | 175 | 1,300,836.0 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point176 | 176 | 1,300,836.0 | 12,317,791.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point177 | 177 | 1,300,858.9 | 12,317,791.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point178 | 178 | 1,300,858.9 | 12,317,795.0 | 0.00 | 15.00 | | | | | |
| Barrier17 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point180 | 180 | 1,301,099.5 | 12,317,893.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point181 | 181 | 1,300,939.5 | 12,317,895.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point182 | 182 | 1,300,938.5 | 12,317,785.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point183 | 183 | 1,300,973.4 | 12,317,785.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point184 | 184 | 1,300,973.4 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point185 | 185 | 1,301,098.6 | 12,317,794.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point186 | 186 | 1,301,099.5 | 12,317,893.0 | 0.00 | 15.00 | | | | | |
| Barrier18 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point188 | 188 | 1,300,827.4 | 12,317,903.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point189 | 189 | 1,301,091.4 | 12,317,901.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point190 | 190 | 1,301,092.0 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point191 | 191 | 1,301,032.6 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point192 | 192 | 1,301,032.9 | 12,318,033.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point193 | 193 | 1,300,829.2 | 12,318,034.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point194 | 194 | 1,300,828.8 | 12,317,945.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point195 | 195 | 1,300,760.9 | 12,317,946.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point196 | 196 | 1,300,761.4 | 12,318,036.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point197 | 197 | 1,300,557.4 | 12,318,037.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point198 | 198 | 1,300,557.4 | 12,318,041.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point199 | 199 | 1,300,522.4 | 12,318,042.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point200 | 200 | 1,300,521.6 | 12,317,925.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point202 | 202 | 1,300,761.5 | 12,317,923.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point203 | 203 | 1,300,770.6 | 12,317,924.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point204 | 204 | 1,300,770.5 | 12,317,905.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point206 | 206 | 1,300,827.4 | 12,317,904.0 | 0.00 | 15.00 | | | | | |
| Barrier19 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point208 | 208 | 1,301,163.0 | 12,317,936.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point209 | 209 | 1,301,323.4 | 12,317,935.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point210 | 210 | 1,301,323.9 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point211 | 211 | 1,301,279.6 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point212 | 212 | 1,301,279.9 | 12,318,033.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point213 | 213 | 1,301,163.8 | 12,318,034.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point214 | 214 | 1,301,163.0 | 12,317,936.0 | 0.00 | 15.00 | | | | | |
| Barrier20 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point216 | 216 | 1,301,398.2 | 12,317,933.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point217 | 217 | 1,301,658.4 | 12,317,933.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point218 | 218 | 1,301,658.6 | 12,318,002.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point219 | 219 | 1,301,398.5 | 12,318,003.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point220 | 220 | 1,301,398.2 | 12,317,933.0 | 0.00 | 15.00 | | | | | |

Dudek
CB

28 September 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Downey Truck Terminal
RUN: Opening Year 092020
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| ST1 | 1 | 1 | 71.0 | 67.5 | 66 | -3.5 | 10 | Snd Lvl | 67.5 | 0.0 | 8 | -8.0 |
| ST2 | 2 | 1 | 62.6 | 63.5 | 66 | 0.9 | 10 | ---- | 63.5 | 0.0 | 8 | -8.0 |
| ST3 | 3 | 1 | 70.2 | 69.1 | 66 | -1.1 | 10 | Snd Lvl | 69.1 | 0.0 | 8 | -8.0 |
| ST4 | 4 | 1 | 70.9 | 69.7 | 66 | -1.2 | 10 | Snd Lvl | 69.7 | 0.0 | 8 | -8.0 |
| ST5 | 5 | 1 | 72.2 | 69.8 | 66 | -2.4 | 10 | Snd Lvl | 69.8 | 0.0 | 8 | -8.0 |

| Dwelling Units | # DUs | Noise Reduction Min | Avg | Max |
|---|---|---|---|---|
| | | dB | dB | dB |
| All Selected | 5 | 0.0 | 0.0 | 0.0 |
| All Impacted | 4 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

| | |
|---|---|
| Dudek | 28 September 2020 |
| CB | TNM 2.5 |

| | |
|---|---|
| INPUT: ROADWAYS | Average pavement type shall be used unless |
| PROJECT/CONTRACT: | Downey Truck Terminal a State highway agency substantiates the use |
| RUN: | Opening Year plus Proj 092020 of a different type with the approval of FHWA |

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | ft | | | ft | ft | ft | | mph | % | | |
| Roadway1 | 35.0 | point1 | 1 | 1,301,802.8 | 12,318,675.0 | 0.00 | | | | Average | |
| | | point2 | 2 | 1,301,812.2 | 12,319,388.0 | 0.00 | | | | Average | |
| | | point3 | 3 | 1,301,813.1 | 12,319,791.0 | 0.00 | | | | Average | |
| | | point4 | 4 | 1,301,818.2 | 12,320,025.0 | 0.00 | | | | | |
| Roadway2 | 35.0 | point5 | 5 | 1,301,775.8 | 12,320,044.0 | 0.00 | | | | Average | |
| | | point6 | 6 | 1,301,771.5 | 12,319,272.0 | 0.00 | | | | Average | |
| | | point7 | 7 | 1,301,764.2 | 12,318,654.0 | 0.00 | | | | | |
| Stewart and Grey Rd | 30.0 | point8 | 8 | 1,301,733.9 | 12,318,612.0 | 0.00 | | | | Average | |
| | | point9 | 9 | 1,301,546.5 | 12,318,566.0 | 0.00 | | | | Average | |
| | | point10 | 10 | 1,301,213.0 | 12,318,568.0 | 0.00 | | | | Average | |
| | | point11 | 11 | 1,300,873.2 | 12,318,569.0 | 0.00 | | | | Average | |
| | | point12 | 12 | 1,300,488.6 | 12,318,572.0 | 0.00 | | | | Average | |
| | | point13 | 13 | 1,300,224.5 | 12,318,604.0 | 0.00 | | | | | |
| Roadway4 | 30.0 | point14 | 14 | 1,300,223.6 | 12,318,565.0 | 0.00 | | | | Average | |
| | | point15 | 15 | 1,300,461.6 | 12,318,538.0 | 0.00 | | | | Average | |
| | | point16 | 16 | 1,300,663.5 | 12,318,535.0 | 0.00 | | | | Average | |
| | | point17 | 17 | 1,301,138.2 | 12,318,537.0 | 0.00 | | | | Average | |
| | | point18 | 18 | 1,301,563.2 | 12,318,537.0 | 0.00 | | | | Average | |
| | | point19 | 19 | 1,301,723.0 | 12,318,575.0 | 0.00 | | | | | |
| Roadway5 | 30.0 | point20 | 20 | 1,301,824.2 | 12,318,643.0 | 0.00 | | | | Average | |
| | | point21 | 21 | 1,302,166.0 | 12,318,772.0 | 0.00 | | | | Average | |
| | | point22 | 22 | 1,302,518.8 | 12,318,898.0 | 0.00 | | | | Average | |
| | | point23 | 23 | 1,302,995.2 | 12,319,088.0 | 0.00 | | | | | |
| Roadway6 | 30.0 | point24 | 24 | 1,303,010.1 | 12,319,051.0 | 0.00 | | | | Average | |
| | | point25 | 25 | 1,302,580.6 | 12,318,898.0 | 0.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | point26 | 26 | 1,302,339.8 | 12,318,807.0 | 0.00 | | | | Average | |
| | | point27 | 27 | 1,301,821.5 | 12,318,610.0 | 0.00 | | | | | |
| Roadway7 | 35.0 | point28 | 28 | 1,301,804.4 | 12,318,575.0 | 0.00 | | | | Average | |
| | | point29 | 29 | 1,301,798.5 | 12,318,109.0 | 0.00 | | | | | |
| Roadway8 | 35.0 | point32 | 32 | 1,301,753.9 | 12,317,361.0 | 0.00 | | | | Average | |
| | | point33 | 33 | 1,301,761.4 | 12,318,112.0 | 0.00 | | | | | |
| Washburn rd | 20.0 | point36 | 36 | 1,300,261.4 | 12,317,343.0 | 0.00 | | | | Average | |
| | | point37 | 37 | 1,300,859.2 | 12,317,339.0 | 0.00 | | | | Average | |
| | | point38 | 38 | 1,301,737.0 | 12,317,332.0 | 0.00 | | | | | |
| Roadway10 | 20.0 | point39 | 39 | 1,300,263.8 | 12,317,331.0 | 0.00 | | | | Average | |
| | | point40 | 40 | 1,300,564.4 | 12,317,329.0 | 0.00 | | | | Average | |
| | | point41 | 41 | 1,300,834.5 | 12,317,323.0 | 0.00 | | | | Average | |
| | | point42 | 42 | 1,301,108.6 | 12,317,322.0 | 0.00 | | | | Average | |
| | | point43 | 43 | 1,301,329.6 | 12,317,317.0 | 0.00 | | | | Average | |
| | | point44 | 44 | 1,301,734.6 | 12,317,312.0 | 0.00 | | | | | |
| Washburn Rd | 20.0 | point45 | 45 | 1,302,603.4 | 12,317,325.0 | 0.00 | | | | Average | |
| | | point46 | 46 | 1,302,359.1 | 12,317,328.0 | 0.00 | | | | Average | |
| | | point47 | 47 | 1,302,086.2 | 12,317,332.0 | 0.00 | | | | Average | |
| | | point48 | 48 | 1,301,826.6 | 12,317,335.0 | 0.00 | | | | | |
| Roadway12 | 20.0 | point49 | 49 | 1,302,600.1 | 12,317,309.0 | 0.00 | | | | Average | |
| | | point50 | 50 | 1,302,494.5 | 12,317,307.0 | 0.00 | | | | Average | |
| | | point51 | 51 | 1,302,184.8 | 12,317,307.0 | 0.00 | | | | Average | |
| | | point52 | 52 | 1,301,829.0 | 12,317,317.0 | 0.00 | | | | | |
| Woodruff Ave | 35.0 | point53 | 53 | 1,301,797.5 | 12,317,291.0 | 0.00 | | | | Average | |
| | | point54 | 54 | 1,301,791.5 | 12,317,098.0 | 0.00 | | | | Average | |
| | | point55 | 55 | 1,301,788.9 | 12,316,696.0 | 0.00 | | | | Average | |
| | | point56 | 56 | 1,301,784.9 | 12,316,359.0 | 0.00 | | | | Average | |
| | | point57 | 57 | 1,301,781.8 | 12,315,989.0 | 0.00 | | | | Average | |
| | | point58 | 58 | 1,301,774.5 | 12,315,550.0 | 0.00 | | | | Average | |
| | | point59 | 59 | 1,301,772.9 | 12,315,185.0 | 0.00 | | | | Average | |
| | | point60 | 60 | 1,301,771.0 | 12,315,041.0 | 0.00 | | | | Average | |
| | | point61 | 61 | 1,301,770.9 | 12,314,749.0 | 0.00 | | | | | |
| Roadway14 | 35.0 | point62 | 62 | 1,301,731.6 | 12,314,750.0 | 0.00 | | | | Average | |
| | | point63 | 63 | 1,301,740.9 | 12,315,737.0 | 0.00 | | | | Average | |
| | | point64 | 64 | 1,301,747.4 | 12,316,334.0 | 0.00 | | | | Average | |
| | | point65 | 65 | 1,301,751.9 | 12,316,864.0 | 0.00 | | | | Average | |
| | | point66 | 66 | 1,301,752.6 | 12,317,290.0 | 0.00 | | | | | |
| Roadway8-2 | 35.0 | point67 | 67 | 1,301,761.4 | 12,318,112.0 | 0.00 | | | | Average | |
| | | point34 | 34 | 1,301,762.2 | 12,318,288.0 | 0.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | point35 | 35 | 1,301,767.2 | 12,318,564.0 | 0.00 | | | | | |
| Roadway7-2 | 35.0 | point68 | 68 | 1,301,798.5 | 12,318,109.0 | 0.00 | | | | Average | |
| | | point30 | 30 | 1,301,795.2 | 12,317,816.0 | 0.00 | | | | Average | |
| | | point31 | 31 | 1,301,794.0 | 12,317,364.0 | 0.00 | | | | | |

**Dudek** **28 September 2020**
**CB** **TNM 2.5**

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**PROJECT/CONTRACT:** **Downey Truck Terminal**
**RUN:** **Opening Year plus Proj 092020**

| Roadway | Points | | Segment | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | mph | veh/hr | mph | veh/hr | mph | veh/hr | mph | veh/hr | mph |
| Roadway1 | point1 | 1 | 766 | 40 | 24 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point2 | 2 | 766 | 40 | 24 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point3 | 3 | 766 | 40 | 24 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point4 | 4 | | | | | | | | | | |
| Roadway2 | point5 | 5 | 766 | 40 | 24 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point6 | 6 | 766 | 40 | 24 | 40 | 18 | 40 | 0 | 0 | 0 | 0 |
| | point7 | 7 | | | | | | | | | | |
| Stewart and Grey Rd | point8 | 8 | 912 | 40 | 29 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point9 | 9 | 912 | 40 | 29 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point10 | 10 | 912 | 40 | 29 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point11 | 11 | 912 | 40 | 29 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point12 | 12 | 912 | 40 | 29 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point13 | 13 | | | | | | | | | | |
| Roadway4 | point14 | 14 | 912 | 40 | 29 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point15 | 15 | 912 | 40 | 29 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point16 | 16 | 912 | 40 | 29 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point17 | 17 | 912 | 40 | 29 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point18 | 18 | 912 | 40 | 29 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point19 | 19 | | | | | | | | | | |
| Roadway5 | point20 | 20 | 584 | 40 | 21 | 40 | 36 | 40 | 0 | 0 | 0 | 0 |
| | point21 | 21 | 584 | 40 | 21 | 40 | 36 | 40 | 0 | 0 | 0 | 0 |
| | point22 | 22 | 584 | 40 | 21 | 40 | 36 | 40 | 0 | 0 | 0 | 0 |
| | point23 | 23 | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Roadway6 | point24 | 24 | 584 | 40 | 21 | 40 | 36 | 40 | 0 | 0 | 0 | 0 |
| | point25 | 25 | 584 | 40 | 21 | 40 | 36 | 40 | 0 | 0 | 0 | 0 |
| | point26 | 26 | 584 | 40 | 21 | 40 | 36 | 40 | 0 | 0 | 0 | 0 |
| | point27 | 27 | | | | | | | | | | |
| Roadway7 | point28 | 28 | 847 | 40 | 29 | 40 | 45 | 40 | 0 | 0 | 0 | 0 |
| | point29 | 29 | | | | | | | | | | |
| Roadway8 | point32 | 32 | 831 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point33 | 33 | | | | | | | | | | |
| Washburn rd | point36 | 36 | 166 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point37 | 37 | 166 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point38 | 38 | | | | | | | | | | |
| Roadway10 | point39 | 39 | 166 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point40 | 40 | 166 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point41 | 41 | 166 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point42 | 42 | 166 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point43 | 43 | 166 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point44 | 44 | | | | | | | | | | |
| Washburn Rd | point45 | 45 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point46 | 46 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point47 | 47 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point48 | 48 | | | | | | | | | | |
| Roadway12 | point49 | 49 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point50 | 50 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point51 | 51 | 169 | 40 | 5 | 40 | 4 | 40 | 0 | 0 | 0 | 0 |
| | point52 | 52 | | | | | | | | | | |
| Woodruff Ave | point53 | 53 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point54 | 54 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point55 | 55 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point56 | 56 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point57 | 57 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point58 | 58 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point59 | 59 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point60 | 60 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point61 | 61 | | | | | | | | | | |
| Roadway14 | point62 | 62 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point63 | 63 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | point64 | 64 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point65 | 65 | 858 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point66 | 66 | | | | | | | | | | |
| Roadway8-2 | point67 | 67 | 847 | 40 | 29 | 40 | 45 | 40 | 0 | 0 | 0 | 0 |
| | point34 | 34 | 847 | 40 | 29 | 40 | 45 | 40 | 0 | 0 | 0 | 0 |
| | point35 | 35 | | | | | | | | | | |
| Roadway7-2 | point68 | 68 | 831 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point30 | 30 | 831 | 40 | 27 | 40 | 21 | 40 | 0 | 0 | 0 | 0 |
| | point31 | 31 | | | | | | | | | | |

**Dudek** **28 September 2020**
**CB** **TNM 2.5**

**INPUT: RECEIVERS**
**PROJECT/CONTRACT:** **Downey Truck Terminal**
**RUN:** **Opening Year plus Proj 092020**

| **Receiver** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name** | **No.** | **#DUs** | **Coordinates (ground)** | | | **Height** | **Input Sound Levels and Criteria** | | | | **Active** |
| | | | **X** | **Y** | **Z** | **above** | **Existing** | **Impact Criteria** | | **NR** | **in** |
| | | | | | | **Ground** | **LAeq1h** | **LAeq1h** | **Sub'l** | **Goal** | **Calc.** |
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| ST1 | 1 | 1 | 1,301,863.8 | 12,317,281.0 | 0.00 | 4.92 | 71.00 | 66 | 10.0 | 8.0 | Y |
| ST2 | 2 | 1 | 1,301,004.6 | 12,317,287.0 | 0.00 | 4.92 | 62.60 | 66 | 10.0 | 8.0 | Y |
| ST3 | 3 | 1 | 1,301,703.9 | 12,316,154.0 | 0.00 | 4.92 | 70.20 | 66 | 10.0 | 8.0 | Y |
| ST4 | 4 | 1 | 1,301,843.2 | 12,319,423.0 | 0.00 | 4.92 | 70.90 | 66 | 10.0 | 8.0 | Y |
| ST5 | 5 | 1 | 1,302,831.0 | 12,318,965.0 | 0.00 | 4.92 | 72.20 | 66 | 10.0 | 8.0 | Y |

Dudek 28 September 2020
CB TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: Downey Truck Terminal
RUN: Opening Year plus Proj 092020

| Barrier | | | | | | | | | Points | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Type | Height | | If Wall | If Berm | | | Add'tnl | Name | No. | Coordinates (bottom) | | | Height | Segment | | | | |
| | | Min | Max | $ per Unit Area | $ per Unit Vol. | Top Width | Run:Rise | $ per Unit Length | | | X | Y | Z | at Point | Seg Ht Incre-ment | #Up | #Dn | On Struct? | Important Reflec-tions? |
| | | ft | ft | $/sq ft | $/cu yd | ft | ft:ft | $/ft | | | ft | ft | ft | ft | ft | | | | |
| Barrier1 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point2 | 2 | 1,301,646.6 | 12,318,321.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point3 | 3 | 1,300,519.8 | 12,318,329.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point4 | 4 | 1,300,518.9 | 12,318,230.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point5 | 5 | 1,300,519.6 | 12,318,230.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point6 | 6 | 1,300,519.6 | 12,318,226.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point7 | 7 | 1,300,578.8 | 12,318,225.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point8 | 8 | 1,300,578.5 | 12,318,180.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point9 | 9 | 1,300,650.2 | 12,318,179.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point10 | 10 | 1,300,650.6 | 12,318,225.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point11 | 11 | 1,300,722.8 | 12,318,224.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point12 | 12 | 1,300,722.4 | 12,318,178.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point13 | 13 | 1,300,758.5 | 12,318,178.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point14 | 14 | 1,300,758.2 | 12,318,152.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point15 | 15 | 1,301,645.2 | 12,318,145.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point16 | 16 | 1,301,646.6 | 12,318,321.0 | 0.00 | 35.00 | | | | | |
| Barrier2 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point18 | 18 | 1,301,692.8 | 12,317,672.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point19 | 19 | 1,301,693.9 | 12,317,692.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point20 | 20 | 1,301,630.4 | 12,317,694.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point21 | 21 | 1,301,626.2 | 12,317,767.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point22 | 22 | 1,301,680.9 | 12,317,768.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point23 | 23 | 1,301,681.1 | 12,317,799.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point24 | 24 | 1,301,700.6 | 12,317,799.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point25 | 25 | 1,301,695.8 | 12,317,873.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point26 | 26 | 1,301,169.5 | 12,317,878.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point27 | 27 | 1,301,168.4 | 12,317,698.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point28 | 28 | 1,301,148.0 | 12,317,698.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point29 | 29 | 1,301,144.1 | 12,317,564.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point30 | 30 | 1,301,693.2 | 12,317,560.0 | 0.00 | 20.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point31 | 31 | 1,301,692.8 | 12,317,672.0 | 0.00 | 20.00 | | | | | |
| Barrier3 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point33 | 33 | 1,302,427.6 | 12,317,524.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point34 | 34 | 1,302,430.2 | 12,317,860.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point35 | 35 | 1,302,405.9 | 12,317,860.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point36 | 36 | 1,302,407.8 | 12,318,100.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point37 | 37 | 1,302,265.1 | 12,318,101.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point38 | 38 | 1,302,263.4 | 12,317,862.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point39 | 39 | 1,302,238.8 | 12,317,862.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point40 | 40 | 1,302,236.1 | 12,317,525.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point41 | 41 | 1,302,427.6 | 12,317,524.0 | 0.00 | 35.00 | | | | | |
| Barrier4 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point43 | 43 | 1,301,892.0 | 12,318,029.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point44 | 44 | 1,302,179.6 | 12,318,027.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point45 | 45 | 1,302,180.1 | 12,318,082.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point46 | 46 | 1,302,203.5 | 12,318,081.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point47 | 47 | 1,302,204.2 | 12,318,176.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point48 | 48 | 1,301,893.1 | 12,318,179.0 | 0.00 | 35.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point49 | 49 | 1,301,892.0 | 12,318,029.0 | 0.00 | 35.00 | | | | | |
| Barrier5 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point51 | 51 | 1,301,912.1 | 12,317,874.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point52 | 52 | 1,301,909.9 | 12,317,574.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point53 | 53 | 1,301,934.4 | 12,317,574.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point54 | 54 | 1,301,979.2 | 12,317,537.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point55 | 55 | 1,302,076.9 | 12,317,536.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point56 | 56 | 1,302,079.5 | 12,317,873.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point57 | 57 | 1,301,912.1 | 12,317,874.0 | 0.00 | 15.00 | | | | | |
| Barrier6 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point59 | 59 | 1,301,957.6 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point60 | 60 | 1,302,111.6 | 12,318,245.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point61 | 61 | 1,302,112.0 | 12,318,326.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point62 | 62 | 1,301,930.9 | 12,318,327.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point63 | 63 | 1,301,930.5 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point64 | 64 | 1,301,934.1 | 12,318,246.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point65 | 65 | 1,301,934.0 | 12,318,239.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point66 | 66 | 1,301,957.6 | 12,318,239.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point67 | 67 | 1,301,957.6 | 12,318,246.0 | 0.00 | 15.00 | | | | | |
| Barrier7 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point69 | 69 | 1,301,895.4 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point70 | 70 | 1,301,895.4 | 12,317,466.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point71 | 71 | 1,301,893.6 | 12,317,469.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point72 | 72 | 1,301,890.6 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point73 | 73 | 1,301,888.6 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point74 | 74 | 1,301,870.5 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point75 | 75 | 1,301,869.0 | 12,317,474.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point76 | 76 | 1,301,856.9 | 12,317,474.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point77 | 77 | 1,301,855.4 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point78 | 78 | 1,301,826.2 | 12,317,472.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point79 | 79 | 1,301,826.2 | 12,317,425.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point80 | 80 | 1,301,836.6 | 12,317,425.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point81 | 81 | 1,301,836.6 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point82 | 82 | 1,301,895.4 | 12,317,419.0 | 0.00 | 15.00 | | | | | |
| Barrier8 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point84 | 84 | 1,302,088.6 | 12,317,495.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point85 | 85 | 1,301,992.1 | 12,317,495.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point86 | 86 | 1,301,991.5 | 12,317,423.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point87 | 87 | 1,302,015.9 | 12,317,423.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point88 | 88 | 1,302,015.4 | 12,317,375.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point89 | 89 | 1,302,087.6 | 12,317,375.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point90 | 90 | 1,302,088.6 | 12,317,495.0 | 0.00 | 15.00 | | | | | |
| Barrier9 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point92 | 92 | 1,301,469.8 | 12,317,486.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point93 | 93 | 1,301,468.6 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point94 | 94 | 1,301,473.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point95 | 95 | 1,301,473.4 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point96 | 96 | 1,301,489.8 | 12,317,381.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point97 | 97 | 1,301,489.8 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point98 | 98 | 1,301,494.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point99 | 99 | 1,301,494.2 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point100 | 100 | 1,301,513.4 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point101 | 101 | 1,301,513.5 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point102 | 102 | 1,301,531.4 | 12,317,386.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point103 | 103 | 1,301,531.2 | 12,317,382.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point104 | 104 | 1,301,543.0 | 12,317,381.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point105 | 105 | 1,301,543.0 | 12,317,385.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point106 | 106 | 1,301,543.6 | 12,317,385.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point107 | 107 | 1,301,544.8 | 12,317,485.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point108 | 108 | 1,301,469.8 | 12,317,486.0 | 0.00 | 15.00 | | | | | |
| Barrier10 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point110 | 110 | 1,301,703.6 | 12,317,497.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point111 | 111 | 1,301,583.5 | 12,317,498.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point112 | 112 | 1,301,582.9 | 12,317,420.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point113 | 113 | 1,301,683.6 | 12,317,419.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point114 | 114 | 1,301,683.4 | 12,317,398.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point115 | 115 | 1,301,705.9 | 12,317,398.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point116 | 116 | 1,301,706.2 | 12,317,444.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point117 | 117 | 1,301,703.2 | 12,317,444.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point118 | 118 | 1,301,703.6 | 12,317,497.0 | 0.00 | 15.00 | | | | | |
| Barrier12 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point122 | 122 | 1,301,040.5 | 12,317,389.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point123 | 123 | 1,301,076.6 | 12,317,389.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point124 | 124 | 1,301,077.4 | 12,317,508.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point125 | 125 | 1,301,088.6 | 12,317,508.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point126 | 126 | 1,301,088.9 | 12,317,558.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point127 | 127 | 1,301,013.5 | 12,317,558.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point128 | 128 | 1,301,013.4 | 12,317,528.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point129 | 129 | 1,300,978.0 | 12,317,528.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point130 | 130 | 1,300,972.1 | 12,317,402.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point131 | 131 | 1,300,972.0 | 12,317,384.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point132 | 132 | 1,301,040.5 | 12,317,383.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point133 | 133 | 1,301,040.5 | 12,317,389.0 | 0.00 | 15.00 | | | | | |
| Barrier13 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point135 | 135 | 1,300,969.4 | 12,317,621.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point136 | 136 | 1,301,088.9 | 12,317,620.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point137 | 137 | 1,301,090.2 | 12,317,720.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point138 | 138 | 1,300,969.6 | 12,317,721.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point139 | 139 | 1,300,969.4 | 12,317,703.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point140 | 140 | 1,300,967.8 | 12,317,703.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point141 | 141 | 1,300,963.2 | 12,317,671.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point142 | 142 | 1,300,966.9 | 12,317,639.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point143 | 143 | 1,300,969.5 | 12,317,639.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point144 | 144 | 1,300,969.4 | 12,317,621.0 | 0.00 | 15.00 | | | | | |
| Barrier14 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point146 | 146 | 1,300,766.4 | 12,317,608.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point147 | 147 | 1,300,861.1 | 12,317,608.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point148 | 148 | 1,300,861.2 | 12,317,645.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point149 | 149 | 1,300,864.0 | 12,317,645.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point150 | 150 | 1,300,864.1 | 12,317,669.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point151 | 151 | 1,300,861.1 | 12,317,669.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point152 | 152 | 1,300,861.2 | 12,317,707.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point153 | 153 | 1,300,766.6 | 12,317,707.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point154 | 154 | 1,300,766.4 | 12,317,608.0 | 0.00 | 15.00 | | | | | |
| Barrier15 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point156 | 156 | 1,301,280.9 | 12,317,479.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point157 | 157 | 1,301,138.0 | 12,317,480.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point158 | 158 | 1,301,137.4 | 12,317,400.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point159 | 159 | 1,301,355.5 | 12,317,399.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point160 | 160 | 1,301,355.4 | 12,317,384.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point161 | 161 | 1,301,434.9 | 12,317,383.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point162 | 162 | 1,301,435.2 | 12,317,431.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point163 | 163 | 1,301,417.9 | 12,317,431.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point164 | 164 | 1,301,418.1 | 12,317,478.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point165 | 165 | 1,301,319.1 | 12,317,479.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point166 | 166 | 1,301,319.2 | 12,317,494.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point167 | 167 | 1,301,280.9 | 12,317,494.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point168 | 168 | 1,301,280.9 | 12,317,479.0 | 0.00 | 15.00 | | | | | |
| Barrier16 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point170 | 170 | 1,300,858.9 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point171 | 171 | 1,300,927.0 | 12,317,794.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point172 | 172 | 1,300,927.8 | 12,317,894.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point173 | 173 | 1,300,768.1 | 12,317,896.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point174 | 174 | 1,300,767.4 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point175 | 175 | 1,300,836.0 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point176 | 176 | 1,300,836.0 | 12,317,791.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point177 | 177 | 1,300,858.9 | 12,317,791.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point178 | 178 | 1,300,858.9 | 12,317,795.0 | 0.00 | 15.00 | | | | | |
| Barrier17 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point180 | 180 | 1,301,099.5 | 12,317,893.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point181 | 181 | 1,300,939.5 | 12,317,895.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point182 | 182 | 1,300,938.5 | 12,317,785.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point183 | 183 | 1,300,973.4 | 12,317,785.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point184 | 184 | 1,300,973.4 | 12,317,795.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point185 | 185 | 1,301,098.6 | 12,317,794.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point186 | 186 | 1,301,099.5 | 12,317,893.0 | 0.00 | 15.00 | | | | | |
| Barrier18 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point188 | 188 | 1,300,827.4 | 12,317,903.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point189 | 189 | 1,301,091.4 | 12,317,901.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point190 | 190 | 1,301,092.0 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point191 | 191 | 1,301,032.6 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point192 | 192 | 1,301,032.9 | 12,318,033.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point193 | 193 | 1,300,829.2 | 12,318,034.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point194 | 194 | 1,300,828.8 | 12,317,945.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point195 | 195 | 1,300,760.9 | 12,317,946.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point196 | 196 | 1,300,761.4 | 12,318,036.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point197 | 197 | 1,300,557.4 | 12,318,037.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point198 | 198 | 1,300,557.4 | 12,318,041.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point199 | 199 | 1,300,522.4 | 12,318,042.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point200 | 200 | 1,300,521.6 | 12,317,925.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point202 | 202 | 1,300,761.5 | 12,317,923.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | point203 | 203 | 1,300,770.6 | 12,317,924.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point204 | 204 | 1,300,770.5 | 12,317,905.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point206 | 206 | 1,300,827.4 | 12,317,904.0 | 0.00 | 15.00 | | | | | |
| Barrier19 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point208 | 208 | 1,301,163.0 | 12,317,936.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point209 | 209 | 1,301,323.4 | 12,317,935.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point210 | 210 | 1,301,323.9 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point211 | 211 | 1,301,279.6 | 12,317,998.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point212 | 212 | 1,301,279.9 | 12,318,033.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point213 | 213 | 1,301,163.8 | 12,318,034.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point214 | 214 | 1,301,163.0 | 12,317,936.0 | 0.00 | 15.00 | | | | | |
| Barrier20 | W | 0.00 | 99.99 | 0.00 | | | | 0.00 | point216 | 216 | 1,301,398.2 | 12,317,933.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point217 | 217 | 1,301,658.4 | 12,317,933.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point218 | 218 | 1,301,658.6 | 12,318,002.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point219 | 219 | 1,301,398.5 | 12,318,003.0 | 0.00 | 15.00 | 0.00 | 0 | 0 | | |
| | | | | | | | | | point220 | 220 | 1,301,398.2 | 12,317,933.0 | 0.00 | 15.00 | | | | | |

Dudek
CB

28 September 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Downey Truck Terminal
RUN: Opening Year plus Proj 092020
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Noise Reduction Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| ST1 | 1 | 1 | 71.0 | 67.6 | 66 | -3.4 | 10 | Snd Lvl | 67.6 | 0.0 | 8 | -8.0 |
| ST2 | 2 | 1 | 62.6 | 63.8 | 66 | 1.2 | 10 | ---- | 63.8 | 0.0 | 8 | -8.0 |
| ST3 | 3 | 1 | 70.2 | 69.2 | 66 | -1.0 | 10 | Snd Lvl | 69.2 | 0.0 | 8 | -8.0 |
| ST4 | 4 | 1 | 70.9 | 69.8 | 66 | -1.1 | 10 | Snd Lvl | 69.8 | 0.0 | 8 | -8.0 |
| ST5 | 5 | 1 | 72.2 | 71.4 | 66 | -0.8 | 10 | Snd Lvl | 71.4 | 0.0 | 8 | -8.0 |

| Dwelling Units | # DUs | Noise Reduction Min | Avg | Max |
|---|---|---|---|---|
| | | dB | dB | dB |
| All Selected | 5 | 0.0 | 0.0 | 0.0 |
| All Impacted | 4 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

# APPENDIX G-4

*Equipment Noise Calculations*

Dudek
CB
10 September 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Downey Truck Terminal
RUN: Opening Year + Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| ST1 | 1 | 1 | 71.0 | 68.6 | 66 | -2.4 | 10 | Snd Lvl | 68.6 | 0.0 | 8 | -8.0 |
| ST2 | 2 | 1 | 62.6 | 64.8 | 66 | 2.2 | 10 | ---- | 64.8 | 0.0 | 8 | -8.0 |
| ST3 | 3 | 1 | 70.2 | 70.2 | 66 | 0.0 | 10 | Snd Lvl | 70.2 | 0.0 | 8 | -8.0 |
| ST4 | 4 | 1 | 70.9 | 70.8 | 66 | -0.1 | 10 | Snd Lvl | 70.8 | 0.0 | 8 | -8.0 |
| ST5 | 5 | 1 | 72.2 | 71.9 | 66 | -0.3 | 10 | Snd Lvl | 71.9 | 0.0 | 8 | -8.0 |

| Dwelling Units | # DUs | Noise Reduction Min | Avg | Max |
|---|---|---|---|---|
| | | dB | dB | dB |
| All Selected | 5 | 0.0 | 0.0 | 0.0 |
| All Impacted | 4 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

**MECHANICAL EQUIPMENT NOISE LEVEL**

**Input:**

Equipment Locations / Source Noise Data

| Site | X | Y | Elev. At Roof or Ground | Source Height | LwA Single Source | Number of Units | Sound Level at 50 feet Total | Equip. Location Site / Number | |
|---|---|---|---|---|---|---|---|---|---|
| NE1 | 1515 | 1170 | 36.5 | 3 | 80 | 2 | 51 | NE1 | York ZF-048 |
| SE2 | 1515 | 1250 | 36.5 | 3 | 80 | 2 | 51 | SE2 | York ZF-048 |

Frequency (in Hz) 500

| Receivers at P.L. and Vicinity | | | | Building Elevation | Roof Elevation |
|---|---|---|---|---|---|
| R1/ST2 | 1000 | 780 | 0 | 0 | 36.5 |
| N1 | 1515 | 1427 | 0 | | |
| S1 | 1515 | 1000 | 0 | | |
| E1 | 1624 | 1210 | 0 | | |
| W1 | 1000 | 1210 | 0 | | |

**Output:**

Location: N1 1515 1427 0

| Source Coordinates | | | | Receiver Coordinates | | Location-Equipment | Leq (h) at 50' (dBA) | Receiver Elevation (feet) | Source Elevation (feet) | Source to Receiver (feet) | Source to Barrier (feet) | Receiver to Barrier (feet) | Barrier (base) (feet) | Barrier Height (feet) | Fresnel No. at 500 Hz | Barrier Attenuation (dBA) | Leq w/o Barrier (dBA) | Leq w/Barrier (dBA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equip Site | X | Y | Z | X | Y | | | | | | | | | | | | | |
| NE1 | 1515 | 1170 | 36.5 | 1515 | 1427 | York ZF-048 | 51 | 5 | 39.5 | 257 | 25 | 232 | 36.5 | 3.5 | 0.29 | 9 | 37 | 28 |
| SE2 | 1515 | 1250 | 36.5 | 1515 | 1427 | York ZF-048 | 51 | 5 | 39.5 | 177 | 25 | 152 | 36.5 | 3.5 | 0.58 | 12 | 40 | 29 |
| | | | | | | | | | | | | | | | | TOTAL Leq: | 42 | **31** |
| | | | | | | | | | | | | | | | | | Without Barrier | With Barrier/ Parapet |

**MECHANICAL EQUIPMENT NOISE LEVEL**

**Input:**

Equipment Locations / Source Noise Data

| Site | X | Y | Elev. At Roof or Ground | Source Height | LwA Single Source | Number of Units | Sound Level at 50 feet Total | Equip. Location Site / Number | |
|---|---|---|---|---|---|---|---|---|---|
| NE1 | 1515 | 1170 | 36.5 | 3 | 80 | 2 | 51 | NE1 | York ZF-048 |
| SE2 | 1515 | 1250 | 36.5 | 3 | 80 | 2 | 51 | SE2 | York ZF-048 |

Frequency (in Hz) 500

| Receivers at P.L. and Vicinity | | | | Building Elevation | Roof Elevation |
|---|---|---|---|---|---|
| R1/ST2 | 1000 | 780 | 0 | 0 | 36.5 |
| N1 | 1515 | 1427 | 0 | | |
| S1 | 1515 | 1000 | 0 | | |
| E1 | 1624 | 1210 | 0 | | |
| W1 | 1000 | 1210 | 0 | | |

**Output:**

Location: S1 1515 1000 0

| Equip Site | Source Coordinates X | Y | Z | Receiver Coordinates X | Y | Location-Equipment | Leq (h) at 50' (dBA) | Receiver Elevation (feet) | Source Elevation (feet) | Source to Receiver (feet) | Source to Barrier (feet) | Receiver to Barrier (feet) | Barrier (base) (feet) | Barrier Height (feet) | Fresnel No. at 500 Hz | Barrier Attenuation (dBA) | Leq w/o Barrier (dBA) | Leq w/Barrier (dBA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NE1 | 1515 | 1170 | 36.5 | 1515 | 1000 | York ZF-048 | 51 | 5 | 39.5 | 170 | 25 | 145 | 36.5 | 3.5 | 0.63 | 12 | 41 | 29 |
| SE2 | 1515 | 1250 | 36.5 | 1515 | 1000 | York ZF-048 | 51 | 5 | 39.5 | 250 | 25 | 225 | 36.5 | 3.5 | 0.31 | 10 | 37 | 28 |
| | | | | | | | | | | | | | | | | TOTAL Leq: | 42 | **31** |
| | | | | | | | | | | | | | | | | | Without Barrier | With Barrier/ Parapet |

**MECHANICAL EQUIPMENT NOISE LEVEL**

**Input:**

Equipment Locations / Source Noise Data

| Site | X | Y | Elev. At Roof or Ground | Source Height | LwA Single Source | Number of Units | Sound Level at 50 feet Total | Equip. Location Site / Number | |
|---|---|---|---|---|---|---|---|---|---|
| NE1 | 1515 | 1170 | 36.5 | 3 | 80 | 2 | 51 | NE1 | York ZF-048 |
| SE2 | 1515 | 1250 | 36.5 | 3 | 80 | 2 | 51 | SE2 | York ZF-048 |

Frequency (in Hz) 500

| Receivers at P.L. and Vicinity | | | | Building Elevation | Roof Elevation |
|---|---|---|---|---|---|
| R1/ST2 | 1000 | 780 | 0 | 0 | 36.5 |
| S1 | 1515 | 1000 | 0 | | |
| E1 | 1624 | 1210 | 0 | | |

**Output:** Location: E1 1624 1210 0

| | Source Coordinates | | | Receiver Coordinates | | Location-Equipment | Leq (h) at 50' (dBA) | Receiver Elevation (feet) | Source Elevation (feet) | Source to Receiver (feet) | Source to Barrier (feet) | Receiver to Barrier (feet) | Barrier (base) (feet) | Barrier Height (feet) | Fresnel No. at 500 Hz | Barrier Attenuation (dBA) | Leq w/o Barrier (dBA) | Leq w/Barrier (dBA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equip Site | X | Y | Z | X | Y | | | | | | | | | | | | | |
| NE1 | 1515 | 1170 | 36.5 | 1624 | 1210 | York ZF-048 | 51 | 5 | 39.5 | 116 | 33 | 83 | 36.5 | 3.5 | 1.84 | 16 | 44 | 28 |
| SE2 | 1515 | 1250 | 36.5 | 1624 | 1210 | York ZF-048 | 51 | 5 | 39.5 | 116 | 33 | 83 | 36.5 | 3.5 | 1.84 | 16 | 44 | 28 |
| | | | | | | | | | | | | | | | | TOTAL Leq: | 47 | **31** |
| | | | | | | | | | | | | | | | | | Without Barrier | With Barrier/ Parapet |

**MECHANICAL EQUIPMENT NOISE LEVEL**

**Input:**

Equipment Locations / Source Noise Data

| Site | X | Y | Elev. At Roof or Ground | Source Height | LwA Single Source | Number of Units | Sound Level at 50 feet Total | Equip. Location Site / Number | |
|---|---|---|---|---|---|---|---|---|---|
| NE1 | 1515 | 1170 | 36.5 | 3 | 80 | 2 | 51 | NE1 | York ZF-048 |
| SE2 | 1515 | 1250 | 36.5 | 3 | 80 | 2 | 51 | SE2 | York ZF-048 |

Frequency (in Hz) 500

| Receivers at P.L. and Vicinity | | | | Building Elevation | Roof Elevation |
|---|---|---|---|---|---|
| R1/ST2 | 1000 | 780 | 0 | 0 | 36.5 |
| N1 | 1515 | 1427 | 0 | | |
| S1 | 1515 | 1000 | 0 | | |
| E1 | 1624 | 1210 | 0 | | |
| W1 | 1000 | 1210 | 0 | | |

**Output:**

Location: W1 1000 1210 0

| Equip Site | Source Coordinates X | Y | Z | Receiver Coordinates X | Y | Location-Equipment | Leq (h) at 50' (dBA) | Receiver Elevation (feet) | Source Elevation (feet) | Source to Receiver (feet) | Source to Barrier (feet) | Receiver to Barrier (feet) | Barrier (base) (feet) | Barrier Height (feet) | Fresnel No. at 500 Hz | Barrier Attenuation (dBA) | Leq w/o Barrier (dBA) | Leq w/Barrier (dBA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NE1 | 1515 | 1170 | 36.5 | 1000 | 1210 | York ZF-048 | 51 | 5 | 39.5 | 517 | 25 | 492 | 36.5 | 3.5 | 0.09 | 7 | 31 | 24 |
| SE2 | 1515 | 1250 | 36.5 | 1000 | 1210 | York ZF-048 | 51 | 5 | 39.5 | 517 | 25 | 492 | 36.5 | 3.5 | 0.09 | 7 | 31 | 24 |
| | | | | | | | | | | | | | | | | TOTAL Leq: | 34 | **27** |
| | | | | | | | | | | | | | | | | | Without Barrier | With Barrier/ Parapet |

**MECHANICAL EQUIPMENT NOISE LEVEL**

**Input:**

Equipment Locations / Source Noise Data

| Site | X | Y | Elev. At Roof or Ground | Source Height | LwA Single Source | Number of Units | Sound Level at 50 feet Total | Equip. Location Site / Number | |
|---|---|---|---|---|---|---|---|---|---|
| NE1 | 1515 | 1170 | 36.5 | 3 | 80 | 2 | 51 | NE1 | York ZF-048 |
| SE2 | 1515 | 1250 | 36.5 | 3 | 80 | 2 | 51 | SE2 | York ZF-048 |

Frequency (in Hz) 500

| Receivers at P.L. and Vicinity | | | | Building Elevation | Roof Elevation |
|---|---|---|---|---|---|
| R1/ST2 | 1000 | 780 | 0 | 0 | 36.5 |
| S1 | 1515 | 1000 | 0 | | |
| E1 | 1624 | 1210 | 0 | | |

**Output:**

Location: R1/ST2 1000 780 0

| | Source Coordinates | | | Receiver Coordinates | | Location-Equipment | Leq (h) at 50' (dBA) | Receiver Elevation (feet) | Source Elevation (feet) | Source to Receiver (feet) | Source to Barrier (feet) | Receiver to Barrier (feet) | Barrier (base) (feet) | Barrier Height (feet) | Fresnel No. at 500 Hz | Barrier Attenuation (dBA) | Leq w/o Barrier (dBA) | Leq w/Barrier (dBA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equip Site | X | Y | Z | X | Y | | | | | | | | | | | | | |
| NE1 | 1515 | 1170 | 36.5 | 1000 | 780 | York ZF-048 | 51 | 5 | 39.5 | 646 | 25 | 621 | 36.5 | 3.5 | 0.06 | 6 | 29 | 23 |
| SE2 | 1515 | 1250 | 36.5 | 1000 | 780 | York ZF-048 | 51 | 5 | 39.5 | 697 | 25 | 672 | 36.5 | 3.5 | 0.06 | 6 | 28 | 22 |
| | | | | | | | | | | | | | | | | TOTAL Leq: | 32 | **26** |
| | | | | | | | | | | | | | | | | | Without Barrier | With Barrier/ Parapet |

# RAY-TRACE PROGRAM (FOR A POINT-SOURCE)

**Uses the Equation: $(A_{e4})_{point}=20*\log[(2*pi*N)^{1/2}/\tanh(2*pi*N)^{1/2}]+5dB$**
**(Ref. Pg.174, Noise and Vibration Control, L.L. Beranek Editor, 1971 Ed.**

**Project: Woodruff Avenue Truck Terminal Project**
**Date: 09/01/20**
**By: MG**

**Please Enter: Using English (E) units or Metric (M) units ?** E

| Ray Trace Number/Description | Source-Receiver Distance (ft. or m) | Source Base Elev. (ft. or m) | Source Height above Ground (ft. or m) | Receiver Base Elev. (ft. or m) | Receiver Height above Ground (ft. or m) | Horizontal Barrier Dist. (in ref. to source) (ft. or m) | Barrier Base Elev. (ft. or m) | Barrier Height (ft. or m) | Dominant Freq.(Hz) | Source-Rcvr Straight-Line Dist. (ft. or m) | Source-Top-of-Barrier Dist. (ft. or m) | Receiver-Top-of-Barrier Dist. (ft. or m) | Lambda | $N_{max}$ | $AE_{(barriers)}$ (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Source -Truck Noise at Nearest Residence | 300.0 | 0.0 | 10.0 | 0.0 | 5.0 | 40.0 | 0.0 | **20.0** | 500.0 | 300.0 | 41.2 | 260.4 | 2.3 | 1.4 | **14.6** |