PHASE I ENVIRONMENTAL SITE ASSESSMENT

Former Chemoil Refinery
(including Raymond Tract Parcels)
2020, 2025-2035 and 2040 Walnut Avenue
Signal Hill, California

Prepared for:

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TABLE OF CONTENTS

EXECUTIVE SUMMARY III
1. INTRODUCTION 1

1.1. Objective 1
1.2. Scope Of Services, Methodology And Limitations 2

2. SITE DESCRIPTION 3

2.1. Site Setting 3
2.2. Regional Geology and Hydrogeology 4

3. RECORDS REVIEW AND INTERVIEWS 5

3.1. User Provided Information 5
3.2. Title Records 5
3.3. Owner Knowledge 5
3.4. Environmental Liens or Activity and Use Limitations 5

4. SITE USE AND HISTORY 5

4.1. Aerial Photograph Review 6
4.2. Topographic Maps 7
4.3. Sanborn Maps 7
4.4. EDR City Directory Review 7

5. PRIOR INVESTIGATIONS 8

5.1. Remediation To Date 9
5.2. Current Investigation 9
5.3. Proposed Response Plan 10
5.4. Developmental Investigations 12

6. SITE RECONNAISSANCE. 12

6.1. Site Vicinity 13

7. REGULATORY AGENCY DATABASE RESEARCH 14

7.1. Database Records Concerning the Target Property 14
7.2. Database Records Concerning the Site Vicinity 15
7.3. Orphan Sites 16
7.4. Summary of Off Site Issues 16

7.5. Tribal Records 16
7.6. Oil and Gas Wells 16
7.7. State of California 16

8. VAPOR INTRUSION, ASBESTOS AND OTHER MATERIALS 16

8.1. Vapor Intrusion 16
8.2. Asbestos 17
8.3. Radon 17
8.4. Mold 17

9. SUMMARY OF FINDINGS 17
10. CONCLUSIONS 19
11. RECOMMENDATIONS 19
12. QUALIFICATIONS 20
13. REFERENCES 21

FIGURES

Figure 1 Site Location Map
Figure 2 Site and Site Vicinity Map
Figure 3 Areas of Impact on Site
SELECT FIGURES FROM RESPONSE PLAN

APPENDICES

A – Site Photographs
B – EDR Historical Reports
C – Prior Reports
D – Supporting Documents

Executive Summary

Hazard Management Consulting, Inc. (HMC) is pleased to submit this Environmental Site Assessment (ESA) for the property referenced above in the City of Signal Hill, California (Site) (Figures 1 & 2). This ESA is intended to evaluate the Site for potential Recognized Environmental Conditions (RECs) that may be present at the Site and was conducted as part of your due diligence efforts to acquire the Site. This ESA is also intended to meet the requirements of the Bona Fide Prospective Purchaser (BFPP) status for the existing California Land Reuse and Revitalization Act Agreement (the CLRRA Agreement) for the Site that was signed on March 4, 2017.

The Site is approximately 8.2-acres in size; it was formerly used as an oil refinery and is referred to as the Former Chemoil Refinery. The Site includes an Eastern Parcel (2.5 acres) that is situated immediately east of Walnut Avenue. The remaining property (5.7 acres) is situated immediately west of Walnut Avenue and is bisected by 21st Street. The property west of Walnut Avenue includes the Northwest Parcel, the Southwest Parcel, and the Raymond Tract Parcels (Figure 2). The Site is currently vacant and fenced. Extensive environmental investigations have been conducted at the Site to date as part of closure of the refinery operations and past evaluations of potential remedial requirements. It is our understanding that Xebec Realty Partners has entered into a venture with RE | Solutions, LLC (Signal Hill REXRP, LLC) to acquire the site, and complete all required remedial investigations and remedial action to allow development of the Site for future industrial use.

The Site is located north and northwest of the intersection of 20th Street and Walnut Avenue in Signal Hill California. As mentioned, the Site has been divided into multiple parcels for ease of investigation and reference, as follows:

- the Northwest Parcel located west of Walnut Avenue and north of 21st street;
- the Southwest Parcel located west of Walnut Avenue and south of 21st Street; and
- the Eastern Parcel located east of Walnut Avenue and north of 20th Street.

In addition, the Site includes three legal parcels of land that Chemoil Refining Company did not own, but leased for their operations. These three parcels are known as the Raymond Tract Parcels and are also being acquired by Signal Hill REXRP, LLC in a separate transaction.

Land use in the vicinity of the Site includes a mix of commercial, residential, academic and industrial uses. The Site is bound:

- To the north by a recently constructed multi-family development (Northwestern Parcel) and medical college (Eastern Parcel);
- To the east by residential developments;
- To the south by residential land uses and Long Beach City College; and,
- To the west by commercial businesses and a contractors yard.

The Site was developed as an oil refinery in 1922. The MacMillan-Ring Free Oil Company owned and operated the facility from 1922 until 1988. Chemoil Corporation purchased the refinery in August 1988 and operated it until February 1994. From early 1994 to early 1997, the refinery was shut down with occasional operation of its waste water system. Operation of the waste water system was discontinued and all of the above ground structures were dismantled in early 1997. Since December 2013, the property owner of title has been Signal Hill Enterprises, LLC.

Key findings of this Phase I ESA are as follows:

- The historical records indicate that the Site was open land until the mid 1920s when the Site was developed and operated as an oil refinery. Refining and storage operations were conducted on Site through the late 1990s when all structures were demolished and removed from the Site.

- There have been extensive investigations conducted on site, which have revealed that multiple releases of petroleum products have occurred at the facility affecting soil, soil gas and groundwater. An area of free product floating on groundwater is present in the Northwest Parcel and a plume of impacted groundwater is also present that extends off site to the south-southwest.

- Remedial efforts to date have included removal of free product and containment and treatment of the dissolved phase hydrocarbons present in the groundwater.

- The Site has been entered into the California Land Reuse and Recycling Act (CLRRA) Program with the California Regional Water Quality Control Board (RWQCB). The CLRRA program is a State initiative to promote the cleanup and redevelopment of blighted contaminated properties (brownfields) that provides liability limitations to prospective innocent purchasers of impacted property who agree to conduct certain defined remedial scopes. In exchange for the work, the State agrees to provide certain

immunities from environmental liability, which is transferable to future owners, among other provisions.

- Recent investigations have been conducted at the Site to better define the areas of impact and a proposed remedial solution has been put forth to the RWQCB, which is serving as lead regulatory agency for the Site. The extent of the release has been defined.

- Investigations have been conducted in the downgradient area of the plume and have demonstrated that the presence of petroleum in groundwater does not pose a vapor intrusion risk to residents of the area.

- The remedial solution proposed for the Site includes removal of free product, installation and operation of a vapor extraction system to remediate impacted soil, expansion of the downgradient groundwater barrier to contain impacted groundwater on Site and monitored natural attenuation to demonstrate that the overall plume is stable and declining and that the off site downgradient portions of the plume will degrade and not pose a threat to human health or groundwater resources. The Site will be capped with the future development and a deed restriction recorded on title that limits the Site to commercial land use, among other restrictions.

- A potholing investigation was conducted at the Site which confirmed that during grading, VOC Contaminated Soil as defined by the AQMD Rule 1166 will be encountered and must be managed during redevelopment. A soil management plan will be prepared to guide the overall grading and redevelopment efforts.

Conclusions

HMC has conducted a Phase I ESA for the Site in accordance with the ASTM E1527-13 guidelines. Based on the information obtained as part of this ESA, the historic operations of the Site as an oil refinery and documented releases of petroleum products would be considered an REC for the Site.

Recommendations

Given the findings of this ESA, we recommend the following:

- The response plan presented to the RWQCB should be implemented during grading and development.
- A Site-specific AQMD Rule 1166 permit should be obtained for the Site development activities.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

2020 Walnut Avenue Signal Hill, California

1. INTRODUCTION

Hazard Management Consulting, Inc. (HMC) is pleased to submit this Environmental Site Assessment (ESA) for the property referenced above in the City of Signal Hill, California (Site) (Figures 1 & 2). This ESA is intended to evaluate the Site for potential Recognized Environmental Conditions (RECs) that may be present at the Site and was conducted as part of your due diligence efforts to acquire the Site. The Site is approximately 8.2-acres in size; it was formerly used as an oil refinery and is referred to as the Former Chemoil Refinery. The Site includes an Eastern Parcel (2.5 acres) that is situated immediately east of Walnut Avenue. The remaining property (5.7 acres) is situated immediately west of Walnut Avenue and is bisected by 21st Street. The property west of Walnut Avenue includes the Northwest Parcel, the Southwest Parcel, and the Raymond Tract Parcels (Figure 2). The Site is currently vacant and fenced. Extensive environmental investigations have been conducted at the Site to date as part of closure of the refinery operations and past evaluations of potential remedial requirements. It is our understanding that you are considering entering into a venture with RE Solutions, LLC to acquire the site, complete all required remedial investigations and remedial action to allow development of the Site for future industrial use.

1.1. Objective

In accordance with the ASTM E 1527-13 Standard Practice for Environmental Site Assessments, the objective of the ESA is to assess, to the extent feasible under the standard, the likelihood that Recognized Environmental Conditions (RECs), as defined by ASTM, are present at the Site.

A Recognized Environmental Condition "means 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 of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. 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" (ASTM Standard Practice E1527-13). Performance of a Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for Recognized

Environmental Conditions in connection with a property, within reasonable limits of time and cost.

All Appropriate Inquires (AAI) as defined in the Final Rule (40 CFR, Part 312), must be conducted by persons seeking the landowner liability protections under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) prior to acquiring a property or seeking or receiving federal brownfields grants under the authorities of CERCLA. The purpose of AAI, as defined in the AAI Final Rule, is to identify releases and threatened releases of hazardous substances, which cause or threaten to cause the incurrence of response costs. The U.S. Environmental Protection Agency (EPA) has stated that ASTM Standard E-1527-13 is consistent with the Standards and Practices for AAI, and is compliant with the statutory criteria for AAI.

Mark: please add a paragraph referencing the CLRRA agreement and the use of the ESA to demonstrate AAI compliance for purposes of establishing the buyer as qualifying as a BFPP.

1.2. Scope Of Services, Methodology And Limitations

The findings of this ESA must be viewed in recognition of certain limiting conditions. The scope of work commissioned for this project does not represent an exhaustive study, but rather a reasonable inquiry, consistent with good commercial practice, in general accordance with ASTM Practice E-1527-13.

The scope of work for this ESA included the following activities:

- A site walk to document the current condition of the Site and neighboring facilities.
- Review of a regulatory database report.
- Interviews with the purchaser of the Site.
- Review of historical references including aerial photographs, city directories, Sanborn Maps and topographic maps.
- On-line research and file review requests concerning the Site and suspect off site sources at the State of California Regional Water Quality Control Board (RWQCB) and Department of Toxic Substances Control (DTSC) websites.
- Review of prior reports prepared for the Site.
- Preparation of this report of findings.

In the course of this assessment, HMC has relied on information provided by outside parties, such as regulatory agencies, previous reports and interview sources. For the purpose of this assessment, such third-party information is assumed to be accurate unless contradictory evidence is noted, and HMC does not express or imply any warranty regarding information provided by third-party sources.

2. SITE DESCRIPTION

2.1. Site Setting

The Site is located north and northwest of the intersection of 20th Street and Walnut Avenue in Signal Hill California. As mentioned, there are three parcels including:

- the northern parcel located west of Walnut Avenue and north of 21st street,
- the southern parcel located west of Walnut Avenue and south of 21st Street and
- the eastern parcel located east of Walnut Avenue and north of 20th Street.

Land use in the vicinity of the Site includes a mix of commercial, residential, academic and industrial uses. The Site is bound:

- To the north by a recently constructed multi family development and medical college (eastern parcel);
- To the east by residential developments;
- To the south by residential land uses and Long Beach City College; and,
- To the west by commercial businesses and a contractors yard.

In addition, the Site includes three legal parcels of land that Chemoil Refining Company did not own, but leased for their operations. These three parcels are known as the Raymond Tract Parcels and are also being acquired by Signal Hill REXRP, LLC in a separate transaction.

Southern California Edison (SCE) provides electrical service while Long Beach gas provides gas service to the area. Water and sewer services are provided by the City of Signal Hill.

2.2. Regional Geology and Hydrogeology

The Site is located in the Los Angeles basin which is located within the Los Angeles Coastal Plain [CDWR], 1961) of the Peninsular Ranges geomorphic province of southern California. The Los Angeles Coastal Plain is a deep structural trough that has been filled primarily with unconsolidated Miocene through Recent age sediments or alluvium that are underlain by earlier Cenozoic bedrock. The Los Angeles Coastal Plain is bounded on the north by the Santa Monica Mountains; on the northeast by the low-lying Elysian, Repetto, Merced, and Puente Hills; on the east and southeast by the Santa Ana Mountains and San Joaquin Hills; on the south by the Palos Verdes Hills and the Pacific Ocean; and on the west by the Pacific Ocean. The Site is underlain by deposits of unconsolidated, laterally discontinuous sequences of silt and fine to coarse-grained sand. Coarse-grained soils consist of sand (SP) and silty sand (SM); whereas, subordinate fine-grained soils consist of silt (ML and MH) and, to a lesser degree, clay (CL).

The Los Angeles Coastal Plain has been divided into four groundwater basins and the Site is located within the West Coast Basin. The West Coast Basin is bordered on the east by the Newport-Inglewood Fault; on the west by Santa Monica Bay; on the north by the Ballona Gap and on the south by the Palos Verdes Hills. Five major aquifers have been identified in the geologic formations underlying the West Coast Basin (CDWR, 1961). The aquifers consist of (from oldest to youngest) the Silverado and Lynwood Aquifers of the San Pedro Formation, the Gage Aquifer of the Lakewood Formation, and the Gaspur and Semi-perched Aquifers of the recent Holocene-age Alluvium. In general, the older/deeper Silverado and Lynwood Aquifers are currently designated as drinking water sources and the younger/shallow aquifers (Gage, Gaspur, and Semi-perched) are not currently used for drinking water purposes due to low yield and/or generally poor quality. Shallow groundwater beneath the Site is encountered in the semi-perched Aquifer in the southern portion of the West Coast Basin.

There has been extensive groundwater investigation on Site to date and groundwater data from prior investigations have provided a relatively thorough understanding of groundwater conditions beneath the Site. Due to Site topography, the difference between depths to water measurements in existing monitoring wells is approximately 30 feet. Depth to water in the northern portions of the Site is approximately 43 feet bgs whereas depth to water in the southern portions of the Site is measured at approximately 15 feet bgs. Groundwater flow beneath the Site was generally toward the south-southeast.

3. RECORDS REVIEW AND INTERVIEWS

3.1. User Provided Information

The User of this report is SIGNAL HILL REXRP, LLC**,** Xebec Realty Partners (Xebec) and their lenders, partners and counsel. We were able to interview Mr. Jay Soni of Xebec regarding their knowledge and information regarding the Site. Mr. Soni indicated that his firm had no prior knowledge or unique information regarding the Site though Mr. Soni indicated that he had received access to certain environmental reports from the Seller, which were provided to HMC for review. Mr. Soni indicated that they are taking on the responsibility to complete all remedial actions to obtain closure for the Site and are paying a price that reflects fair market value for the Site, but is discounted to take into account the known environmental issues.

3.2. Title Records

The Site includes two separate legal parcels and there are two current owners or sellers in the transaction. We were provided with two title reports from Chicago Title Insurance Company dated August 18, 2017. Title is currently vested in Signal Hill Enterprises, LLC (APN 7210-043-002 to 004, 010 to 014, 016-019, 023-026, 7215-009-003 and 006) and MPO Walnut Partners, LLC (APN: 7210-043-020, 7210-043-021, 7210-043-022). We reviewed the preliminary reports and other then typical listings for tax burdens and utility easements. There was a listing for a petroleum pipeline.

3.3. Owner Knowledge

We submitted a questionnaire for the Site owner to complete which has not been returned to HMC as of the date of this report. However, we were provided with numerous historic reports for the Site as well as the results of recent investigations. We do not view this as a critical datagap.

3.4. Environmental Liens or Activity and Use Limitations

We are not aware of any land use restrictions regarding the Site nor was any information developed as part of this ESA to suggest such restrictions were required for the Site. However, as will be described in following sections, a remedial action plan has been developed that will include remediating the Site to a commercial standard with the recording of a Land Use Covenant limiting the site to non residential uses, among other provisions.

4. SITE USE AND HISTORY

Past usage of the subject site was assessed through a review of historical aerial photographs, topographic maps and an EDR search of city directories and prior reports. Review of the

Sanborn Map collection indicates that Sanborn Maps were not produced for the Site. We also reviewed previous environmental assessments as described in Section 7. As obtained from other investigation reports, the Site was developed as an oil refinery in 1922. The MacMillan-Ring Free Oil Company owned and operated the facility from 1922 until 1988. Chemoil Corporation purchased the refinery in August 1988 and operated it until February 1994. From early 1994 to early 1997, the refinery was shut down with occasional operation of its waste water system. Operation of the waste water system was discontinued and all of the above ground structures were dismantled in early 1997. Since December 2013, the property owner of title has been Signal Hill Enterprises, LLC.

4.1. Aerial Photograph Review

Aerial photographs covering the Site were obtained from Environmental Data Resources, Inc. (EDR). Photographs were available from the period 1928 through 2012. Copies of the aerial photographs are included in Appendix B. A summary of the observations noted from the aerial photographs is as follows:

1928 In the photograph from 1928, the Site and Site vicinity had been developed as well as major arterials and roadways. The Site contained what appeared to be several large above ground storage tanks, processing equipment and sumps as well as industrial style buildings. The property to the north appeared to have sumps or other structures while the property to the south was built out with residential uses.

1947 The photograph from 1947 shows the Site in a similar configuration as in the prior photograph. Additional above ground tanks were observed.

1953 No major changes were noted on Site and the Site still was in use as an oil storage and refinery facility. The property to the north of the eastern parcel was noted to have had equipment removed while the properties to the east were developed. The property north of the Site was observed to have had the sumps filled in and related equipment removed

1963-94 No major changes were noted to the Site use in this period. Tanks were added and removed but the overall use stayed consistent with what was observed in the prior photos. The Site vicinity had been built out during this period.

2002 By the time of the 2002 photograph, the Site had been completely razed and

was observed to be a vacant parcel.

2002-12 No changes were noted to the Site during this period.

4.2. Topographic Maps

Historical topographic maps were also reviewed as part of this effort and aided in interpreting the overall site history. No specific information was obtained beyond that seen in the aerial photographs for the Site. The Site did appear vacant undeveloped land in the topographic map from 1902 and by the time of the 1925 map, the major roadways were in place in the Site vicinity.

4.3. Sanborn Maps

Sanborn maps are maps that were created for the insurance industry to document site activities in metropolitan areas of the country and were used in insurance underwriting. They often times contain detailed information about a site. While they were prepared for insurance underwriting and were not environmental maps per se, they often times contain information that is useful in evaluating the historical use of a Site and potential environmental issues. Sanborn maps were available for the years 1923, 1950 and 1963.

In the map from 1923, the major roadways of the area were in place though the Site was substantially empty. There were dwellings noted on the northern parcel and southern parcel while the eastern parcel was vacant. North of the eastern parcel in the current location of the medical college was the Gilmore Gasoline Plant. No major changes were noted in the 1963 map.

The Sanborn map from 1950 shows that the Site had been developed as the MacMillan Petroleum Company and the Site included numerous steel oil tanks, processing units, warehouses, research labs and auto and truck storage.

4.4. EDR City Directory Review

EDR performed a search of the City Directory records for the Site address at approximately five-year intervals. The directory indicated that the Site was occupied by MacMilan Petroleum Corp (or related names) from 1939-1985. The listing for 1991 has a listing for the Site as Carson Tank Farm and Gasoline Loading Rack.

5. PRIOR INVESTIGATIONS

There have been extensive investigations and remedial actions taken at the Site dating back to 1985. Groundwater monitoring was initiated in 1987 and site characterization activities were conducted through 2012 and a groundwater remediation system was installed in January of 2014 and began operations in March of 2014. As part of the current pending real estate transaction, additional investigations were conducted and a new remedial plan proposed by the prospective purchasers. A phase one ESA was previously prepared by TriHydro Corporation for RE Solutions who is in escrow to purchase the Site and would be a partner to Xebec Realty Partners in the acquisition and development of the Site. The following was obtained from the TriHydro report and other investigatory documents and provides a general overview of the investigations conducted to date. Copies of select reports are presented in Appendix C.

For discussion purposes, the Site is divided into the Eastern Parcel and Western Parcel with the Western Parcel having a northern and southern sub-parcel. The northern sub-parcel is rectangular in shape and previously included approximately 40 above ground storage tanks (ASTs), loading racks, as well as miscellaneous buildings including storage warehouses. The southern sub-parcel of the Western Parcel is triangular in shape and previously contained 25 ASTs, boilers, heater units, loading racks, and a cooling tower. The Eastern Parcel is rectangular shaped property that previously included six ASTs as well as warehouse, offices, laboratory, and maintenance facilities (Trihydro, 2016).

Multiple releases of petroleum products have occurred impacting soil, soil gas and groundwater at the Site and the properties immediately downgradient of the Site. Light non-aqueous phase liquid (LNAPL) has been reported at three separate locations at the Site. The LNAPL was found to be crude oil or lubricating oil, or a combination of naphtha, kerosene, and gas oil. The chemicals found in soil and groundwater include total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs) (primarily aromatic constituents), and fuel oxygenates (including methyl tertiary-butyl ether [MTBE] and tertiary-butyl alcohol [TBA]. It appears the MTBE maybe from an off site, adjacent source.

Groundwater monitoring conducted at the Site since 1987 reports groundwater at an elevation of approximately 2.5 feet above sea level and a direction of flow ranging from the southwest to the southeast. There is considerable relief across the Site and the depth to groundwater varies by as much as 30 feet due to this elevational change. There is one water supply well located 850 feet south of the Site (LACDPW Well #420). No natural surface water bodies, including ponds, streams, or other bodies of water are present near or on the Site.

The primary contaminants are petroleum including unrefined crude and various refined products including gasoline and weathered diesel fuel. This area appears to be substantially smaller and more localized than found on the west. Very elevated concentrations of petroleum products are present primarily beneath the Western Parcel that extends downgradient and into an off Site area south of the Site. One monitoring well was reported to contain LNAPL at approximately 1.7 feet in thickness. Soil gas monitoring of the residential area downgradient did not report levels of petroleum above acceptable screening levels used by the State.

5.1. Remediation To Date

In response to finding impacts to groundwater including the presence of LNAPL, an LNAPL recovery program was implemented on the Western Parcel in March 1987 and ran through February 1994 when the refinery shut down. An estimated 27.9 barrels of LNAPL was recovered. Currently, LNAPL is observed in only one well in the middle of the Western Parcel.

In response to directives from the RWQCB, a second remedial program was implemented at the Site to attempt to contain the plume from further migrating off Site. Source treatment and remediation of the impacted groundwater on Site was not included. A flow-through barrier groundwater treatment system was installed along the western and southern boundaries of the Site in 2013, which includes 150 injection wells. The remedial system includes a flow-through barrier incorporating a proprietary technology called subsurface metabolism enhancement (SME) to mitigate petroleum hydrocarbons. SME is an in situ soil and groundwater remediation system that incorporates nutrient injection, air injection, and air and biogenic gas extraction to stimulate natural biological breakdown of hydrocarbons. Due to high vapor readings, the system was initially run as a vapor extraction system until the concentrations of vapors produced was compatible with the SME technology. An estimated 7,604 pounds of THPg has been removed from the SME system through January 2016.

5.2. Current Investigation

As mentioned, RE Solutions has conducted additional investigations to close datagaps and refine the information necessary to develop a revised remedial plan that takes into account the future industrial redevelopment. Source Group Inc. (SGI) was retained to conduct supplemental investigations in 2016 and their efforts were presented in a report dated 2017 (SGI, 2017).

The scope of work conducted as part of the Site Investigation included:

- The advancement of 18 Cone Penetration Testing-Ultraviolet Optical Scanning Technology (CPT-UVOST™) soundings in the Northwest, Southwest and Eastern Parcels;
- The advancement of six onsite and one offsite soil borings to further delineate impacts to soil and groundwater;

- Soil vapor sampling at four locations in the northern portion of the Northwest Parcel;
- Installation of one monitoring well in the Southwest Parcel; and
- Completion of an LNAPL bail-down test at monitoring well MW-11, within the Northwest Parcel.

Site-specific screening levels (SLs) were developed for the site media (soil, groundwater, and soil vapor), and laboratory analytical data were compared to SLs to determine the chemicals of potential concern (COPCs). COPCs for soil, groundwater, and soil vapor consist of compounds typical of those found at petroleum refining facilities, including petroleum hydrocarbons and VOCs including BTEX and benzene derivatives.

Site Investigation results, combined with historical data collected from the Site indicate that COPCs are present in soil above SLs within a significant portion of the Northwest Parcel and Southwest Parcel and isolated to the northern portion of the Eastern parcel. Data indicate that except for a few isolated locations, soil vapor COPC detections above applicable screening levels are limited to onsite

Groundwater data collected to date indicate that TPHg (C4-C12), TPHd (C13-C22), BTEX, and naphthalene are the COPCs detected in the highest concentration in groundwater at the Site. TPHg and benzene were generally detected at the highest concentrations in the Northwest Parcel (up to 170,000 µg/L and 6,960 µg/L, respectively) with lower concentrations of TPHg detected in groundwater samples collected from the Southwest Parcel.

MTBE has historically been detected in groundwater samples collected offsite west of Gundry Avenue. The lack of MTBE detections in soil and groundwater samples collected onsite coupled with the highest concentration of MTBE detected in an offsite well located west and hydrologically cross-gradient of the Site (MW-17) suggests that an offsite source of MTBE is present.

Site investigation activities have defined three isolated areas of the site where LNAPL has been observed or UVOST™ data suggests the potential exists for LNAPL to be present. LNAPL bail-down testing was performed to assess the volume of LNAPL present beneath the Site and to assist with the quantification of LNAPL transmissivity.

The results of the Site Investigation were evaluated, along with other data collected from the Site, and a CSM was developed.

5.3. Proposed Response Plan

SGI completed Site characterization activities and prepared a Response Plan that presents an overall plan for remedial action for the Site taking into account the future industrial redevelopment and either replacing or augmenting the existing remedial program (SGI, 2017a). A California Land Reuse and Revitalization Act (CLRRA) Agreement was executed between RES and the Los Angeles

Regional Water Quality Control Board (LARWQCB) on March 4, 2017 (Appendix D). The CLRRA program is a State of California Brownsfield initiative that allows the State to enter into an agreement with an Innocent prospective purchaser of a Site subject to remedial requirements such that the purchaser agrees to take on certain remedial requirements in exchange for a covenant not to sue from the State once the actions are completed. The covenant not to sue is transferable to future buyers of the Site. Activities documented herein were requirements from the LARWQCB with the goal to remediate the Site to acceptable levels and allow property redevelopment for light industrial and commercial purposes.

The Response Plan includes a comprehensive review of characterization activities completed to date, a description of the Site conceptual model, proposed remedial action cleanup levels for onsite soil vapor, an evaluation of applicable technologies that were considered to remediate the Site, the selected preferred actions, and the conceptual design of response actions.

A Conceptual Site Model (CSM) was developed for the Site and the subsurface data was evaluated against site-specific screening levels to assess the required remedial actions. The following Remedial Action Objectives (RAOs) were developed for the Site:

- Reduce and/or maintain human health risks to acceptable levels to allow redevelopment of the Site for light industrial/commercial purposes;
- Prevent soil-related exposures (i.e., incidental ingestion, direct dermal contact, particulate inhalation and outdoor vapor inhalation of VOCs) to constituent concentrations exceeding commercial/industrial screening levels;
- Prevent indoor inhalation through vapor intrusion of constituent concentrations exceeding commercial/industrial cleanup goals;
- Reduce the potential for adsorbed-phase petroleum constituents in soil to leach to groundwater underlying the Site;
- Remove to the extent practical, mobile light, non-aqueous phase liquid (LNAPL) within the three defined LNAPL areas of occurrence; and
- Control the dissolved-phase hydrocarbon groundwater plume to prevent further offsite migration of contaminants at concentrations above levels that present a risk.

A detailed evaluation of remedial technologies was conducted and the following response actions were selected as the most suitable and cost effective alternatives for the Site:

<u>Groundwater Recommended Response Actions:</u>

1. On-Site downgradient edge air sparge barrier
2. Source area LNAPL removal and off-site disposal

3. Downgradient monitored natural attenuation

Soil and Soil Vapor Recommended Response Actions

4. On-Site soil vapor extraction

Engineering and Institutional Controls

5. "Cap" site with building and pavement
6. Install vapor mitigation system under all future buildings
7. Restrict on-site land use through LUC
8. Prepare SMP associated with LUC
9. Prepare Soil Management Plan for use during property redevelopment

The Plan was approved by the RWQCB on September 15, 2017.

5.4. Developmental Investigations

In August 2017, an investigation was conducted on Site to assess the potential that shallow soil that would be disturbed as part of grading for the new development, would encounter "VOC Contaminated Soil" as defined by the South Coast Air Quality Management District (AQMD) Rule 1166 (Italiano, 2017). The investigation included potholing a series of shallow trenches to the anticipated depth of remedial grading and measuring the soil that was excavated with a field meter consistent with the Rule 1166 protocols to assess whether VOC Contaminated soil was present and if so, at what locations and what general magnitude. There were several areas where VOC Contaminated soil was found that will require special handling during grading. A copy of this report is included in Appendix C.

6. SITE RECONNAISSANCE.

Mr. Mark Cousineau of HMC conducted a Site and Site vicinity reconnaissance on September 7, 2017 in order to identify visible evidence of RECs of concern at the Site and to assess possible conditions off Site that may impact the Site. HMC was unescorted during our inspection.

The Site is currently a vacant lot that is fenced on all sides. As mentioned, there are three separate parcels, northern, southern and eastern. The northern parcel included a remedial system, numerous monitoring and extraction wells and drums from recent investigations. Otherwise, the Site was vacant and generally graded flat with some weed growth present. The southern parcel was also a vacant parcel with portions of a remedial action system in place

including numerous monitoring and extraction wells. The eastern parcel was a vacant parcel and no remedial system was present.

Other than the remedial systems, there was no equipment or chemical use taking place at the Site. Selected photographs illustrating the Site and nearby off site conditions are included in Appendix A. Summaries of the Site and observations are detailed below.

Description and Use of Site:	The Site is currently a vacant plot of land with components of two remedial systems present.
Underground and Aboveground Storage Tanks:	No USTs or ASTs are currently present at the Site with the exception of certain small ASTS that are part of the remedial system.
Hazardous Materials, Hazardous Wastes or Petroleum Products:	Hazardous materials were not present on Site with the exception of small quantities of oil and other related material used as part of the remedial systems.
Drains, Drain lines and Sumps:	The Site primarily drains via sheet flow to the south in the general topographic gradient.
Pits, Ponds, Lagoons	No ponds, pits or lagoons were observed at the Site.
Industrial Wastewater:	No industrial wastewater is currently generated at the Site.
Stains:	There were no areas of significant surficial stains noted though as mentioned previously, a site investigation was recently conducted which involved surficial disturbance of the Site
Wells:	There are numerous groundwater monitoring and extraction as well as vapor wells present at the Site.
Transformers:	No pad-mounted transformers were identified at the Site.
Other Features:	No other features of concern were noted during the Site walk.

6.1. Site Vicinity

Land use in the vicinity of the Site includes a mix of commercial, residential, academic and industrial uses. The Site is bound:

- To the north by a recently constructed multi family development and a medical college (eastern parcel);
- To the east by residential developments;
- To the south by residential land uses and Long Beach City College; and,
  To the west by commercial businesses and a contractors yard.

While the Site vicinity is in commercial and light industrial use, no nearby properties were identified that appeared to pose a concern to the Site from a visual basis.

7. REGULATORY AGENCY DATABASE RESEARCH

Regulatory agency database information was obtained from a standard radius Site Assessment (ASTM) report by Environmental Data Resources, Inc. The center of the search was in the approximate center of the Site. Search distances for specific databases were one-quarter to one mile as specified in the ASTM 1527-13 standard. The database search includes over 70 federal, state, local, and proprietary records.

A complete copy of this report is included in Appendix B.

7.1. Database Records Concerning the Target Property

The Site is listed in several of the databases searched as part of this assessment:

HAZNET
CHMIRS
EMI
FINDS
EMI
ERNS
RCRA SQG
SEMS-Archive
SLIC
ENVIROSTOR
ECHO
TSCA
NPDES

These listings reflect the fact that the Site was an oil refinery, stored hazardous materials, disposed of hazardous waste, maintained air quality discharge permits and experienced releases that were investigated under the oversight of the State of California. The listings are consistent with what would be expected for a facility like this and available information related to previous subsurface investigations and remedial actions taken.

7.2. Database Records Concerning the Site Vicinity

A review of the EDR Radius Map database search was conducted to assess potential off Site facilities that could be contributing hazardous substances to the Site and represent an REC. In review of the many entries on the database, we reviewed the following factors that affect the ability of a facility to affect the Site:

- Distance from the Site,
- Location from the Site with regard to the direction of groundwater flow,
- Nature of the release and whether the release has affected soil, groundwater or both,
- Status of the investigation (e.g. open or closed)

Only those facilities judged using these factors are discussed below. Given the direction of groundwater flow to the south southeast, only those facilities adjacent or west to northwest were further considered. The facilities are discussed below:

Location	Address	Dist	Direction	Lists	REC	Rationale
P&M Diesel	2170 Gundry	Adj	NW	EDR Hist Auto, Finds, , RCRA SQG, Haznet, ECHO	NO	While the facility reportedly used chemicals, there was no data to suggest that a release had occurred.
Universal Care	1600 E Hill	223'	NE	Finds, RCRA SQG, ECHO, Haznet	NO	While the facility reportedly used chemicals, there was no data to suggest that a release had occurred.
LBUSD Signal Hill Elementary	2285 Walnut	737'	NNE	RCRA SQG	NO	There was no evidence of a spill or release.
Walnut Industrial Park aka Matthews Garage	2300 Walnut	850'	NNE	RCRA SQG, Finds, ECHO	NO	There was no evidence of a spill or release.
Carlos Guzman	1619 E Creston	1191'	NNE	RCRA SQG, Finds, ECHO	NO	There was no evidence of a spill or release.
Basin Valve	1500 E Burnett	1311	N	RCRA SQG, Finds, ECHO	NO	There was no evidence of a spill or release.

The remaining facilities were judged not to have impacted the Site.

7.3. Orphan Sites

Orphan Sites are those properties that are included on various agency lists, but for which the records do not have sufficient address information for the database program to map the site. None of the addresses listed were close enough to be of concern.

7.4. Summary of Off Site Issues

The Site is located in an area that has had historical industrial activity. While there are facilities that experienced releases in the Site vicinity, none were close enough or in the correct orientation to be considered a threat to the Site. There were no RECs from the neighboring uses of the Site in our judgment.

7.5. Tribal Records

The Site is not located in a tribal area so there were no tribal records to review.

7.6. Oil and Gas Wells

The State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources online mapping website was reviewed for the location of active, plugged, or abandoned oil wells in the vicinity of the Site. There was no record of oil wells on Site though the Site is adjacent to the Signal Hill oilfield and there are numerous oil wells in the Site vicinity.

7.7. State of California

The State of California Geotracker and EnviroStor websites were also reviewed for information on potential on or off site facilities that are being investigated or remediated under either RWQCB or DTSC oversight. The Site was not listed nor were there any facilities listed in the search zone that were not already listed in the EDR Radius Report reviewed as part of this assessment.

8. VAPOR INTRUSION, ASBESTOS AND OTHER MATERIALS

8.1. Vapor Intrusion

Based on the findings of this ESA and prior on Site investigations, we believe that there is a high risk of a vapor intrusion condition at the Site.

8.2. Asbestos

The Site is currently a vacant parcel with no structures. As such, potential asbestos containing material are not a concern at the Site.

8.3. Radon

The Site is listed as being located in Zone 2 with regards to radon indicating that radon maybe present at concentrations less than 4 pico curies / liter.

8.4. Mold

No evidence of water damage or mold growth was observed.

9. SUMMARY OF FINDINGS

Key findings of this Phase I ESA are as follows:

- The historical records indicate that the Site was open land until the mid 1920s when the Site was developed and operated as an oil refinery. Refining and storage operations were conducted on Site through the late 1990s when all structures were demolished and removed from the Site.

- There have been extensive investigations conducted on site, which have revealed that multiple releases of petroleum products have occurred at the facility affecting soil, soil gas and groundwater. An area of free product floating on groundwater is present in the northern parcel and a plume of impacted groundwater is also present that extends off site to the south-southwest.

- Remedial efforts to date have included removal of free product and containment and treatment of the dissolved phase hydrocarbons present in the groundwater.

- The Site has been entered into the California Land Reuse & Recycling Act (CLRRA) Program with the California Regional Water Quality Control Board (RWQCB). The CLRRA program is a State Brownsfield initiative that provides liability limitations to prospective innocent purchasers of impacted property who agree to conduct certain defined remedial scopes. In exchange for the work, the State agrees to provide a covenant not to sue for future environmental costs, which is transferable to future owners, among other provisions.

- Recent investigations have been conducted at the Site to better define the areas of impact and a proposed remedial solution has been put forth to the RWQCB who is serving as lead regulatory agency for the Site. The extent of the release has been defined.

- Investigations have been conducted in the downgradient area of the plume and demonstrated that the presence of petroleum in groundwater does not pose a vapor intrusion risk to residents of the area.

- The remedial solution proposed for the Site includes removal of free product, installation and operation of a vapor extraction system to remediate impacted soil, expansion of the downgradient groundwater barrier to contain impacted groundwater on Site and monitored natural attenuation to demonstrate that the overall plume is stable and declining and that the off site downgradient portions of the plume will degrade and not pose a threat to human health or groundwater resources. The Site will be capped with the future development and a deed restriction recorded on title that limits the Site to commercial land use, among other restrictions.

- A potholing investigation was conducted at the Site which confirmed that during grading, VOC Contaminated Soil as defined by the AQMD Rule 1166 will be encountered and must be dealt with during redevelopment. A soil management plan will be prepared to guide the overall grading and redevelopment efforts.

10. CONCLUSIONS

HMC has conducted a Phase I ESA for the Site in accordance with the ASTM E1527-13 guidelines. Based on the information obtained as part of this ESA, the historic operations of the Site as an oil refinery and documented releases of petroleum products would be considered an REC for the Site.

11. RECOMMENDATIONS

Given the findings of this ESA, we recommend the following:

- The response plan presented to the RWQCB should be implemented during grading and development.
- A Site-specific AQMD Rule 1166 permit should be obtained for the Site development activities.

12. QUALIFICATIONS

Mark S. Cousineau, NREP

Mr. Mark S. Cousineau, principal with HMC, has a diverse professional background in environmental management, which includes working as a generator, regulator, consultant, and corporate advisor in hazardous waste and other environmental issues.

Mr. Cousineau's technical background is focused in the area of overseeing large-scale environmental investigations and regulatory compliance management related to site assessments, subsurface investigations, facility surveys, and site remediation. To projects such as these, Mr. Cousineau brings expertise in evaluating complex sites and developing solutions to solve the technical, operational, regulatory, financial and timing issues. In addition, Mr. Cousineau routinely assists clients in developing environmental business plans for single assets and multi-site real estate portfolios and has designed and implemented several tenant audit programs involving the proactive management of environmental risk caused by on-site commercial and industrial tenant activities.

Mr. Cousineau has provided litigation support and has served, as a court-appointed expert on environmental issues, is a member of the National Registry of Environmental Professionals, holds a M.S. in Environmental Sciences from California State University Fullerton and a B.S. in Chemistry from University California San Diego.

As signatory to this report, I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in § 312.10 of this part. I have the specific qualifications based on education, training, and experience to assess the property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312."

Mark Cousineau, NREP
Principal

13. REFERENCES

CDWR, 1960 — Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, State of California Department of Water Resources Bulletin 104, Appendix A. June.

AA&AI. 2016a — Interim Remedial Action Progress Report, Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, California. March 25.

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Apex-SGI. 2016 — Site Investigation Workplan for Former Chemoil Refinery. October 25.

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Italiano, 2017, — Signal Hill Walnut Ave & 21st Street Potholing Operation Narrative & Report, Unpublished report prepared for Xebec Realty Partners, 2017.

SGI, 2017 — Site Investigation and Site Conceptual Model Report, Former Chemoil Refinery, Site Cleanup Program Number 0453A, Site ID No, 2047W00 Global ID SL 2047W2348, 2020 Walnut Ave Signal Hill California, 2017.

SGI, 2017a, — Response Plan and Remedial Technology Evaluation, Former Chemoil Refinery, Site Cleanup Program Number 0453A, Site ID No, 2047W00 Global ID SL 2047W2348, 2020 Walnut Ave Signal Hill California, June 13, 2017.

TEC, 2011. — Report on Phase III Additional Site Characterization, Former Chemoil Refinery, Signal Hill, California. June.

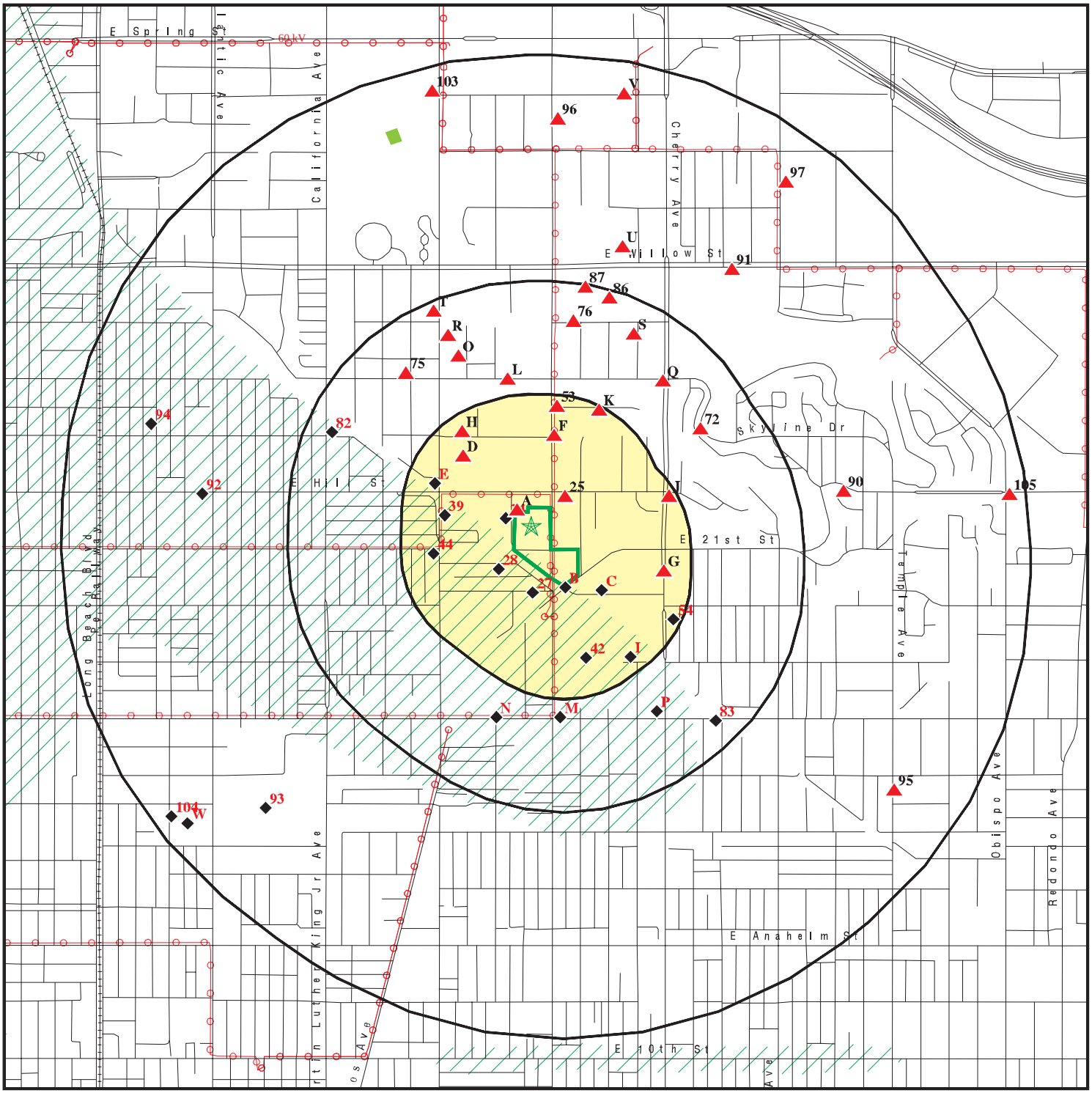
Tetra Tech, 2006. — Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

TriHydro, 2016, — Phase I Environmental Site Assessment, 2185, 2020 Walnut Avenue Signal Hill CA 90755, Prepared for RE Solutions, May 3, 2016.

TABLES

TABLE 1.

OVERVIEW MAP - 5042323.2S



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

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:	Former Chemoil Refinery	CLIENT:	Hazard Management Consulting
ADDRESS:	2020 Walnut Avenue Signal Hill CA 90755	CONTACT:	Mark Cousineau
		INQUIRY #:	5042323.2s
LAT/LONG:	33.795985 / 118.1728	DATE:	September 06, 2017 6:27 pm

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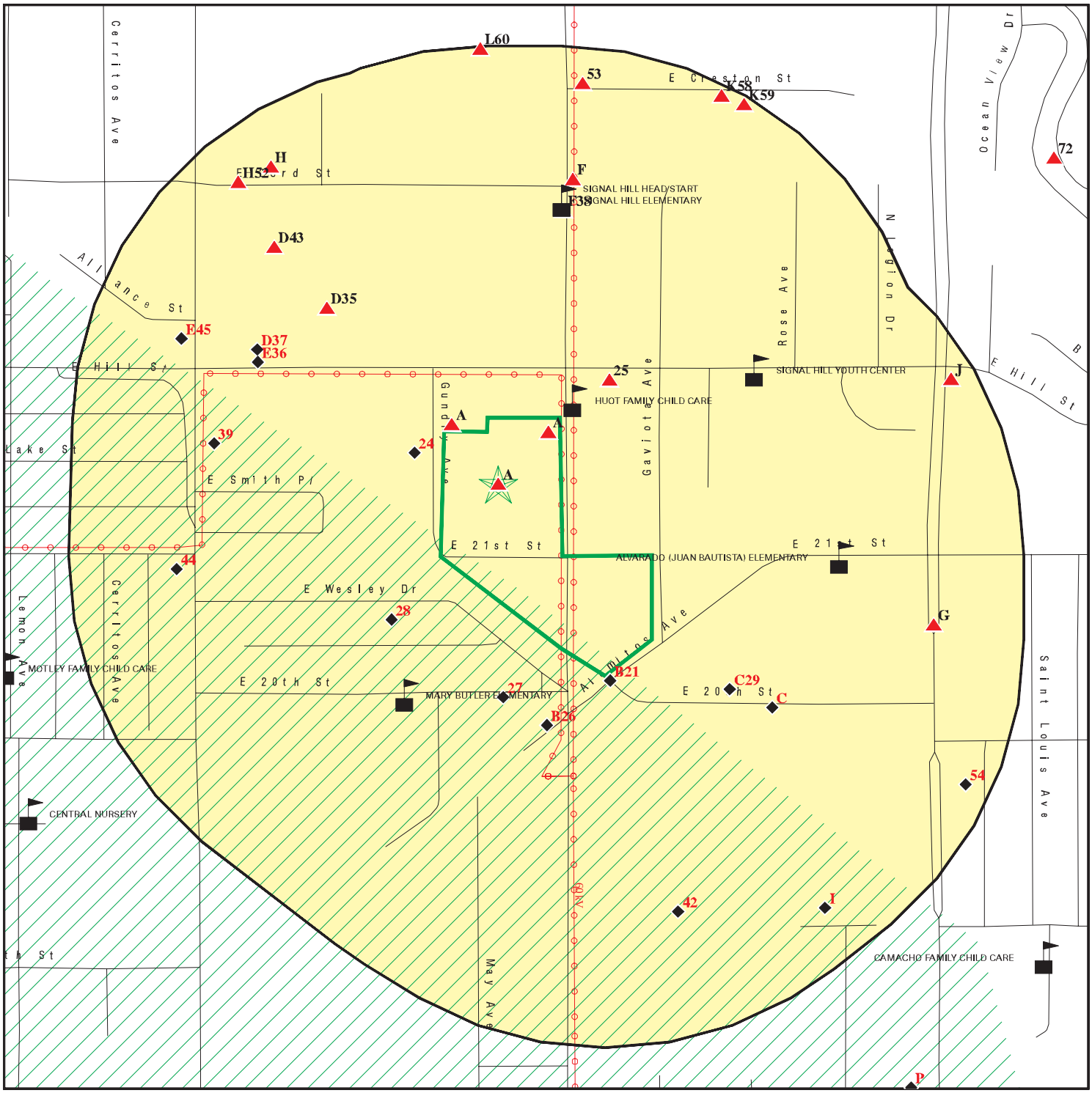
TABLE 1.

DETAIL MAP - 5042323.2S



0 1/16 1/8 1/4 Miles

- 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: Former Chemoil Refinery	CLIENT: Hazard Management Consulting
ADDRESS: 2020 Walnut Avenue Signal Hill CA 90755	CONTACT: Mark Cousineau INQUIRY #: 5042323.2s
LAT/LONG: 33.795985 / 118.1728	DATE: September 06, 2017 6:33 pm

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TABLE 1.

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	0.001		0	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	1	0	0	2	NR	NR	3
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	2	NR	2
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	3	6	NR	NR	NR	10
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
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	0.001	2	0	NR	NR	NR	NR	2
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000	1	2	0	1	17	NR	21
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	2	16	NR	NR	19

TABLE 1.

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
SLIC	0.500	3	0	0	3	NR	NR	6
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		3	7	NR	NR	NR	10
AST	0.250		0	1	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN 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	3	2	NR	NR	5
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	1	NR	NR	1
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	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								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
AOCONCERN	1.000		0	0	0	0	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		2	0	NR	NR	NR	2
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		1	4	NR	NR	NR	5
HIST UST	0.250		1	3	NR	NR	NR	4
CA FID UST	0.250		0	1	NR	NR	NR	1
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0

TABLE 1.

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
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001	4	0	NR	NR	NR	NR	4
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		2	0	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001	1	0	NR	NR	NR	NR	1
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001	3	0	NR	NR	NR	NR	3
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001	1	0	NR	NR	NR	NR	1
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
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001	3	0	NR	NR	NR	NR	3

TABLE 1.

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
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001	2	0	NR	NR	NR	NR	2
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		1	2	11	NR	NR	14
LOS ANGELES CO. HMS	0.001		1	NR	NR	NR	NR	1
HWP	1.000		0	0	0	2	NR	2
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001	1	0	NR	NR	NR	NR	1
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	1	0	NR	1
LA Co. Site Mitigation	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	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		4	NR	NR	NR	NR	4
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		23	21	29	37	21	0	131

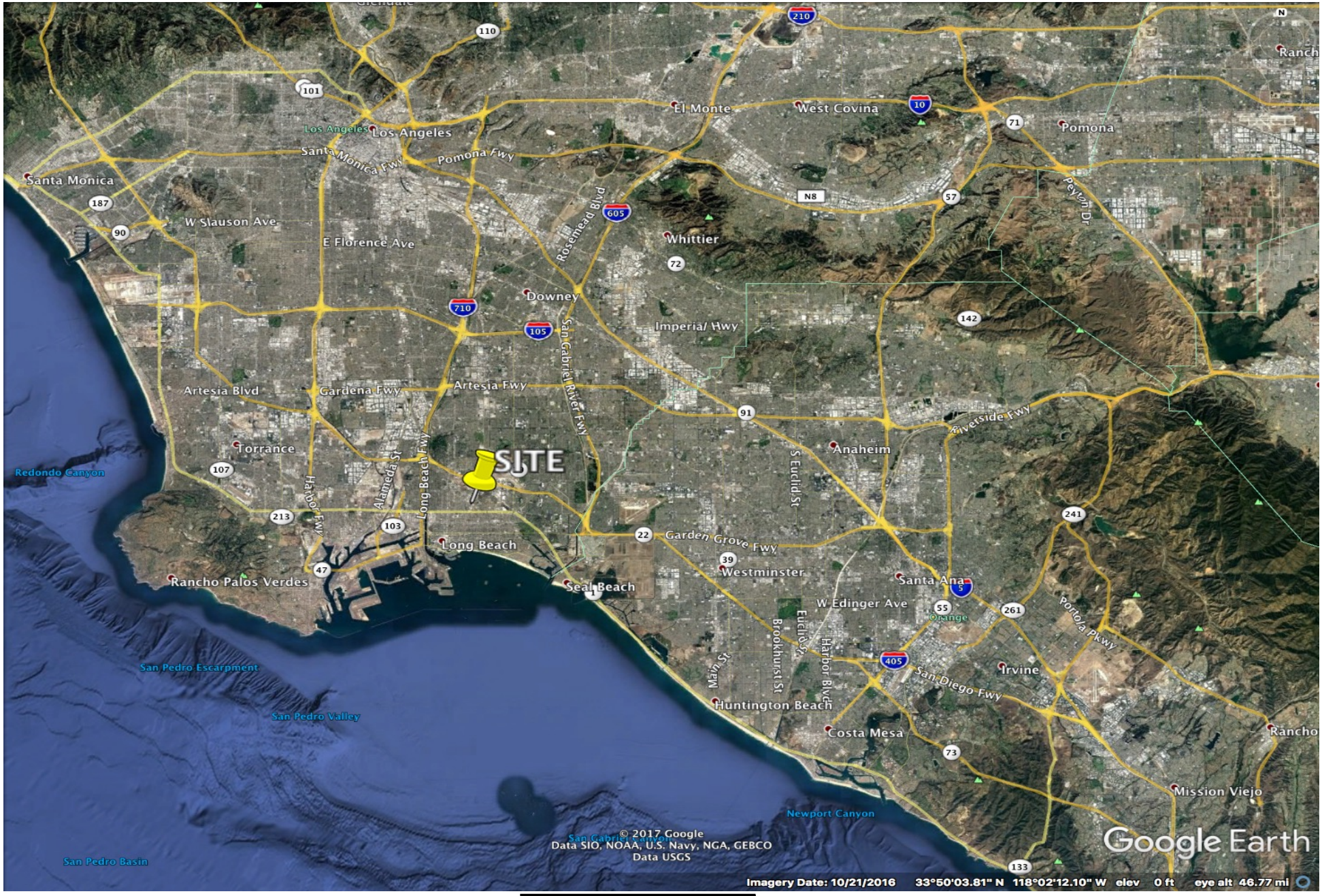
NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

FIGURES

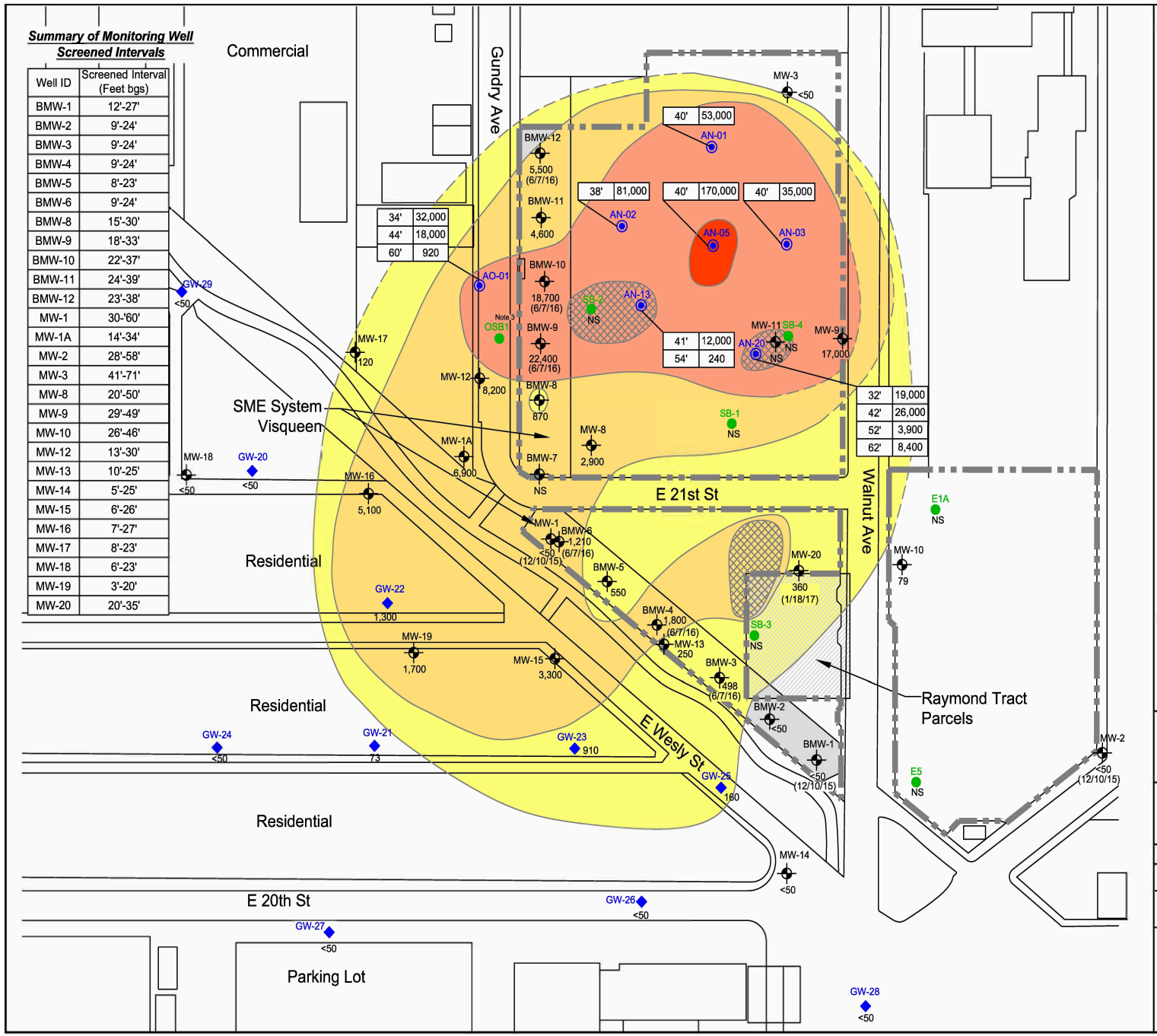


HMC

Figure 1: Site Location

HMC

Figure 2: Site Map



Summary of Monitoring Well Screened Intervals

Well ID	Screened Interval (Feet bgs)
BMW-1	12'-27'
BMW-2	9'-24'
BMW-3	9'-24'
BMW-4	9'-24'
BMW-5	8'-23'
BMW-6	9'-24'
BMW-8	15'-30'
BMW-9	18'-33'
BMW-10	22'-37'
BMW-11	24'-39'
BMW-12	23'-38'
MW-1	30-'60'
MW-1A	14'-34'
MW-2	28'-58'
MW-3	41'-71'
MW-8	20'-50'
MW-9	29'-49'
MW-10	26'-46'
MW-12	13'-30'
MW-13	10'-25'
MW-14	5'-25'
MW-15	6'-26'
MW-16	7'-27'
MW-17	8'-23'
MW-18	6'-23'
MW-19	3'-20'
MW-20	20'-35'

LEGEND

- Site Boundary
- MW-16 Groundwater Monitoring Well Locations
- AN-01 Grab Groundwater Sample Locations, APEX, 2017
- SB-2 Grab Groundwater Sample Locations, Tetratech, 2006
- GW-29 Grab Groundwater Sample Locations, Geosyntec, 2012. Samples Collected for First Encountered Groundwater.
- 40' | 35,000 — Depth in feet bgs; TPHg Concentration in µg/L
- bgs — Below Ground Surface
- µg/L — Micrograms per Liter
- <50 — Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
- NS — Not Sampled
- SME — Subsurface Metabolism Enhancement
- Isoconcentration Contour, Dashed Where Inferred
- Area of Observed or Suspected LNAPL
- Concentrations > 100 µg/L
- Concentrations > 1,000 µg/L
- Concentrations > 10,000 µg/L
- Concentrations > 100,000 µg/L

Note:
1. Locations sampled during Quarter 4, 2016 unless otherwise indicated.
2. With the exception of MW-20, monitoring wells were sampled by Ami Adini & Associates.
3. OSBI was advanced and sampled prior to installation of the SME barrier. Results no longer representative are not shown.

SUMMARY OF TPHg (C4-C12) CONCENTRATIONS IN GROUNDWATER

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	01/23/17	ZA	KD

0 120 240
HORIZONTAL SCALE IN FEET

SGI environmental APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

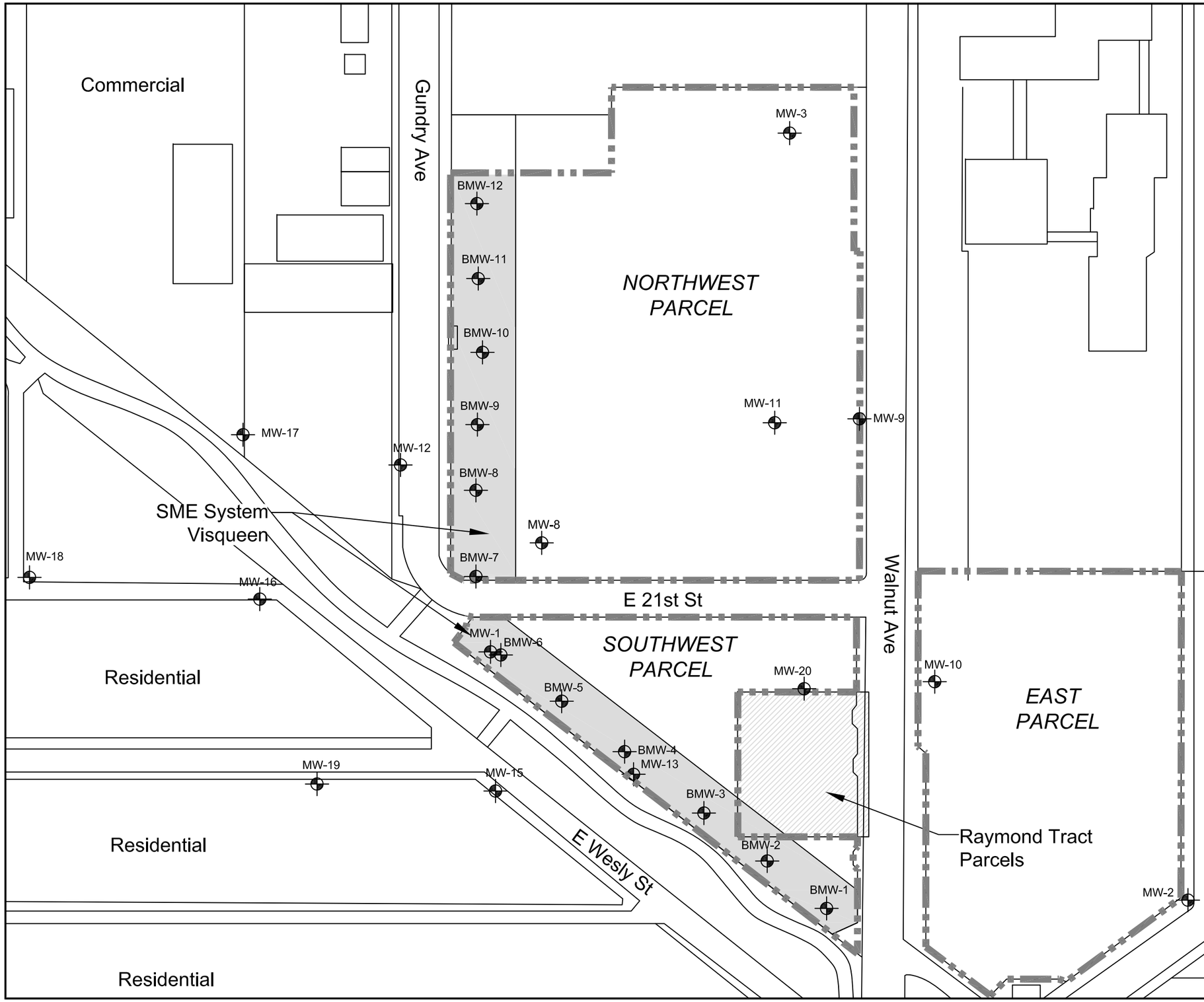
N

FIGURE F-4

HMC

Figure 3: Area of Impact

SELECT FIGURES FROM RESPONSE PLAN



LEGEND

Site Boundary

MW-16 Groundwater Monitoring Well Locations

SME Subsurface Metabolic Enhancement

SITE MAP

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-CHEMOIL-001	02/08/17	ZA	KD

0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 1-2

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.1-2-Site Map.dwg, 3/9/2017 12:44:39 PM

LEGEND

Site Boundary

Wnt-4 — Soil Vapor Sampling Locations, (TEC, 2009/2010)

AN-06 — Soil Vapor Sample Locations, (APEX, 2017)

E1 — Soil Vapor Sample Locations, (Tetratech, 2006)

SV-20 — Soil Gas Sampling Locations, (Geosyntec, 2012)

SOIL VAPOR SAMPLE LOCATIONS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-ChemOil-001	01/31/17	ZA	KD

0 150 300
HORIZONTAL SCALE IN FEET

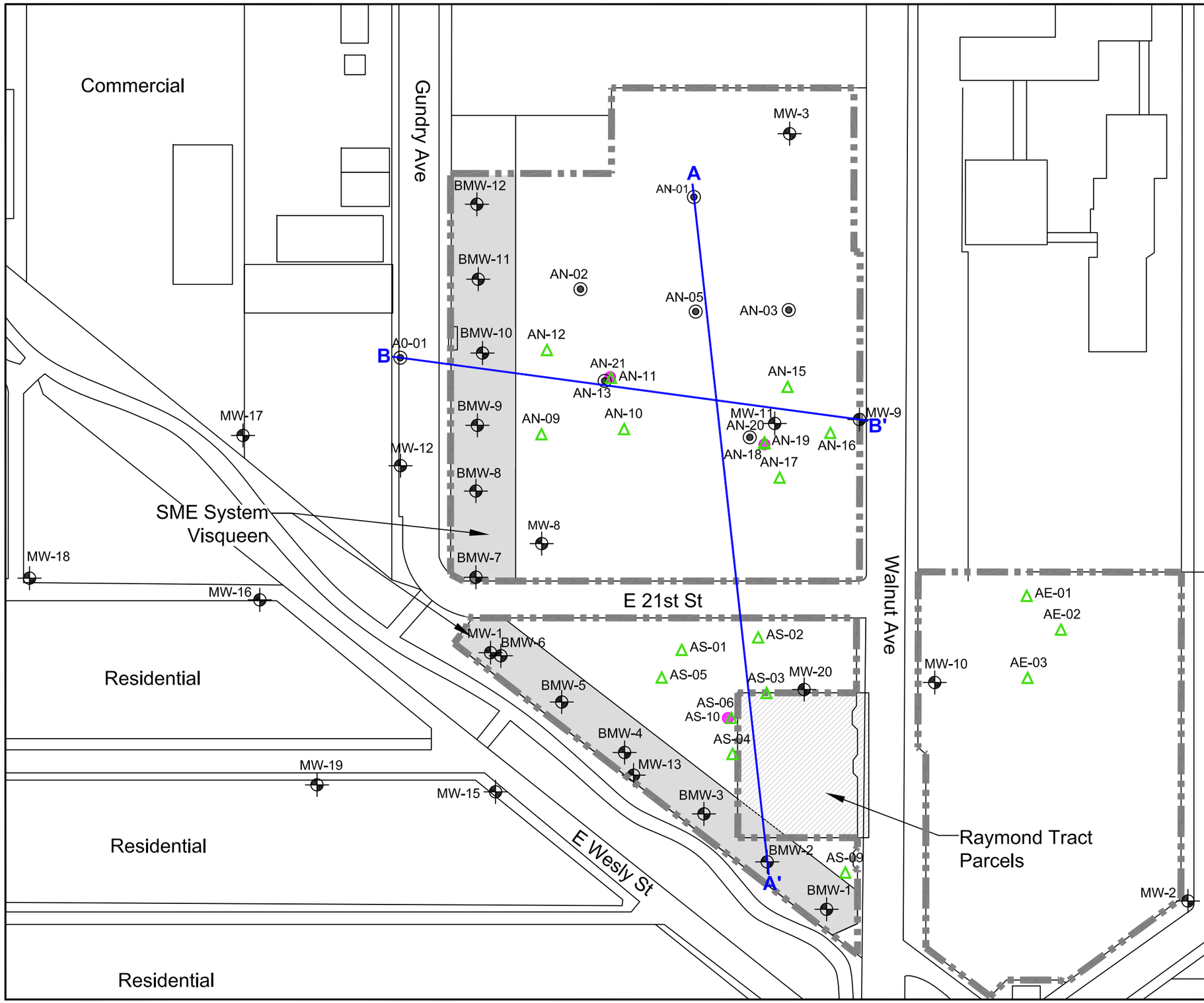
SGI environmental
APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 3-3

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.3-3-SV Sample Locations.dwg, 3/9/2017 1:11:02 PM



LEGEND

	Site Boundary
MW-16	Groundwater Monitoring Well Location
AN-20	Soil Boring and Grab Groundwater Location (Apex, 2017)
AN-10	2016 UVOST™ Boring Location
AN-21	2016 MIP© Boring Location
UVOST	Ultra-Violet Optical Screening Tool
SME	Subsurface Metabolism Enhancement

CROSS SECTION LOCATION MAP

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-CHEMOIL-001	02/08/17	ZA	KD

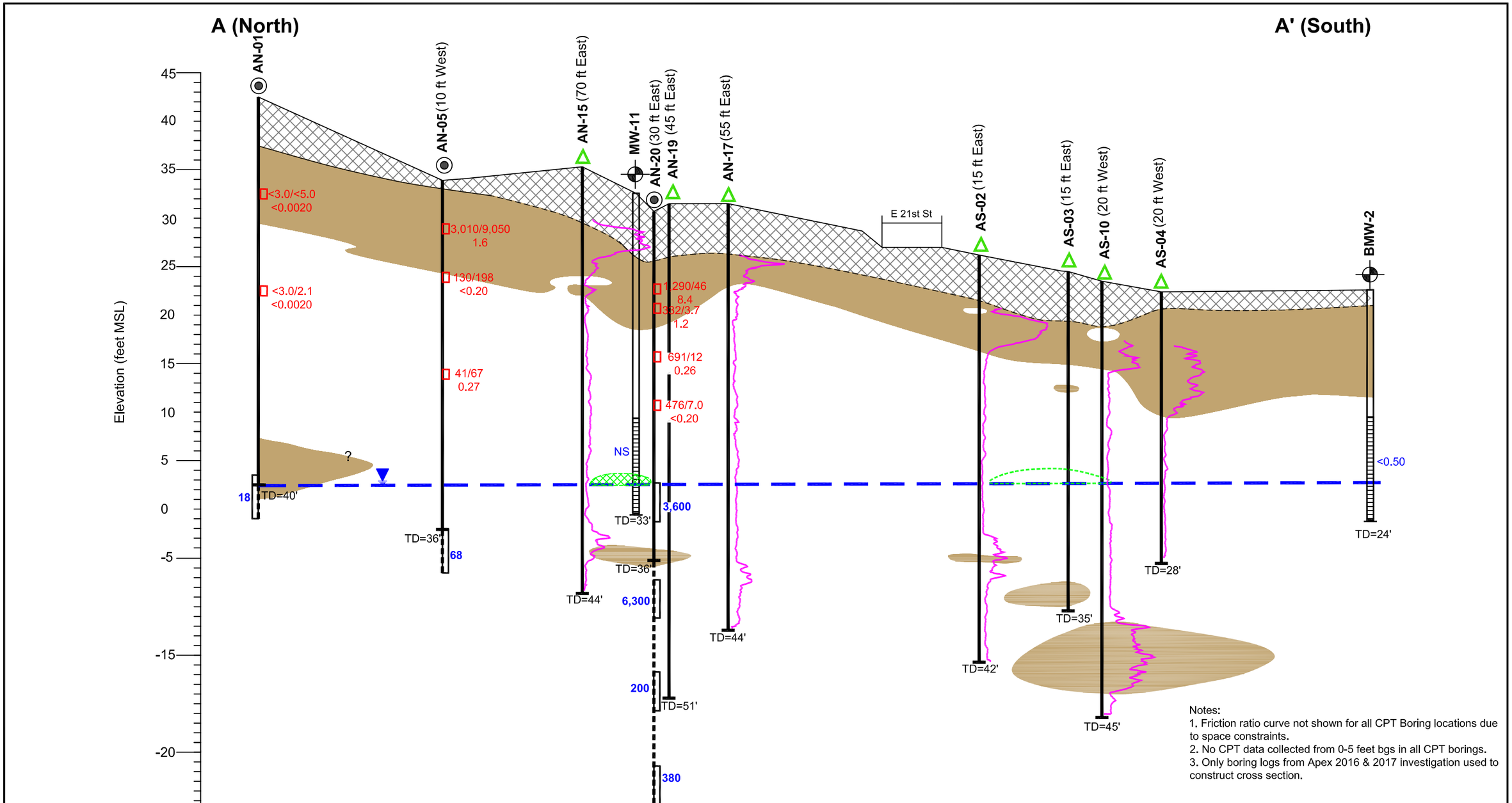
0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental
APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-1

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-1,5-2,5-3-Cross Section Locations &Cross sections A-A' & B-B'.dwg, 3/9/2017 2:46:24 PM



Notes:
1. Friction ratio curve not shown for all CPT Boring locations due to space constraints.
2. No CPT data collected from 0-5 feet bgs in all CPT borings.
3. Only boring logs from Apex 2016 & 2017 investigation used to construct cross section.

LEGEND

- Fill
- Fine Grained Material
- Coarse Grained Material
- Lithologic Contact (Dashed Where Inferred)
- MSL Mean Sea Level
- TD Total Depth of Logged Boring In Feet
- Grab Groundwater Sample
- 68 Benzene Concentration in Groundwater (micrograms per Liter)
- <0.50 Not Detected Above Indicated Reporting Limit
- NS Not Sampled
- Soil Not Logged. Boring Advanced For Grab Groundwater Sample Only
- Screened Interval, Monitoring Well Sample
- Potentiometric Surface
- CPT Boring (Apex, 2016)
- Soil Boring and Grab Groundwater Location (Apex, 2017)
- Monitoring Well Location
- 41/67 / 0.27 — TPH(C5-C12) Concentration in Soil (milligrams per kilogram); TPH(C13-C22) Concentration in Soil (milligrams per kilogram); Benzene Concentration in Soil (milligrams per kilogram) — Soil Sample
- Approximate Groundwater Elevation Measured in December 2016 Monitoring event by Adini Associates, Inc, 2016
- Friction Ratio From CPT Report (Apex, 2016)
- Free Product Observed
- Suspected Area of Free Product

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
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0 60 120
HORIZONTAL SCALE IN FEET

CROSS SECTION A-A'

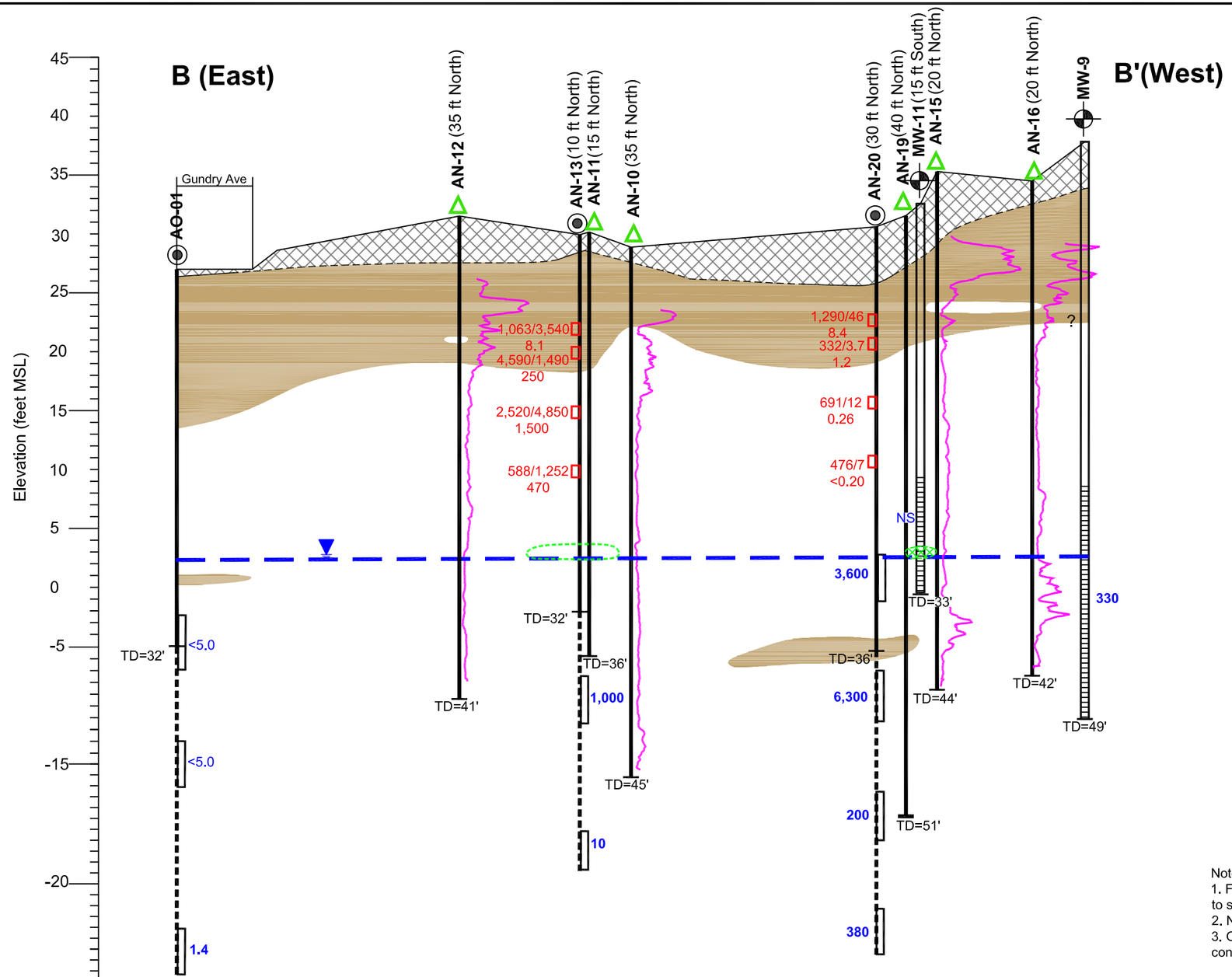
SGI environmental / APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-2

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-1,5-2,5-3-Cross Section Locations &Cross sections A-A' & B-B'.dwg, 3/9/2017 1:20:59 PM



Notes:
1. Friction ratio curve not shown for all CPT Boring locations due to space constraints.
2. No CPT data collected from 0-5 feet bgs in all CPT borings.
3. Only boring logs from Apex 2016 & 2017 investigation used to construct cross section.

LEGEND

- Fill
- Fine Grained Material
- Coarse Grained Material
- Lithologic Contact (Dashed Where Inferred)
- MSL Mean Sea Level
- TD Total Depth of Logged Boring
- Grab Groundwater Sample
- 200 Benzene Concentration in Groundwater (micrograms per Liter)
- Not Detected Above Indicated Reporting Limit
- NS Not Sampled
- Soil Not Logged. Boring Advanced For Grab Groundwater Sample Only
- Screened Interval, Monitoring Well Sample
- Potentiometric Surface
- CPT Boring (Apex, 2016)
- Soil Boring and Grab Groundwater Location (Apex, 2017)
- Monitoring Well Location
- 2,520/4,850 / 1,500 Soil Sample: TPH(C5-C12) Concentration in Soil (milligrams per kilogram); TPH(C13-C22) Concentration in Soil (milligrams per kilogram); Benzene Concentration in Soil (milligrams per kilogram)
- Approximate Groundwater Elevation Measured in December 2016 Monitoring event by Adini Associates, Inc, 2016
- Friction Ratio From CPT Report (Apex, 2016)
- Free Product Observed
- Suspected Area of Free Product

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	02/21/17	ZA	KD

0 60 120
HORIZONTAL SCALE IN FEET

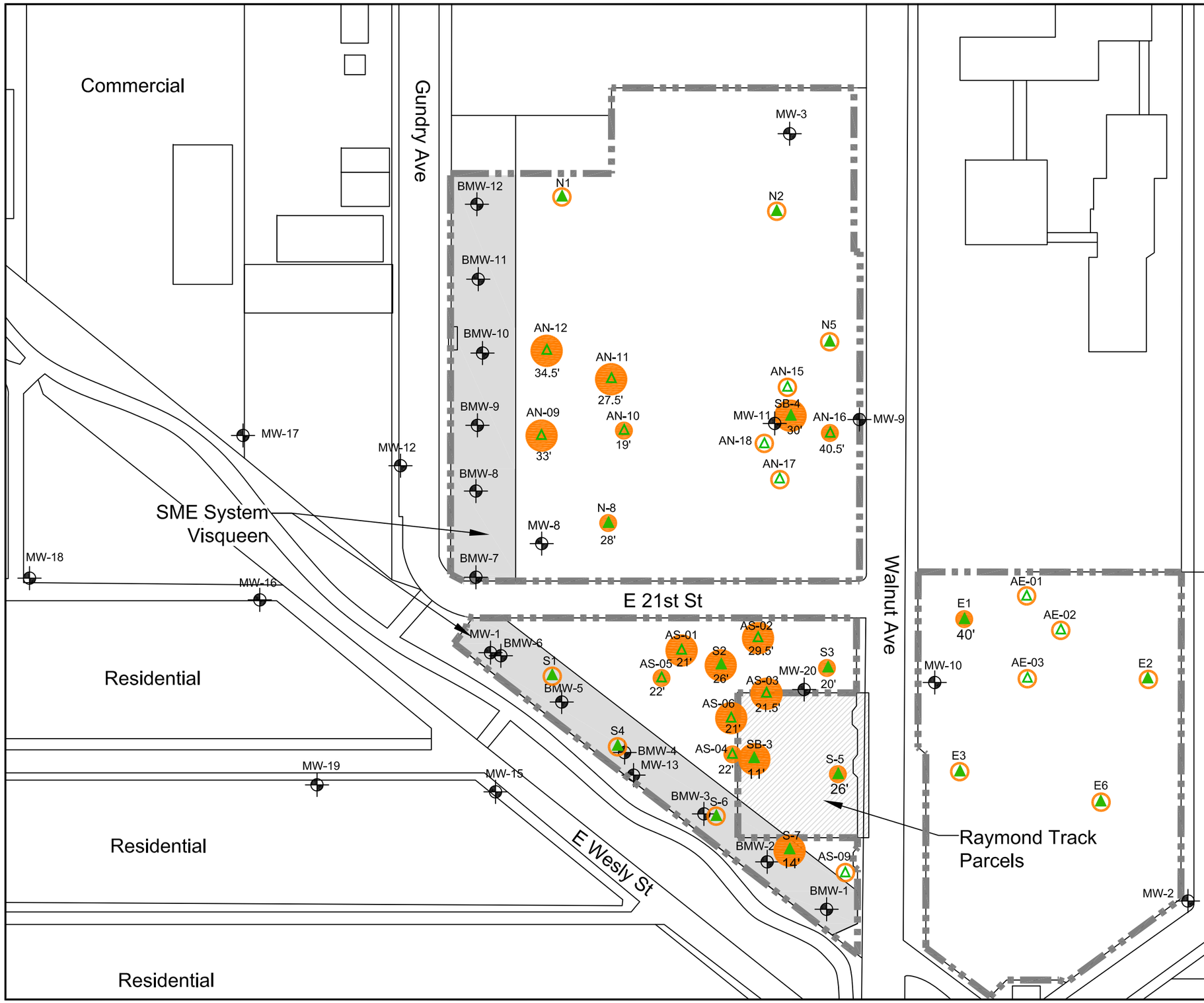
CROSS SECTION B-B'

SGI environmental APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-3

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-1,5-2,5-3-Cross Section Locations &Cross sections A-A' & B-B'.dwg, 3/9/2017 1:22:11 PM



LEGEND

	Site Boundary
MW-16	Groundwater Monitoring Well Locations
S4	2006 ROST™ Boring Location
AN-15	2016 UVOST™ Boring Location
ROST	Rapid Optical Screening Tool
SME	Subsurface Metabolism Enhancement
UVOST	Ultra-Violet Optical Screening Tool
30'	Depth of Maximum Response Output in Feet Below Ground Surface (Shown for All Boring With Outputs of >25%)

Percent response relative to reference emitter (RE):

- RE <25%
- 25%<RE <50%
- RE >50%

SUMMARY OF LASER INDUCED FLUORESCENCE RESULTS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	02/13/17	ZA	KD

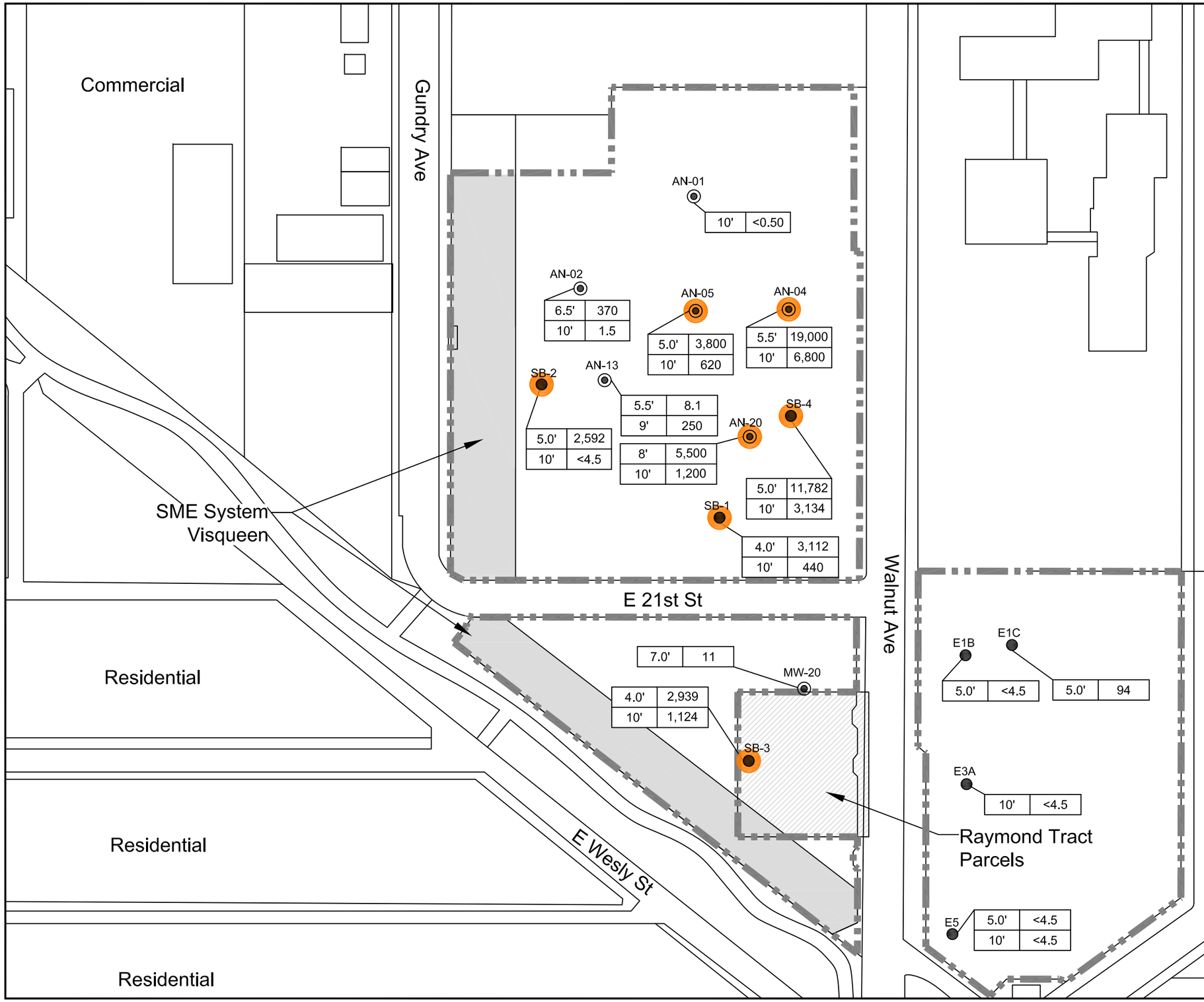
0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental
APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-4

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-4-Summary of Laser Induced Flourescence Results.dwg, 3/9/2017 1:28:21 PM



LEGEND

Site Boundary

AN-01 Soil Sample Locations (APEX, 2017)

SB-4 Soil Sample Locations (Tetratech, 2006)

5.5'	19,000

Depth in feet bgs — TPHg Concentration in mg/kg

TPHg Total Petroleum Hydrocarbons as Gasoline (C4-C12)

(C4-C12) Carbon Range

bgs Below Ground Surface

mg/kg Milligrams per Kilogram

<0.50 Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown

NS Not Sampled

SME Subsurface Metabolism Enhancement

Concentrations of TPHg (C4-C12) are Above the Lowest Screening Level of 420 mg/kg

Note:
TPHg (C4-C12) measured by EPA method 8260B in APEX, 2017 samples. TPHg (C4-C12) measured by EPA method 8015 in Tetratech, 2006 samples.

SUMMARY OF TPHg (C4-C12) CONCENTRATIONS IN SOIL 0 to 10 FEET BGS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	02/01/17	ZA	KD

0 100 200
HORIZONTAL SCALE IN FEET

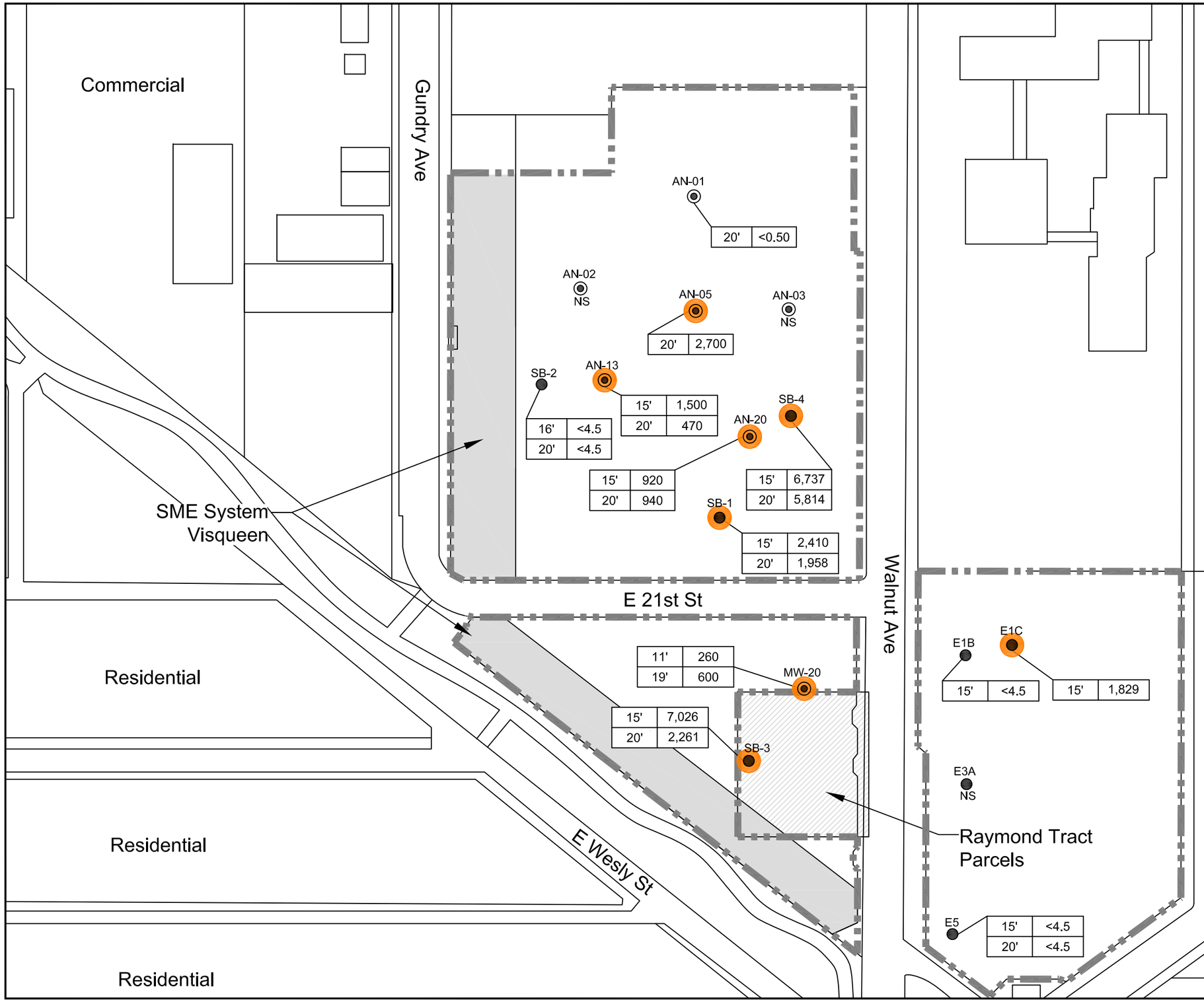
SGI environmental APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-5

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-5-Summary of TPHg (C4-C12) Concentration in Soil-0-10' BGS.dwg, 3/9/2017 1:31:10 PM



LEGEND

Site Boundary

AN-01 Soil Sample Locations (APEX, 2017)

SB-4 Soil Sample Locations (Tetratech, 2006)

20'	2,700

Depth in feet bgs — TPHg Concentration in mg/kg

TPHg	Total Petroleum Hydrocarbons as Gasoline (C4-C12)
(C4-C12)	Carbon Range
bgs	Below Ground Surface
mg/kg	Milligrams per Kilogram
<0.50	Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
NS	Not Sampled
SME	Subsurface Metabolism Enhancement

Concentrations of TPHg (C4-C12) are Above the Lowest Screening Level of 420 mg/kg

Note:
TPHg (C4-C12) measured by EPA method 8260B in APEX, 2017 samples. TPHg (C4-C12) measured by EPA method 8015 in Tetratech, 2006 samples.

SUMMARY OF TPHg (C4-C12) CONCENTRATIONS IN SOIL >10 to 20 FEET BGS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	02/01/17	ZA	KD

0 100 200
HORIZONTAL SCALE IN FEET

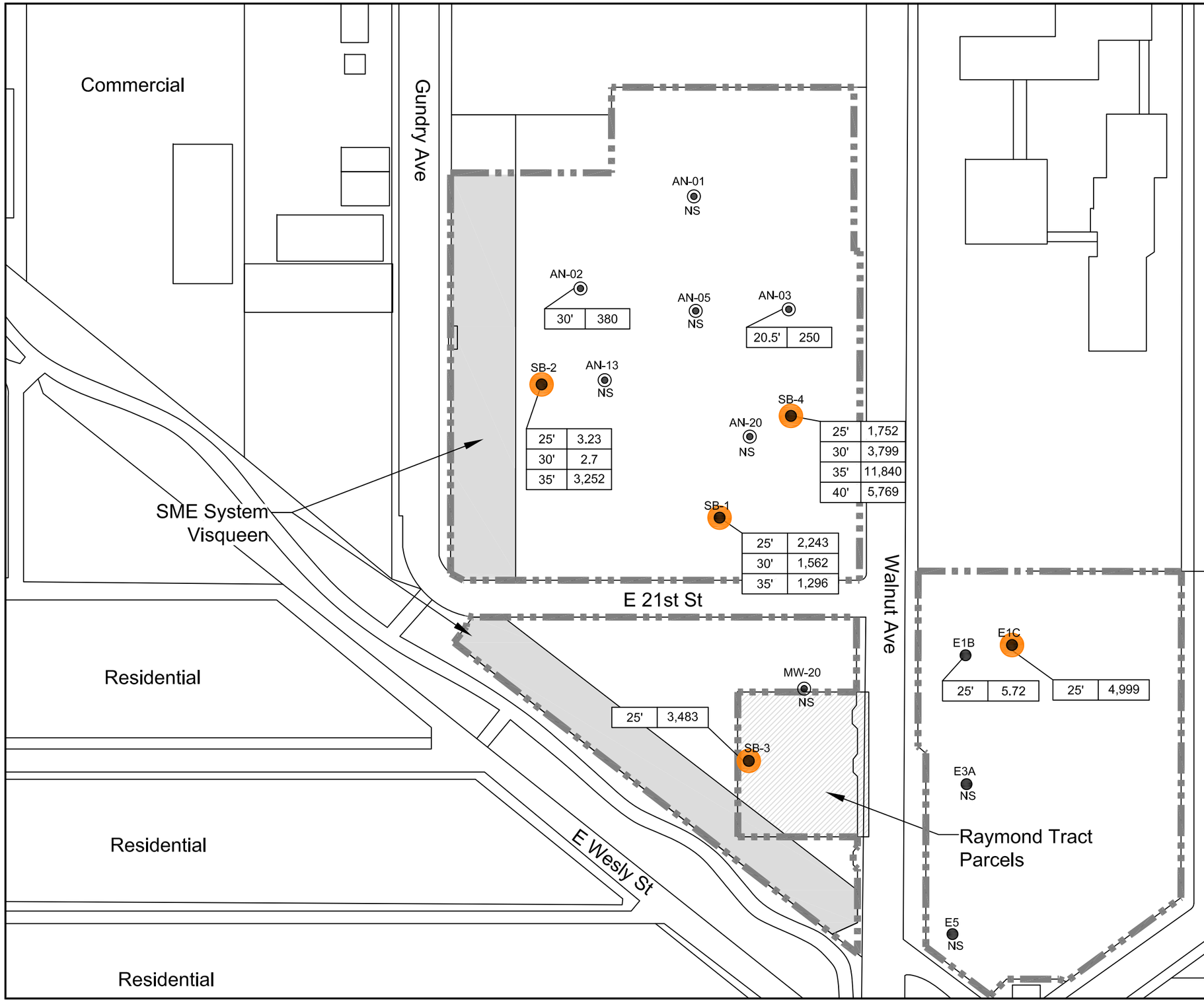
SGI environmental APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-6

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-6-Summary of TPHg (C4-C12) Concentration in Soil-10-20' BGS.dwg, 3/9/2017 1:35:35 PM



LEGEND

Site Boundary

AN-01 Soil Sample Locations (APEX, 2017)

SB-4 Soil Sample Locations (Tetratech, 2006)

30'	380

Depth in feet bgs — TPHg Concentration in mg/kg

TPHg Total Petroleum Hydrocarbons as Gasoline (C4-C12)

(C4-C12) Carbon Range

bgs Below Ground Surface

mg/kg Milligrams per Kilogram

NS Not Sampled

SME Subsurface Metabolism Enhancement

Concentrations of TPHg (C4-C12) are Above the Lowest Screening Level of 420 mg/kg

Note:
TPHg (C4-C12) measured by EPA method 8260B in APEX, 2017 samples. TPHg (C4-C12) measured by EPA method 8015 in Tetratech, 2006 samples.

SUMMARY OF TPHg (C4-C12) CONCENTRATIONS IN SOIL >20 FEET BGS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	02/01/17	ZA	KD

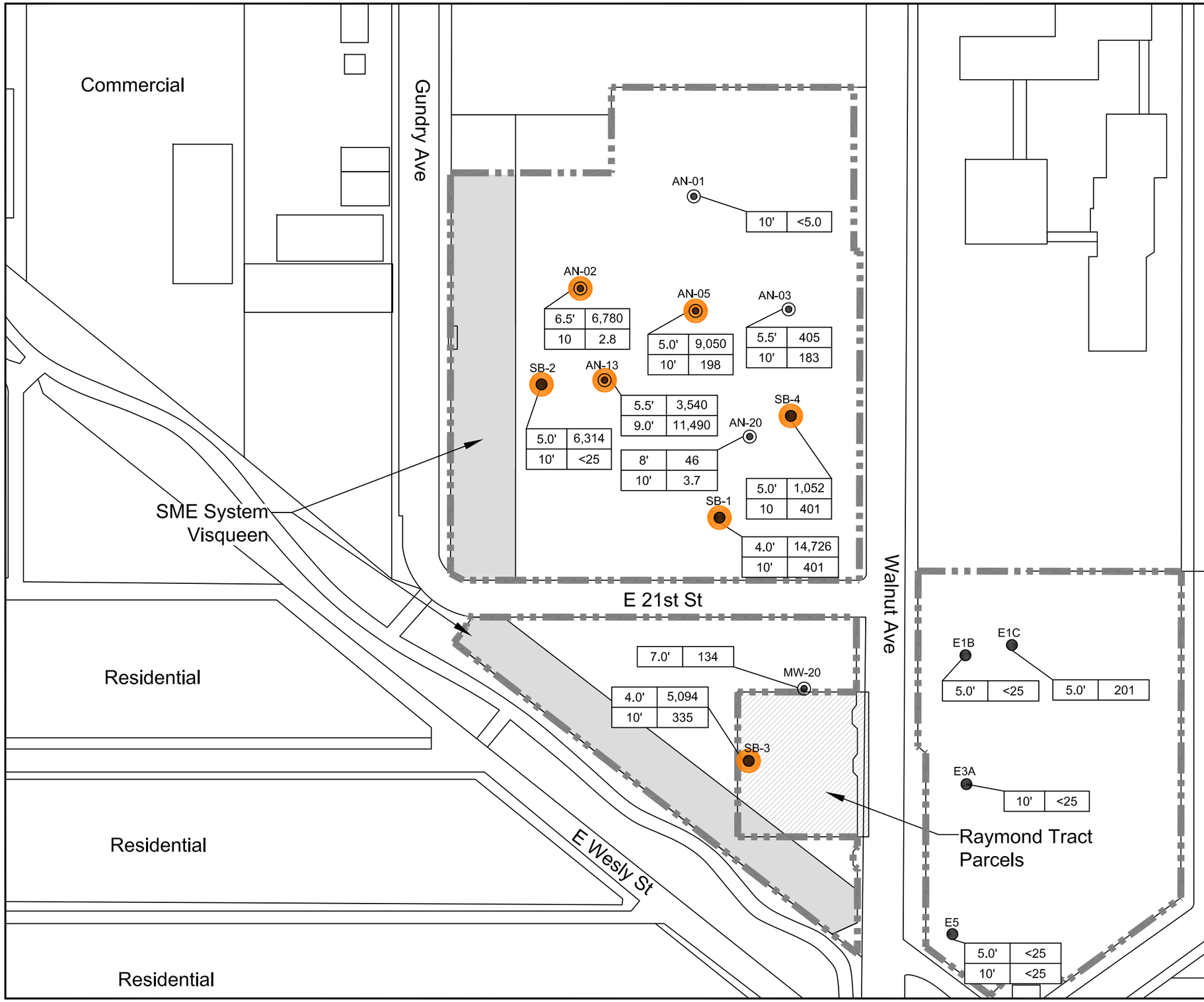
0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-7

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-7-Summary of TPHg (C4-C12)Concentration in Soil-20' BGS.dwg, 3/9/2017 1:37:44 PM



LEGEND

Site Boundary

AN-01 Soil Sample Locations (APEX, 2017)

SB-4 Soil Sample Locations (Tetratech, 2006)

5.5'	405
Depth in feet bgs	TPH (C13-C22) Concentration in mg/kg

TPH	Total Petroleum Hydrocarbons, Carbon Range (C13-C22)
(C13-C22)	Carbon Range
bgs	Below Ground Surface
mg/kg	Milligrams per Kilogram
<5.0	Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
NS	Not Sampled
SME	Subsurface Metabolism Enhancement

Concentrations of TPH (C13-C22) are Above the Lowest Screening Level of 440 mg/kg

SUMMARY OF TPH (C13-C22) CONCENTRATIONS IN SOIL 0 to 10 FEET BGS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	02/07/17	ZA	KD

0 100 200
HORIZONTAL SCALE IN FEET

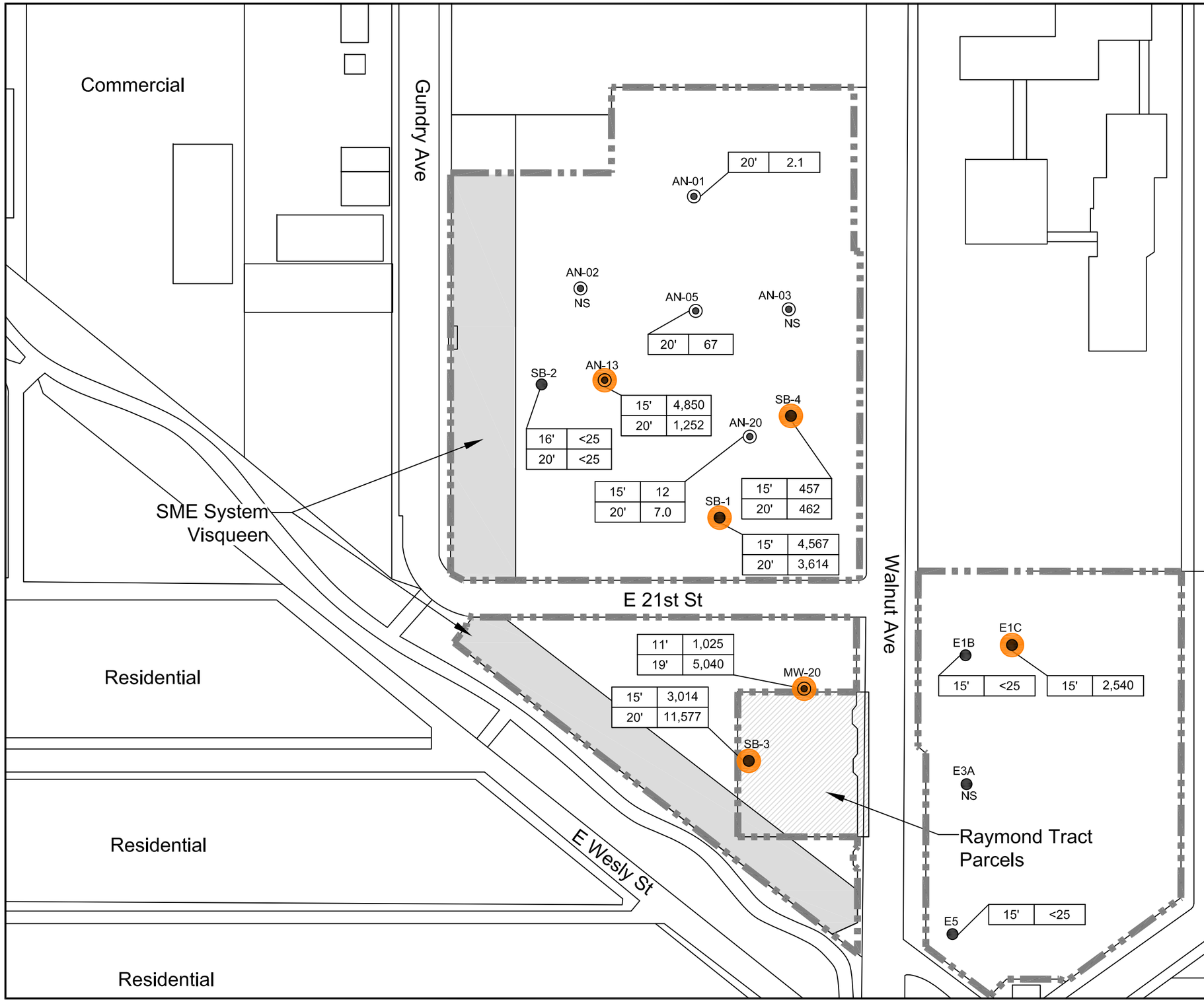
SGI environmental APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-8

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-8-Summary of TPH (C13-C22) Concentration in Soil-0-10' BGS.dwg, 3/9/2017 1:39:34 PM



LEGEND

Site Boundary

AN-01 Soil Sample Locations (APEX, 2017)

SB-4 Soil Sample Locations (Tetratech, 2006)

20'	67
Depth in feet bgs	TPH (C13-C22) Concentration in mg/kg

TPH Total Petroleum Hydrocarbons, Carbon Range (C13-C22)

(C13-C22) Carbon Range

bgs Below Ground Surface

mg/kg Milligrams per Kilogram

<25 Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown

NS Not Sampled

SME Subsurface Metabolism Enhancement

Concentrations of TPH (C13-C22) are Above the Lowest Screening Level of 440 mg/kg

SUMMARY OF TPH (C13-C22) CONCENTRATIONS IN SOIL >10 to 20 FEET BGS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	02/01/17	ZA	KD

0 100 200
HORIZONTAL SCALE IN FEET

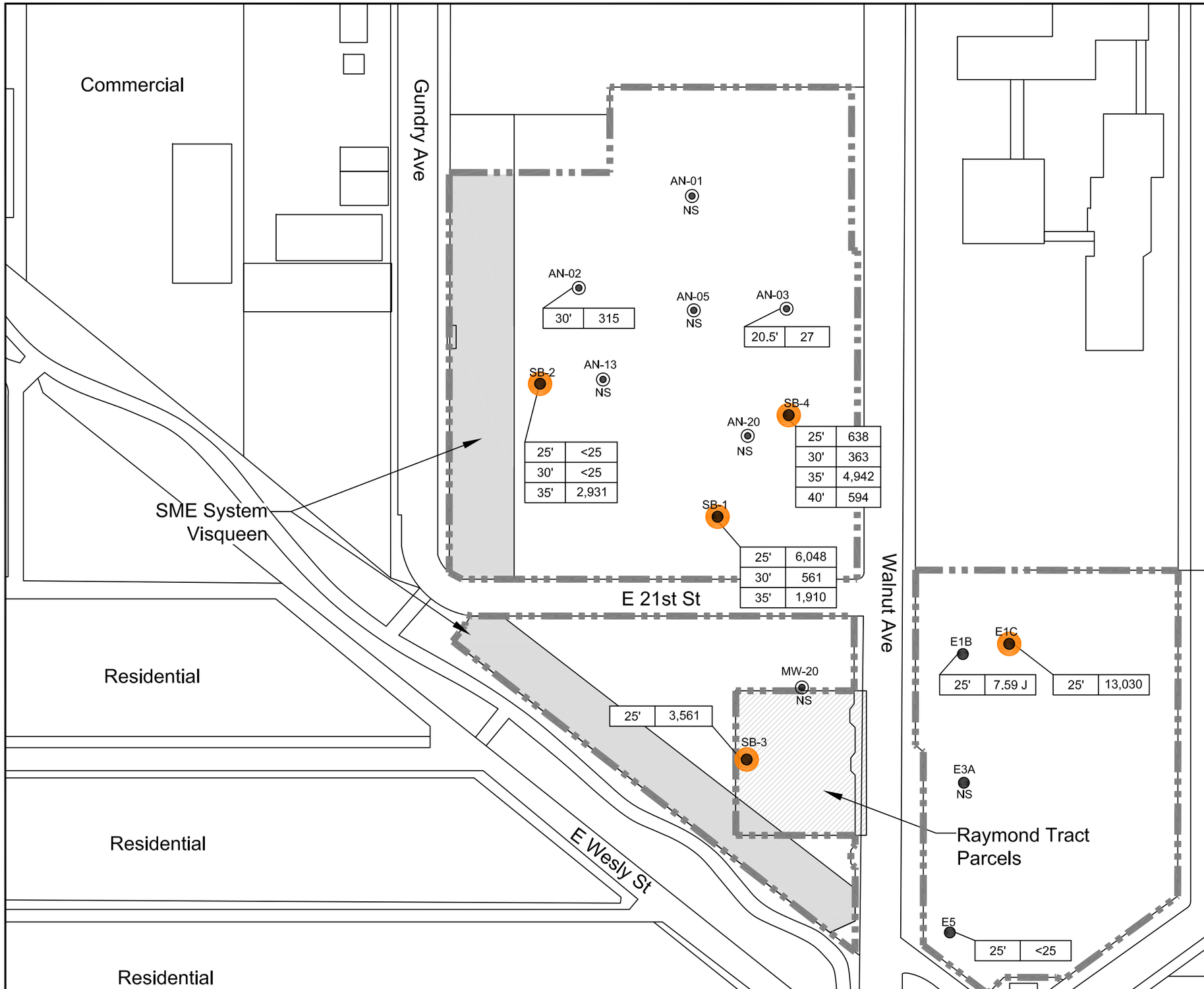
SGI environmental APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-9

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-9-Summary of TPH (C13-C22) Concentration in Soil-10-20' BGS.dwg, 3/9/2017 1:42:16 PM



LEGEND

Site Boundary

AN-01 Soil Sample Locations (APEX, 2017)

SB-4 Soil Sample Locations (Tetratech, 2006)

30'	315

Depth in feet bgs — TPH (C13-C22) Concentration in mg/kg

TPH	Total Petroleum Hydrocarbons, Carbon Range (C13-C22)
(C13-C22)	Carbon Range
bgs	Below Ground Surface
mg/kg	Milligrams per Kilogram
<25	Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
J	Estimated Value
NS	Not Sampled
SME	Subsurface Metabolism Enhancement

Concentrations of TPH (C13-C22) are Above Lowest Screening Level of 440 mg/kg

SUMMARY OF TPH (C13-C22) CONCENTRATIONS IN SOIL >20 FEET BGS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	02/01/17	ZA	KD

0 100 200
HORIZONTAL SCALE IN FEET

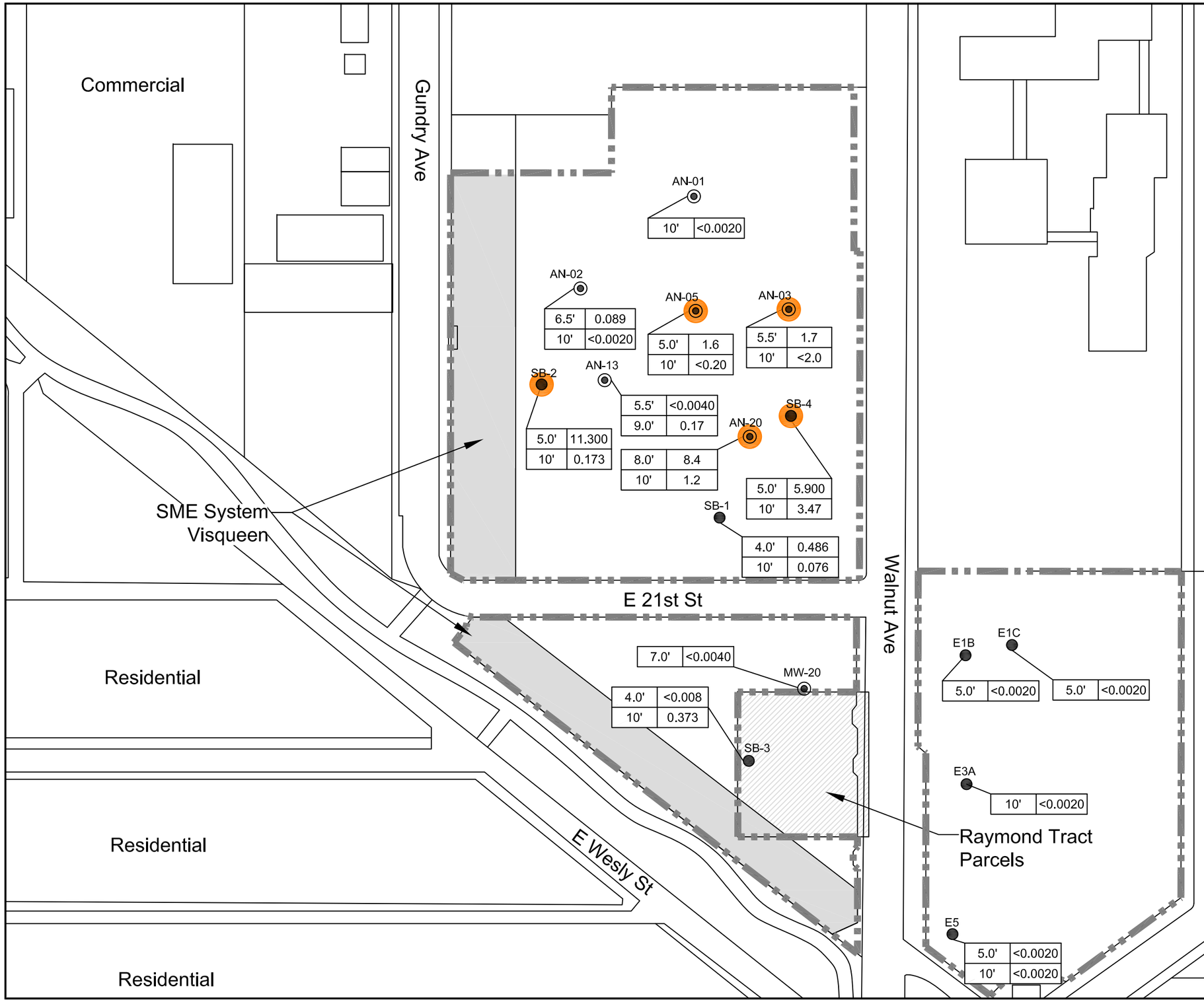
SGI environmental
APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-10

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-10-Summary of TPH (C13-C22) Concentration in Soil-20' BGS.dwg, 3/9/2017 1:44:29 PM



LEGEND

Site Boundary

AN-01 Soil Sample Locations (APEX, 2017)

SB-4 Soil Sample Locations (Tetratech, 2006)

5.5'	1.7

Depth in feet bgs — Benzene Concentration in mg/kg

bgs	Below Ground Surface
mg/kg	Milligrams per Kilogram
<0.0040	Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
NS	Not Sampled
SME	Subsurface Metabolism Enhancement
	Concentrations of Benzene are Above the LARWQCB Screening Level of 0.62 mg/kg
LARWQCB	Los Angeles Regional Water Quality Control Board

SUMMARY OF BENZENE CONCENTRATIONS IN SOIL 0 to 10 FEET BGS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	02/01/17	ZA	KD

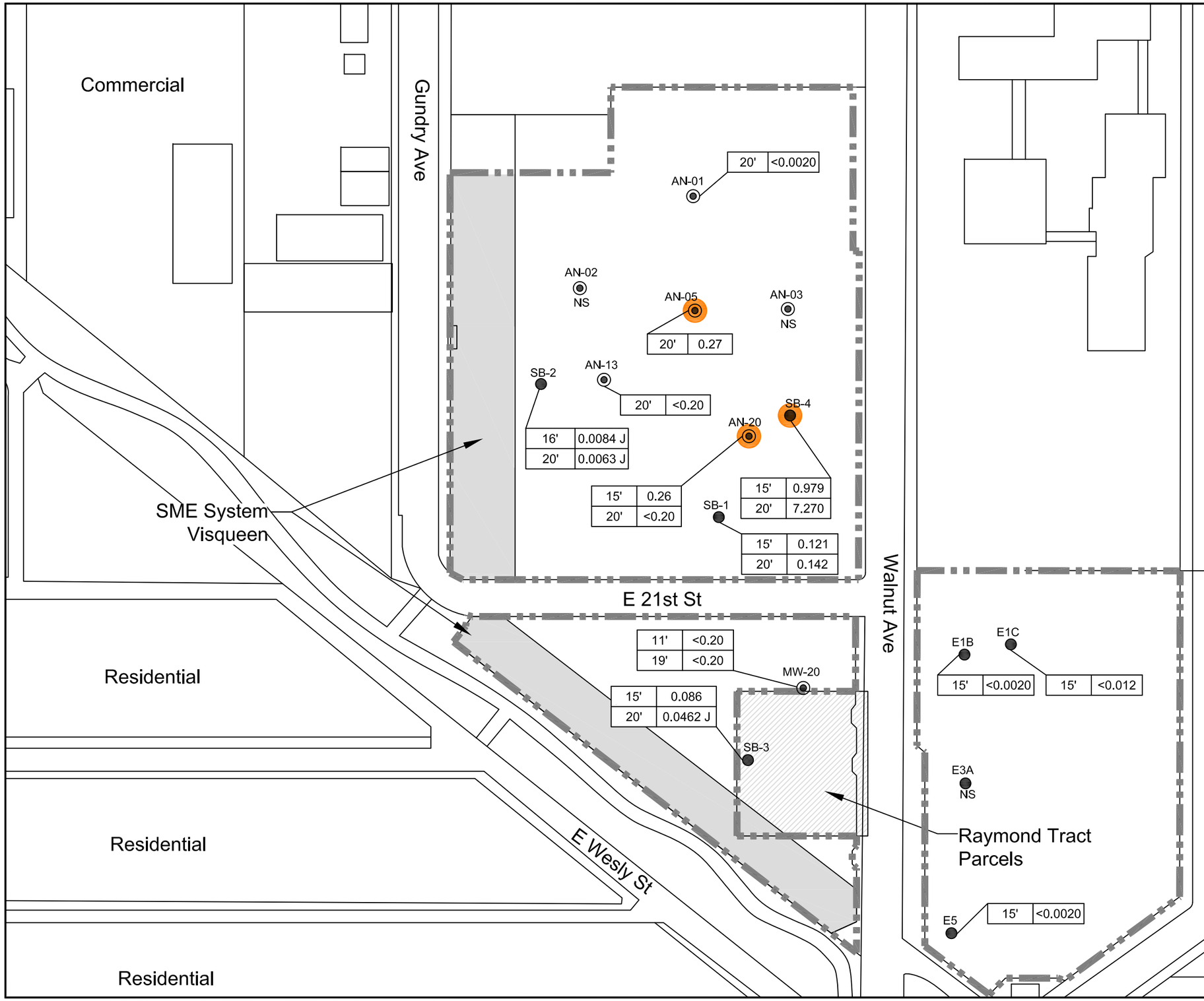
0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-11

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-11-Summary of Benzene Concentration in Soil-0-10' BGS.dwg, 3/9/2017 2:48:40 PM



LEGEND

	Site Boundary
AN-01	Soil Sample Locations (APEX, 2017)
SB-4	Soil Sample Locations (Tetratech, 2006)
20' | 0.27	Depth in feet bgs; Benzene Concentration in mg/kg
bgs	Below Ground Surface
mg/kg	Milligrams per Kilogram
<0.0020	Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
J	Estimated Value
NS	Not Sampled
SME	Subsurface Metabolism Enhancement
	Concentration of Benzene are Above the LARWQCB Screening Level of 0.15 mg/kg
LARWQCB	Los Angeles Regional Water Quality Control Board

SUMMARY OF BENZENE CONCENTRATIONS IN SOIL >10 to 20 FEET BGS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	02/01/17	ZA	KD

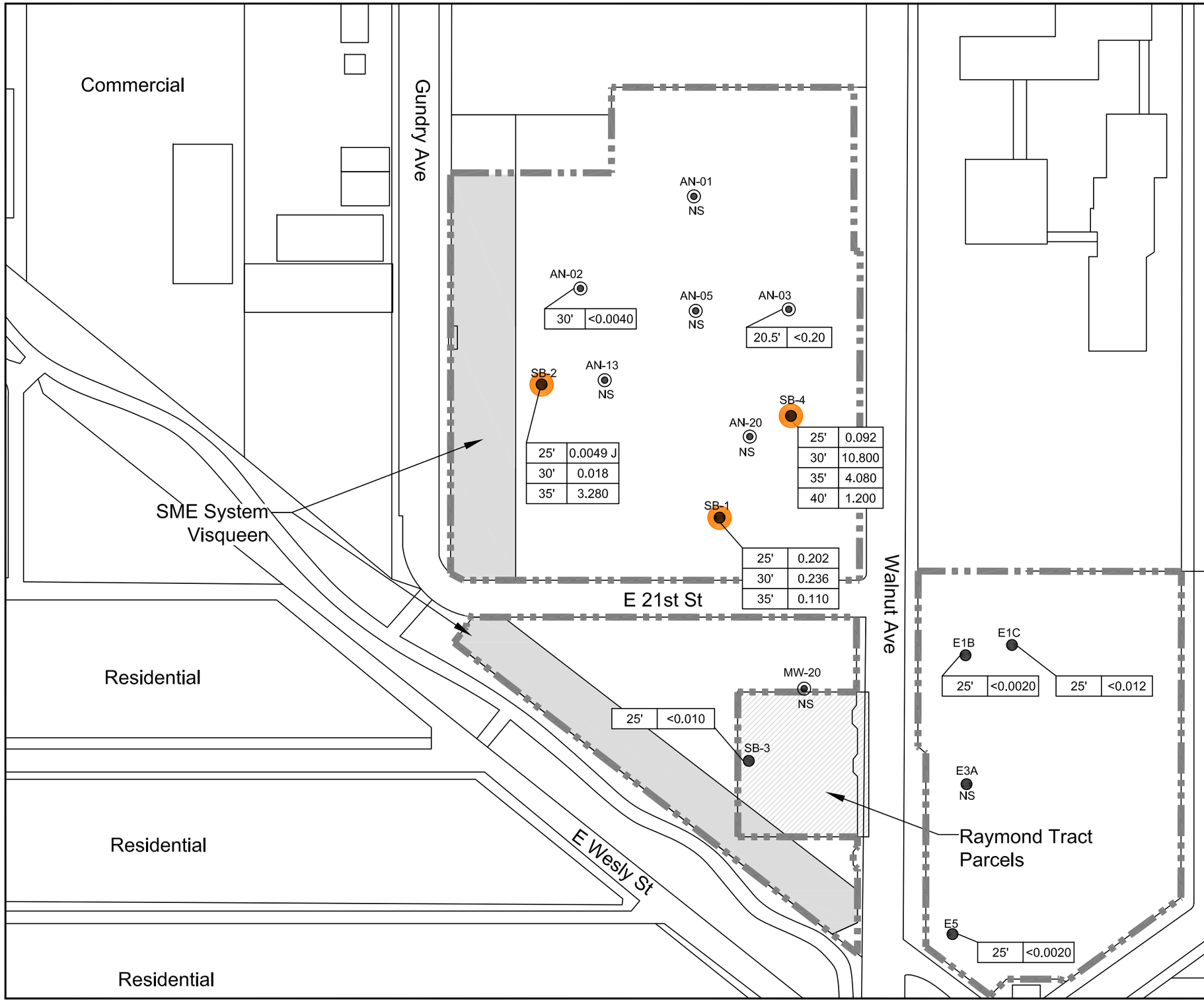
0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental
APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-12

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-12-Summary of Benzene Concentration in Soil-10-20' BGS.dwg, 3/9/2017 2:50:32 PM



LEGEND

Site Boundary

AN-01 Soil Sample Locations (APEX, 2017)

SB-4 Soil Sample Locations (Tetratech, 2006)

35'	3.280

Depth in feet bgs — Benzene Concentration in mg/kg

bgs	Below Ground Surface
mg/kg	Milligrams per Kilogram
<0.0020	Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
J	Estimated Value
NS	Not Sampled
SME	Subsurface Metabolism Enhancement
	Concentration of Benzene are Above the LARWQCB Screening Level of 0.15 mg/kg
LARWQCB	Los Angeles Regional Water Quality Control Board

SUMMARY OF BENZENE CONCENTRATIONS IN SOIL >20 FEET BGS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	02/01/17	ZA	KD

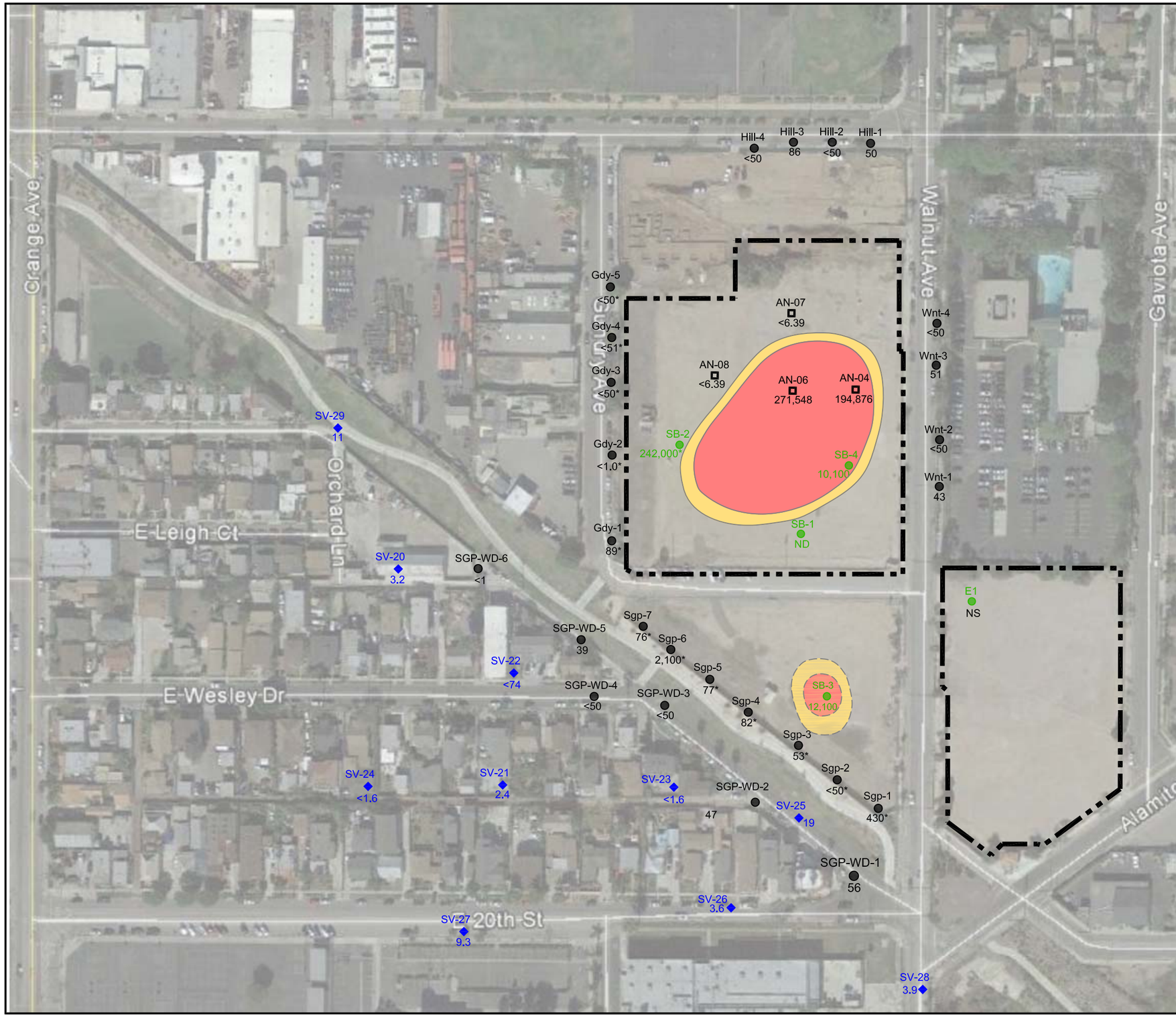
0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-13

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-13-Summary of Benzene Concentration in Soil-20' BGS.dwg, 3/9/2017 2:52:01 PM



LEGEND

Site Boundary	
Wnt-4	Soil Vapor Sampling Locations, (TEC, 2009/2010)
AN-06	Soil Vapor Sample Locations, (APEX, 2017)
E1	Soil Vapor Sample Locations, (Tetratech, 2006)
SV-20	Soil Gas Sampling Locations, (Geosyntec, 2012)
<50	Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
*	Data Not Used in Contouring due to Proximity of SME System Which Began Operation After Collection of Samples
bgs	Below Ground Surface
ND	Not Detected
NS	Not Sampled
	Isoconcentration Contour, Dashed Where Inferred
	Concentrations > 840 µg/m³
	Concentrations > 10,000 µg/m³
µg/m³	Micrograms per Cubic Meter

Note:
1. Concentration of benzene in micrograms per cubic meter (µg/m³)
2. 840 µg/m³ = DTSC SL/USEPA RSL for vapor intrusion to indoor air based on commercial land use.

SUMMARY OF BENZENE CONCENTRATIONS IN SOIL VAPOR AT 5 FEET BGS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-ChemOil-001	01/31/17	ZA	KD

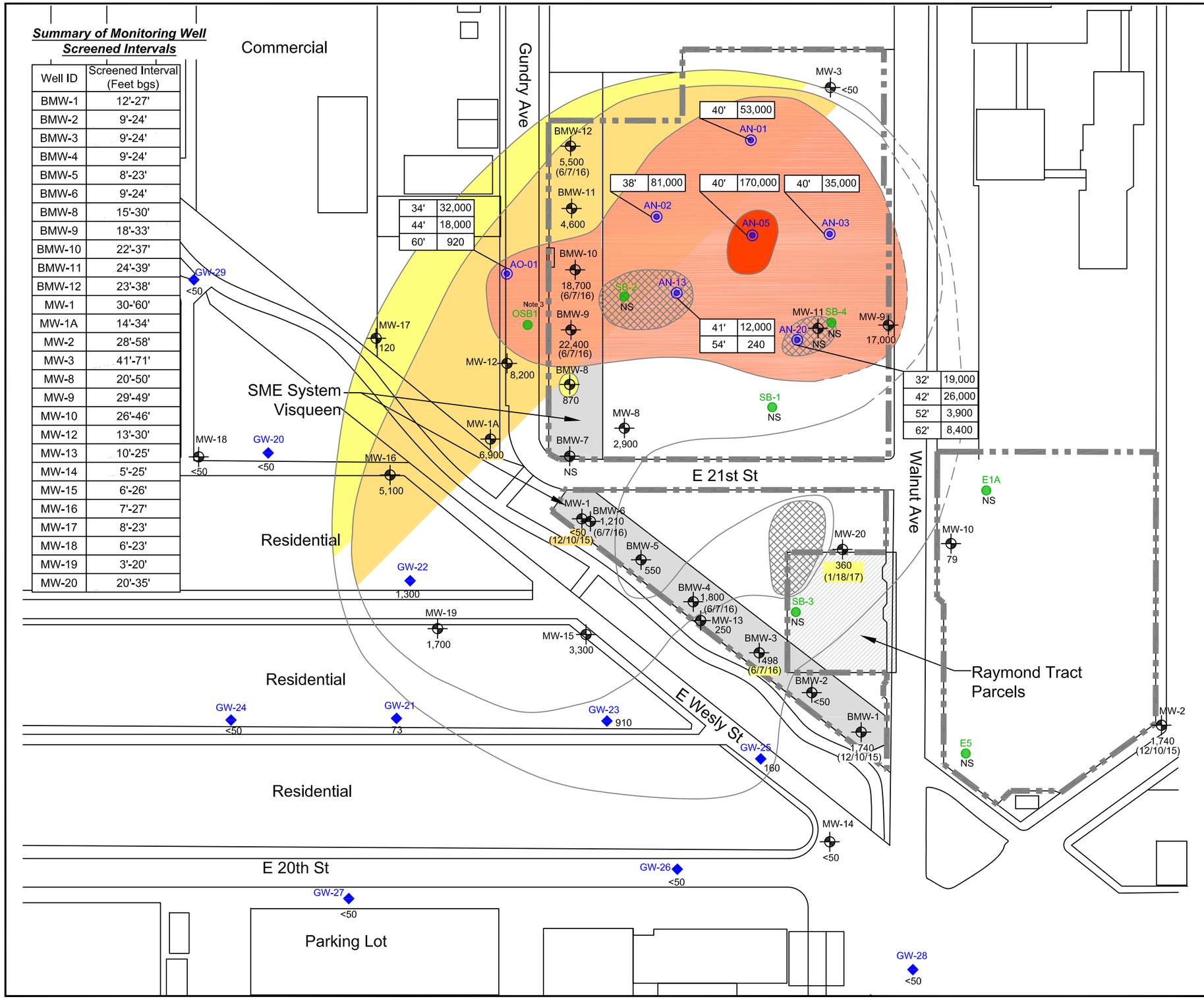
0 150 300
HORIZONTAL SCALE IN FEET

SGI environmental APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-14

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-14-Summary of Benzene Concentratiosn in Soil Vapor-5 ft BGS.dwg, 3/9/2017 1:54:32 PM



Summary of Monitoring Well Screened Intervals

Well ID	Screened Interval (Feet bgs)
BMW-1	12'-27'
BMW-2	9'-24'
BMW-3	9'-24'
BMW-4	9'-24'
BMW-5	8'-23'
BMW-6	9'-24'
BMW-8	15'-30'
BMW-9	18'-33'
BMW-10	22'-37'
BMW-11	24'-39'
BMW-12	23'-38'
MW-1	30-'60'
MW-1A	14'-34'
MW-2	28'-58'
MW-3	41'-71'
MW-8	20'-50'
MW-9	29'-49'
MW-10	26'-46'
MW-12	13'-30'
MW-13	10'-25'
MW-14	5'-25'
MW-15	6'-26'
MW-16	7'-27'
MW-17	8'-23'
MW-18	6'-23'
MW-19	3'-20'
MW-20	20'-35'

LEGEND

- Site Boundary
- MW-16 — Groundwater Monitoring Well Locations
- AN-01 — Grab Groundwater Sample Locations, APEX, 2017
- SB-2 — Grab Groundwater Sample Locations, Tetratech, 2006
- GW-29 — Grab Groundwater Sample Locations, Geosyntec, 2012. Samples Collected for First Encountered Groundwater.

40'	35,000
Depth in feet bgs	TPHg Concentration in µg/L

- bgs — Below Ground Surface
- µg/L — Micrograms per Liter
- <50 — Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
- NS — Not Sampled
- SME — Subsurface Metabolism Enhancement
- Isoconcentration Contour, Dashed Where Inferred
- Area of Observed or Suspected LNAPL
- Concentrations > 100 µg/L
- Concentrations > 1,000 µg/L
- Concentrations > 10,000 µg/L
- Concentrations > 100,000 µg/L

Note:
1. Locations sampled during Quarter 4, 2016 unless otherwise indicated.
2.With the exception of MW-20, monitoring wells were sampled by Ami Adini & Associates.
3. OSBI was advanced and sampled prior to installation of the SME barrier. Results no longer representative are not shown.

SUMMARY OF TPHg (C4-C12) CONCENTRATIONS IN GROUNDWATER

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	01/23/17	ZA	KD

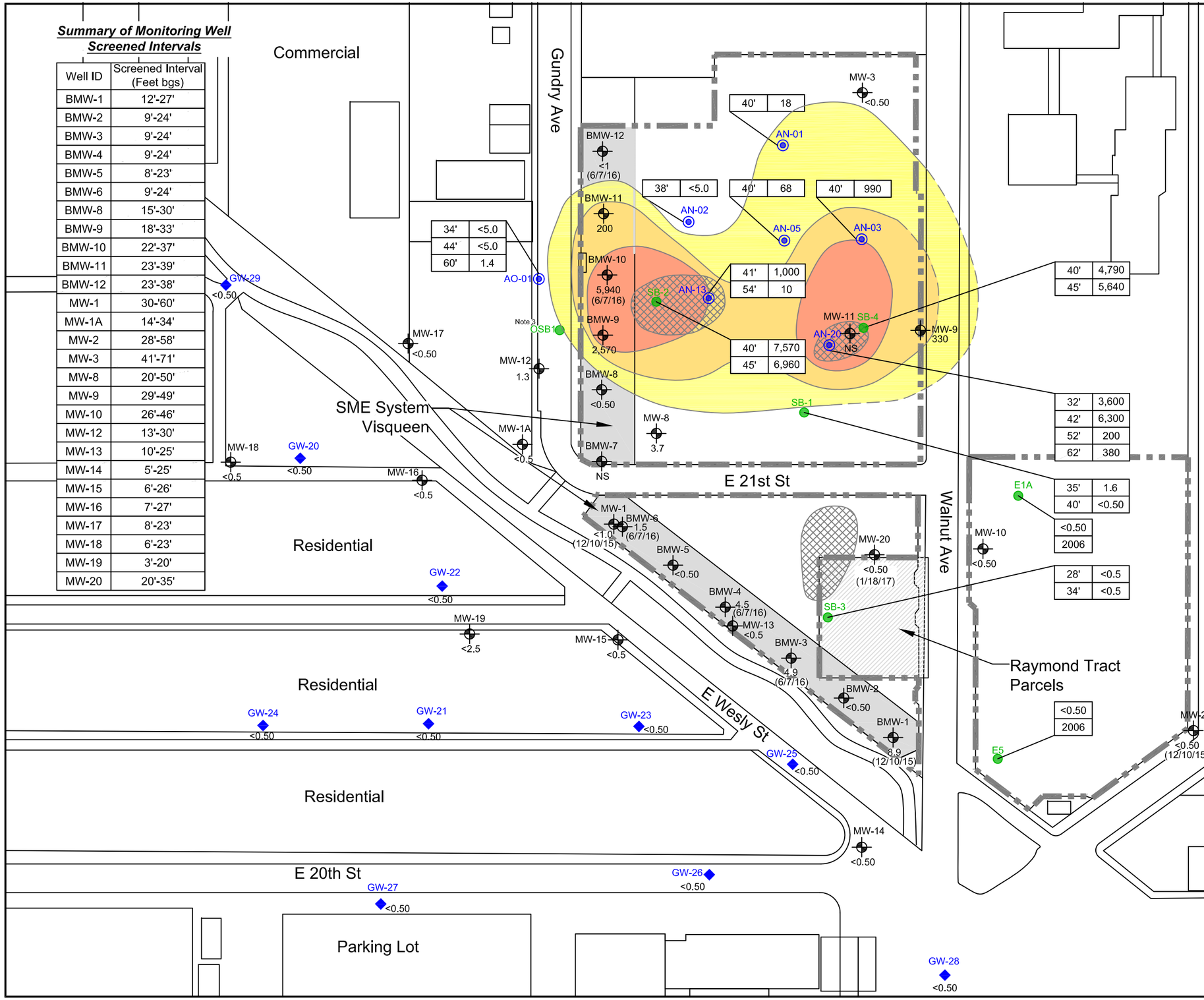
0 120 240
HORIZONTAL SCALE IN FEET

SGI environmental | APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-15

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-15-Summary of TPHg (C-4-C12) in GW.dwg, 3/9/2017 4:42:47 PM



Summary of Monitoring Well Screened Intervals

Well ID	Screened Interval (Feet bgs)
BMW-1	12'-27'
BMW-2	9'-24'
BMW-3	9'-24'
BMW-4	9'-24'
BMW-5	8'-23'
BMW-6	9'-24'
BMW-8	15'-30'
BMW-9	18'-33'
BMW-10	22'-37'
BMW-11	23'-39'
BMW-12	23'-38'
MW-1	30-'60'
MW-1A	14'-34'
MW-2	28'-58'
MW-3	41'-71'
MW-8	20'-50'
MW-9	29'-49'
MW-10	26'-46'
MW-12	13'-30'
MW-13	10'-25'
MW-14	5'-25'
MW-15	6'-26'
MW-16	7'-27'
MW-17	8'-23'
MW-18	6'-23'
MW-19	3'-20'
MW-20	20'-35'

LEGEND

- Site Boundary
- MW-16 — Groundwater Monitoring Well Locations
- AN-01 — Grab Groundwater Sample Locations, APEX, 2017
- SB-2 — Grab Groundwater Sample Locations, Geosyntec, 2012. Samples Collected for First Encountered Groundwater.
- GW-29 — Grab Groundwater Sample Locations, Geosyntec, 2012
- 40' | 18 — Depth in feet bgs | Benzene Concentration in µg/L
- bgs — Below Ground Surface
- µg/L — Micrograms per Liter
- <0.50 — Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
- NS — Not Sampled
- SME — Subsurface Metabolism Enhancement
- Isoconcentration Contour, Dashed Where Inferred
- Area of Observed or Suspected LNAPL
- Concentrations > 10 µg/L
- Concentrations > 100 µg/L
- Concentrations > 1,000 µg/L

Note:
1. Locations sampled during Quarter 4, 2016 unless otherwise indicated.
2.With the exception of MW-20, monitoring wells were sampled by Ami Adini & Associates.
3. OSBI was advanced and sampled prior to installation of the SME barrier. Results no longer representative are not shown.

SUMMARY OF BENZENE CONCENTRATIONS IN GROUNDWATER

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	01/23/17	ZA	KD

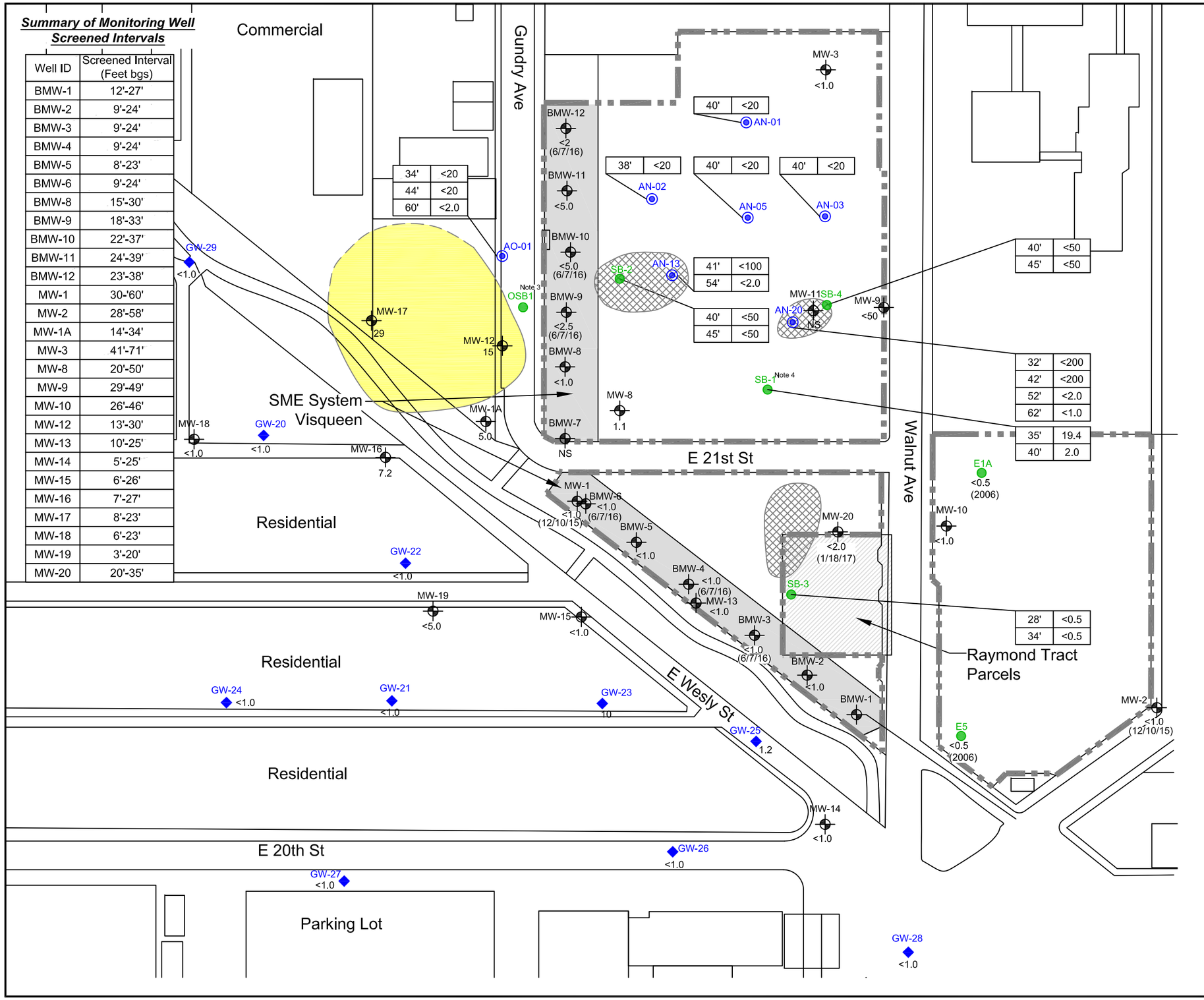
0 120 240
HORIZONTAL SCALE IN FEET

SGI environmental | APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 5-16

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-16-Summary of Benzene Concentration in GW.dwg, 3/9/2017 4:38:18 PM



Summary of Monitoring Well Screened Intervals

Well ID	Screened Interval (Feet bgs)
BMW-1	12'-27'
BMW-2	9'-24'
BMW-3	9'-24'
BMW-4	9'-24'
BMW-5	8'-23'
BMW-6	9'-24'
BMW-8	15'-30'
BMW-9	18'-33'
BMW-10	22'-37'
BMW-11	24'-39'
BMW-12	23'-38'
MW-1	30-'60'
MW-2	28'-58'
MW-1A	14'-34'
MW-3	41'-71'
MW-8	20'-50'
MW-9	29'-49'
MW-10	26'-46'
MW-12	13'-30'
MW-13	10'-25'
MW-14	5'-25'
MW-15	6'-26'
MW-16	7'-27'
MW-17	8'-23'
MW-18	6'-23'
MW-19	3'-20'
MW-20	20'-35'

LEGEND

- Site Boundary
- MW-16 — Groundwater Monitoring Well Locations
- AN-01 — Grab Groundwater Sample Locations, APEX, 2017
- SB-2 — Grab Groundwater Sample Locations, Tetratech, 2006
- GW-29 — Grab Groundwater Sample Locations, Geosyntec, 2012. Samples Collected for First Encountered Groundwater.
- 35' | 19.4 — Depth in feet bgs; MTBE Concentration in µg/L
- MTBE — Methyl tert-butyl ether
- bgs — Below Ground Surface
- µg/L — Micrograms per Liter
- <20 — Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
- NS — Not Sampled
- SME — Subsurface Metabolism Enhancement
- Isoconcentration Contour, Dashed Where Inferred
- Area of Observed or Suspected LNAPL
- Concentrations > 10 µg/L

Note:
1. Locations sampled during Quarter 4, 2016 unless otherwise indicated.
2.With the exception of MW-20, monitoring wells were sampled by Ami Adini & Associates.
3. OSBI was advanced and sampled prior to installation of the SME barrier. Results no longer representative are not shown.
4. 2006 data from SB-1 not included in contouring.

SUMMARY OF MTBE CONCENTRATIONS IN GROUNDWATER

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	01/23/17	ZA	KD

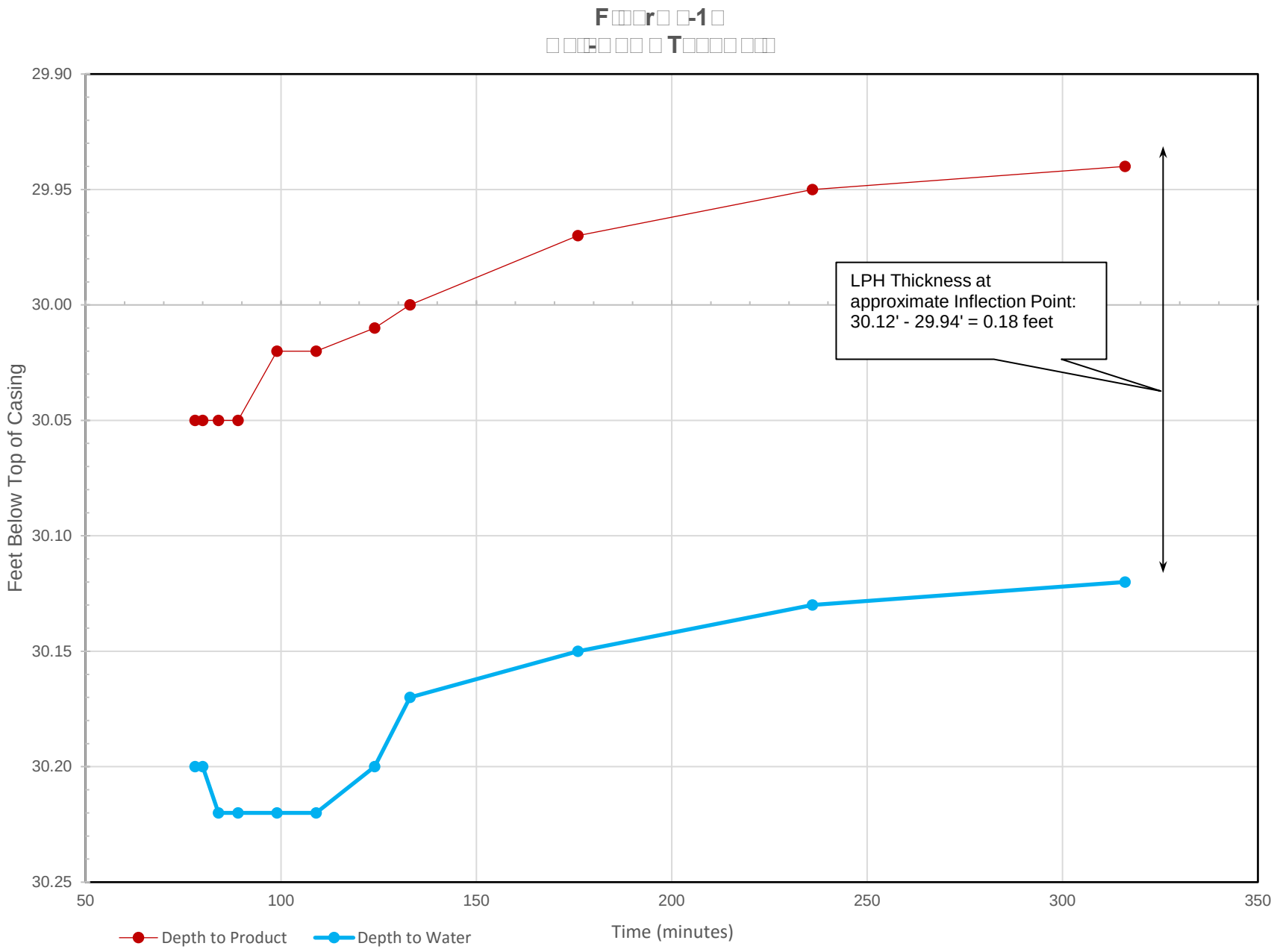
0 120 240
HORIZONTAL SCALE IN FEET

SGI environmental | APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

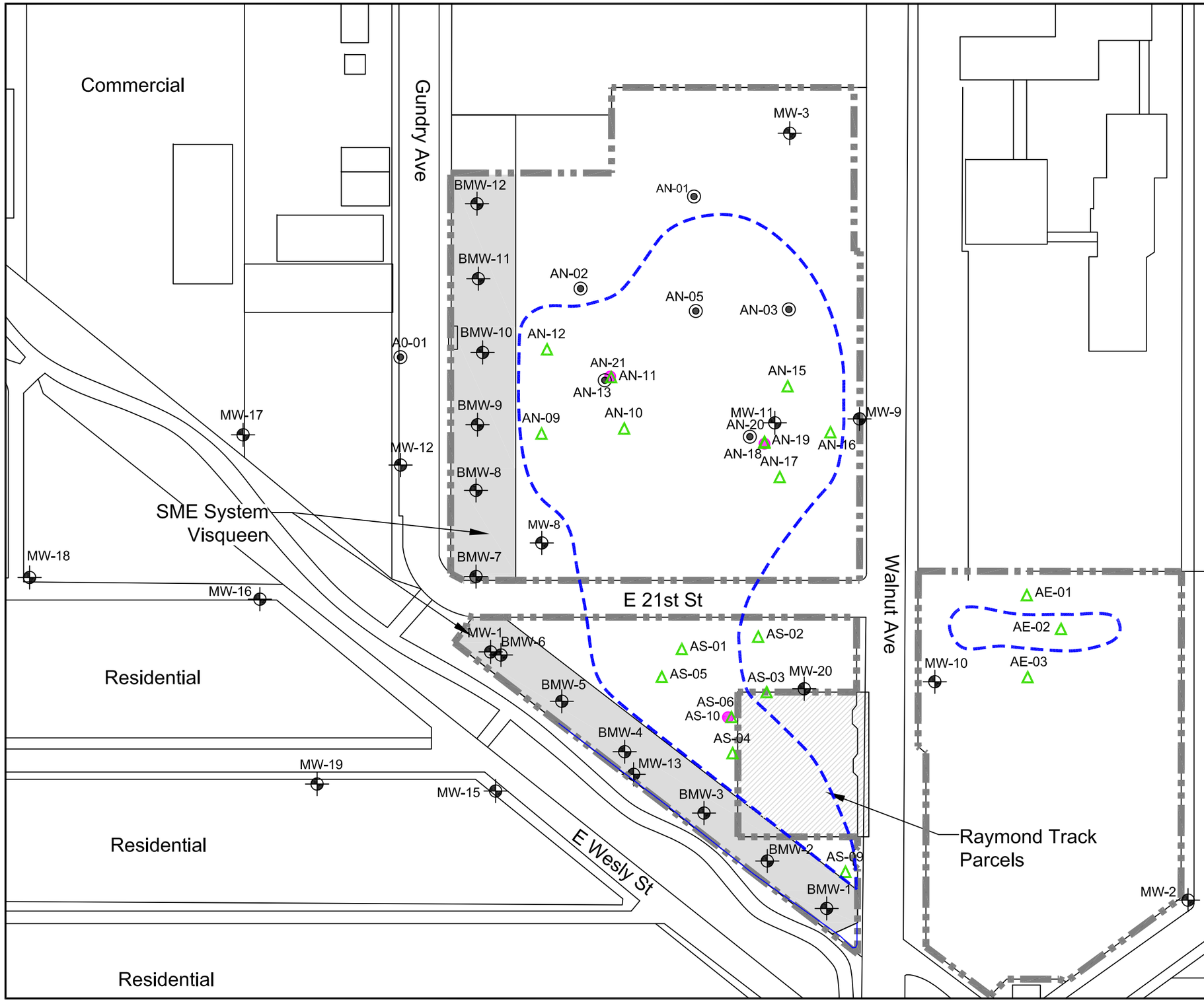
N

FIGURE 5-17

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.5-17-Summary of MTBE in GW.dwg, 3/9/2017 4:48:55 PM



The Source Group, Inc.
A division of Apex Companies, LLC.



LEGEND

	Site Boundary
MW-16	Groundwater Monitoring Well Locations
AN-20	Soil Boring and Grab Groundwater Location (Apex, 2017)
AN-10	2016 UVOST™ Boring Location ©
AN-21	2016 MIP Boring Location
	Approximate Extent of Vadose Zone Above Screening Level
UVOST	Ultra-Violet Optical Screening Tool

INTERPRETED VADOSE ZONE AREA ABOVE SCREENING LEVELS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-CHEMOIL-001	02/08/17	ZA	KD

0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental
APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 7-1

S:\Clients A - F\ChemOil Refinery\Report\Figures\Report Figures\Fig.7-1-Interpreted Vadox Zone Area Above Screenig Level.dwg, 3/9/2017 4:23:00 PM

APPENDIX A

View of College Across Walnut

View of Northern Parcel Looking SW

Northern Parcel

Looking North at Northern Parcel With Multifamily in Background

Looking Across Site with Remediation System in Background

Southern Parcel

Southern Parcel and Remedial Equipment

Looking Across Site

Western Site Boundary

Residential Neighborhood South of Site

Commercial Uses West of Site

West of Site

On Site Remedial Compound

Southern Parcel

Eastern PArcel

Eastern Parcel

Adjacent Residential

APPENDIX B

Former Chemoil Refinery

2020 Walnut Avenue

Signal Hill, CA 90755

Inquiry Number: 5042323.4

September 06, 2017

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

09/06/17

Site Name:	Client Name:
Former Chemoil Refinery	Hazard Management Consulting
2020 Walnut Avenue	211 W. Avenida Cordoba
Signal Hill, CA 90755	San Clemente, CA 92672
EDR Inquiry # 5042323.4	Contact: Mark Cousineau

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Hazard Management Consulting 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: NA

Coordinates:

Latitude:	33.795985 33° 47' 46" North
Longitude:	-118.1728 -118° 10' 22" West
UTM Zone:	Zone 11 North
UTM X Meters:	391433.31
UTM Y Meters:	3740153.68
Elevation:	43.12' above sea level

Maps Provided:

2012	1925
1981	1902
1972	1899
1964	1896
1949	
1947	
1943	
1942	

□ □□□□□□ □r - C□□□r□□□□□d Tr□d□□ □r□ N□□□□□

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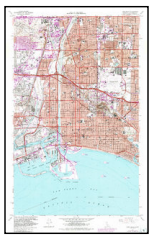
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets

Long Beach
2012
7.5-minute, 24000

1981 Source Sheets



Long Beach
1981
7.5-minute, 24000
Aerial Photo Revised 1978

1972 Source Sheets

Long Beach
1972
7.5-minute, 24000
Aerial Photo Revised 1972

1964 Source Sheets

Long Beach
1964
7.5-minute, 24000
Aerial Photo Revised 1963

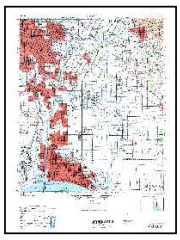
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1949 Source Sheets

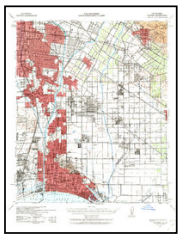
Long Beach
1949
7.5-minute, 24000

1947 Source Sheets



DOWNEY
1947
15-minute, 50000

1943 Source Sheets



Downey
1943
15-minute, 62500
Aerial Photo Revised 1939

1942 Source Sheets

Downey
1942
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1925 Source Sheets

Long Beach
1925
7.5-minute, 24000

Clearwater
1925
7.5-minute, 24000

1902 Source Sheets

Downey
1902
15-minute, 62500

1899 Source Sheets

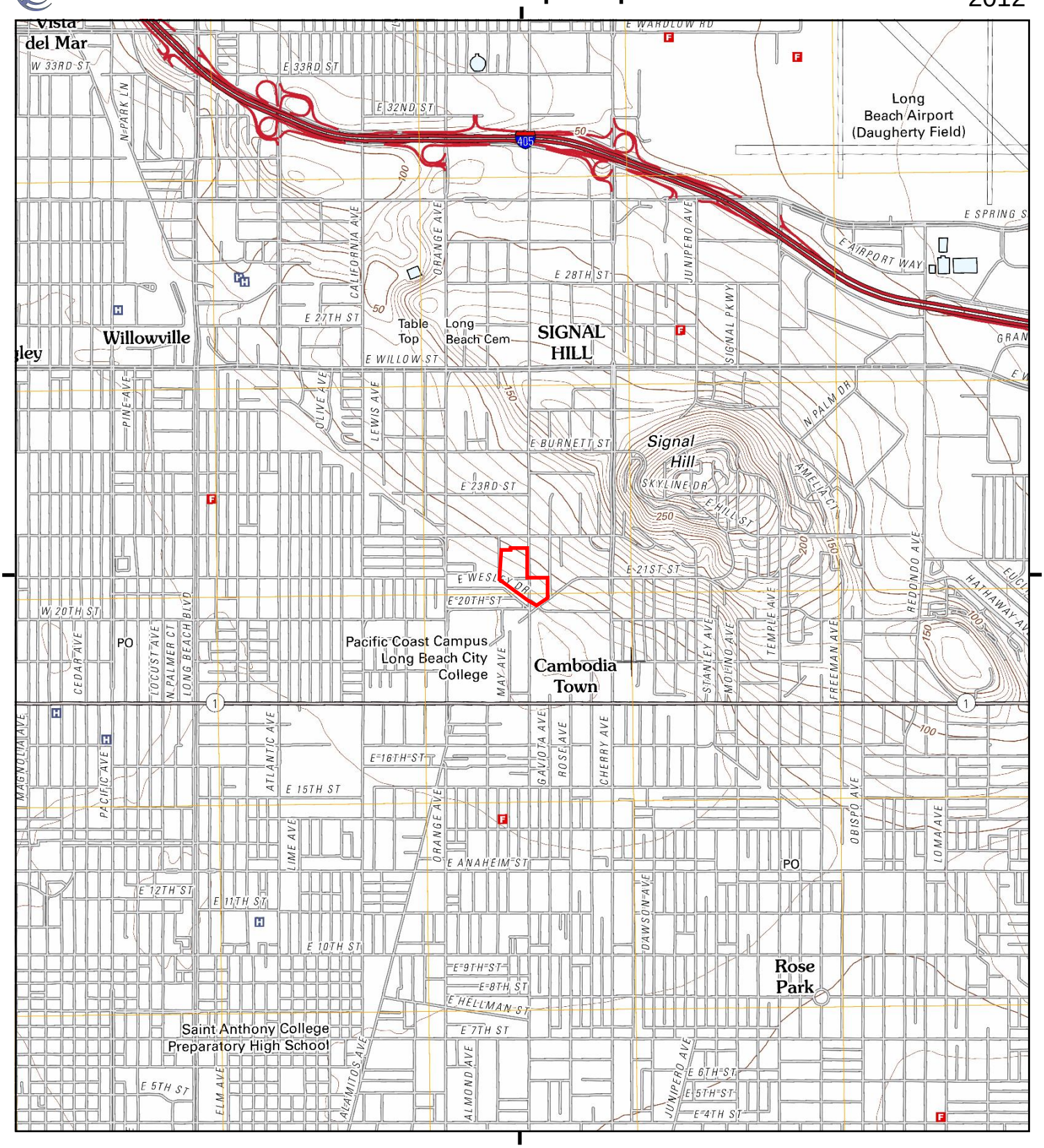
Downey
1899
15-minute, 62500

1896 Source Sheets

Downey
1896
15-minute, 62500

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

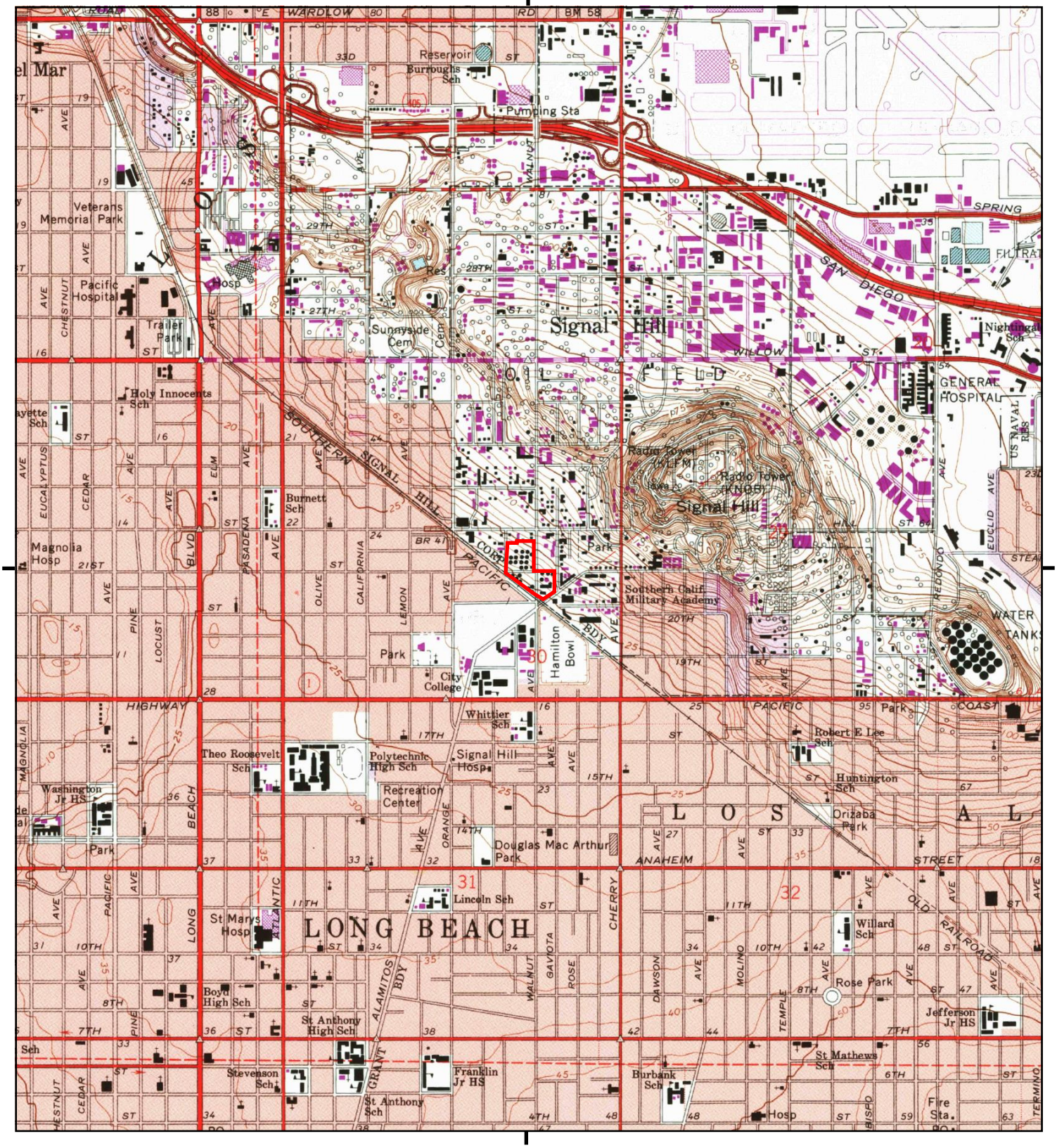
TP, Long Beach, 2012, 7.5-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Historical Topo Map

1981



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

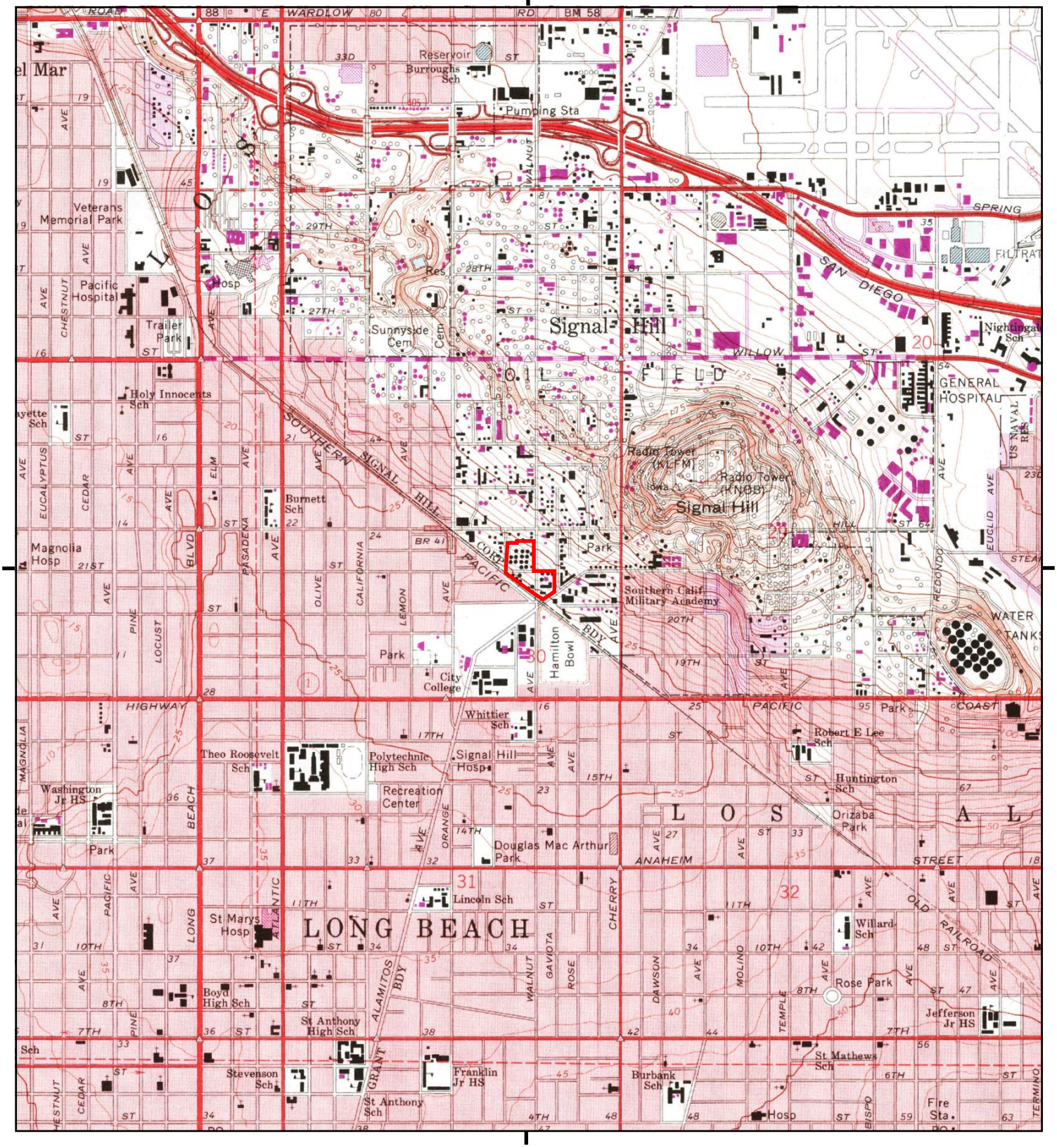
TP, Long Beach, 1981, 7.5-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Historical Topo Map

1972



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

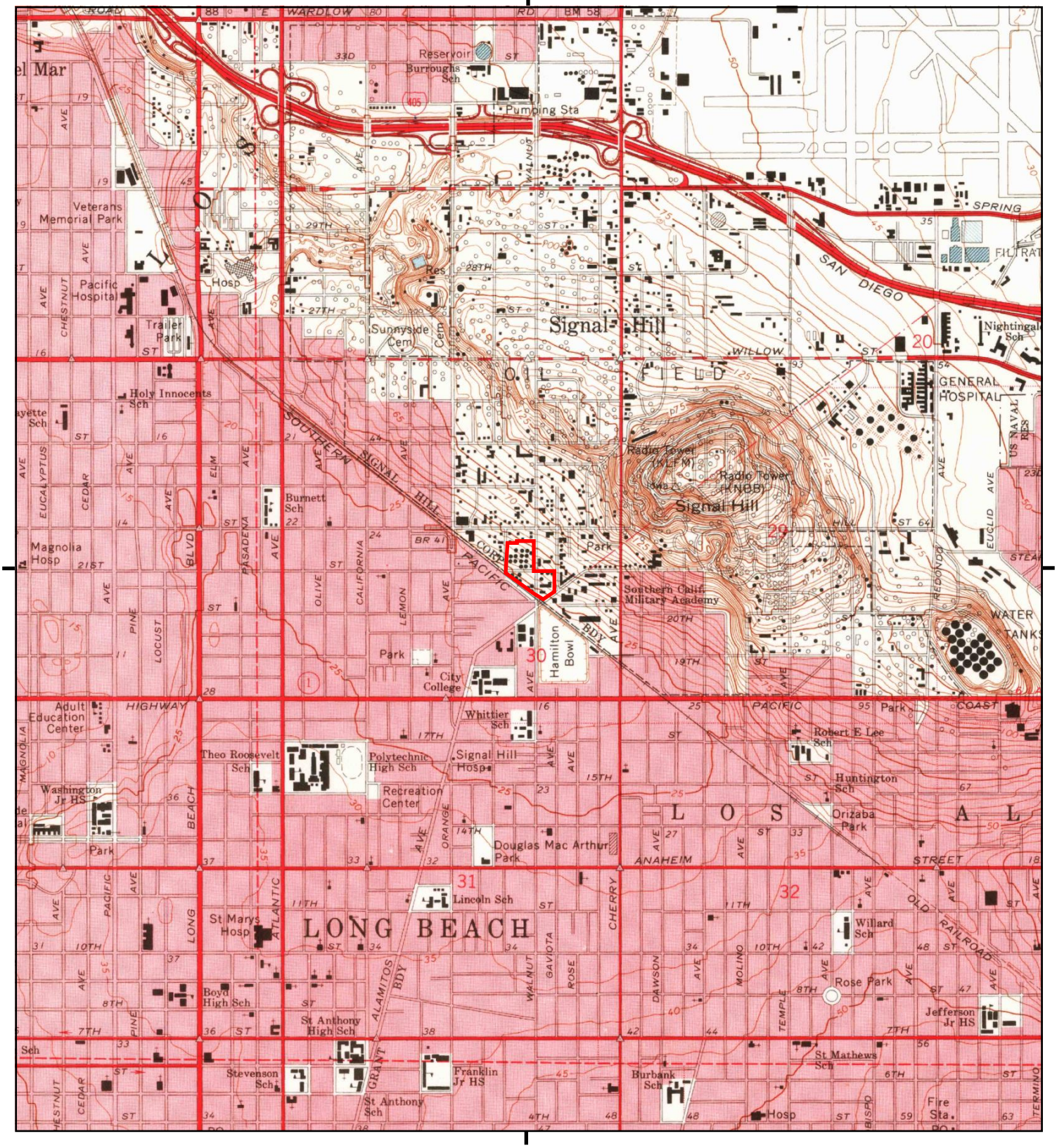
TP, Long Beach, 1972, 7.5-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Historical Topo Map

1964



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

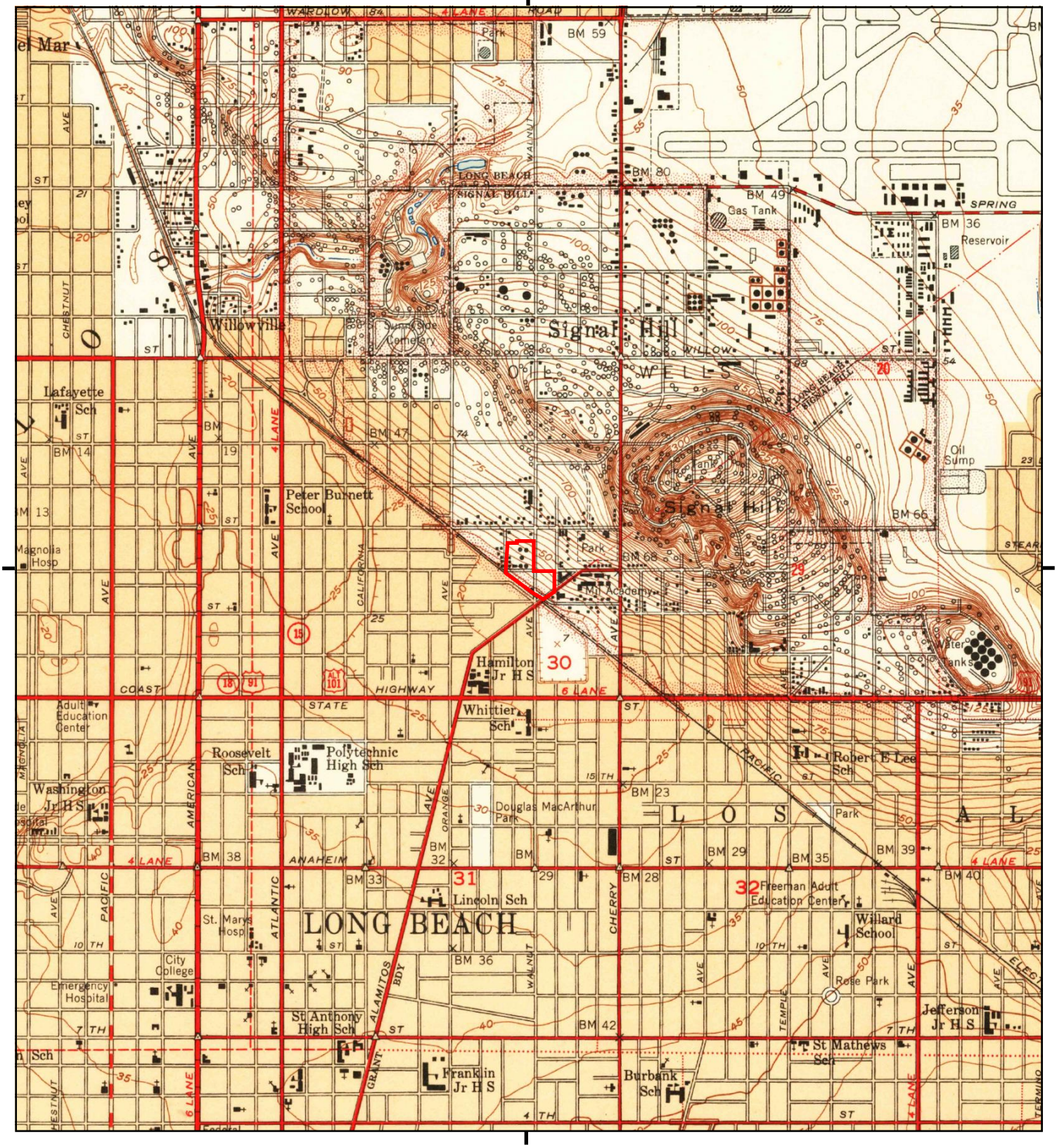
TP, Long Beach, 1964, 7.5-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Historical Topo Map

1949



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

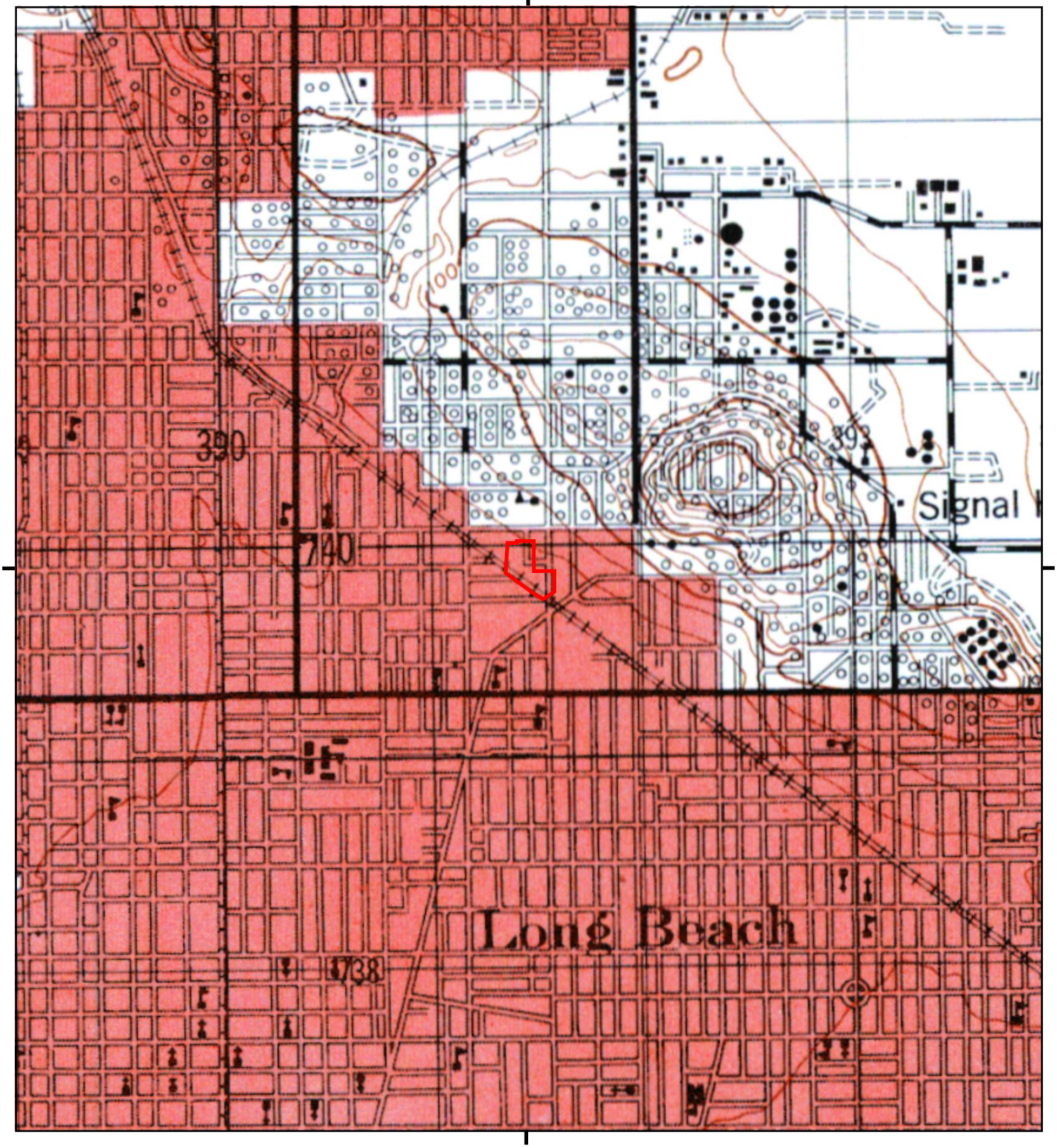
TP, Long Beach, 1949, 7.5-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Historical Topo Map

1947



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

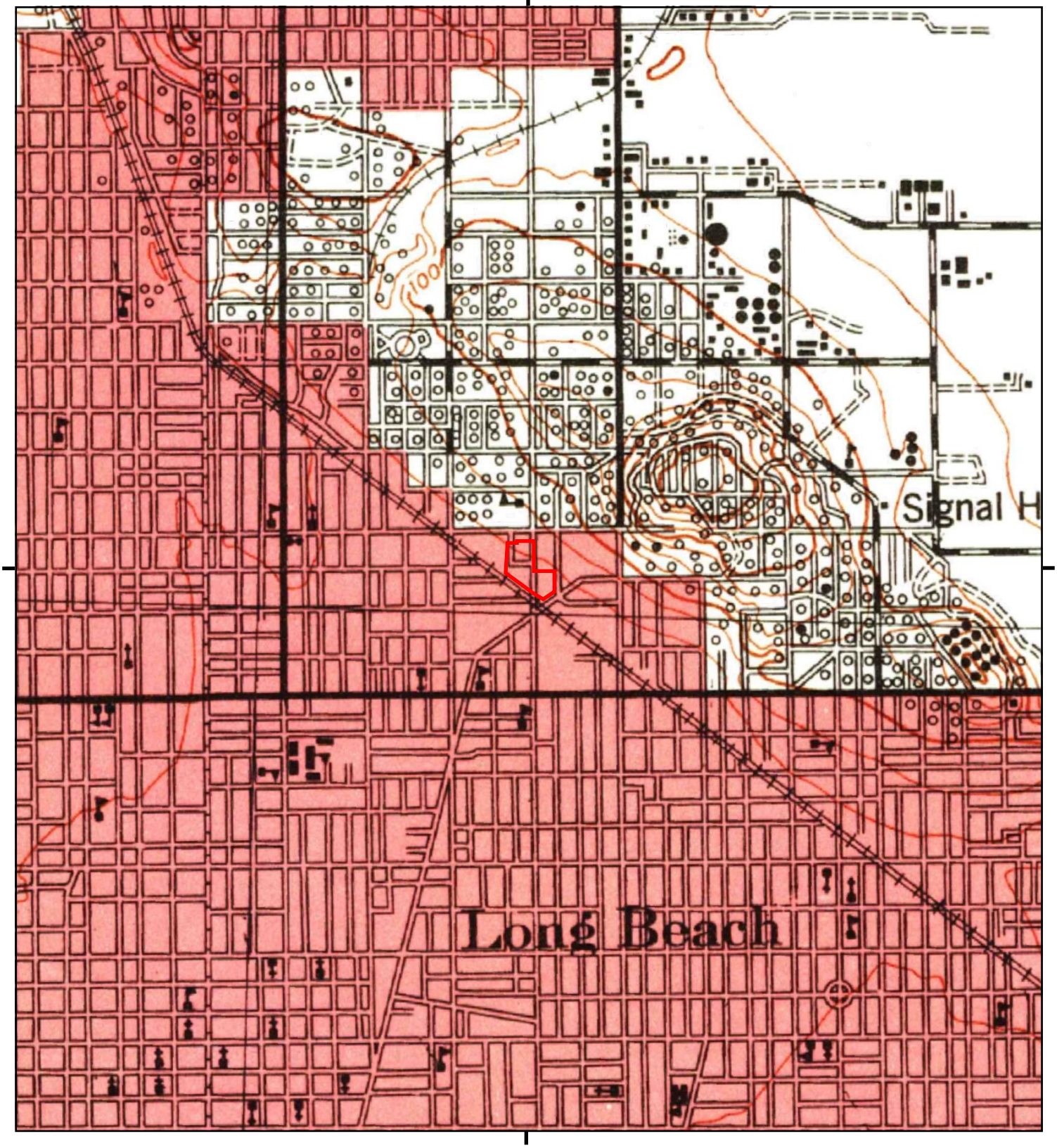
TP, DOWNEY, 1947, 15-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Historical Topo Map

1943



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

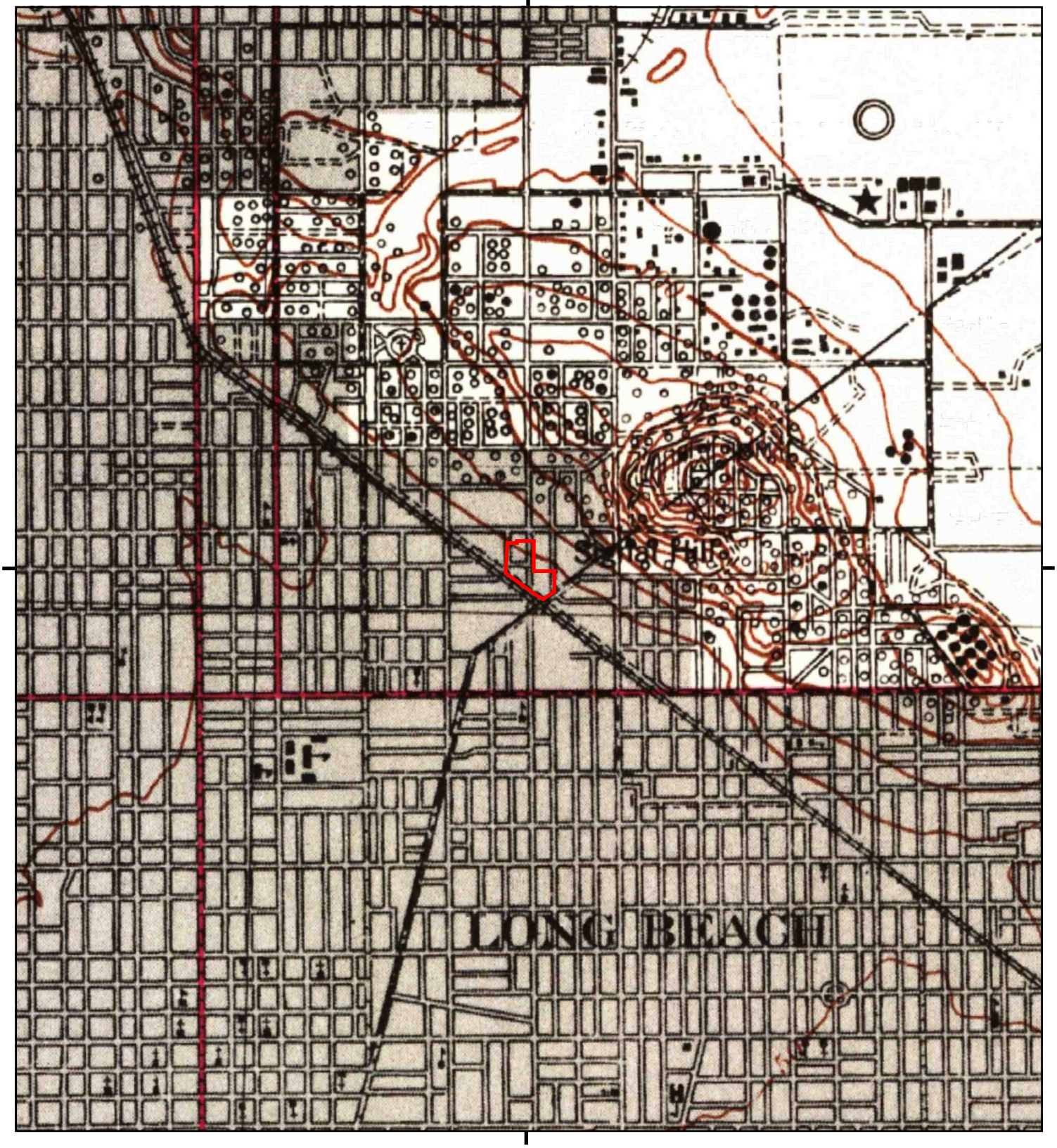
TP, Downey, 1943, 15-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Historical Topo Map

1942



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

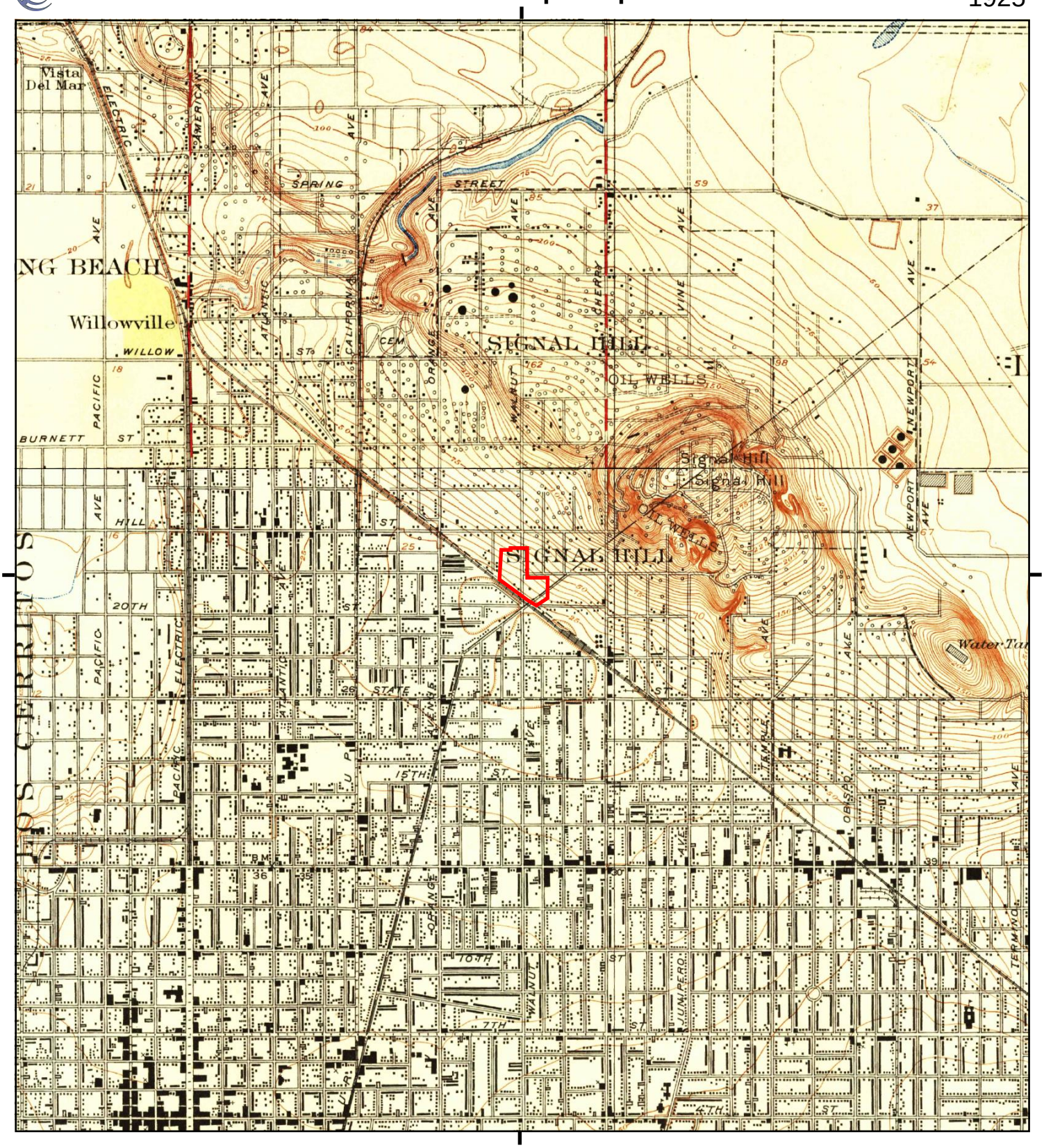
TP, Downey, 1942, 15-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Historical Topo Map

1925



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

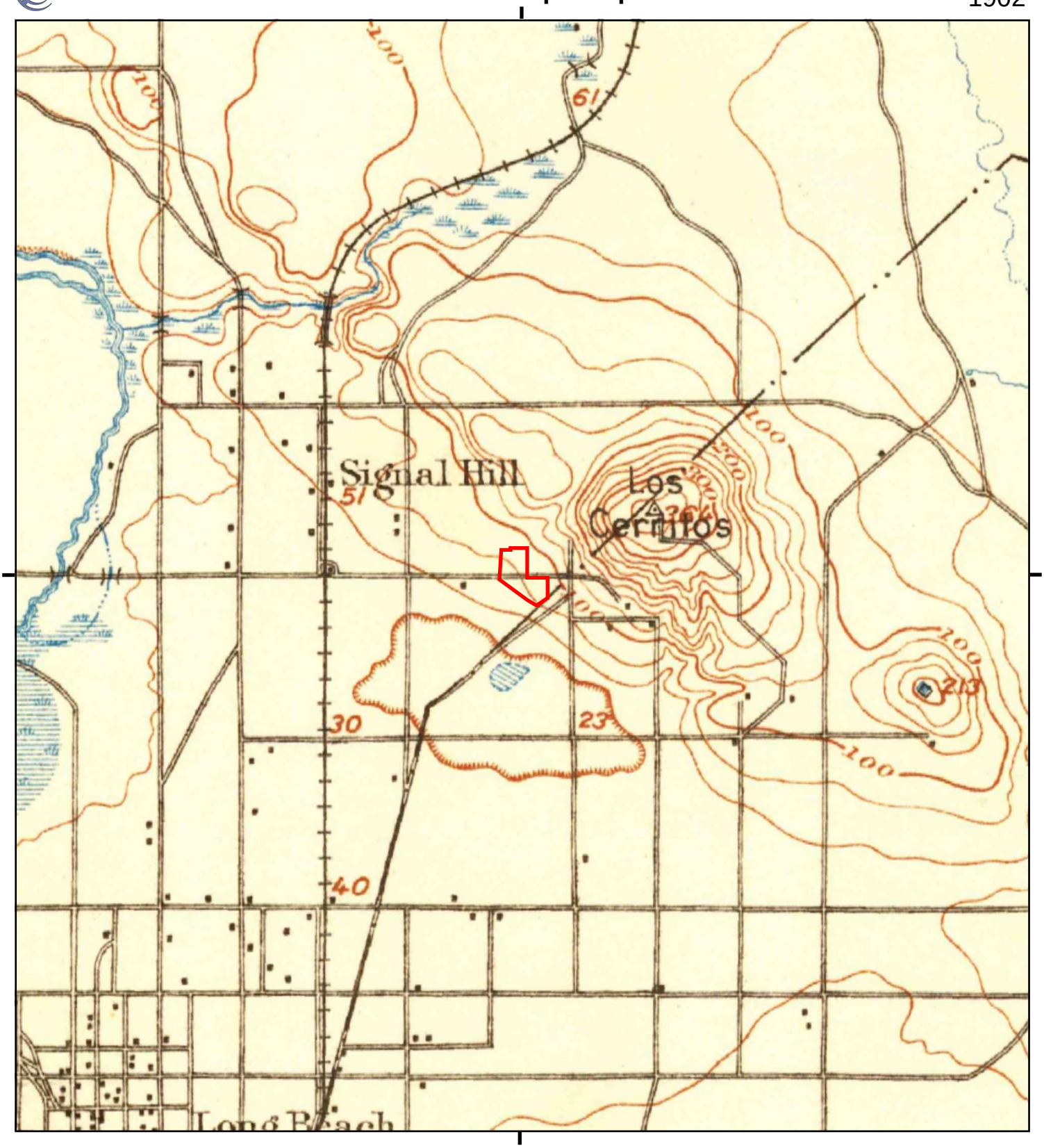
TP, Long Beach, 1925, 7.5-minute
N, Clearwater, 1925, 7.5-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Historical Topo Map

1902



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

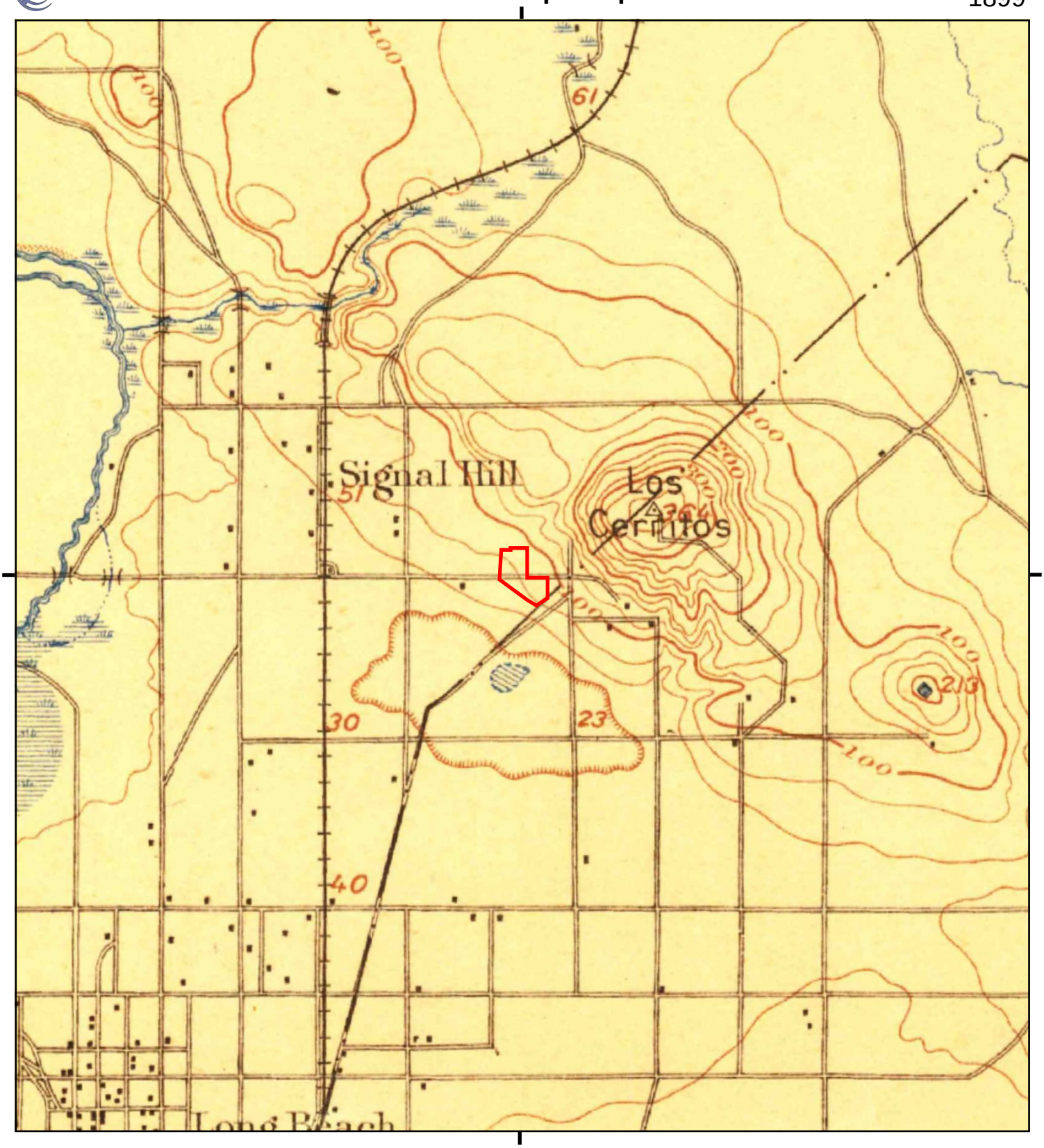
TP, Downey, 1902, 15-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Historical Topo Map

1899



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

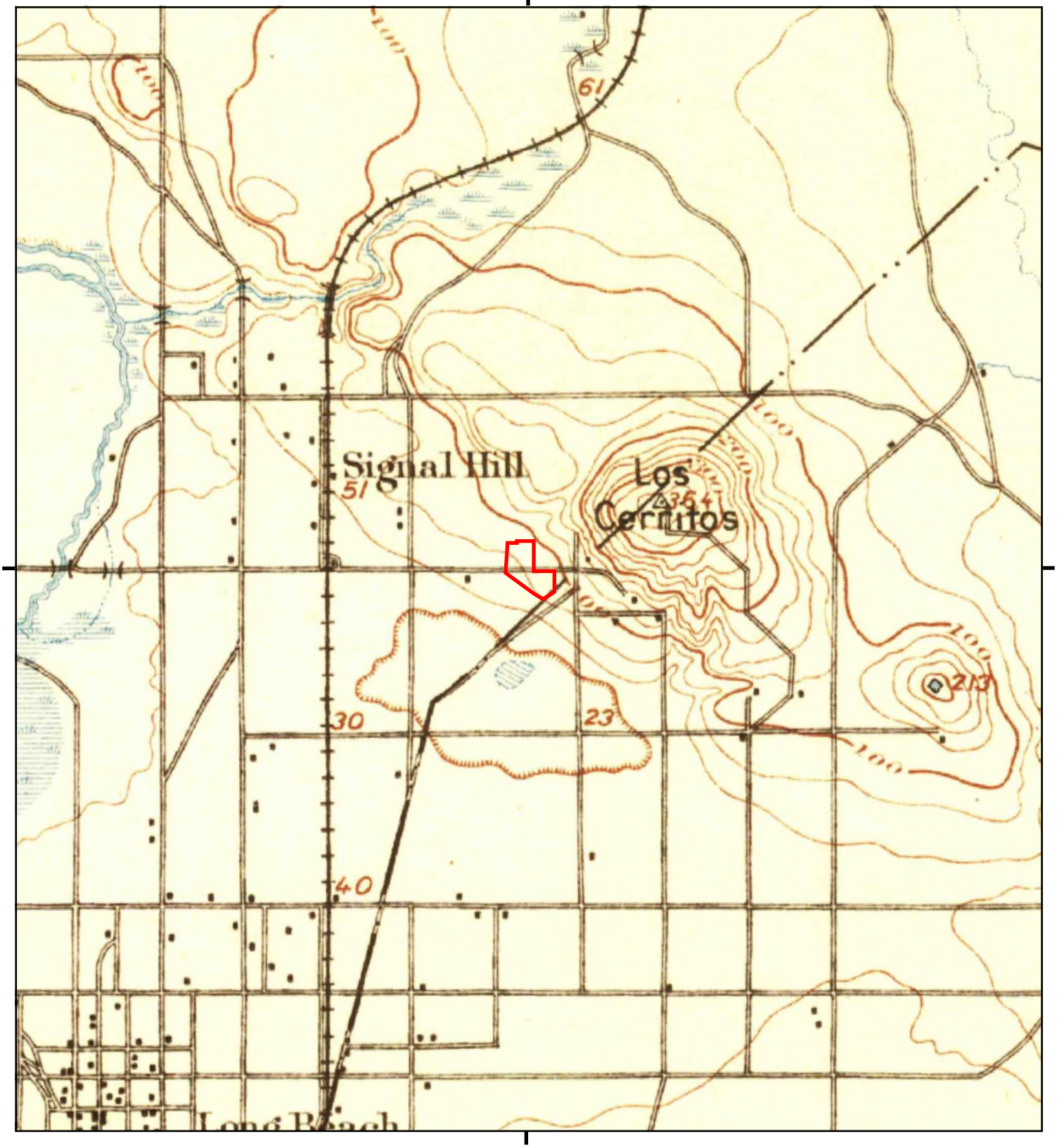
TP, Downey, 1899, 15-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Historical Topo Map

1896



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Downey, 1896, 15-minute

SITE NAME: Former Chemoil Refinery
ADDRESS: 2020 Walnut Avenue
Signal Hill, CA 90755
CLIENT: Hazard Management Consulting

N

Former Chemoil Refinery

2020 Walnut Avenue

Signal Hill, CA 90755

Inquiry Number: 5042323.3

September 06, 2017

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

09/06/17

Site Name:	Client Name:
Former Chemoil Refinery	Hazard Management Consulting
2020 Walnut Avenue	211 W. Avenida Cordoba
Signal Hill, CA 90755	San Clemente, CA 92672
EDR Inquiry # 5042323.3	Contact: Mark Cousineau

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Hazard Management Consulting 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 # 2D6A-45A5-9246

PO # NA

Project NA

Maps Provided:

1963

1950

1923

Sanborn® Library search results

Certification #: 2D6A-45A5-9246

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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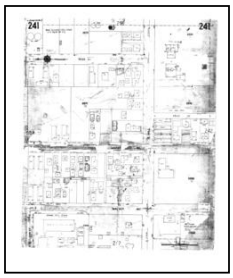
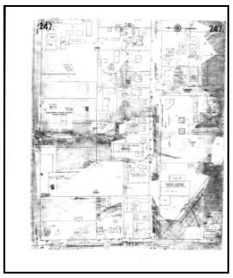
Sanborn Sheet Key

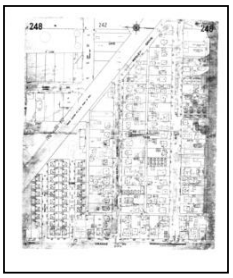
This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1963 Source Sheets

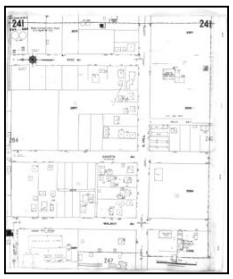

Volume 2, Sheet 241
1963

Volume 2, Sheet 242
1963


Volume 2, Sheet 247
1963


Volume 2, Sheet 248
1963

1950 Source Sheets

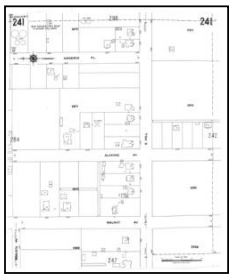

Volume 2, Sheet 241
1950

Volume 2, Sheet 242
1950

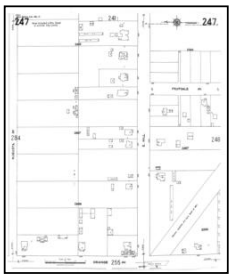
Volume 2, Sheet 247
1950

Volume 2, Sheet 248
1950

1923 Source Sheets


Volume 2, Sheet 241
1923

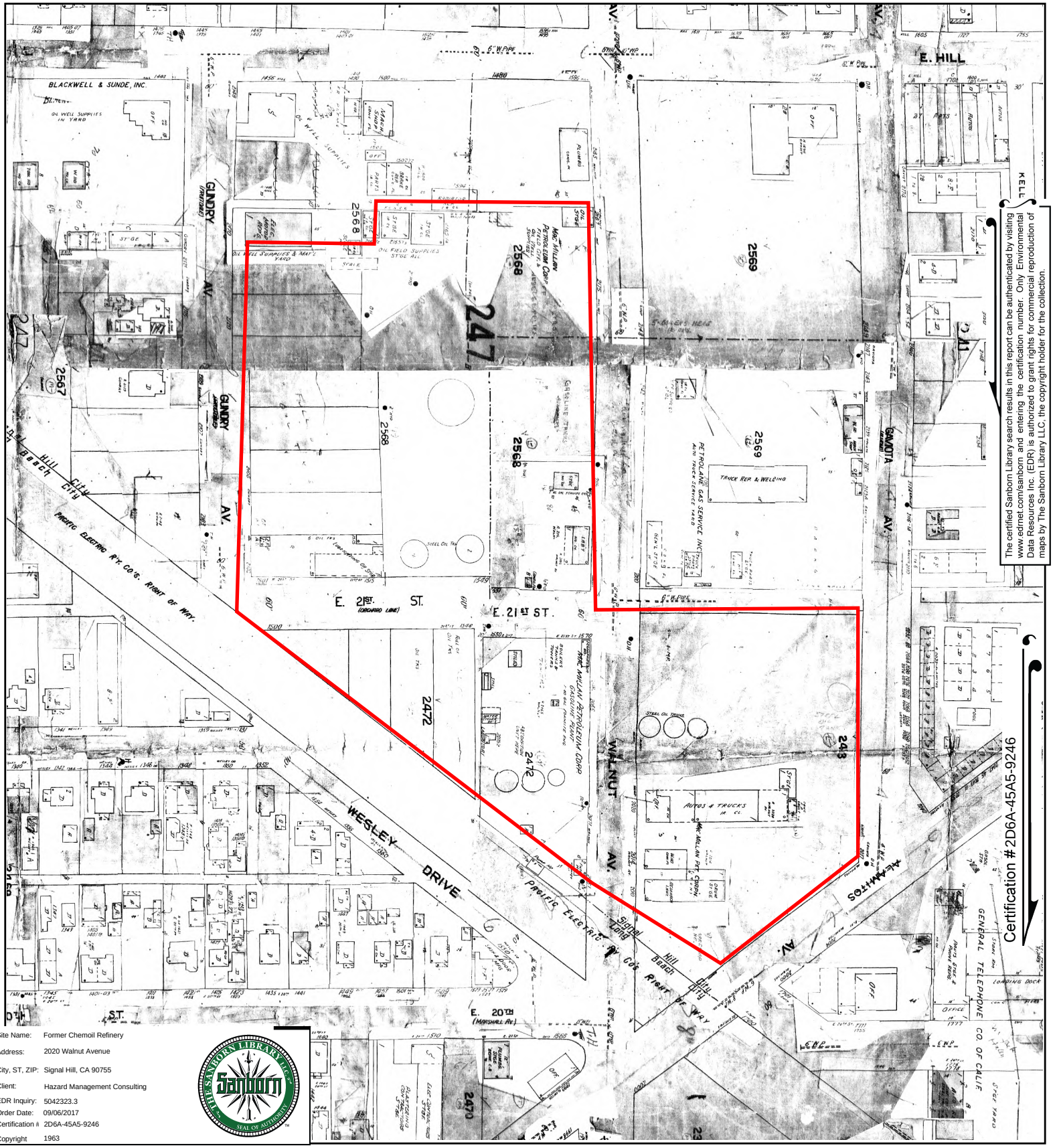
Volume 2, Sheet 242
1923


Volume 2, Sheet 247
1923

Volume 2, Sheet 248
1923

Certified Sanborn® Map

1963



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Certification #2D6A-45A5-9246

Site Name:	Former Chemoil Refinery
Address:	2020 Walnut Avenue
City, ST, ZIP:	Signal Hill, CA 90755
Client:	Hazard Management Consulting
EDR Inquiry:	5042323.3
Order Date:	09/06/2017
Certification #	2D6A-45A5-9246
Copyright	1963

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Outlined areas indicate map sheets within the collection.

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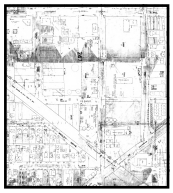
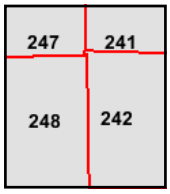


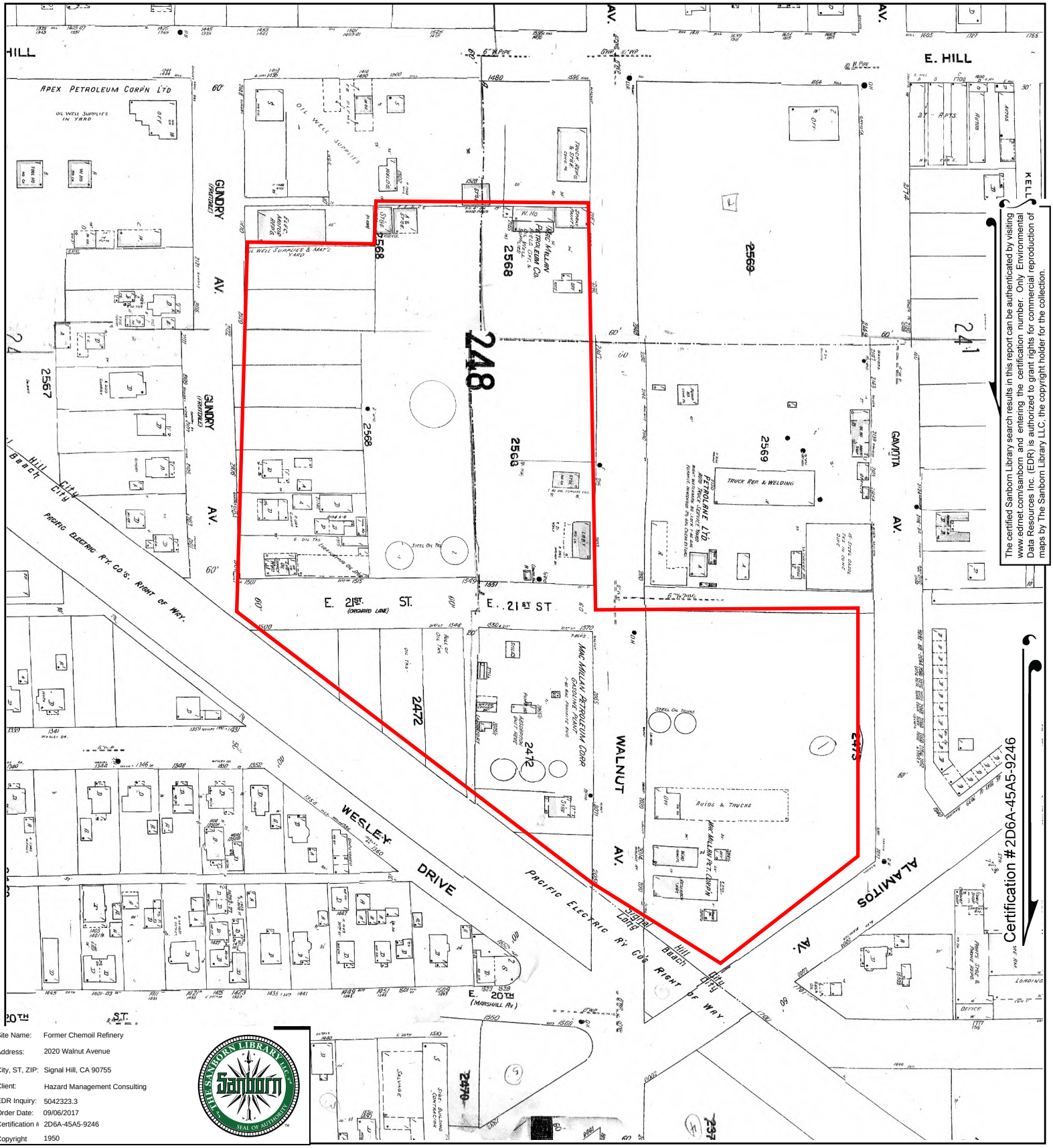


Volume 2, Sheet 248
Volume 2, Sheet 247
Volume 2, Sheet 242
Volume 2, Sheet 241

N

Certified Sanborn® Map

1950



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Certification #2D6A-45A5-9246

Site Name:	Former Chemoil Refinery
Address:	2020 Walnut Avenue
City, ST, ZIP:	Signal Hill, CA 90755
Client:	Hazard Management Consulting
EDR Inquiry:	5042323.3
Order Date:	09/06/2017
Certification #	2D6A-45A5-9246
Copyright	1950

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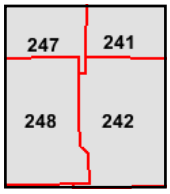
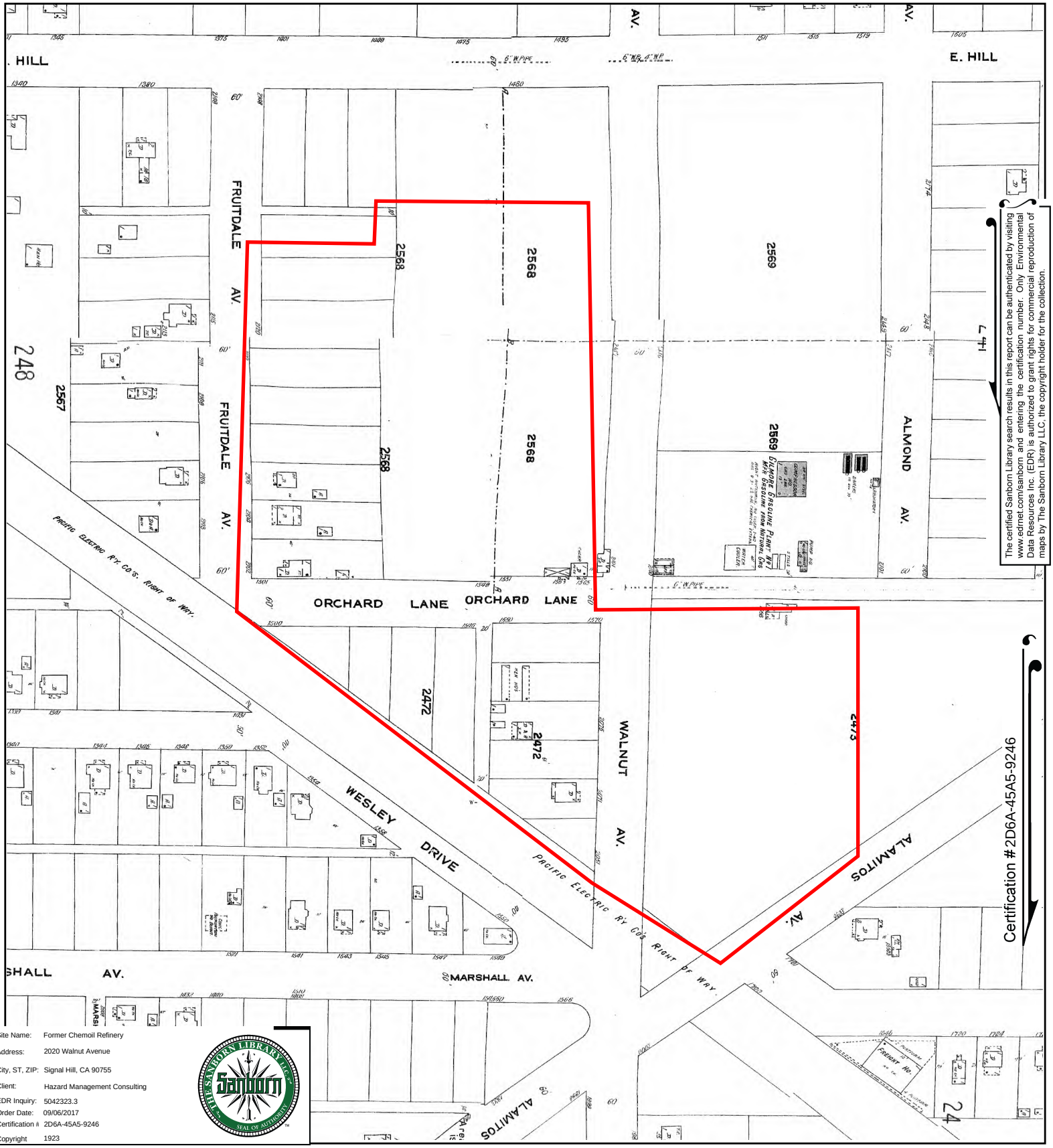


Volume 2, Sheet 248
Volume 2, Sheet 247
Volume 2, Sheet 242
Volume 2, Sheet 241

N

Certified Sanborn® Map

1923



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Site Name:	Former Chemoil Refinery
Address:	2020 Walnut Avenue
City, ST, ZIP:	Signal Hill, CA 90755
Client:	Hazard Management Consulting
EDR Inquiry:	5042323.3
Order Date:	09/06/2017
Certification #	2D6A-45A5-9246
Copyright	1923

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Outlined areas indicate map sheets within the collection.

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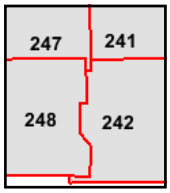

Volume 2, Sheet 248
Volume 2, Sheet 247
Volume 2, Sheet 242
Volume 2, Sheet 241

N

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, CA 90755

Inquiry Number: 5042323.2s
September 06, 2017

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	299
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-38
Physical Setting Source Map Findings	A-39
Physical Setting Source Records Searched	PSGR-1

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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) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2020 WALNUT AVENUE
SIGNAL HILL, CA 90755

COORDINATES

Latitude (North):	33.7959850 - 33˚ 47' 45.54''
Longitude (West):	118.1728000 - 118˚ 10' 22.08''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	391430.9
UTM Y (Meters):	3739960.0
Elevation:	42 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5652670 LONG BEACH, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140513
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
2020 WALNUT AVENUE
SIGNAL HILL, CA 90755

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	MACMILLAN RING-FREE	2020 WALNUT AVE	SEMS-ARCHIVE, RCRA-SQG		TP
A2		2020 WALNUT AVE	ERNS		TP
A3	MACMILLAN RING FREE	2020 N. WALNUT AVE.	EMI		TP
A4		2020 WALNUT AVE	CHMIRS		TP
A5	CHEM-OIL REFINERY (F	2020 WALNUT AVE	FINDS		TP
A6	MACMILLAN RING FREE	2020 WALNUT ST.	EMI		TP
A7		2020 WALNUT AVENUE	CHMIRS		TP
A8	MIDNIGHT OIL	2020 WALNUT ST	HAZNET		TP
A9	CHEMOIL REF CORP (NS	2020 N WALNUT AV	SLIC, EMI		TP
A10	FORMER CHEMOIL REFIN	2020 WALNUT	FINDS		TP
A11	CHEM-OIL REFINERY (F	2020 WALNUT AVE	ENVIROSTOR, SLIC, CHMIRS		TP
A12	CHEMOIL REFINING COR	2020 WALNUT AVE	FINDS, ECHO		TP
A13		2020 WALNUT AVE	ERNS		TP
A14	SIGNAL HILL HOLDING	2020 WALNUT AVE	HAZNET		TP
A15	CHEMOIL REFINERY (FO	2020 WALNUT AVENUE	SLIC		TP
A16	MACMILLAN RING-FREE	2020 WALNUT AVE	TSCA		TP
A17	CHEMOIL REFINING COR	2020 WALNUT AVE	NPDES		TP
A18		2020 WALNUT AVE AT W	CHMIRS		TP
A19	DON ANDERSON	2185 WALNUT AVE	LOS ANGELES CO. HMS	Higher	1 ft.
A20	DON ANDERSON	2185 WALNUT	SWEEPS UST	Higher	1 ft.
B21	BLAIN A L	2000 ALAMITOS AV	EDR Hist Auto	Lower	24, 0.005, SSE
A22	P & M DIESEL	2170 GUNDRY AVE	EDR Hist Auto	Higher	26, 0.005, NW
A23	P AND M DIESEL	2170 GUNDRY AVE	RCRA-SQG, FINDS, ECHO, HAZNET	Higher	26, 0.005, NW
24	OCEAN IMPORTS	2115 GUNDRY AVE	EDR Hist Auto	Lower	103, 0.020, WNW
25	UNIVERSAL CARE	1600 E HILL ST	RCRA-SQG, FINDS, ECHO, HAZNET	Higher	223, 0.042, NE
B26	REED RALPH	1811 ALAMITOS AV	EDR Hist Auto	Lower	258, 0.049, SSE
27	UNKNOWN	1510 E 20TH ST	UST	Lower	262, 0.050, South
28	MIRANDAS TRUCKING	1344 WESLEY DR	RCRA NonGen / NLR, FINDS, ECHO	Lower	283, 0.054, SW
C29	20TH STREET SCHOOL	1777 EAST 20TH STREE	ENVIROSTOR, SCH	Lower	328, 0.062, SE
C30	GTE LONG BEACH PLANT	1777 E 20TH ST	LUST, UST, HIST CORTESE	Lower	491, 0.093, SE
C31	GTE CALIFORNIA L.B.	1778 E 20TH ST	UST	Lower	491, 0.093, SE
C32	JESSIE ELWIN NELSON	1778 EAST 20TH STREE	ENVIROSTOR, SCH	Lower	491, 0.093, SE
C33	MODERN CLEANERS	1730 E 20 ST	RCRA NonGen / NLR, FINDS, ECHO, HAZNET	Lower	508, 0.096, SE
C34	MODERN CLEANERS INC	1730 E 20TH ST	HIST UST	Lower	508, 0.096, SE
D35	KALIBUR ENGINEERING	1361 E HILL ST	RCRA-SQG, FINDS, ECHO, HAZNET	Higher	605, 0.115, NW
E36	HUST-ITT CORP	1247 HILL	LUST, HIST CORTESE	Lower	706, 0.134, WNW
D37	HUSK-ITT CORPORATION	1247 EAST HILL STREE	HIST UST	Lower	724, 0.137, WNW
F38	LONG BEACH USD SIGNA	2285 WALNUT AVENUE	RCRA-SQG	Higher	737, 0.140, NNE
39	FILE ONLY	2150 ORANGE AVE	UST	Lower	815, 0.154, West

MAPPED SITES SUMMARY

Target Property Address:
2020 WALNUT AVENUE
SIGNAL HILL, CA 90755

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
F40	MATTHEWS GARAGE	2300 WALNUT AVE SUIT	RCRA-SQG, FINDS, ECHO	Higher	850, 0.161, NNE
F41	WALNUT INDUSTRIAL PA	2300 WALNUT ST	RCRA-SQG, FINDS, ECHO	Higher	850, 0.161, NNE
42	LONG BEACH BUILDING	1851 E 019TH ST	CA FID UST	Lower	875, 0.166, SSE
D43	TERRA EXPLORATION &	1250 E Z-23RD ST	UST	Higher	891, 0.169, NW
44	GREATER OPEN DOOR	2053 ORANGE AVE	UST	Lower	938, 0.178, WSW
E45	EXCEL PAVING CO.	2230 LEMON AVE	UST	Lower	988, 0.187, WNW
G46	SO CAL MILITARY ACAD	2065 CHERRY AVE	SWEEPS UST	Higher	1001, 0.190, ESE
G47	SO.CAL. MILITARY ACA	2065 CHERRY AVE	UST	Higher	1001, 0.190, ESE
H48	HAWK INDUSTRIES INC	1245 E 23RD ST	UST, EMI, WDS	Higher	1123, 0.213, NW
H49	HAWK INDUSTRIES INC	1245 E 23RD ST	HIST UST, NPDES	Higher	1123, 0.213, NW
I50	LONG BEACH BLDG MATE	1851 19TH ST E	LUST, HIST CORTESE	Lower	1129, 0.214, SE
I51	LONG BEACH BUILDING	1851 E 19TH ST	UST, SWEEPS UST, HIST UST	Lower	1129, 0.214, SE
H52	HAWK INDUSTRIES, INC	1245 E 023RD ST	SWEEPS UST	Higher	1148, 0.217, NW
53	CARLOS GUZMAN INC	1619 E CRESTON PL	RCRA-SQG, FINDS, ECHO	Higher	1191, 0.226, NNE
54	JOHN OSBORNE CO	1990 CHERRY AVE	RCRA-SQG, FINDS, ECHO	Lower	1227, 0.232, ESE
J55	NORTH FLANK OF THE H	2192 CHERRY AVE	US BROWNFIELDS, FINDS	Higher	1233, 0.234, ENE
J56	A&A SITE	2192 CHERRY AVE	US BROWNFIELDS, FINDS	Higher	1233, 0.234, ENE
J57	BOB LEE SITE	2192 CHERRY AVE	US BROWNFIELDS	Higher	1233, 0.234, ENE
K58	NAKAMURA #63	1776 CRESTON AVE	AST	Higher	1281, 0.243, NNE
K59	REEDY-DUBOIS LEASE	1792 E CRESTON ST	SWEEPS UST, LOS ANGELES CO. HMS	Higher	1291, 0.245, NNE
L60	BASIN VALVE CO	1500 E BURNETT ST	RCRA-SQG, FINDS, ECHO, HAZNET	Higher	1311, 0.248, North
L61	BOB HILL CRANE COMPA	1444 BURNETT ST E	LUST	Higher	1522, 0.288, North
M62	KL GAS & OIL AUTO RE	1601 E PACIFIC COAST	LUST, SWEEPS UST, CA FID UST	Lower	1528, 0.289, South
M63	U-HAUL MOVING CENTER	1600 PACIFIC COAST H	LUST, ENF	Lower	1569, 0.297, South
M64	U-HAUL MOVING CENTER	1600 PACIFIC COAST	HIST CORTESE	Lower	1569, 0.297, South
N65	LONG BEACH CITY COLL	1305 E PACIFIC COAST	RCRA-SQG, LUST, UST, CA FID UST, EMI, HIST...	Lower	1720, 0.326, South
N66	CARL'S FINE FURNITUR	1300 PACIFIC COAST H	LUST, HIST CORTESE	Lower	1762, 0.334, South
O67	FULLER HB CO INC	2424 BRAYTON ST	SEMS-ARCHIVE	Higher	1816, 0.344, NNW
P68	SHELL GAS STATION	1945 E. PACIIC COAST	Notify 65	Lower	1821, 0.345, SE
P69	SHELL #204-4482-1407	1945 PACIFIC COAST H	LUST, HIST CORTESE	Lower	1874, 0.355, SSE
O70	SIPPRELLE/GUZMAN PRO	2409 ORANGE AVE	LUST	Higher	1936, 0.367, NNW
P71	MOBIL #99-LNG (FORME	2001 PACIFIC COAST H	LUST, HIST CORTESE	Lower	1979, 0.375, SE
72	SIGNAL HILL PETROLEU	2200 SKYLINE	SLIC	Higher	1982, 0.375, ENE
Q73	CONTINENTAL EMSCO CO	2335 CHERRY AVE	SEMS-ARCHIVE	Higher	1984, 0.376, NE
Q74	CONTINENTAL EMSCO CO	2335 CHERRY AVENUE	ENVIROSTOR, HIST CORTESE	Higher	1984, 0.376, NE
75	SLOSSON PROPERTY	1145 BURNETT	LUST, HIST CORTESE	Higher	2060, 0.390, NW
76	MCKERNIE FAMILY PART	1698 025TH	LUST, HIST CORTESE	Higher	2197, 0.416, NNE
R77	TOM TANK ENTERPRISES	2450 ORANGE AVE	LUST, HIST CORTESE, LOS ANGELES CO. HMS	Higher	2203, 0.417, NNW
S78	2475 GARDENA AVENUE	2475 GARDENA AVENUE	US BROWNFIELDS	Higher	2210, 0.419, NNE

MAPPED SITES SUMMARY

Target Property Address:
2020 WALNUT AVENUE
SIGNAL HILL, CA 90755

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
R79	HEAT & POWER EQUIPME	2459 ORANGE AVE	LUST	Higher	2223, 0.421, NNW
R80	HEAT & POWER EQUIPME	2459 ORANGE AVE	LUST, HIST CORTESE	Higher	2223, 0.421, NNW
S81	2485 GARDENA AVENUE	2485 GARDENA AVENUE	US BROWNFIELDS	Higher	2253, 0.427, NNE
82	LONG BEACH REDEVELOP	2300 MARTIN LUTHER K	LUST	Lower	2325, 0.440, WNW
83	CALTRANS - HIGHWAY 1	2100 PACIFIC COAST	SLIC	Lower	2337, 0.443, SE
T84	GAINES ELECTRIC SUPP	2501 ORANGE AVE	LUST, UST, HAZNET, HIST CORTESE	Higher	2530, 0.479, NNW
T85	GAINES ELECTRIC SUPP	2501 ORANGE AVE	LUST	Higher	2530, 0.479, NNW
86	TOWN CENTER WEST - C	W. CHERRY AVE	SLIC	Higher	2547, 0.482, NNE
87	REPLANET LLC	1600 E WILLOW ST	SWRCY	Higher	2610, 0.494, NNE
U88	ABBOTTS WASTE OIL SE	1845 E WILLOW LOT A	ENVIROSTOR, DEED, RCRA NonGen / NLR, FINDS, ECHO	Higher	3161, 0.599, NNE
U89	DICO OIL CO	1845 E WILLOW	SEMS, CORRACTS, RCRA-TSDF, RCRA-SQG, US INST...	Higher	3170, 0.600, NNE
90	ALAMITOS LAND/BIXBY	HATHAWAY/TEMPLE/HILL	ENVIROSTOR	Higher	3175, 0.601, East
91	SIGNAL HILL PETROLEU	2200 E. WILLOW ST	ENVIROSTOR, SLIC	Higher	3504, 0.664, NE
92	PETER H. BURNETT ELE	568 EAST HILL STREET	ENVIROSTOR, SCH	Lower	3649, 0.691, West
93	LONG BEACH POLYTECHN	1600 ATLANTIC AVENUE	ENVIROSTOR, SCH, HAZNET	Lower	4175, 0.791, SW
94	DOOLEY'S HARDWARE MA	HOME STREET/DEL AMO	ENVIROSTOR, SCH	Lower	4364, 0.827, WNW
95	ROBERT E. LEE SCHOOL	1620 TEMPLE AVENUE	ENVIROSTOR, SCH	Higher	4457, 0.844, SE
96	KENYON PRESS INC	2850 WALNUT AVE	ENVIROSTOR, EMI	Higher	4540, 0.860, North
97	JUNIPERO AVENUE SITE	2740-2760 JUNIPERO A	ENVIROSTOR, VCP, LIENS	Higher	4694, 0.889, NE
V98	URBAN PACIFIC BUILDE	1835-1899 ORIZABA AV	ENVIROSTOR	Higher	4883, 0.925, NNE
V99	ENVIROPUR WEST CORP	1835 E 29TH ST	SEMS-ARCHIVE, CORRACTS, RCRA-TSDF, RCRA-SQG, UST...	Higher	4908, 0.930, NNE
V100	ENVIROPUR WEST CORP	1835 E 29TH ST	ENVIROSTOR, HIST UST, HWP	Higher	4908, 0.930, NNE
W101	UNITED METHODIST CHU	1535 ATLANTIC AVENUE	ENVIROSTOR, SCH	Lower	4934, 0.934, SW
W102	ROOSEVELT ELEMENTARY	1574 LINDEN AVENUE	ENVIROSTOR, SCH, NPDES	Lower	4966, 0.941, SW
103	SIGNAL HILL BUSINESS	29TH AND ORANGE STRE	ENVIROSTOR, VCP	Higher	4991, 0.945, NNW
104	ROOSEVELT ELEMENTARY	1574 LINDEN AVENUE	ENVIROSTOR, SCH	Lower	5061, 0.959, SW
105	BROWNING SITE (AKA T	3230 EAST HILL STREE	ENVIROSTOR, SCH, NPDES	Higher	5076, 0.961, East
W106	ROOSEVELT ELEMENTARY	SW CORNER OF ATLANTI	ENVIROSTOR, SCH	Lower	5136, 0.973, SW

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
MACMILLAN RING-FREE 2020 WALNUT AVE SIGNAL HILL, CA 90806	SEMS-ARCHIVE Site ID: 0900996 EPA Id: CAD008249435 RCRA-SQG EPA ID:: CAD008249435	CAD008249435
2020 WALNUT AVE 2020 WALNUT AVE SIGNAL HILL, CA 90806	ERNS NRC Report #: 354073	N/A
MACMILLAN RING FREE 2020 N. WALNUT AVE. SIGNAL HILL, CA 90806	EMI Facility Id: 8129 Facility Id: 20360	N/A
2020 WALNUT AVE 2020 WALNUT AVE SIGNAL HILL, CA	CHMIRS OES Incident Number: 7772	N/A
CHEM-OIL REFINERY (F 2020 WALNUT AVE SIGNAL HILL, CA 90806	FINDS Registry ID:: 110065483729	N/A
MACMILLAN RING FREE 2020 WALNUT ST. SIGNAL HILL, CA 90806	EMI Facility Id: 6700 Facility Id: 13180 Facility Id: 12 Facility Id: 800081 Facility Id: 17832 **Additional key fields are available in the Map Findings section*	N/A
2020 WALNUT AVENUE 2020 WALNUT AVENUE SIGNAL HILL, CA 90806	CHMIRS OES Incident Number: 14888	N/A
MIDNIGHT OIL 2020 WALNUT ST SIGNAL HILL, CA 90806	HAZNET GEPAID: CAC001242648	N/A

EXECUTIVE SUMMARY

CHEMOIL REF CORP (NS 2020 N WALNUT AV SIGNAL HILL, CA 90806	SLIC Database: SLIC REG 4, Date of Government Version: 11/17/2004 Facility Status: Site Assessment EMI Facility Id: 800273	N/A
FORMER CHEMOIL REFIN 2020 WALNUT SIGNAL HILL, CA 90755	FINDS Registry ID:: 110066634388	N/A
CHEM-OIL REFINERY (F 2020 WALNUT AVE SIGNAL HILL, CA 90806	ENVIROSTOR Facility Id: 71002155 Facility Id: 19290040 Status: Refer: Other Agency Status: Refer: RWQCB SLIC Database: SLIC, Date of Government Version: 06/12/2017 Facility Status: Open - Assessment & Interim Remedial Action Global Id: SL2047W2348 CHMIRS OES Incident Number: 120068 Date Completed: 28-OCT-91	N/A
CHEMOIL REFINING COR 2020 WALNUT AVE SIGNAL HILL, CA 90806	FINDS Registry ID:: 110040985556 ECHO	N/A
2020 WALNUT AVE 2020 WALNUT AVE SIGNAL HILL, CA	ERNS NRC Report #: 370103	N/A
SIGNAL HILL HOLDING 2020 WALNUT AVE SIGNAL HILL, CA 90806	HAZNET GEPAID: CAD008249435	N/A
CHEMOIL REFINERY (FO 2020 WALNUT AVENUE SIGNAL HILL, CA 90755	SLIC Database: SLIC, Date of Government Version: 06/12/2017 Facility Status: Open - Site Assessment Global Id: T10000010213	N/A
MACMILLAN RING-FREE 2020 WALNUT AVE SIGNAL HILL, GA 90806	TSCA Chemical Number: 64741420 Chemical Number: 64741442	N/A

EXECUTIVE SUMMARY

	Chemical Number: 64741453 Chemical Number: 68476266	
CHEMOIL REFINING COR 2020 WALNUT AVE SIGNAL HILL, CA 90755	NPDES	N/A
2020 WALNUT AVE AT W 2020 WALNUT AVE AT W SIGNAL HILL, CA 90806	CHMIRS OES Incident Number: 16915	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 RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System

EXECUTIVE SUMMARY

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

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

VCP..... Voluntary Cleanup Program Properties
INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... Open Dump Inventory
IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register
AOCONCERN..... San Gabriel Valley Areas of Concern
HIST Cal-Sites..... Historical Calsites Database
CDL..... Clandestine Drug Labs
Toxic Pits..... Toxic Pits Cleanup Act Sites
US CDL..... National Clandestine Laboratory Register

Local Land Records

LIENS..... Environmental Liens Listing
LIENS 2..... CERCLA Lien Information
DEED..... Deed Restriction Listing

EXECUTIVE SUMMARY

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
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
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
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
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
DRYCLEANERS	Cleaner Facilities
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
ICE	ICE
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
PEST LIC	Pesticide Regulation Licenses Listing

EXECUTIVE SUMMARY

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

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner..... EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF..... Recovered Government Archive Solid Waste Facilities List
RGA LUST..... Recovered Government Archive Leaking Underground Storage Tank

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 CERCLIS NFRAP site list

SEMS-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.

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 02/07/2017 has revealed that there

are 2 SEMS-ARCHIVE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FULLER HB CO INC	2424 BRAYTON ST	NNW 1/4 - 1/2 (0.344 mi.)	O67	147
CONTINENTAL EMSCO CO	2335 CHERRY AVE	NE 1/4 - 1/2 (0.376 mi.)	Q73	161

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 12/12/2016 has revealed that there are 2 CORRACTS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DICO OIL CO	***1845 E WILLOW***	***NNE 1/2 - 1 (0.600 mi.)***	***U89***	***192***
ENVIROPUR WEST CORP	***1835 E 29TH ST***	***NNE 1/2 - 1 (0.930 mi.)***	***V99***	***241***

Federal RCRA generators list

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 12/12/2016 has revealed that there are 9 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
P AND M DIESEL	***2170 GUNDRY AVE***	***NW 0 - 1/8 (0.005 mi.)***	***A23***	***34***
UNIVERSAL CARE	***1600 E HILL ST***	***NE 0 - 1/8 (0.042 mi.)***	***25***	***38***
KALIBUR ENGINEERING	***1361 E HILL ST***	***NW 0 - 1/8 (0.115 mi.)***	***D35***	***70***
LONG BEACH USD SIGNA	2285 WALNUT AVENUE	NNE 1/8 - 1/4 (0.140 mi.)	F38	76
MATTHEWS GARAGE	***2300 WALNUT AVE SUIT***	***NNE 1/8 - 1/4 (0.161 mi.)***	***F40***	***77***
WALNUT INDUSTRIAL PA	***2300 WALNUT ST***	***NNE 1/8 - 1/4 (0.161 mi.)***	***F41***	***79***
CARLOS GUZMAN INC	***1619 E CRESTON PL***	***NNE 1/8 - 1/4 (0.226 mi.)***	***53***	***93***
BASIN VALVE CO	***1500 E BURNETT ST***	***N 1/8 - 1/4 (0.248 mi.)***	***L60***	***105***

Lower Elevation	Address	Direction / Distance	Map ID	Page
JOHN OSBORNE CO	***1990 CHERRY AVE***	***ESE 1/8 - 1/4 (0.232 mi.)***	***54***	***94***

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 07/31/2017 has revealed that there are 20 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CONTINENTAL EMSCO CO Facility Id: 19350342 Status: Refer: Other Agency	***2335 CHERRY AVENUE***	***NE 1/4 - 1/2 (0.376 mi.)***	***Q74***	***162***
ABBOTTS WASTE OIL SE Facility Id: 19130002 Facility Id: 80001745 Status: Refer: Other Agency Status: Certified O&M - Land Use Restrictions Only	***1845 E WILLOW LOT A***	***NNE 1/2 - 1 (0.599 mi.)***	***U88***	***185***
ALAMITOS LAND/BIXBY Facility Id: 19130105 Status: Inactive - Needs Evaluation	HATHAWAY/TEMPLE/HILL	E 1/2 - 1 (0.601 mi.)	90	212
SIGNAL HILL PETROLEU Facility Id: 71003256 Status: Refer: Other Agency	***2200 E. WILLOW ST***	***NE 1/2 - 1 (0.664 mi.)***	***91***	***214***
ROBERT E. LEE SCHOOL Facility Id: 19820022 Status: No Action Required	***1620 TEMPLE AVENUE***	***SE 1/2 - 1 (0.844 mi.)***	***95***	***231***
KENYON PRESS INC Facility Id: 19350466 Status: Refer: Other Agency	***2850 WALNUT AVE***	***N 1/2 - 1 (0.860 mi.)***	***96***	***233***
JUNIPERO AVENUE SITE Facility Id: 19340779 Status: Inactive - Needs Evaluation	***2740-2760 JUNIPERO A***	***NE 1/2 - 1 (0.889 mi.)***	***97***	***235***
URBAN PACIFIC BUILDE Facility Id: 19950001 Status: Refer: 1248 Local Agency	1835-1899 ORIZABA AV	NNE 1/2 - 1 (0.925 mi.)	V98	240
ENVIROPUR WEST CORP Facility Id: 80001829 Status: Inactive - Action Required	***1835 E 29TH ST***	***NNE 1/2 - 1 (0.930 mi.)***	***V100***	***262***
SIGNAL HILL BUSINESS Facility Id: 19130099 Status: No Action Required	***29TH AND ORANGE STRE***	***NNW 1/2 - 1 (0.945 mi.)***	***103***	***278***
BROWNING SITE (AKA T Facility Id: 19760019	***3230 EAST HILL STREE***	***E 1/2 - 1 (0.961 mi.)***	***105***	***282***

Status: Active

Lower Elevation	Address	Direction / Distance	Map ID	Page
20TH STREET SCHOOL Facility Id: 19760020 Status: Certified	***1777 EAST 20TH STREE***	***SE 0 - 1/8 (0.062 mi.)***	***C29***	***41***
JESSIE ELWIN NELSON Facility Id: 19760018 Status: Certified / Operation & Maintenance	***1778 EAST 20TH STREE***	***SE 0 - 1/8 (0.093 mi.)***	***C32***	***50***
PETER H. BURNETT ELE Facility Id: 19990029 Status: Inactive - Withdrawn	***568 EAST HILL STREET***	***W 1/2 - 1 (0.691 mi.)***	***92***	***215***
LONG BEACH POLYTECHN Facility Id: 60001962 Status: No Further Action	***1600 ATLANTIC AVENUE***	***SW 1/2 - 1 (0.791 mi.)***	***93***	***218***
DOOLEY'S HARDWARE MA Facility Id: 19590004 Status: Certified	***HOME STREET/DEL AMO***	***WNW 1/2 - 1 (0.827 mi.)***	***94***	***223***
UNITED METHODIST CHU Facility Id: 60000028 Status: No Action Required	***1535 ATLANTIC AVENUE***	***SW 1/2 - 1 (0.934 mi.)***	***W101***	***268***
ROOSEVELT ELEMENTARY Facility Id: 60001492 Status: No Further Action	***1574 LINDEN AVENUE***	***SW 1/2 - 1 (0.941 mi.)***	***W102***	***271***
ROOSEVELT ELEMENTARY Facility Id: 19820124 Status: No Action Required	***1574 LINDEN AVENUE***	***SW 1/2 - 1 (0.959 mi.)***	***104***	***280***
ROOSEVELT ELEMENTARY Facility Id: 60001953 Status: No Further Action	***SW CORNER OF ATLANTI***	***SW 1/2 - 1 (0.973 mi.)***	***W106***	***294***

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 19 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BOB HILL CRANE COMPA Database: LUST REG 4, Date of Government Version: 09/07/2004 Database: LUST, Date of Government Version: 06/12/2017 Status: Completed - Case Closed Facility Id: I-08365 Status: Case Closed Global Id: T0603703324	1444 BURNETT ST E	N 1/4 - 1/2 (0.288 mi.)	L61	108

Global ID: T0603703324

SIPPRELLE/GUZMAN PRO	2409 ORANGE AVE	NNW 1/4 - 1/2 (0.367 mi.)	O70	155

Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Global Id: T0603722009

SLOSSON PROPERTY	***1145 BURNETT***	***NW 1/4 - 1/2 (0.390 mi.)***	***75***	***164***

Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Facility Id: I-14150
Status: Case Closed
Global Id: T0603704139
Global ID: T0603704139

MCKERNIE FAMILY PART	***1698 025TH***	***NNE 1/4 - 1/2 (0.416 mi.)***	***76***	***166***

Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Facility Id: I-22749
Status: Case Closed
Global Id: T0603704495
Global ID: T0603704495

TOM TANK ENTERPRISES	***2450 ORANGE AVE***	***NNW 1/4 - 1/2 (0.417 mi.)***	***R77***	***169***

Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Facility Id: I-15635
Status: Case Closed
Global Id: T0603704338
Global ID: T0603704338

HEAT & POWER EQUIPME	2459 ORANGE AVE	NNW 1/4 - 1/2 (0.421 mi.)	R79	174

Database: LUST REG 4, Date of Government Version: 09/07/2004
Facility Id: I-16106
Status: Case Closed
Global ID: T0603704390

HEAT & POWER EQUIPME	***2459 ORANGE AVE***	***NNW 1/4 - 1/2 (0.421 mi.)***	***R80***	***175***

Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Global Id: T0603704390

GAINES ELECTRIC SUPP	***2501 ORANGE AVE***	***NNW 1/4 - 1/2 (0.479 mi.)***	***T84***	***181***

Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Global Id: T0603704326

GAINES ELECTRIC SUPP	2501 ORANGE AVE	NNW 1/4 - 1/2 (0.479 mi.)	T85	183

Database: LUST REG 4, Date of Government Version: 09/07/2004
Facility Id: I-15572
Status: Case Closed
Global ID: T0603704326

Lower Elevation	Address	Direction / Distance	Map ID	Page
GTE LONG BEACH PLANT	***1777 E 20TH ST***	***SE 0 - 1/8 (0.093 mi.)***	***C30***	***47***

Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017

Status: Completed - Case Closed
Facility Id: I-10172
Status: Case Closed
Global Id: T0603703587
Global ID: T0603703587

HUST-ITT CORP ***1247 HILL*** ***WNW 1/8 - 1/4 (0.134 mi.)*** ***E36*** ***73***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Facility Id: R-22253
Status: Case Closed
Global Id: T0603705359
Global ID: T0603705359

LONG BEACH BLDG MATE ***1851 19TH ST E*** ***SE 1/8 - 1/4 (0.214 mi.)*** ***I50*** ***88***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Facility Id: 908061034
Status: Case Closed
Global Id: T0603701836
Global ID: T0603701836

KL GAS & OIL AUTO RE ***1601 E PACIFIC COAST*** ***S 1/4 - 1/2 (0.289 mi.)*** ***M62*** ***111***
Database: LUST, Date of Government Version: 06/12/2017
Status: Open - Site Assessment
Global Id: T0603777036

U-HAUL MOVING CENTER ***1600 PACIFIC COAST H*** ***S 1/4 - 1/2 (0.297 mi.)*** ***M63*** ***114***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Facility Id: 908061089
Status: Remedial action (cleanup) Underway
Global Id: T0603701840
Global ID: T0603701840

LONG BEACH CITY COLL ***1305 E PACIFIC COAST*** ***S 1/4 - 1/2 (0.326 mi.)*** ***N65*** ***126***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Facility Id: 022289-01
Status: Case Closed
Global Id: T0603700061
Global ID: T0603700061

CARL'S FINE FURNITUR ***1300 PACIFIC COAST H*** ***S 1/4 - 1/2 (0.334 mi.)*** ***N66*** ***143***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Facility Id: 908061216
Status: Case Closed
Global Id: T0603701853
Global ID: T0603701853

SHELL #204-4482-1407 ***1945 PACIFIC COAST H*** ***SSE 1/4 - 1/2 (0.355 mi.)*** ***P69*** ***148***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed

Facility Id: 908061098
Status: Pollution Characterization
Global Id: T0603701841
Global ID: T0603701841

MOBIL #99-LNG (FORME ***2001 PACIFIC COAST H*** ***SE 1/4 - 1/2 (0.375 mi.)*** ***P71*** ***158***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Facility Id: 908040089
Status: Case Closed
Global Id: T0603701741
Global ID: T0603701741

LONG BEACH REDEVELOP 2300 MARTIN LUTHER K WNW 1/4 - 1/2 (0.440 mi.) 82 179
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Global Id: T10000001031

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 SLIC list, as provided by EDR, has revealed that there are 3 SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SIGNAL HILL PETROLEU	2200 SKYLINE	ENE 1/4 - 1/2 (0.375 mi.)	72	161
Database: SLIC REG 4, Date of Government Version: 11/17/2004 Database: SLIC, Date of Government Version: 06/12/2017 Facility Status: Open - Verification Monitoring Facility Status: Remediation Global Id: SLT43670668				
TOWN CENTER WEST - C	W. CHERRY AVE	NNE 1/4 - 1/2 (0.482 mi.)	86	184
Database: SLIC, Date of Government Version: 06/12/2017 Facility Status: Completed - Case Closed Global Id: SLT4306058				

Lower Elevation	Address	Direction / Distance	Map ID	Page
CALTRANS - HIGHWAY 1	2100 PACIFIC COAST	SE 1/4 - 1/2 (0.443 mi.)	83	180
Database: SLIC REG 4, Date of Government Version: 11/17/2004 Database: SLIC, Date of Government Version: 06/12/2017 Facility Status: Completed - Case Closed Facility Status: No further action required Global Id: SL2048R1707				

EXECUTIVE SUMMARY

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 10 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TERRA EXPLORATION &	1250 E Z-23RD ST	NW 1/8 - 1/4 (0.169 mi.)	D43	81
Database: LONG BEACH UST, Date of Government Version: 03/09/2017				
SO.CAL. MILITARY ACA	2065 CHERRY AVE	ESE 1/8 - 1/4 (0.190 mi.)	G47	82
Database: LONG BEACH UST, Date of Government Version: 03/09/2017				
HAWK INDUSTRIES INC	***1245 E 23RD ST***	***NW 1/8 - 1/4 (0.213 mi.)***	***H48***	***83***
Database: LONG BEACH UST, Date of Government Version: 03/09/2017				

Lower Elevation	Address	Direction / Distance	Map ID	Page
UNKNOWN	1510 E 20TH ST	S 0 - 1/8 (0.050 mi.)	27	40
Database: LONG BEACH UST, Date of Government Version: 03/09/2017				
GTE LONG BEACH PLANT	***1777 E 20TH ST***	***SE 0 - 1/8 (0.093 mi.)***	***C30***	***47***
Database: LONG BEACH UST, Date of Government Version: 03/09/2017				
GTE CALIFORNIA L.B.	1778 E 20TH ST	SE 0 - 1/8 (0.093 mi.)	C31	50
Database: LONG BEACH UST, Date of Government Version: 03/09/2017				
FILE ONLY	2150 ORANGE AVE	W 1/8 - 1/4 (0.154 mi.)	39	77
Database: LONG BEACH UST, Date of Government Version: 03/09/2017				
GREATER OPEN DOOR	2053 ORANGE AVE	WSW 1/8 - 1/4 (0.178 mi.)	44	81
Database: LONG BEACH UST, Date of Government Version: 03/09/2017				
EXCEL PAVING CO.	2230 LEMON AVE	WNW 1/8 - 1/4 (0.187 mi.)	E45	81
Database: UST, Date of Government Version: 06/12/2017 Database: LONG BEACH UST, Date of Government Version: 03/09/2017 Facility Id: 19-060-1357				
LONG BEACH BUILDING	***1851 E 19TH ST***	***SE 1/8 - 1/4 (0.214 mi.)***	***I51***	***90***
Database: LONG BEACH UST, Date of Government Version: 03/09/2017				

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, and dated 07/06/2016 has revealed that there is 1 AST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NAKAMURA #63	1776 CRESTON AVE	NNE 1/8 - 1/4 (0.243 mi.)	K58	104

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 03/02/2017 has revealed that there are 5 US BROWNFIELDS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NORTH FLANK OF THE H	***2192 CHERRY AVE***	***ENE 1/8 - 1/4 (0.234 mi.)***	***J55***	***96***
A&A SITE	***2192 CHERRY AVE***	***ENE 1/8 - 1/4 (0.234 mi.)***	***J56***	***99***
BOB LEE SITE	2192 CHERRY AVE	ENE 1/8 - 1/4 (0.234 mi.)	J57	101
2475 GARDENA AVENUE	2475 GARDENA AVENUE	NNE 1/4 - 1/2 (0.419 mi.)	S78	172
2485 GARDENA AVENUE	2485 GARDENA AVENUE	NNE 1/4 - 1/2 (0.427 mi.)	S81	177

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 03/13/2017 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
REPLANET LLC Cert Id: RC156564.001	1600 E WILLOW ST	NNE 1/4 - 1/2 (0.494 mi.)	87	185

Local Lists of Hazardous waste / Contaminated Sites

SCH: 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.

A review of the SCH list, as provided by EDR, and dated 07/31/2017 has revealed that there are 2 SCH sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
20TH STREET SCHOOL Facility Id: 19760020 Status: Certified	***1777 EAST 20TH STREE***	***SE 0 - 1/8 (0.062 mi.)***	***C29***	***41***
JESSIE ELWIN NELSON Facility Id: 19760018 Status: Certified / Operation & Maintenance	***1778 EAST 20TH STREE***	***SE 0 - 1/8 (0.093 mi.)***	***C32***	***50***

EXECUTIVE SUMMARY

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 5 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DON ANDERSON Status: A Comp Number: 14892	2185 WALNUT	0 - 1/8 (0.000 mi.)	A20	33
SO CAL MILITARY ACAD Status: A Comp Number: 13039	2065 CHERRY AVE	ESE 1/8 - 1/4 (0.190 mi.)	G46	82
HAWK INDUSTRIES, INC Status: A Tank Status: A Comp Number: 3746	1245 E 023RD ST	NW 1/8 - 1/4 (0.217 mi.)	H52	92
REEDY-DUBOIS LEASE Status: A Comp Number: 9205	***1792 E CRESTON ST***	***NNE 1/8 - 1/4 (0.245 mi.)***	***K59***	***105***

Lower Elevation	Address	Direction / Distance	Map ID	Page
LONG BEACH BUILDING Comp Number: 41527	***1851 E 19TH ST***	***SE 1/8 - 1/4 (0.214 mi.)***	***I51***	***90***

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 4 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HAWK INDUSTRIES INC Facility Id: 00000003746	***1245 E 23RD ST***	***NW 1/8 - 1/4 (0.213 mi.)***	***H49***	***84***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MODERN CLEANERS INC Facility Id: 00000000380	1730 E 20TH ST	SE 0 - 1/8 (0.096 mi.)	C34	69
HUSK-ITT CORPORATION Facility Id: 00000068684	1247 EAST HILL STREE	WNW 1/8 - 1/4 (0.137 mi.)	D37	75
LONG BEACH BUILDING Facility Id: 00000041527	***1851 E 19TH ST***	***SE 1/8 - 1/4 (0.214 mi.)***	***I51***	***90***

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 is 1 CA FID UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LONG BEACH BUILDING Facility Id: 19056686 Status: A	1851 E 019TH ST	SSE 1/8 - 1/4 (0.166 mi.)	42	80

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 12/12/2016 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MIRANDAS TRUCKING	***1344 WESLEY DR***	***SW 0 - 1/8 (0.054 mi.)***	***28***	***40***
MODERN CLEANERS	***1730 E 20 ST***	***SE 0 - 1/8 (0.096 mi.)***	***C33***	***67***

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 14 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CONTINENTAL EMSCO CO Reg Id: 19350342	***2335 CHERRY AVENUE***	***NE 1/4 - 1/2 (0.376 mi.)***	***Q74***	***162***
SLOSSON PROPERTY Reg Id: I-14150	***1145 BURNETT***	***NW 1/4 - 1/2 (0.390 mi.)***	***75***	***164***
MCKERNIE FAMILY PART Reg Id: I-22749	***1698 025TH***	***NNE 1/4 - 1/2 (0.416 mi.)***	***76***	***166***
TOM TANK ENTERPRISES Reg Id: I-15635	***2450 ORANGE AVE***	***NNW 1/4 - 1/2 (0.417 mi.)***	***R77***	***169***
HEAT & POWER EQUIPME Reg Id: I-16106	***2459 ORANGE AVE***	***NNW 1/4 - 1/2 (0.421 mi.)***	***R80***	***175***
GAINES ELECTRIC SUPP Reg Id: I-15572	***2501 ORANGE AVE***	***NNW 1/4 - 1/2 (0.479 mi.)***	***T84***	***181***

Lower Elevation	Address	Direction / Distance	Map ID	Page
GTE LONG BEACH PLANT	***1777 E 20TH ST***	***SE 0 - 1/8 (0.093 mi.)***	***C30***	***47***

Reg Id: I-10172				
HUST-ITT CORP Reg Id: R-22253	***1247 HILL***	***WNW 1/8 - 1/4 (0.134 mi.)***	***E36***	***73***
LONG BEACH BLDG MATE Reg Id: 908061034	***1851 19TH ST E***	***SE 1/8 - 1/4 (0.214 mi.)***	***I50***	***88***
U-HAUL MOVING CENTER Reg Id: 908061089	1600 PACIFIC COAST	S 1/4 - 1/2 (0.297 mi.)	M64	126
LONG BEACH CITY COLL Reg Id: 022289-01	***1305 E PACIFIC COAST***	***S 1/4 - 1/2 (0.326 mi.)***	***N65***	***126***
CARL'S FINE FURNITUR Reg Id: 908061216	***1300 PACIFIC COAST H***	***S 1/4 - 1/2 (0.334 mi.)***	***N66***	***143***
SHELL #204-4482-1407 Reg Id: 908061098	***1945 PACIFIC COAST H***	***SSE 1/4 - 1/2 (0.355 mi.)***	***P69***	***148***
MOBIL #99-LNG (FORME Reg Id: 908040089	***2001 PACIFIC COAST H***	***SE 1/4 - 1/2 (0.375 mi.)***	***P71***	***158***

Los Angeles County Industrial Waste and Underground Storage Tank Sites.

A review of the LOS ANGELES CO. HMS list, as provided by EDR, and dated 04/18/2017 has revealed that there is 1 LOS ANGELES CO. HMS site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DON ANDERSON Facility ID: 014321-014892	2185 WALNUT AVE	0 - 1/8 (0.000 mi.)	A19	33

HWP: Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

A review of the HWP list, as provided by EDR, and dated 05/22/2017 has revealed that there are 2 HWP sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DICO OIL CO EPA Id: CAD980737076 Cleanup Status: UNDERGOING CLOSURE	***1845 E WILLOW***	***NNE 1/2 - 1 (0.600 mi.)***	***U89***	***192***
ENVIROPUR WEST CORP EPA Id: CAT080011059 Cleanup Status: UNDERGOING CLOSURE	***1835 E 29TH ST***	***NNE 1/2 - 1 (0.930 mi.)***	***V100***	***262***

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 12/16/2016 has revealed that there is 1 Notify 65 site within approximately 1 mile of the target property.

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
SHELL GAS STATION	1945 E. PACIIC COAST	SE 1/4 - 1/2 (0.345 mi.)	P68	147

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 are 4 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
P & M DIESEL	2170 GUNDRY AVE	NW 0 - 1/8 (0.005 mi.)	A22	34

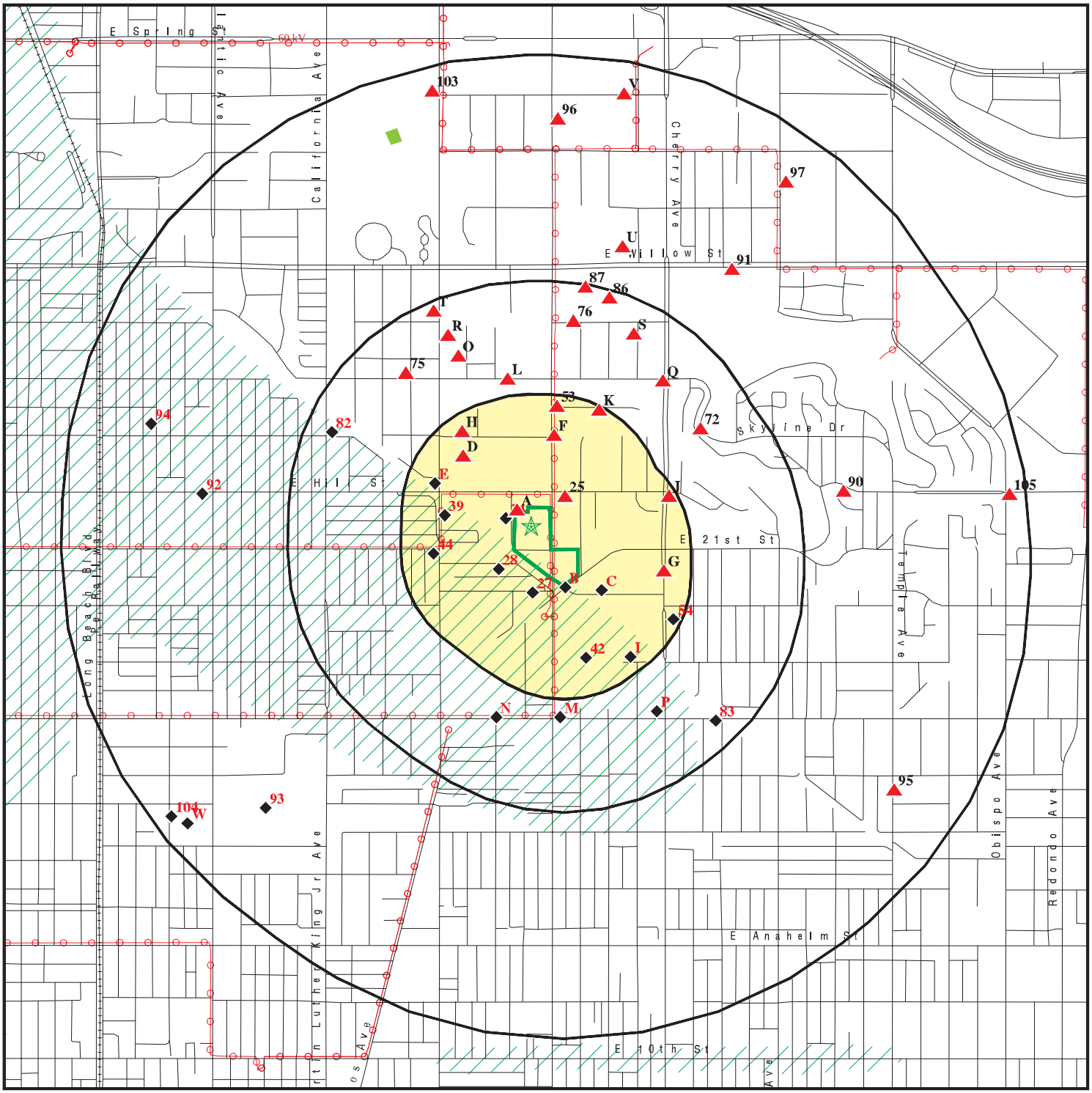
Lower Elevation	Address	Direction / Distance	Map ID	Page
BLAIN A L	2000 ALAMITOS AV	SSE 0 - 1/8 (0.005 mi.)	B21	34
OCEAN IMPORTS	2115 GUNDRY AVE	WNW 0 - 1/8 (0.020 mi.)	24	37
REED RALPH	1811 ALAMITOS AV	SSE 0 - 1/8 (0.049 mi.)	B26	39

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
TOWN CENTER WEST - COMMERCIAL SITE	SLIC
REINGART PROPERTY	SLIC
ANAHEIM STREET SCHOOL	ENVIROSTOR, SCH

OVERVIEW MAP - 5042323.2S



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: Former Chemoil Refinery	CLIENT: Hazard Management Consulting
ADDRESS: 2020 Walnut Avenue Signal Hill CA 90755	CONTACT: Mark Cousineau INQUIRY #: 5042323.2s
LAT/LONG: 33.795985 / 118.1728	DATE: September 06, 2017 6:27 pm

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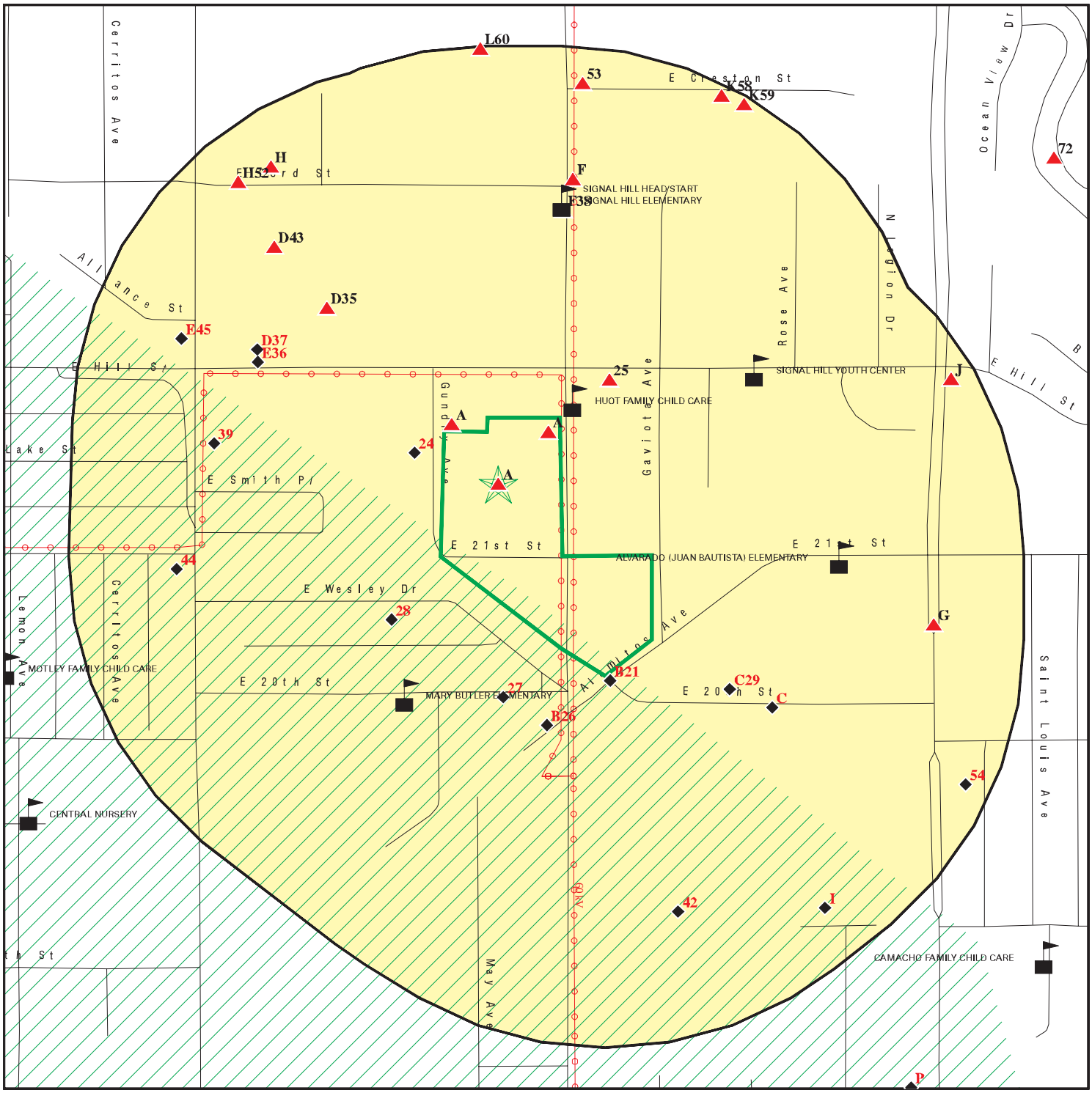
DETAIL MAP - 5042323.2S



0 1/16 1/8 1/4 Miles

- 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: Former Chemoil Refinery	CLIENT: Hazard Management Consulting
ADDRESS: 2020 Walnut Avenue Signal Hill CA 90755	CONTACT: Mark Cousineau INQUIRY #: 5042323.2s
LAT/LONG: 33.795985 / 118.1728	DATE: September 06, 2017 6:33 pm

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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	0.001		0	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	1	0	0	2	NR	NR	3
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	2	NR	2
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	3	6	NR	NR	NR	10
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
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	0.001	2	0	NR	NR	NR	NR	2
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000	1	2	0	1	17	NR	21
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	2	16	NR	NR	19

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
SLIC	0.500	3	0	0	3	NR	NR	6
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		3	7	NR	NR	NR	10
AST	0.250		0	1	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN 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	3	2	NR	NR	5
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	1	NR	NR	1
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	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								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
AOCONCERN	1.000		0	0	0	0	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		2	0	NR	NR	NR	2
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		1	4	NR	NR	NR	5
HIST UST	0.250		1	3	NR	NR	NR	4
CA FID UST	0.250		0	1	NR	NR	NR	1
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	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
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001	4	0	NR	NR	NR	NR	4
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		2	0	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001	1	0	NR	NR	NR	NR	1
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001	3	0	NR	NR	NR	NR	3
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001	1	0	NR	NR	NR	NR	1
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
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001	3	0	NR	NR	NR	NR	3

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
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001	2	0	NR	NR	NR	NR	2
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		1	2	11	NR	NR	14
LOS ANGELES CO. HMS	0.001		1	NR	NR	NR	NR	1
HWP	1.000		0	0	0	2	NR	2
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001	1	0	NR	NR	NR	NR	1
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	1	0	NR	1
LA Co. Site Mitigation	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	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		4	NR	NR	NR	NR	4
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		23	21	29	37	21	0	131

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 Target Property | **MACMILLAN RING-FREE OIL CO INC**
2020 WALNUT AVE
SIGNAL HILL, CA 90806 | **SEMS-ARCHIVE** | **1000301048**
RCRA-SQG | **CAD008249435**

Site 1 of 22 in cluster A

Actual: 42 ft.

SEMS-ARCHIVE:

Site ID:	900996
EPA ID:	CAD008249435
Federal Facility:	N
NPL:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

Following information was gathered from the prior CERCLIS update completed in 10/2013:

Site ID:	0900996
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:

Contact Sequence ID:	13289206.00000
Person ID:	13003854.00000
Contact Sequence ID:	13294801.00000
Person ID:	13003858.00000
Contact Sequence ID:	13300659.00000
Person ID:	13004003.00000

CERCLIS-NFRAP Site Alias Name(s):

Alias Name:	SIGNAL HILL REFINERY
Alias Address:	Not reported
	CA

CERCLIS-NFRAP Assessment History:

Action:	DISCOVERY
Date Started:	/ /
Date Completed:	02/01/86
Priority Level:	Not reported
Action:	PRELIMINARY ASSESSMENT
Date Started:	12/01/85
Date Completed:	06/01/86
Priority Level:	Low priority for further assessment
Action:	ARCHIVE SITE
Date Started:	/ /
Date Completed:	12/29/88
Priority Level:	Not reported
Action:	PRELIMINARY ASSESSMENT
Date Started:	/ /
Date Completed:	12/29/88
Priority Level:	NFRAP-Site does not qualify for the NPL based on existing information

RCRA-SQG:

Date form received by agency: 09/01/1996

MACMILLAN RING-FREE OIL CO INC (Continued) **1000301048**

Facility name:	CHEMOIL REFINING CORP
Facility address:	2020 WALNUT AVE SIGNAL HILL, CA 90806
EPA ID:	CAD008249435
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
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:	CHEMOIL REFINING CORP
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
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
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

MACMILLAN RING-FREE OIL CO INC (Continued) **1000301048**

Historical Generators:

Date form received by agency:	09/01/1996
Site name:	CHEMOIL REFINING CORP
Classification:	Small Quantity Generator
Date form received by agency:	08/14/1980
Site name:	CHEMOIL REFINING CORP
Classification:	Large Quantity Generator
Violation Status:	No violations found

Evaluation Action Summary:

Evaluation date:	06/09/1994
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State Contractor/Grantee
Evaluation date:	09/04/1993
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State Contractor/Grantee

A2 **ERNS** **96354073**
Target Property **2020 WALNUT AVE** **N/A**
SIGNAL HILL, CA 90806

Site 2 of 22 in cluster A

Actual: 42 ft.

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

A3 **MACMILLAN RING FREE OIL CO INC** **EMI** **S106834958**
Target Property **2020 N. WALNUT AVE.** **N/A**
SIGNAL HILL, CA 90806

Site 3 of 22 in cluster A

Actual: 42 ft.

EMI:

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	20360
Air District Name:	SC
SIC Code:	2911
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:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

MACMILLAN RING FREE OIL CO INC (Continued) **S106834958**

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	8129
Air District Name:	SC
SIC Code:	2911
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:	3
Reactive Organic Gases Tons/Yr:	3
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

A4 **CHMIRS** **S105631026**
Target Property **2020 WALNUT AVE** **N/A**
SIGNAL HILL, CA

Site 4 of 22 in cluster A

Actual: 42 ft.

CHMIRS:

OES Incident Number:	7772
OES notification:	Not reported
OES Date:	4/23/1993
OES Time:	02:20:00 PM
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:	Not reported
Spill Site:	Not reported
Cleanup By:	CHEM OIL
Containment:	Not reported

(Continued) **S105631026**

What Happened:	Not reported
Type:	CHEMICAL
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	1993
Agency:	CHEM OIL
Incident Date:	4/22/93/07:00
Admin Agency:	Not reported
Amount:	170 BBLS
Contained:	NO
Site Type:	Not reported
E Date:	Not reported
Substance:	LIGHT ATMOSPHERE GAS OIL
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:	TANK 310 OVERFLOWED. REASON UNKNOWN.

A5 **CHEM-OIL REFINERY (FORMER)** **FINDS** **1023259129**
Target **2020 WALNUT AVE** **N/A**
Property **SIGNAL HILL, CA 90806**

Site 5 of 22 in cluster A

Actual:
42 ft.

FINDS:

Registry ID: 110065483729

Environmental Interest/Information System
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A6 Target Property | **MACMILLAN RING FREE OIL CO INC**
2020 WALNUT ST.
SIGNAL HILL, CA 90806 | **EMI** | **S106834959**
N/A

Site 6 of 22 in cluster A

Actual: 42 ft.

EMI:

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	6700
Air District Name:	SC
SIC Code:	2911
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:	3
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

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	14198
Air District Name:	SC
SIC Code:	2911
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:	3
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	8
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers and Smllr Tons/Yr:	1

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	12
Air District Name:	SC
SIC Code:	2911
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:	3
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

Year:	1987

MACMILLAN RING FREE OIL CO INC (Continued) **S106834959**

County Code:	19
Air Basin:	SC
Facility ID:	800081
Air District Name:	SC
SIC Code:	2911
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:	43
Reactive Organic Gases Tons/Yr:	32
Carbon Monoxide Emissions Tons/Yr:	5
NOX - Oxides of Nitrogen Tons/Yr:	30
SOX - Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr:	3
Part. Matter 10 Micrometers and Smllr Tons/Yr:	3

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	17832
Air District Name:	SC
SIC Code:	2911
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:	3
Reactive Organic Gases Tons/Yr:	3
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:	1987
County Code:	19
Air Basin:	SC
Facility ID:	469
Air District Name:	SC
SIC Code:	2911
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:	3
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

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	5504
Air District Name:	SC
SIC Code:	2911
Air District Name:	SOUTH COAST AQMD

MACMILLAN RING FREE OIL CO INC (Continued) **S106834959**

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:	3
Carbon Monoxide Emissions Tons/Yr:	2
NOX - Oxides of Nitrogen Tons/Yr:	8
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	2
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	4798
Air District Name:	SC
SIC Code:	2911
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:	3
Reactive Organic Gases Tons/Yr:	3
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:	1987
County Code:	19
Air Basin:	SC
Facility ID:	18371
Air District Name:	SC
SIC Code:	2911
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:	3
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

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	8911
Air District Name:	SC
SIC Code:	2911
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:	3
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0

MACMILLAN RING FREE OIL CO INC (Continued) **S106834959**

SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	3959
Air District Name:	SC
SIC Code:	2911
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:	3
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

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	14276
Air District Name:	SC
SIC Code:	2911
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:	3
Reactive Organic Gases Tons/Yr:	3
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:	1987
County Code:	19
Air Basin:	SC
Facility ID:	2781
Air District Name:	SC
SIC Code:	2911
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

Year:	1987
County Code:	19

MACMILLAN RING FREE OIL CO INC (Continued) **S106834959**

Air Basin:	SC
Facility ID:	461
Air District Name:	SC
SIC Code:	2911
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:	3
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

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	24291
Air District Name:	SC
SIC Code:	2911
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:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	9000
Air District Name:	SC
SIC Code:	2911
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:	3
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

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	13180
Air District Name:	SC
SIC Code:	2911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported

MACMILLAN RING FREE OIL CO INC (Continued) **S106834959**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
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

A7 **CHMIRS** **S100180828**
Target Property **2020 WALNUT AVENUE** **N/A**
SIGNAL HILL, CA 90806

Site 7 of 22 in cluster A

Actual: 42 ft.

CHMIRS:

OES Incident Number:	14888
OES notification:	Not reported
OES Date:	7/30/1996
OES Time:	01:51:19 PM
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:	storm drain
Spill Site:	Not reported
Cleanup By:	chemoil and mesa environmental
Containment:	Not reported
What Happened:	Not reported
Type:	PETROLEUM
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	1996
Agency:	chemoil refining corp.
Incident Date:	1330/30 July96

(Continued) **S100180828**

Admin Agency:	Not reported
Amount:	unknown (small quantity)
Contained:	YES
Site Type:	REF
E Date:	Not reported
Substance:	oily water
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	NO
Number of Injuries:	NO
Number of Fatalities:	NO
#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:	suspect valve failed on piping causing leakage. leaked to driveway and down the street. small amount entered storm drain which leaks to hamilton bowl where it was contained.

A8 Target Property | **MIDNIGHT OIL** | **HAZNET** | **S112877168**
2020 WALNUT ST | **N/A**
SIGNAL HILL, CA 90806

Site 8 of 22 in cluster A

Actual: 42 ft.

HAZNET:

envid:	S112877168
Year:	1997
GEPAID:	CAC001242648
Contact:	KEVIN RAINES
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	10646 ALMOND ST
Mailing City,St,Zip:	FONTANA, CA 908020000
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Tons:	.0300
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

A9 Target Property | **CHEMOIL REF CORP (NSR USE ONLY**
2020 N WALNUT AV
SIGNAL HILL, CA 90806 | **SLIC** **1006011937**
EMI **N/A**

Site 9 of 22 in cluster A

Actual: 42 ft.

SLIC REG 4:

Region:	4
Facility Status:	Site Assessment
SLIC:	0453A
Substance:	TPH
Staff:	MZ

EMI:

Year:	1990
County Code:	19
Air Basin:	SC
Facility ID:	800273
Air District Name:	SC
SIC Code:	2911
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:	47
Reactive Organic Gases Tons/Yr:	30
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	23
SOX - Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr:	3
Part. Matter 10 Micrometers and Smllr Tons/Yr:	3

Year:	1993
County Code:	19
Air Basin:	SC
Facility ID:	800273
Air District Name:	SC
SIC Code:	2911
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:	123
Reactive Organic Gases Tons/Yr:	78
Carbon Monoxide Emissions Tons/Yr:	24
NOX - Oxides of Nitrogen Tons/Yr:	23
SOX - Oxides of Sulphur Tons/Yr:	7
Particulate Matter Tons/Yr:	8
Part. Matter 10 Micrometers and Smllr Tons/Yr:	8

Year:	1995
County Code:	19
Air Basin:	SC
Facility ID:	800273
Air District Name:	SC
SIC Code:	2911
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:	123
Reactive Organic Gases Tons/Yr:	78

CHEMOIL REF CORP (NSR USE ONLY (Continued) **1006011937**

Carbon Monoxide Emissions Tons/Yr:	24
NOX - Oxides of Nitrogen Tons/Yr:	23
SOX - Oxides of Sulphur Tons/Yr:	7
Particulate Matter Tons/Yr:	8
Part. Matter 10 Micrometers and Smllr Tons/Yr:	8

Year:	1996
County Code:	19
Air Basin:	SC
Facility ID:	800273
Air District Name:	SC
SIC Code:	2911
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:	800273
Air District Name:	SC
SIC Code:	2291
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:	800273
Air District Name:	SC
SIC Code:	2291
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

CHEMOIL REF CORP (NSR USE ONLY (Continued) **1006011937**

Year:	1999
County Code:	19
Air Basin:	SC
Facility ID:	800273
Air District Name:	SC
SIC Code:	2291
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:	800273
Air District Name:	SC
SIC Code:	2291
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:	800273
Air District Name:	SC
SIC Code:	2291
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

A10 Target Property | **FORMER CHEMOIL REFINERY (CURRENTLY VACANT LAND)** | **FINDS** | **1023365899**
2020 WALNUT | **N/A**
SIGNAL HILL, CA 90755

Site 10 of 22 in cluster A

Actual: 42 ft.

FINDS:

Registry ID: 110066634388

Environmental Interest/Information System
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A11 Target Property | **CHEM-OIL REFINERY (FORMER)** | **ENVIROSTOR** | **S100278394**
2020 WALNUT AVE | **SLIC** | **N/A**
SIGNAL HILL, CA 90806 | **CHMIRS**

Site 11 of 22 in cluster A

Actual: 42 ft.

ENVIROSTOR:

Facility ID:	71002155
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:	70
Senate:	33
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	33.79448
Longitude:	-118.1719
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	CAD008249435
Alias Type:	EPA Identification Number
Alias Name:	110018952579
Alias Type:	EPA (FRS #)
Alias Name:	71002155
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	Not reported
Completed Sub Area Name:	Not reported

CHEM-OIL REFINERY (FORMER) (Continued) **S100278394**

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

Facility ID: 19290040
Status: Refer: RWQCB
Status Date: 03/06/1995
Site Code: 400095
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 Cypress
Assembly: 70
Senate: 33
Special Program: * Site Char & Assess Grant (CERCLA 104)
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.79416
Longitude: -118.1722
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: * HYDROCARBON SOLVENTS * OIL/WATER SEPARATION SLUDGE * OTHER STILL BOTTOM WASTE * TANK BOTTOM WASTES * UNSPECIFIED AQUEOUS SOLUTION * WASTE OIL & MIXED OIL
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: MACMILLAN RING-FREE OIL CO INC (1)
Alias Type: Alternate Name
Alias Name: CAD008249435
Alias Type: EPA Identification Number
Alias Name: 110018952579
Alias Type: EPA (FRS #)
Alias Name: 400095
Alias Type: Project Code (Site Code)
Alias Name: 19290040
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: 03/06/1995

CHEM-OIL REFINERY (FORMER) (Continued) **S100278394**

Comments: Database Validation Program confirms NFA for DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 06/03/1991
Comments: Site should remain a BEP RWQCB LEAD PROJECT.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 04/30/1980
Comments: Facility Identified: IW Survey Questionnaire 12580. Questionnaire Received: More than 1,000 gallons/year waste.

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

SLIC:
Region: STATE
Facility Status: **Open - Assessment & Interim Remedial Action**
Status Date: 02/02/2010
Global Id: SL2047W2348
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number: Not reported
Latitude: 33.794797
Longitude: -118.170993
Case Type: Cleanup Program Site
Case Worker: JYP
Local Agency: Not reported
RB Case Number: 0453A
File Location: Regional Board
Potential Media Affected: Aquifer used for drinking water supply, Soil, Soil Vapor, Under Investigation
Potential Contaminants of Concern: Not reported
Site History: The former Chemoil refinery site encompasses two parcels: the Eastern Parcel encompasses approximately 2.5 and the Western Parcel encompasses approximately 5.7 acres. The Subject Property is situated in what is referred to as the Civic Center Neighborhood, and has been an open field since 2001. Subsurface investigations have been performed since 1985. Previous site investigations indicate that hydrocarbon-impacted soil extends from ground surface to the water table (approximately 17 feet to 42 feet below ground surface). Dissolved hydrocarbons (TPH diesel, TPH gasoline, benzene and several volatile and semi-volatile organic compounds) were reported in groundwater beneath the Subject Property with a general flow toward the south. The extent of light non-aqueous phase hydrocarbon liquid (LNAPL) has not been fully delineated beneath the Subject Property. RWQCB has directed the property owner to submit a technical report for soil and groundwater remediation pursuant to California Water

CHEM-OIL REFINERY (FORMER) (Continued) **S100278394**

Code Section 13267 Order. The property owner proosed a remedial design of a flow-through barrier along the western and southern boundaries, which is an in-situ bioremediation process of soil and groundwater remediation to degrade petroleum hydrocarbons in the subsurface. The Regioanl Board approved this interim remedial action plan (IRAP) on December 7, 2012. Implementation of the IRAP is on-going at the Site.

Click here to access the California GeoTracker records for this facility:

CHMIRS:

OES Incident Number:	120068
OES notification:	Not reported
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**28-OCT-91**
Property Use:	767
Agency Id Number:	19620
Agency Incident Number:	H-051-91
Time Notified:	1900
Time Completed:	2200
Surrounding Area:	400
Estimated Temperature:	50
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:	J. PETERSON 48
Report Date:	12-NOV-91
Facility Telephone:	213 426-7311
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:	28-OCT-91
Admin Agency:	Not reported
Amount:	Not reported
Contained:	Not reported
Site Type:	Not reported

CHEM-OIL REFINERY (FORMER) (Continued) **S100278394**

E Date:	07-AUG-92
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:	Y
Description:	Not reported

A12 Target Property **CHEMOIL REFINING CORP** **FINDS 1014680151**
2020 WALNUT AVE **ECHO N/A**
SIGNAL HILL, CA 90806

Site 12 of 22 in cluster A

Actual: 42 ft.

FINDS:

Registry ID: 110040985556

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.

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.

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.

HAZARDOUS AIR POLLUTANT MAJOR

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1014680151
Registry ID:	110040985556

CHEMOIL REFINING CORP (Continued) **1014680151**

DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110040985556

A13 **ERNS** **96370103**
Target Property **2020 WALNUT AVE** **N/A**
SIGNAL HILL, CA

Site 13 of 22 in cluster A

Actual: 42 ft.

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

A14 **SIGNAL HILL HOLDING CORP FORMERLY CHEMOI** **HAZNET** **S112999100**
Target Property **2020 WALNUT AVE** **N/A**
SIGNAL HILL, CA 90806

Site 14 of 22 in cluster A

Actual: 42 ft.

HAZNET:

envid:	S112999100
Year:	2006
GEPAID:	CAD008249435
Contact:	TED CHRESTENSEN/GENERAL MGR
Telephone:	5624276611
Mailing Name:	Not reported
Mailing Address:	2365 E SEPULVEDA BLVD
Mailing City,St,Zip:	LONG BEACH, CA 908101944
Gen County:	Not reported
TSD EPA ID:	CAD980884183
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station
Tons:	0.12
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	S112999100
Year:	2006
GEPAID:	CAD008249435
Contact:	TED CHRESTENSEN/GENERAL MGR
Telephone:	5624276611
Mailing Name:	Not reported
Mailing Address:	2365 E SEPULVEDA BLVD
Mailing City,St,Zip:	LONG BEACH, CA 908101944
Gen County:	Not reported
TSD EPA ID:	CAD980884183
TSD County:	Not reported
Waste Category:	Contaminated soil from site clean-up
Disposal Method:	Transfer Station
Tons:	0.12
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	S112999100
Year:	1998
GEPAID:	CAD008249435

SIGNAL HILL HOLDING CORP FORMERLY CHEMOI (Continued) **S112999100**

Contact:	SIGNAL HILL HOLDING CORP FORME
Telephone:	5624276611
Mailing Name:	Not reported
Mailing Address:	2365 E SEPULVEDA BLVD
Mailing City,St,Zip:	LONG BEACH, CA 908101944
Gen County:	Not reported
TSD EPA ID:	CAD009007626
TSD County:	Not reported
Waste Category:	Asbestos containing waste
Disposal Method:	Disposal, Land Fill
Tons:	29.4980
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	S112999100
Year:	1997
GEPAID:	CAD008249435
Contact:	SIGNAL HILL HOLDING CORP FORME
Telephone:	5624276611
Mailing Name:	Not reported
Mailing Address:	2365 E SEPULVEDA BLVD
Mailing City,St,Zip:	LONG BEACH, CA 908101944
Gen County:	Not reported
TSD EPA ID:	CAD009007626
TSD County:	Not reported
Waste Category:	Asbestos containing waste
Disposal Method:	Disposal, Land Fill
Tons:	269.6960
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	S112999100
Year:	1996
GEPAID:	CAD008249435
Contact:	SIGNAL HILL HOLDING CORP FORME
Telephone:	5624276611
Mailing Name:	Not reported
Mailing Address:	2365 E SEPULVEDA BLVD
Mailing City,St,Zip:	LONG BEACH, CA 908101944
Gen County:	Not reported
TSD EPA ID:	CAD000088252
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Transfer Station
Tons:	.2000
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
12 additional CA_HAZNET: record(s) in the EDR Site Report.

A15 Target Property | **CHEMOIL REFINERY (FORMER)** | **SLIC** | **S120762582**
2020 WALNUT AVENUE | **N/A**
SIGNAL HILL, CA 90755

Site 15 of 22 in cluster A

Actual: 42 ft.

SLIC:

Region:	STATE
Facility Status:	**Open - Site Assessment**
Status Date:	03/14/2017
Global Id:	T10000010213
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number:	Not reported
Latitude:	33.79563
Longitude:	-118.1727
Case Type:	Cleanup Program Site
Case Worker:	JYP
Local Agency:	Not reported
RB Case Number:	1391
File Location:	Not reported
Potential Media Affected:	Aquifer used for drinking water supply, Soil, Soil Vapor
Potential Contaminants of Concern:	Not reported
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

A16 Target Property | **MACMILLAN RING-FREE OIL CO** | **TSCA** | **1005930291**
2020 WALNUT AVE | **N/A**
SIGNAL HILL, GA 90806

Site 16 of 22 in cluster A

Actual: 42 ft.

Click this hyperlink while viewing on your computer to access additional TSCA detail in the EDR Site Report.

A17 Target Property | **CHEMOIL REFINING CORP** | **NPDES** | **S117697271**
2020 WALNUT AVE | **N/A**
SIGNAL HILL, CA 90755

Site 17 of 22 in cluster A

Actual: 42 ft.

NPDES:

Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	4
Regulatory Measure Id:	268331
Order No:	Not reported
Regulatory Measure Type:	Industrial
Place Id:	Not reported
WDID:	4 19I001839
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

CHEMOIL REFINING CORP (Continued) **S117697271**

Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	5/9/2008
PROCESSED DATE:	3/30/1992
STATUS CODE NAME:	Terminated
STATUS DATE:	3/30/1992
PLACE SIZE:	7
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Terry Goldman
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	310-424-8515
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Chemoil Refining Corp
OPERATOR ADDRESS:	2020 Walnut Ave
OPERATOR CITY:	Signal Hill
OPERATOR STATE:	California
OPERATOR ZIP:	90755
OPERATOR CONTACT NAME:	Terry Goldman
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	310-424-8515
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	Private Business
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	California
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	310-424-8515
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 DESRIPTION:	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:	Pacific Ocean
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	2911-Petroleum Refining
SECONDARY SIC:	Not reported

CHEMOIL REFINING CORP (Continued) **S117697271**

TERTIARY SIC: Not reported

A18
Target Property
Actual: 42 ft.

CHMIRS **S105642986**
N/A

2020 WALNUT AVE AT WESLEY
SIGNAL HILL, CA 90806

Site 18 of 22 in cluster A

CHMIRS:

OES Incident Number:	16915
OES notification:	Not reported
OES Date:	12/11/1996
OES Time:	12:08:23 PM
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:	storm drain system.
Spill Site:	Not reported
Cleanup By:	contractor in process
Containment:	Not reported
What Happened:	Not reported
Type:	PETROLEUM
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	1996
Agency:	chemoil
Incident Date:	1100 11 Dec 96
Admin Agency:	Not reported
Amount:	less than 1 bbl
Contained:	YES
Site Type:	OTHER
E Date:	Not reported
Substance:	gas oil
Unknown:	Not reported

(Continued) **S105642986**

Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	NO
Number of Injuries:	NO
Number of Fatalities:	NO
#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:	loose process drain lid leading to and oil overflowed due to excessive rainwater. went into storm collection bowl and contained at a pump station.

A19 **DON ANDERSON** **LOS ANGELES CO. HMS** **S119007658**
2185 WALNUT AVE **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 19 of 22 in cluster A

Relative:
Higher

Actual:
56 ft.

LOS ANGELES CO. HMS:

Region:	LA
Permit Category:	Not reported
Facility Id:	014321-014892
Facility Type:	Not reported
Facility Status:	Closed
Area:	1M
Permit Number:	Not reported
Permit Status:	Not reported

A20 **DON ANDERSON** **SWEEPS UST** **S106925442**
2185 WALNUT **N/A**
< 1/8 **SIGNAL HILL, CA 90800**
1 ft.

Site 20 of 22 in cluster A

Relative:
Higher

Actual:
56 ft.

SWEEPS UST:

Status:	Active
Comp Number:	14892
Number:	9
Board Of Equalization:	Not reported
Referral Date:	08-23-90
Action Date:	08-23-90
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

DON ANDERSON (Continued) **S106925442**

STG: Not reported
Content: Not reported
Number Of Tanks: Not reported

B21
SSE
< 1/8
0.005 mi.
24 ft.

BLAIN A L **EDR Hist Auto** **1009017640**
2000 ALAMITOS AV **N/A**
LONG BEACH, CA

Site 1 of 2 in cluster B

Relative:
Lower

Actual:
24 ft.

EDR Hist Auto

Year:	Name:	Type:
1931	BLAIN A L	GASOLINE AND OIL SERVICE STATIONS
1935	BLAIN A L	GASOLINE AND OIL SERVICE STATIONS
1939	BLAIN A L	GASOLINE AND OIL SERVICE STATIONS
1939	BLAIN A L	GASOLINE AND OIL SERVICE STATIONS
1944	BLAIN A L	GASOLINE AND OIL SERVICE STATIONS

A22
NW
< 1/8
0.005 mi.
26 ft.

P & M DIESEL **EDR Hist Auto** **1020362645**
2170 GUNDRY AVE **N/A**
LONG BEACH, CA 90755

Site 21 of 22 in cluster A

Relative:
Higher

Actual:
46 ft.

EDR Hist Auto

Year:	Name:	Type:
2002	P & M DIESEL	Engine Repair
2003	P & M DIESEL	Engine Repair
2004	P & M DIESEL	Engine Repair
2005	P & M DIESEL	Engine Repair
2006	P & M DIESEL	Engine Repair
2007	P & M DIESEL	Engine Repair
2008	P & M DIESEL	Engine Repair
2009	P & M DIESEL	Engine Repair
2010	P & M DIESEL	Engine Repair
2011	P & M DIESEL	Engine Repair
2012	P & M DIESEL	Engine Repair

A23
NW
< 1/8
0.005 mi.
26 ft.

P AND M DIESEL **RCRA-SQG** **1004675890**
2170 GUNDRY AVE **FINDS** **CAR000078402**
SIGNAL HILL, CA 90806 **ECHO**
HAZNET

Site 22 of 22 in cluster A

Relative:
Higher

Actual:
46 ft.

RCRA-SQG:

Date form received by agency:	07/19/2000
Facility name:	P AND M DIESEL
Facility address:	2170 GUNDRY AVE SIGNAL HILL, CA 90806
EPA ID:	CAR000078402
Contact:	MARK MULDEN
Contact address:	2170 GUNDRY AVE SIGNAL HILL, CA 90806

P AND M DIESEL (Continued) **1004675890**

Contact country: US
Contact telephone: (562) 985-0023
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: P AND M DIESEL
Owner/operator address: 2170 GUNDRY AVE
SIGNAL HILL, CA 90806
Owner/operator country: Not reported
Owner/operator telephone: (562) 985-0023
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

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

Violation Status: No violations found

FINDS:

Registry ID: 110002940541

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.

P AND M DIESEL (Continued) **1004675890**

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:	1004675890
Registry ID:	110002940541
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002940541

HAZNET:

envid:	1004675890
Year:	2008
GEPAID:	CAR000078402
Contact:	Not reported
Telephone:	5629890023
Mailing Name:	Not reported
Mailing Address:	2170 GUNDRY AVE
Mailing City,St,Zip:	SIGNAL HILL, CA 908060000
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:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.882
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	1004675890
Year:	2007
GEPAID:	CAR000078402
Contact:	Not reported
Telephone:	5629890023
Mailing Name:	Not reported
Mailing Address:	2170 GUNDRY AVE
Mailing City,St,Zip:	SIGNAL HILL, CA 908060000
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:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.08
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid: 1004675890

P AND M DIESEL (Continued) **1004675890**

Year:	2007
GEPAID:	CAR000078402
Contact:	Not reported
Telephone:	5629890023
Mailing Name:	Not reported
Mailing Address:	2170 GUNDRY AVE
Mailing City,St,Zip:	SIGNAL HILL, CA 908060000
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:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	1.15
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	1004675890
Year:	2004
GEPAID:	CAR000078402
Contact:	--
Telephone:	5629890023
Mailing Name:	Not reported
Mailing Address:	2170 GUNDRY AVE
Mailing City,St,Zip:	SIGNAL HILL, CA 908060000
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:	0.1
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

24
WNW
< 1/8
0.020 mi.
103 ft.

OCEAN IMPORTS **EDR Hist Auto** **1022163441**
2115 GUNDRY AVE **N/A**
LONG BEACH, CA 90755

Relative:
Lower

Actual:
40 ft.

EDR Hist Auto

Year:	Name:	Type:
2002	OCEAN IMPORTS	General Automotive Repair Shops
2003	OCEAN IMPORTS	General Automotive Repair Shops
2004	OCEAN IMPORTS	General Automotive Repair Shops
2005	OCEAN IMPORTS	General Automotive Repair Shops
2006	OCEAN IMPORTS	General Automotive Repair Shops
2007	OCEAN IMPORTS	General Automotive Repair Shops
2008	OCEAN IMPORTS	General Automotive Repair Shops
2009	OCEAN IMPORTS	General Automotive Repair Shops
2010	OCEAN IMPORTS	General Automotive Repair Shops
2011	OCEAN IMPORTS	General Automotive Repair Shops
2012	OCEAN IMPORTS	General Automotive Repair Shops
2013	OCEAN IMPORTS	General Automotive Repair Shops
2014	OCEAN IMPORTS	General Automotive Repair Shops

25 NE < 1/8 0.042 mi. 223 ft. | **UNIVERSAL CARE**
1600 E HILL ST
SIGNAL HILL, CA 90755 | **RCRA-SQG FINDS ECHO HAZNET** | **1006804877 CAR000114280**

Relative: Higher

Actual: 68 ft.

RCRA-SQG:

Date form received by agency:	04/02/2002
Facility name:	UNIVERSAL CARE
Facility address:	1600 E HILL ST SIGNAL HILL, CA 90806
EPA ID:	CAR000114280
Contact:	NELLY CRUZ
Contact address:	1600 E HILL ST SIGNAL HILL, CA 90806
Contact country:	US
Contact telephone:	(562) 714-6040
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:	HOWARD DAVIS
Owner/operator address:	1600 E HILL ST SIGNAL HILL, CA 90806
Owner/operator country:	Not reported
Owner/operator telephone:	(562) 714-6040
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

. Waste code: D001
. Waste name: IGNITABLE WASTE

Violation Status: No violations found

UNIVERSAL CARE (Continued) **1006804877**

FINDS:

Registry ID: 110013311816

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:	1006804877
Registry ID:	110013311816
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110013311816

HAZNET:

envid:	1006804877
Year:	2002
GEPAID:	CAR000114280
Contact:	ANN ONEAL
Telephone:	5629814004
Mailing Name:	Not reported
Mailing Address:	1600 E Hill St
Mailing City,St,Zip:	Signal Hill, CA 90806
Gen County:	Not reported
TSD EPA ID:	CAT080033681
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Disposal, Land Fill
Tons:	0.3
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

B26 **REED RALPH** **EDR Hist Auto** **1009049300**
SSE **1811 ALAMITOS AV** **N/A**
< 1/8 **LONG BEACH, CA**
0.049 mi.
258 ft. **Site 2 of 2 in cluster B**

Relative:
Lower

EDR Hist Auto

Year:	Name:	Type:
1931	REED RALPH	AUTOMOBILE REPAIRING

Actual:
18 ft.

27
South
< 1/8
0.050 mi.
262 ft.

UNKNOWN
1510 E 20TH ST
LONG BEACH, CA

UST **U003854665**
N/A

Relative:
Lower

Actual:
19 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:

Region:	LONG BEACH
Tanks:	1F
Tank Test:	Not reported
Leak Test:	Not reported
Tank Status:	Not reported

28
SW
< 1/8
0.054 mi.
283 ft.

MIRANDAS TRUCKING
1344 WESLEY DR
LONG BEACH, CA 90806

RCRA NonGen / NLR **1006805616**
FINDS **CAR000130096**
ECHO

Relative:
Lower

Actual:
21 ft.

RCRA NonGen / NLR:

Date form received by agency:	10/30/2002
Facility name:	MIRANDAS TRUCKING
Facility address:	1344 WESLEY DR LONG BEACH, CA 90806
EPA ID:	CAR000130096
Mailing address:	WESLEY DR LONG BEACH, CA 90806
Contact:	GREGORIO MIRANDA
Contact address:	WESLEY DR LONG BEACH, CA 90806
Contact country:	US
Contact telephone:	562-218-3315
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:	GREGORIO MIRANDA
Owner/operator address:	WESLEY DR LONG BEACH, CA 90806
Owner/operator country:	US
Owner/operator telephone:	562-218-3315
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/15/1998
Owner/Op end date:	Not reported

Owner/operator name:	GREGORIO MIRANDA
Owner/operator address:	WESLEY DR LONG BEACH, CA 90806
Owner/operator country:	US
Owner/operator telephone:	562-218-3315
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/15/1998
Owner/Op end date:	Not reported

MIRANDAS TRUCKING (Continued) **1006805616**

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:	Yes
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: 110014377469

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.

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Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1006805616
Registry ID:	110014377469
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110014377469

C29 **20TH STREET SCHOOL** **ENVIROSTOR** **S105628552**
SE **1777 EAST 20TH STREET** **SCH** **N/A**
< 1/8 **SIGNAL HILL, CA 90806**
0.062 mi.
328 ft. **Site 1 of 6 in cluster C**

Relative:
Lower

Actual:
32 ft.

ENVIROSTOR:

Facility ID:	19760020
Status:	Certified
Status Date:	06/28/2013
Site Code:	404216
Site Type:	School Cleanup

20TH STREET SCHOOL (Continued) **S105628552**

Site Type Detailed:	School
Acres:	1.99
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Javier Hinojosa
Supervisor:	Javier Hinojosa
Division Branch:	Cleanup Chatsworth
Assembly:	70
Senate:	33
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	33.79405
Longitude:	-118.1702
APN:	7216010902, 7216011912, 7216011913
Past Use:	* MISCELLANEOUS REPAIR SERVICES
Potential COC:	Asbestos Containing Materials (ACM Lead
Confirmed COC:	NONE SPECIFIED
Potential Description:	SOIL
Alias Name:	20TH STREET SCHOOL
Alias Type:	Alternate Name
Alias Name:	Jessie Elwin Nelson Academy
Alias Type:	Alternate Name
Alias Name:	LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-PROPOSED 20TH ST SCHOOL
Alias Type:	Alternate Name
Alias Name:	7216010902
Alias Type:	APN
Alias Name:	7216011912
Alias Type:	APN
Alias Name:	7216011913
Alias Type:	APN
Alias Name:	404216
Alias Type:	Project Code (Site Code)
Alias Name:	19760020
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	06/12/2001
Comments:	Final Approval Letter
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	4.15 Request
Completed Date:	07/23/2004
Comments:	Approved.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	08/13/2001
Comments:	Initial Study & Mitigated Negative Declaration

20TH STREET SCHOOL (Continued) **S105628552**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 10/08/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 07/09/2002
Comments: PEA Addendum submitted. Additional investigation and removal was eventually conducted.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Tech Memo
Completed Date: 07/26/2004
Comments: Additional info to the July 9, 2002 PEA Addendum requires no action from DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 06/30/2011
Comments: DTSC had previously determined that the Site, AKA the former GTE North property, required No Further Action. However, during a subsequent Site walk, the presence of a hydraulic lift and associated hydraulic tank were noted. Concurrent with the TMSRAI implementation at the 1778 E. 20th St. site, this hydraulic lift and associated hydraulic tank were removed under DTSC oversight. Also, affected soils surrounding this tank (containing hydraulic oil and no detectable Polychlorinated Biphenols) were excavated and disposed of off-Site. These activities contributed additional volume to soils that were not considered as part of the initial RAW, or included in the approved Revised TMSRAI which addressed only the southern Site parcel. Oversight costs were charged to the 1778 E. 20th St. project, AKA Jessie Elwin Nelson Academy.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan w/ESD
Completed Date: 01/06/2012
Comments: The site, AKA the former GTE North property, had previously received a No Further Action Required determination by DTSC. However, during a subsequent Site walk, the presence of a hydraulic lift and associated hydraulic tank were noted. Concurrent with the TMSRAI implementation, this hydraulic lift and associated hydraulic tank were removed under DTSC oversight. Also, affected soils surrounding this tank (containing hydraulic oil and no detectable Polychlorinated Biphenols) were excavated and disposed of off-Site. These activities contributed additional volume to soils that were not considered as part of the initial RAW, or included in the approved Revised TMSRAI which addressed only the southern Site parcel.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification

20TH STREET SCHOOL (Continued) **S105628552**

Completed Date:	06/28/2013
Comments:	Completion of the removal action was conducted together with the oversight of the adjacent 1778 20th St. site and all oversight charges were billed to that site code under an agreement with the LBUSD. The site has been redeveloped and serves as a parking lot for the new Jessie Elwin Nelson Academy.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	12/14/2004
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Public Participation
Completed Date:	02/19/2002
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	03/26/2001
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Public Participation
Completed Date:	02/08/2002
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

SCH:

Facility ID:	19760020
Site Type:	School Cleanup
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	1.99
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Javier Hinojosa
Supervisor:	Javier Hinojosa
Division Branch:	Cleanup Chatsworth
Site Code:	404216
Assembly:	70

20TH STREET SCHOOL (Continued) **S105628552**

Senate:	33
Special Program Status:	Not reported
Status:	Certified
Status Date:	06/28/2013
Restricted Use:	NO
Funding:	School District
Latitude:	33.79405
Longitude:	-118.1702
APN:	7216010902, 7216011912, 7216011913
Past Use:	* MISCELLANEOUS REPAIR SERVICES
Potential COC:	Asbestos Containing Materials (ACM, Lead
Confirmed COC:	NONE SPECIFIED
Potential Description:	SOIL
Alias Name:	20TH STREET SCHOOL
Alias Type:	Alternate Name
Alias Name:	Jessie Elwin Nelson Academy
Alias Type:	Alternate Name
Alias Name:	LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-PROPOSED 20TH ST SCHOOL
Alias Type:	Alternate Name
Alias Name:	7216010902
Alias Type:	APN
Alias Name:	7216011912
Alias Type:	APN
Alias Name:	7216011913
Alias Type:	APN
Alias Name:	404216
Alias Type:	Project Code (Site Code)
Alias Name:	19760020
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	06/12/2001
Comments:	Final Approval Letter
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	4.15 Request
Completed Date:	07/23/2004
Comments:	Approved.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	08/13/2001
Comments:	Initial Study & Mitigated Negative Declaration
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Design/Implementation Workplan
Completed Date:	10/08/2009
Comments:	Not reported
Completed Area Name:	PROJECT WIDE

20TH STREET SCHOOL (Continued) **S105628552**

Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 07/09/2002
Comments: PEA Addendum submitted. Additional investigation and removal was eventually conducted.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Tech Memo
Completed Date: 07/26/2004
Comments: Additional info to the July 9, 2002 PEA Addendum requires no action from DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 06/30/2011
Comments: DTSC had previously determined that the Site, AKA the former GTE North property, required No Further Action. However, during a subsequent Site walk, the presence of a hydraulic lift and associated hydraulic tank were noted. Concurrent with the TMSRAI implementation at the 1778 E. 20th St. site, this hydraulic lift and associated hydraulic tank were removed under DTSC oversight. Also, affected soils surrounding this tank (containing hydraulic oil and no detectable Polychlorinated Biphenols) were excavated and disposed of off-Site. These activities contributed additional volume to soils that were not considered as part of the initial RAW, or included in the approved Revised TMSRAI which addressed only the southern Site parcel. Oversight costs were charged to the 1778 E. 20th St. project, AKA Jessie Elwin Nelson Academy.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan w/ESD
Completed Date: 01/06/2012
Comments: The site, AKA the former GTE North property, had previously received a No Further Action Required determination by DTSC. However, during a subsequent Site walk, the presence of a hydraulic lift and associated hydraulic tank were noted. Concurrent with the TMSRAI implementation, this hydraulic lift and associated hydraulic tank were removed under DTSC oversight. Also, affected soils surrounding this tank (containing hydraulic oil and no detectable Polychlorinated Biphenols) were excavated and disposed of off-Site. These activities contributed additional volume to soils that were not considered as part of the initial RAW, or included in the approved Revised TMSRAI which addressed only the southern Site parcel.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 06/28/2013
Comments: Completion of the removal action was conducted together with the oversight of the adjacent 1778 20th St. site and all oversight charges were billed to that site code under an agreement with the LBUSD. The site has been redeveloped and serves as a parking lot for the new Jessie Elwin Nelson Academy.

20TH STREET SCHOOL (Continued) **S105628552**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 12/14/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Public Participation
Completed Date: 02/19/2002
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 03/26/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Public Participation
Completed Date: 02/08/2002
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

C30 **GTE LONG BEACH PLANT YARD NORTH** **LUST** **U003660043**
SE **1777 E 20TH ST** **UST** **N/A**
< 1/8 **LONG BEACH, CA** **HIST CORTESE**
0.093 mi.
491 ft. **Site 2 of 6 in cluster C**

Relative:
Lower

Actual:
31 ft.

LUST:

Region: STATE
Global Id: T0603703587
Latitude: 33.7937022
Longitude: -118.1703541
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 11/18/1996
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: YR
Local Agency: LOS ANGELES COUNTY
RB Case Number: I-10172
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Waste Oil / Motor / Hydraulic / Lubricating
Site History: Not reported

GTE LONG BEACH PLANT YARD NORTH (Continued) **U003660043**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603703587
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:	T0603703587
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

Status History:

Global Id:	T0603703587
Status:	Completed - Case Closed
Status Date:	11/18/1996

Global Id:	T0603703587
Status:	Open - Case Begin Date
Status Date:	09/24/1985

Global Id:	T0603703587
Status:	Open - Remediation
Status Date:	05/16/1989

Global Id:	T0603703587
Status:	Open - Site Assessment
Status Date:	04/01/1988

Global Id:	T0603703587
Status:	Open - Site Assessment
Status Date:	10/03/1988

Regulatory Activities:

Global Id:	T0603703587
Action Type:	Other
Date:	09/24/1985
Action:	Leak Reported

Global Id:	T0603703587
Action Type:	Other
Date:	09/24/1985
Action:	Leak Discovery

LUST REG 4:

GTE LONG BEACH PLANT YARD NORTH (Continued) **U003660043**

Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	I-10172	
Status:	Case Closed	
Substance:	Hydraulic Oil	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Groundwater	
Abatement Method Used at the Site:		Excavate and Dispose
Global ID:	T0603703587	
W Global ID:	Not reported	
Staff:	UNK	
Local Agency:	19000	
Cross Street:	Not reported	
Enforcement Type:	Not reported	
Date Leak Discovered:	9/24/1985	
Date Leak First Reported:		9/24/1985
Date Leak Record Entered:	12/31/1986	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	Not reported	
Date Case Last Changed on Database:		2/4/1997
Date the Case was Closed:		11/18/1996
How Leak Discovered:	Tank Closure	
How Leak Stopped:	Not reported	
Cause of Leak:	Overfill	
Leak Source:	Piping	
Operator:	HAMMOND, RUSS	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		6578.36691577366552891569700 68
Source of Cleanup Funding:		Piping
Preliminary Site Assessment Workplan Submitted:		4/1/1988
Preliminary Site Assessment Began:		10/3/1988
Pollution Characterization Began:		Not reported
Remediation Plan Submitted:		Not reported
Remedial Action Underway:		5/16/1989
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:	GTE CALIFORNIA INC.	
RP Address:	2849 FICUS STREET, CA301HKJ POMONA CA 91766	
Program:	LUST	
Lat/Long:	33.7937022 / -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	

GTE LONG BEACH PLANT YARD NORTH (Continued) **U003660043**

Summary: THE SITE USES HYDRAULIC HOISTS AND HYDRAULIC TANK TO SERVICEAND REPAIR GTE VEHICLES.

LONG BEACH UST:

DATA AS OF 02/25/2014:

Region:	LONG BEACH
Tanks:	0T
Tank Test:	Not reported
Leak Test:	Not reported
Tank Status:	Not reported

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	I-10172

C31 **GTE CALIFORNIA L.B. PLANT YD. SO.** **UST** **U003660044**
SE **1778 E 20TH ST** **N/A**
< 1/8 **LONG BEACH, CA**
0.093 mi.
491 ft. **Site 3 of 6 in cluster C**

Relative:
Lower

Actual:
31 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:

Region:	LONG BEACH
Tanks:	0T
Tank Test:	Not reported
Leak Test:	Not reported
Tank Status:	Not reported

C32 **JESSIE ELWIN NELSON ACADEMY** **ENVIROSTOR** **S104384577**
SE **1778 EAST 20TH STREET** **SCH** **N/A**
< 1/8 **SIGNAL HILL, CA 90806**
0.093 mi.
491 ft. **Site 4 of 6 in cluster C**

Relative:
Lower

Actual:
31 ft.

ENVIROSTOR:

Facility ID:	19760018
Status:	Certified / Operation & Maintenance
Status Date:	07/24/2015
Site Code:	404051
Site Type:	School Cleanup
Site Type Detailed:	School
Acres:	8
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Richard Allen
Supervisor:	Javier Hinojosa
Division Branch:	Cleanup Chatsworth
Assembly:	70
Senate:	33
Special Program:	Voluntary Cleanup Program

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	33.79233
Longitude:	-118.1682
APN:	7216013905, 7216013906, 7216013907, 7216013908, 7216013909, 7216013910
	Not reported
Past Use:	* MISCELLANEOUS REPAIR SERVICES, ABOVE GROUND STORAGE TANKS, MAINTENANCE / CLEANING, UNDERGROUND STORAGE TANKS, UTILITY - ELECTRIC, DRY CLEANING
Potential COC:	Arsenic Methane Polynuclear aromatic hydrocarbons (PAHs TPH-diesel TPH-gas TPH-MOTOR OIL TPH-Stoddard Solvent Arsenic TPH-diesel TPH-gas Cadmium and compounds Mercury and compounds Tetrachloroethylene (PCE TPH-Stoddard Solvent
Confirmed COC:	Arsenic TPH-diesel TPH-gas 30357-NO 30108-NO Arsenic Methane Polynuclear aromatic hydrocarbons (PAHs TPH-diesel TPH-gas TPH-MOTOR OIL 3002503-NO 30022-NO 3002503-NO
Potential Description:	SOIL, SV, OTH, SOIL, SV, IA, SOIL, SV, UE
Alias Name:	EIGHTH GRADE ACADEMY
Alias Type:	Alternate Name
Alias Name:	GTE LONG BEACH PLANT YARD- NORTH & SOUTH
Alias Type:	Alternate Name
Alias Name:	Jessie Elwin Nelson Academy
Alias Type:	Alternate Name
Alias Name:	LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-FORMER 8TH GRADE ACADEMY
Alias Type:	Alternate Name
Alias Name:	New Middle School at the Former GTE Site
Alias Type:	Alternate Name
Alias Name:	7216013905
Alias Type:	APN
Alias Name:	7216013906
Alias Type:	APN
Alias Name:	7216013907
Alias Type:	APN
Alias Name:	7216013908
Alias Type:	APN
Alias Name:	7216013909
Alias Type:	APN
Alias Name:	7216013910
Alias Type:	APN
Alias Name:	110033616157
Alias Type:	EPA (FRS #)
Alias Name:	7216-10-800
Alias Type:	Historical APN
Alias Name:	7216-11-800
Alias Type:	Historical APN
Alias Name:	7216-11-801
Alias Type:	Historical APN
Alias Name:	7216-13-801
Alias Type:	Historical APN
Alias Name:	7216-13-802
Alias Type:	Historical APN
Alias Name:	7216-13-803
Alias Type:	Historical APN
Alias Name:	7216-13-804

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Alias Type: Historical APN
Alias Name: 7216-13-805
Alias Type: Historical APN
Alias Name: 7216-13-806
Alias Type: Historical APN
Alias Name: 7216-13-807
Alias Type: Historical APN
Alias Name: 404051
Alias Type: Project Code (Site Code)
Alias Name: 19760018
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 03/29/2002
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 07/20/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation / Feasibility Study
Completed Date: 05/26/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Workplan
Completed Date: 08/16/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 04/18/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 02/15/2008
Comments: Not reported

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 02/04/2010
Comments: Not reported

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Completed Date: 06/19/2009
Comments: The document has been completed and the RP and consultant notified that the responses to DTSC's comments are satisfactory, and the document is approved.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 08/15/2008
Comments: DTSC issue comments on the G.W. monitoring reports and recommended additional g.w. monitoring for two more quarters.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/06/2008
Comments: Per District's consultant the fieldwork planned per the approved SSI has been completed.

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Design - Preliminary/Intermediate
Completed Date: 04/21/2009
Comments: Remedial Design for Methane Mitigation (60% complete Design) reviewed for methane mitigation system design compliance by Jesus Sotelo, DTSC structural engineer, and approved on 4/21/2009 Remedial Design for Methane Mitigation (60% complete Design) approved by Jesus Sotelo of DTSC on 4/21/2009. The document was also reviewed by the office of the state architect.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 4.15 Request
Completed Date: 07/23/2004
Comments: The District implemented a RAW approved by DTSC in July 2004 and committed to complete the remaining work, by signing the 4.15 Form.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 05/14/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Well Decommissioning Report
Completed Date: 02/04/2010
Comments: DTSC review revealed that wells were abandoned in accordance with City of Long Beach permit requirements and CA Department of Water Resources requirements. DTSC has no comments and approves the report as submitted.

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 08/10/2009
Comments: Not reported

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 08/17/2009
Comments: Workplan review completed. Workplan approved.

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 02/04/2010
Comments: DTSC concludes on the basis of confirmation sampling data submitted, that it appears that the soil excavation phase of the project has been completed, but awaits submission of the Removal Action Completion Report for final approval that the goals of the RAW have been achieved.

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 06/30/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan w/ESD
Completed Date: 01/06/2012
Comments: Not reported

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 06/18/2013
Comments: RACR approved with conditions, see details in 6/18/2013 approval letter to LBUSD.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 04/10/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 08/17/2000
Comments: Not reported

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 08/28/2014
Comments: Document accepted.

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Comments: document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: document accepted

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: Document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: Document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: Document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: document accpeted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/03/2014
Comments: document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/04/2014
Comments: Document accepted

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 08/29/2014
Comments: Document accepted.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Plan
Completed Date: 02/09/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 09/22/2014
Comments: Document accepted.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/01/2014
Comments: Document accepted.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 04/23/2015
Comments: O and M Received 1st Quarter 2015

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Plan Amendment
Completed Date: 05/19/2015
Comments: Document Accepted

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 08/12/2015
Comments: Reviewed report, found to be acceptable and approved

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/05/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Quality Assurance Workplan
Completed Date: 03/16/2016

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 02/28/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 08/17/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 02/28/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/27/2017
Comments: Complete

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 06/18/2004
Comments: Sharon signed 6/18/04

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 12/22/2014
Comments: site visit to verify O&M operations.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inactive Status Letter
Completed Date: 07/27/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inactive Status Letter
Completed Date: 01/11/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Public Participation
Completed Date: 02/08/2002
Comments: Not reported

Completed Area Name: PROJECT WIDE

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 04/20/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 05/01/2007
Comments: Sent Master Agreement to district for signature

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operation & Maintenance Order/Agreement
Completed Date: 04/13/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 02/20/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 08/28/2014
Comments: Not reported

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 06/28/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Notice of Exemption
Completed Date: 07/20/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 06/22/2015
Comments: Met with Jacquelyn Roberts, Edward Che, Steven Harrison, Kevin Hall, Taamer Refaat, and Javier Hinojosa. Reviewed O and M plan and walked around the school to observe monthly inspection.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Environmental Impact Report
Completed Date: 07/06/2004
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

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

SCH:

Facility ID:	19760018
Site Type:	School Cleanup
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	8
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Richard Allen
Supervisor:	Javier Hinojosa
Division Branch:	Cleanup Chatsworth
Site Code:	404051
Assembly:	70
Senate:	33
Special Program Status:	Voluntary Cleanup Program
Status:	Certified / Operation & Maintenance
Status Date:	07/24/2015
Restricted Use:	NO
Funding:	School District
Latitude:	33.79233
Longitude:	-118.1682
APN:	7216013905, 7216013906, 7216013907, 7216013908, 7216013909, 7216013910 Not reported
Past Use:	* MISCELLANEOUS REPAIR SERVICES, ABOVE GROUND STORAGE TANKS, MAINTENANCE / CLEANING, UNDERGROUND STORAGE TANKS, UTILITY - ELECTRIC, DRY CLEANING
Potential COC:	Arsenic, Methane, Polynuclear aromatic hydrocarbons (PAHs, TPH-diesel, TPH-gas, TPH-MOTOR OIL, TPH-Stoddard Solvent, Arsenic, TPH-diesel, TPH-gas, Cadmium and compounds, Mercury and compounds, Tetrachloroethylene (PCE, TPH-Stoddard Solvent
Confirmed COC:	Arsenic, TPH-diesel, TPH-gas, 30357-NO, 30108-NO, , Arsenic, Arsenic, Methane, Polynuclear aromatic hydrocarbons (PAHs, TPH-diesel, TPH-gas, TPH-MOTOR OIL, 3002503-NO, , 30022-NO, 30022-NO, 3002503-NO
Potential Description:	SOIL, SV, OTH, SOIL, SV, IA, SOIL, SV, UE
Alias Name:	EIGHTH GRADE ACADEMY
Alias Type:	Alternate Name
Alias Name:	GTE LONG BEACH PLANT YARD- NORTH & SOUTH
Alias Type:	Alternate Name
Alias Name:	Jessie Elwin Nelson Academy
Alias Type:	Alternate Name
Alias Name:	LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-FORMER 8TH GRADE ACADEMY
Alias Type:	Alternate Name
Alias Name:	New Middle School at the Former GTE Site

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Alias Type:	Alternate Name
Alias Name:	7216013905
Alias Type:	APN
Alias Name:	7216013906
Alias Type:	APN
Alias Name:	7216013907
Alias Type:	APN
Alias Name:	7216013908
Alias Type:	APN
Alias Name:	7216013909
Alias Type:	APN
Alias Name:	7216013910
Alias Type:	APN
Alias Name:	110033616157
Alias Type:	EPA (FRS #)
Alias Name:	7216-10-800
Alias Type:	Historical APN
Alias Name:	7216-11-800
Alias Type:	Historical APN
Alias Name:	7216-11-801
Alias Type:	Historical APN
Alias Name:	7216-13-801
Alias Type:	Historical APN
Alias Name:	7216-13-802
Alias Type:	Historical APN
Alias Name:	7216-13-803
Alias Type:	Historical APN
Alias Name:	7216-13-804
Alias Type:	Historical APN
Alias Name:	7216-13-805
Alias Type:	Historical APN
Alias Name:	7216-13-806
Alias Type:	Historical APN
Alias Name:	7216-13-807
Alias Type:	Historical APN
Alias Name:	404051
Alias Type:	Project Code (Site Code)
Alias Name:	19760018
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	03/29/2002
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Removal Action Workplan
Completed Date:	07/20/2004
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Investigation / Feasibility Study
Completed Date:	05/26/2004
Comments:	Not reported

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Workplan
Completed Date: 08/16/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 04/18/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 02/15/2008
Comments: Not reported

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 02/04/2010
Comments: Not reported

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 06/19/2009
Comments: The document has been completed and the RP and consultant notified that the responses to DTSC's comments are satisfactory, and the document is approved.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 08/15/2008
Comments: DTSC issue comments on the G.W. monitoring reports and recommended additional g.w. monitoring for two more quarters.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/06/2008
Comments: Per District's consultant the fieldwork planned per the approved SSI has been completed.

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Design - Preliminary/Intermediate
Completed Date: 04/21/2009
Comments: Remedial Design for Methane Mitigation (60% complete Design) reviewed for methane mitigation system design compliance by Jesus Sotelo, DTSC structural engineer, and approved on 4/21/2009 Remedial Design for Methane Mitigation (60% complete Design) approved by Jesus Sotelo of DTSC on 4/21/2009. The document was also reviewed by the office of the state architect.

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 4.15 Request
Completed Date: 07/23/2004
Comments: The District implemented a RAW approved by DTSC in July 2004 and committed to complete the remaining work, by signing the 4.15 Form.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 05/14/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Well Decommissioning Report
Completed Date: 02/04/2010
Comments: DTSC review revealed that wells were abandoned in accordance with City of Long Beach permit requirements and CA Department of Water Resources requirements. DTSC has no comments and approves the report as submitted.

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 08/10/2009
Comments: Not reported

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 08/17/2009
Comments: Workplan review completed. Workplan approved.

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 02/04/2010
Comments: DTSC concludes on the basis of confirmation sampling data submitted, that it appears that the soil excavation phase of the project has been completed, but awaits submission of the Removal Action Completion Report for final approval that the goals of the RAW have been achieved.

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 06/30/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan w/ESD
Completed Date: 01/06/2012
Comments: Not reported

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 06/18/2013
Comments: RACR approved with conditions, see details in 6/18/2013 approval letter to LBUSD.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 04/10/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 08/17/2000
Comments: Not reported

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 08/28/2014
Comments: Document accepted.

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: document accepted

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: Document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: Document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Completed Date: 05/27/2014
Comments: Document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/27/2014
Comments: document accpeted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/03/2014
Comments: document accepted

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/04/2014
Comments: Document accepted

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 08/29/2014
Comments: Document accepted.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Plan
Completed Date: 02/09/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 09/22/2014
Comments: Document accepted.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/01/2014
Comments: Document accepted.

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 04/23/2015
Comments: O and M Received 1st Quarter 2015

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Plan Amendment
Completed Date: 05/19/2015
Comments: Document Accepted

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 08/12/2015
Comments: Reviewed report, found to be acceptable and approved

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/05/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Quality Assurance Workplan
Completed Date: 03/16/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 02/28/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 08/17/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 02/28/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/27/2017
Comments: Complete

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Completed Date: 06/18/2004
Comments: Sharon signed 6/18/04

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 12/22/2014
Comments: site visit to verify O&M operations.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inactive Status Letter
Completed Date: 07/27/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inactive Status Letter
Completed Date: 01/11/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Public Participation
Completed Date: 02/08/2002
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 04/20/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 05/01/2007
Comments: Sent Master Agreement to district for signature

Completed Area Name: Nelson Academy (Former GTE Site) soil gas OU
Completed Sub Area Name: Not reported
Completed Document Type: Operation & Maintenance Order/Agreement
Completed Date: 04/13/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 02/20/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 08/28/2014
Comments: Not reported

JESSIE ELWIN NELSON ACADEMY (Continued) **S104384577**

Completed Area Name: Nelson Academy (Former GTE Site) soil OU
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 06/28/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Notice of Exemption
Completed Date: 07/20/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 06/22/2015
Comments: Met with Jacquelyn Roberts, Edward Che, Steven Harrison, Kevin Hall, Taamer Refaat, and Javier Hinojosa. Reviewed O and M plan and walked around the school to observe monthly inspection.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Environmental Impact Report
Completed Date: 07/06/2004
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

C33 **MODERN CLEANERS** **RCRA NonGen / NLR** **1000216488**
SE **1730 E 20 ST** **FINDS** **CAD033609116**
< 1/8 **SIGNAL HILL, CA 90806** **ECHO**
0.096 mi. **HAZNET**
508 ft. **Site 5 of 6 in cluster C**

Relative:
Lower

Actual:
30 ft.

RCRA NonGen / NLR:
Date form received by agency: 06/19/1986
Facility name: MODERN CLEANERS
Facility address: 1730 E 20 ST
SIGNAL HILL, CA 90806
EPA ID: CAD033609116
Mailing address: E TWENTY
SIGNAL HILL, CA 90806
Contact: ENVIRONMENTAL MANAGER
Contact address: 1730 E TWENTY
SIGNAL HILL, CA 90806
Contact country: US
Contact telephone: (213) 439-2424
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator

MODERN CLEANERS (Continued) **1000216488**

Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	KERR EDWARD
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
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
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: 110002643051

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.

MODERN CLEANERS (Continued) **1000216488**

ECHO:

Envid:	1000216488
Registry ID:	110002643051
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002643051

HAZNET:

envid:	1000216488
Year:	1999
GEPAID:	CAD033609116
Contact:	Not reported
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	1730 E 20TH ST
Mailing City,St,Zip:	SIGNAL HILL, CA 908065811
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Tank bottom waste
Disposal Method:	Recycler
Tons:	3.1275
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	1000216488
Year:	1993
GEPAID:	CAD033609116
Contact:	Not reported
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	1730 E 20TH ST
Mailing City,St,Zip:	SIGNAL HILL, CA 908065811
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:	0.41999999999
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

C34 **MODERN CLEANERS INC** **HIST UST** **U001566104**
SE **1730 E 20TH ST** **N/A**
< 1/8 **SIGNAL HILL, CA 90806**
0.096 mi.
508 ft. **Site 6 of 6 in cluster C**

Relative:
Lower

Actual:
30 ft.

HIST UST:

File Number:	00028046
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00028046.pdf
Region:	STATE
Facility ID:	00000000380
Facility Type:	Other
Other Type:	DRY CLEAN
Contact Name:	Not reported
Telephone:	2134392424

MODERN CLEANERS INC (Continued) **U001566104**

Owner Name:	MODERN CLEANERS INC.
Owner Address:	1730 E 20TH ST
Owner City,St,Zip:	SIGNAL HILL, CA 90806
Total Tanks:	0004
Tank Num:	001
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00000650
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000220
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	004
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00000065
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Click here for Geo Tracker PDF:

D35 **KALIBUR ENGINEERING INC** **RCRA-SQG** **1000246334**
NW **1361 E HILL ST** **FINDS** **CAD982044190**
< 1/8 **LONG BEACH, CA 90806** **ECHO**
0.115 mi. **HAZNET**
605 ft. **Site 1 of 3 in cluster D**

Relative:
Higher

Actual:
52 ft.

RCRA-SQG:

Date form received by agency:	09/30/1987
Facility name:	KALIBUR ENGINEERING INC
Facility address:	1361 E HILL ST LONG BEACH, CA 90806
EPA ID:	CAD982044190
Mailing address:	E HILL ST LONG BEACH, CA 90806
Contact:	ENVIRONMENTAL MANAGER

KALIBUR ENGINEERING INC (Continued) **1000246334**

Contact address:	1361 E HILL ST LONG BEACH, CA 90806
Contact country:	US
Contact telephone:	(213) 424-0461
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:	KALIBUR ENGINEERING INC
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
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
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: 110002786735

KALIBUR ENGINEERING INC (Continued) **1000246334**

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:	1000246334
Registry ID:	110002786735
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002786735

HAZNET:

envid:	1000246334
Year:	1995
GEPAID:	CAD982044190
Contact:	KALIBUR ENGINEERING INC
Telephone:	3104240461
Mailing Name:	Not reported
Mailing Address:	PO BOX 9054
Mailing City,St,Zip:	LONG BEACH, CA 908100000
Gen County:	Not reported
TSD EPA ID:	CAD000088252
TSD County:	Not reported
Waste Category:	Other inorganic solid waste
Disposal Method:	Transfer Station
Tons:	4.8750
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	1000246334
Year:	1995
GEPAID:	CAD982044190
Contact:	KALIBUR ENGINEERING INC
Telephone:	3104240461
Mailing Name:	Not reported
Mailing Address:	PO BOX 9054
Mailing City,St,Zip:	LONG BEACH, CA 908100000
Gen County:	Not reported
TSD EPA ID:	CAD000088252
TSD County:	Not reported
Waste Category:	Unspecified aqueous solution
Disposal Method:	Transfer Station
Tons:	1.0500
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

E36 WNW 1/8-1/4 0.134 mi. 706 ft. | **HUST-ITT CORP 1247 HILL SIGNAL HILL, CA 90806** | **LUST HIST CORTESE** | **S102431578 N/A**

Site 1 of 2 in cluster E

Relative: Lower

Actual: 39 ft.

LUST:

Region:	STATE
Global Id:	T0603705359
Latitude:	33.797398
Longitude:	-118.175616
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/27/1995
Lead Agency:	LOS ANGELES COUNTY
Case Worker:	JOA
Local Agency:	LOS ANGELES COUNTY
RB Case Number:	R-22253
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Aviation
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603705359
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:	T0603705359
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

Status History:

Global Id:	T0603705359
Status:	Completed - Case Closed
Status Date:	01/27/1995

Global Id:	T0603705359
Status:	Open - Case Begin Date
Status Date:	01/27/1995

Regulatory Activities:

Global Id:	T0603705359
Action Type:	Other
Date:	07/24/1996
Action:	Leak Reported

HUST-ITT CORP (Continued) **S102431578**

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	R-22253
Status:	Case Closed
Substance:	1
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Groundwater
Abatement Method Used at the Site:	Not reported
Global ID:	T0603705359
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:	7/24/1996
Date Leak Record Entered:	8/27/1996
Date Confirmation Began:	Not reported
Date Leak Stopped:	Not reported
Date Case Last Changed on Database:	7/24/1996
Date the Case was Closed:	1/27/1995
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):	7592.923308584456945663899526 3
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:	HUST-ITT CORP
RP Address:	1580 INDUSTRIAL AVE., NORCO CA 91760-2946
Program:	LUST
Lat/Long:	33.7973272 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported

HUST-ITT CORP (Continued) **S102431578**

Assigned Name: Not reported
Summary: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: R-22253

D37
WNW
1/8-1/4
0.137 mi.
724 ft.

Relative:
Lower

Actual:
41 ft.

HUSK-ITT CORPORATION **HIST UST** **U001566074**
1247 EAST HILL STREET **N/A**
SIGNAL HILL, CA 90806

Site 2 of 3 in cluster D

HIST UST:
File Number: 0002EDBC
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002EDBC.pdf
Region: STATE
Facility ID: 00000068684
Facility Type: Other
Other Type: MANUFACTURING
Contact Name: MIKE MONTGOMERY
Telephone: 2134261785
Owner Name: SHELBY R. HUSKEY
Owner Address: 1247 EAST HILL STREET
Owner City,St,Zip: SIGNAL HILL, CA 90806
Total Tanks: 0002

Tank Num: 001
Container Num: 1
Year Installed: 1981
Tank Capacity: 00005000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: X
Leak Detection: Pressure Test

Tank Num: 002
Container Num: 2
Year Installed: 1981
Tank Capacity: 00005000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Pressure Test

Click here for Geo Tracker PDF:

F38 NNE 1/8-1/4 0.140 mi. 737 ft. | **LONG BEACH USD SIGNAL HILL ELEM**
2285 WALNUT AVENUE
LONG BEACH, CA 90806 | **RCRA-SQG** | **1000231615**
CAD981421258

Site 1 of 3 in cluster F

Relative: Higher

Actual: 84 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	LONG BEACH USD SIGNAL HILL ELEM
Facility address:	2285 WALNUT AVENUE LONG BEACH, CA 90806
EPA ID:	CAD981421258
Mailing address:	151 EAST TWENTY SEVENTH STREET LONG BEACH, CA 90806
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
Legal status:	District
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	LONG BEACH UNIFIED SCHOOL DISTRICT
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	District
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

LONG BEACH USD SIGNAL HILL ELEM (Continued) **1000231615**

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:	06/16/1986
Site name:	LONG BEACH USD SIGNAL HILL ELEM
Classification:	Large Quantity Generator
Violation Status:	No violations found

39
West
1/8-1/4
0.154 mi.
815 ft.

FILE ONLY **UST** **U003661116**
2150 ORANGE AVE **N/A**
LONG BEACH, CA

Relative:
Lower

Actual:
28 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:

Region:	LONG BEACH
Tanks:	0T
Tank Test:	Not reported
Leak Test:	Not reported
Tank Status:	Not reported

F40
NNE
1/8-1/4
0.161 mi.
850 ft.

MATTHEWS GARAGE **RCRA-SQG** **1000409376**
2300 WALNUT AVE SUITE E **FINDS** **CAD981441744**
SIGNAL HILL, CA 90806 **ECHO**

Site 2 of 3 in cluster F

Relative:
Higher

Actual:
87 ft.

RCRA-SQG:

Date form received by agency:	09/04/1986
Facility name:	MATTHEWS GARAGE
Facility address:	2300 WALNUT AVE SUITE E SIGNAL HILL, CA 90806
EPA ID:	CAD981441744
Mailing address:	WALNUT AVE SUITE E SIGNAL HILL, CA 90806
Contact:	ENVIRONMENTAL MANAGER
Contact address:	2300 WALNUT AVE SUITE E SIGNAL HILL, CA 90806
Contact country:	US
Contact telephone:	(213) 424-2431
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

MATTHEWS GARAGE (Continued) **1000409376**

Owner/Operator Summary:

Owner/operator name:	BILL WOLFE OWNER
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
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
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: 110009536635

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.

MATTHEWS GARAGE (Continued) **1000409376**

ECHO:
Envid: 1000409376
Registry ID: 110009536635
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110009536635

F41 NNE 1/8-1/4 0.161 mi. 850 ft. **WALNUT INDUSTRIAL PARK** **RCRA-SQG 1000323342**
2300 WALNUT ST **FINDS CAD981163587**
SIGNAL HILL, CA 90806 **ECHO**

Site 3 of 3 in cluster F

Relative: Higher

Actual: 87 ft.

RCRA-SQG:
Date form received by agency: 11/18/1985
Facility name: WALNUT INDUSTRIAL PARK
Facility address: 2300 WALNUT ST
SIGNAL HILL, CA 90806
EPA ID: CAD981163587
Mailing address: 1700 E OCEAN BLVD
LONG BEACH, CA 90802
Contact: ENVIRONMENTAL MANAGER
Contact address: 2300 WALNUT ST
SIGNAL HILL, CA 90806
Contact country: US
Contact telephone: (213) 435-4321
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: RHODA FREEMAN
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
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
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

WALNUT INDUSTRIAL PARK (Continued) **1000323342**

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: 110002679628

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: 1000323342
Registry ID: 110002679628
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002679628

42
SSE
1/8-1/4
0.166 mi.
875 ft.

LONG BEACH BUILDING MATERIAL **CA FID UST** **S101618104**
1851 E 019TH ST **N/A**
LONG BEACH, CA 90806

Relative:
Lower

Actual:
9 ft.

CA FID UST:
Facility ID: 19056686
Regulated By: UTNKA
Regulated ID: 00041527
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 2135991381
Mail To: Not reported
Mailing Address: 1851 E 019TH ST
Mailing Address 2: Not reported
Mailing City,St,Zip: LONG BEACH 90806
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported

LONG BEACH BUILDING MATERIAL (Continued) **S101618104**

NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

D43
NW
1/8-1/4
0.169 mi.
891 ft.

TERRA EXPLORATION & PRODUCTION CO **UST** **U003661697**
1250 E Z-23RD ST **N/A**
LONG BEACH, CA

Site 3 of 3 in cluster D

Relative:
Higher

Actual:
56 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:
Region: LONG BEACH
Tanks: 0T
Tank Test: Not reported
Leak Test: Not reported
Tank Status: Not reported

44
WSW
1/8-1/4
0.178 mi.
938 ft.

GREATER OPEN DOOR **UST** **U003661115**
2053 ORANGE AVE **N/A**
LONG BEACH, CA

Relative:
Lower

Actual:
24 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:
Region: LONG BEACH
Tanks: 0T
Tank Test: Not reported
Leak Test: Not reported
Tank Status: Not reported

E45
WNW
1/8-1/4
0.187 mi.
988 ft.

EXCEL PAVING CO. **UST** **U003660815**
2230 LEMON AVE **N/A**
LONG BEACH, CA 90806

Site 2 of 2 in cluster E

Relative:
Lower

Actual:
38 ft.

UST:
Facility ID: 19-060-1357
Permitting Agency: LONG BEACH, CITY OF
Latitude: 33.799162
Longitude: -118.17678

Facility ID: Not reported
Permitting Agency: Long Beach Environmental Heath
Latitude: 33.79781
Longitude: -118.17813

LONG BEACH UST:
Region: LONG BEACH
Tanks: Not reported

EXCEL PAVING CO. (Continued) **U003660815**

Tank Test: Not reported
Leak Test: Not reported
Tank Status: Not reported

DATA AS OF 02/25/2014:
Region: LONG BEACH
Tanks: 2T
Tank Test: 09/11/98
Leak Test: 09/11/98
Tank Status: Not reported

G46
ESE
1/8-1/4
0.190 mi.
1001 ft.

SO CAL MILITARY ACADEMY **SWEEPS UST** **S106932314**
2065 CHERRY AVE **N/A**
LONG BEACH, CA

Site 1 of 2 in cluster G

Relative:
Higher

Actual:
64 ft.

SWEEPS UST:
Status: Active
Comp Number: 13039
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

G47
ESE
1/8-1/4
0.190 mi.
1001 ft.

SO.CAL. MILITARY ACADEMY/VACANT (SH) **UST** **U003920387**
2065 CHERRY AVE **N/A**
LONG BEACH, CA

Site 2 of 2 in cluster G

Relative:
Higher

Actual:
64 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:
Region: LONG BEACH
Tanks: 0T
Tank Test: Not reported
Leak Test: Not reported
Tank Status: Not reported

H48 NW 1/8-1/4 0.213 mi. 1123 ft. | **HAWK INDUSTRIES INC**
1245 E 23RD ST
LONG BEACH, CA | **UST EMI WDS** | **U003660046 N/A**

Site 1 of 3 in cluster H

Relative: Higher

Actual: 64 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:

Region:	LONG BEACH
Tanks:	0T
Tank Test:	Not reported
Leak Test:	Not reported
Tank Status:	Not reported

EMI:

Year:	1993
County Code:	19
Air Basin:	SC
Facility ID:	12561
Air District Name:	SC
SIC Code:	3599
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:	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:	1995
County Code:	19
Air Basin:	SC
Facility ID:	12561
Air District Name:	SC
SIC Code:	3599
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:	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

WDS:

Facility ID:	4 19I015453
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

HAWK INDUSTRIES INC (Continued) **U003660046**

	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:	5624240709
Facility Contact:	HEIDI HAUR
Agency Name:	HAWK IND INC
Agency Address:	1245 E. 23RD ST
Agency City,St,Zip:	LONG BEACH 90806
Agency Contact:	HEIDI HAUR
Agency Telephone:	5624240709
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 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.

H49 **HAWK INDUSTRIES INC** **HIST UST** **U001566072**
NW **1245 E 23RD ST** **NPDES** **N/A**
1/8-1/4 **LONG BEACH, CA 90806**
0.213 mi.
1123 ft. **Site 2 of 3 in cluster H**

Relative:
Higher

Actual:
64 ft.

HIST UST:

File Number:	00026D88
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00026D88.pdf
Region:	STATE
Facility ID:	00000003746
Facility Type:	Other
Other Type:	Not reported
Contact Name:	DEE MILLER
Telephone:	2135940206
Owner Name:	HAWK INDUSTRIES, INC
Owner Address:	1245 E. 23RD ST
Owner City,St,Zip:	LONG BEACH, CA 90806
Total Tanks:	0002

HAWK INDUSTRIES INC (Continued) **U001566072**

Tank Num:	001
Container Num:	1267
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	002
Container Num:	1245
Year Installed:	Not reported
Tank Capacity:	00000500
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	None

Click here for Geo Tracker PDF:

NPDES:

Npdes Number:	CAS000001
Facility Status:	Active
Agency Id:	0
Region:	4
Regulatory Measure Id:	190939
Order No:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	4 19I015453
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	10/26/1999
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Hawk Industries
Discharge Address:	1245 E 23rd St
Discharge City:	Long Beach
Discharge State:	California
Discharge Zip:	90806
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY 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 NAME:	Not reported

HAWK INDUSTRIES INC (Continued) **U001566072**

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 NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	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 DESRIPTION:	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 NAME:	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
Facility Status:	Not reported
Agency Id:	Not reported
Region:	4
Regulatory Measure Id:	190939
Order No:	Not reported
Regulatory Measure Type:	Industrial
Place Id:	Not reported
WDID:	4 19I015453
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

HAWK INDUSTRIES INC (Continued) **U001566072**

Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	5/9/2008
PROCESSED DATE:	10/26/1999
STATUS CODE NAME:	Active
STATUS DATE:	10/26/1999
PLACE SIZE:	84216
PLACE SIZE UNIT:	SqFt
FACILITY CONTACT NAME:	Dan Allshouse
FACILITY CONTACT TITLE:	VP
FACILITY CONTACT PHONE:	562-424-0709
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	dallshouse@aol.com
OPERATOR NAME:	Hawk Industries
OPERATOR ADDRESS:	1245 E 23rd St
OPERATOR CITY:	Long Beach
OPERATOR STATE:	California
OPERATOR ZIP:	90806
OPERATOR CONTACT NAME:	Hena Katzmann Lee
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	562-424-0709
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	henalee@HAWKINDUSTRIES.COM
OPERATOR TYPE:	Private Business
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	California
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	562-424-0709
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 DESRIPTION:	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:	Los Angeles River
CERTIFIER NAME:	Dan Allshouse
CERTIFIER TITLE:	Service Manager
CERTIFICATION DATE:	28-JUL-15
PRIMARY SIC:	3533-Oil and Gas Field Machinery and Equipment
SECONDARY SIC:	Not reported

HAWK INDUSTRIES INC (Continued) **U001566072**

TERTIARY SIC: Not reported

I50 **LONG BEACH BLDG MATERIAL CO** **LUST** **S104159957**
SE **1851 19TH ST E** **HIST CORTESE** **N/A**
1/8-1/4 **LONG BEACH, CA 90806**
0.214 mi.
1129 ft. **Site 1 of 2 in cluster I**

Relative:
Lower

Actual:
21 ft.

LUST:

Region:	STATE
Global Id:	T0603701836
Latitude:	33.791887
Longitude:	-118.168891
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	11/06/2001
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	JFL
Local Agency:	LONG BEACH, CITY OF
RB Case Number:	908061034
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603701836
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Global Id:	T0603701836
Contact Type:	Regional Board Caseworker
Contact Name:	JOE F. LUERA
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4TH STREET, SUITE 200
City:	LOS ANGELES
Email:	joe.luera@waterboards.ca.gov
Phone Number:	Not reported

Status History:

Global Id:	T0603701836
Status:	Completed - Case Closed
Status Date:	11/06/2001

Global Id:	T0603701836
Status:	Open - Case Begin Date
Status Date:	01/05/1994

Global Id:	T0603701836
Status:	Open - Remediation

LONG BEACH BLDG MATERIAL CO (Continued) **S104159957**

Status Date: 04/21/1996

Global Id: T0603701836
Status: Open - Remediation
Status Date: 02/01/2001

Global Id: T0603701836
Status: Open - Site Assessment
Status Date: 04/01/1994

Regulatory Activities:
Global Id: T0603701836
Action Type: ENFORCEMENT
Date: 03/16/2001
Action: * Historical Enforcement

Global Id: T0603701836
Action Type: Other
Date: 06/27/1994
Action: Leak Reported

Global Id: T0603701836
Action Type: Other
Date: 01/05/1994
Action: Leak Discovery

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: 908061034
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Groundwater
Abatement Method Used at the Site: Excavate and Dispose
Global ID: T0603701836
W Global ID: Not reported
Staff: JFL
Local Agency: 19060
Cross Street: GARDENIA
Enforcement Type: EF
Date Leak Discovered: 1/5/1994
Date Leak First Reported: 6/27/1994
Date Leak Record Entered: 4/27/1995
Date Confirmation Began: Not reported
Date Leak Stopped: Not reported
Date Case Last Changed on Database: 1/21/2002
Date the Case was Closed: 11/6/2001
How Leak Discovered: Subsurface Monitoring
How Leak Stopped: Not reported
Cause of Leak: Corrosion
Leak Source: Tank
Operator: Not reported

LONG BEACH BLDG MATERIAL CO (Continued) **S104159957**

Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	6515.917790160919225054916125 3
Source of Cleanup Funding:	Tank
Preliminary Site Assessment Workplan Submitted:	Not reported
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	4/1/1994
Remediation Plan Submitted:	4/21/1996
Remedial Action Underway:	2/1/2001
Post Remedial Action Monitoring Began:	Not reported
Enforcement Action Date:	3/16/2001
Historical Max MTBE Date:	8/11/2000
Hist Max MTBE Conc in Groundwater:	434
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:	MR. EARL BARKER
RP Address:	P.O. BOX 6535
Program:	LUST
Lat/Long:	33.7917402 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	1C1
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Assigned Name:	Not reported
Summary:	SAMPLING WILL NOT BE DONE IN 4Q/98 UNTIL CORRECTIVE ACTION IS IMPLEMENTED; 7/15/00 2ND QTR GW MON RPT 2000; 10/15/00 3RD QTR GW MON RPT 2000; 1/15/01 4TH QTR GW MON RPT 2000

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	908061034

I51 **LONG BEACH BUILDING MATERIALS** **UST** **U001566087**
SE **1851 E 19TH ST** **SWEEPS UST** **N/A**
1/8-1/4 **LONG BEACH, CA** **HIST UST**
0.214 mi.
1129 ft. **Site 2 of 2 in cluster I**

Relative:
Lower

Actual:
21 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:

Region:	LONG BEACH
Tanks:	0T
Tank Test:	Not reported
Leak Test:	Not reported
Tank Status:	Not reported

SWEEPS UST:

Status:	Not reported
Comp Number:	41527

LONG BEACH BUILDING MATERIALS (Continued) **U001566087**

Number:	Not reported
Board Of Equalization:	44-013544
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	19-060-041527-000001
Tank Status:	Not reported
Capacity:	6000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	2

Status:	Not reported
Comp Number:	41527
Number:	Not reported
Board Of Equalization:	44-013544
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	19-060-041527-000002
Tank Status:	Not reported
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	DIESEL
Number Of Tanks:	Not reported

HIST UST:

File Number:	00027637
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00027637.pdf
Region:	STATE
Facility ID:	00000041527
Facility Type:	Other
Other Type:	BUILDING MATERIALS
Contact Name:	JOSEPH T. BARKER
Telephone:	2135991381
Owner Name:	LONG BEACH BUILDING MATERIAL
Owner Address:	1851 EAST 19TH STREET
Owner City,St,Zip:	LONG BEACH, CA 90806
Total Tanks:	0002

Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	.25
Leak Detection:	None

Tank Num:	002
Container Num:	2

LONG BEACH BUILDING MATERIALS (Continued) **U001566087**

Year Installed:	Not reported
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	.25
Leak Detection:	None

Click here for Geo Tracker PDF:

H52 **HAWK INDUSTRIES, INC** **SWEEPS UST** **S106927149**
NW **1245 E 023RD ST** **N/A**
1/8-1/4 **LONG BEACH, CA 90806**
0.217 mi.
1148 ft. **Site 3 of 3 in cluster H**

Relative:
Higher

Actual:
60 ft.

SWEEPS UST:

Status:	Active
Comp Number:	3746
Number:	9
Board Of Equalization:	44-013308
Referral Date:	07-01-85
Action Date:	Not reported
Created Date:	02-29-88
Owner Tank Id:	1267
SWRCB Tank Id:	19-060-003746-000001
Tank Status:	A
Capacity:	Not reported
Active Date:	07-01-85
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	2

Status:	Active
Comp Number:	3746
Number:	9
Board Of Equalization:	44-013308
Referral Date:	07-01-85
Action Date:	Not reported
Created Date:	02-29-88
Owner Tank Id:	1245
SWRCB Tank Id:	19-060-003746-000002
Tank Status:	A
Capacity:	500
Active Date:	07-01-85
Tank Use:	M.V. FUEL
STG:	P
Content:	LEADED
Number Of Tanks:	Not reported

53 NNE 1/8-1/4 0.226 mi. 1191 ft.	**CARLOS GUZMAN INC 1619 E CRESTON PL SIGNAL HILL, CA 90806**	**RCRA-SQG FINDS ECHO**	**1000160197 CAD981970841**

Relative: Higher

Actual: 102 ft.

RCRA-SQG:

Date form received by agency:	05/14/1997
Facility name:	CARLOS GUZMAN INC
Facility address:	1619 E CRESTON PL SIGNAL HILL, CA 90806
EPA ID:	CAD981970841
Contact:	CINDY GUZMAN
Contact address:	1619 E CRESTON PL SIGNAL HILL, CA 90806
Contact country:	US
Contact telephone:	(310) 427-8497
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:	CARLOS GUZMAN
Owner/operator address:	1619 E CRESTON PLACE SIGNAL HILL, CA 90806
Owner/operator country:	Not reported
Owner/operator telephone:	(310) 427-8497
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
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

CARLOS GUZMAN INC (Continued) **1000160197**

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: 110002760165

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: 1000160197
Registry ID: 110002760165
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002760165

54
ESE
1/8-1/4
0.232 mi.
1227 ft.

JOHN OSBORNE CO
1990 CHERRY AVE
LONG BEACH, CA 90806

RCRA-SQG **1000305788**
FINDS **CAD981991763**
ECHO

Relative:
Lower

Actual:
40 ft.

RCRA-SQG:
Date form received by agency: 03/02/1987
Facility name: JOHN OSBORNE CO
Facility address: 1990 CHERRY AVE
LONG BEACH, CA 90806
EPA ID: CAD981991763
Contact: ENVIRONMENTAL MANAGER
Contact address: 1990 CHERRY AVE
LONG BEACH, CA 90806
Contact country: US
Contact telephone: (213) 494-5127
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

JOHN OSBORNE CO (Continued) **1000305788**

hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	JOHN OSBORN
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
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
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: 110009541433

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

JOHN OSBORNE CO (Continued) **1000305788**

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:	1000305788
Registry ID:	110009541433
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110009541433

J55 **NORTH FLANK OF THE HILL SITE** **US BROWNFIELDS** **1016352510**
ENE **2192 CHERRY AVE** **FINDS** **N/A**
1/8-1/4 **SIGNAL HILL, CA 90755**
0.234 mi.
1233 ft. **Site 1 of 3 in cluster J**

Relative:
Higher

Actual:
125 ft.

US BROWNFIELDS:

Property Name:	NORTH FLANK OF THE HILL SITE
Recipient Name:	Signal Hill, City of
Grant Type:	Assessment
Property Number:	Not reported
Parcel size:	32
Latitude:	33.79677
Longitude:	-118.167704
HCM Label:	Not reported
Map Scale:	Not reported
Point of Reference:	Not reported
Highlights:	Not reported
Datum:	Not reported
Acres Property ID:	14388
IC Data Access:	Not reported
Start Date:	Not reported
Redev Completition Date:	Not reported
Completed Date:	Not reported
Acres Cleaned Up:	Not reported
Cleanup Funding:	Not reported
Cleanup Funding Source:	Not reported
Assessment Funding:	Not reported
Assessment Funding Source:	Not reported
Redevelopment Funding:	Not reported
Redev. Funding Source:	Not reported
Redev. Funding Entity Name:	Not reported
Redevelopment Start Date:	Not reported
Assessment Funding Entity:	Not reported
Cleanup Funding Entity:	Not reported
Grant Type:	N/A
Accomplishment Type:	Phase I Environmental Assessment
Accomplishment Count:	0
Cooperative Agreement Number:	98966801
Start Date:	06/30/2001 00:00:00
Ownership Entity:	Not reported
Completion Date:	06/30/2001 00:00:00
Current Owner:	Not reported
Did Owner Change:	Not reported
Cleanup Required:	Not reported
Video Available:	Not reported

NORTH FLANK OF THE HILL SITE (Continued) **1016352510**

Photo Available:	Not reported
Institutional Controls Required:	Not reported
IC Category Proprietary Controls:	Not reported
IC Cat. Info. Devices:	Not reported
IC Cat. Gov. Controls:	Not reported
IC Cat. Enforcement Permit Tools:	Not reported
IC in place date:	Not reported
IC in place:	U
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Not reported
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Surface Water:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported
Arsenic cleaned up:	Not reported

NORTH FLANK OF THE HILL SITE (Continued) **1016352510**

Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
Nickel Cleaned Up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported
Property Description:	Not reported
Below Poverty Number:	989
Below Poverty Percent:	6.5%
Meidan Income:	4278
Meidan Income Number:	2482
Meidan Income Percent:	2.6%
Vacant Housing Number:	144
Vacant Housing Percent:	44.6%
Unemployed Number:	456
Unemployed Percent:	14.1%

FINDS:

Registry ID: 110039553006

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

J56 ENE 1/8-1/4 0.234 mi. 1233 ft.

A&A SITE
2192 CHERRY AVE
SIGNAL HILL, CA 90755

Site 2 of 3 in cluster J

US BROWNFIELDS FINDS

1016352515
N/A

Relative: Higher

Actual: 125 ft.

US BROWNFIELDS:

Property Name:	A&A SITE
Recipient Name:	Signal Hill, City of
Grant Type:	Assessment
Property Number:	Not reported
Parcel size:	1.5
Latitude:	33.79677
Longitude:	-118.167704
HCM Label:	Not reported
Map Scale:	Not reported
Point of Reference:	Not reported
Highlights:	Not reported
Datum:	Not reported
Acres Property ID:	14390
IC Data Access:	Not reported
Start Date:	Not reported
Redev Completition Date:	Not reported
Completed Date:	Not reported
Acres Cleaned Up:	Not reported
Cleanup Funding:	Not reported
Cleanup Funding Source:	Not reported
Assessment Funding:	Not reported
Assessment Funding Source:	Not reported
Redevelopment Funding:	Not reported
Redev. Funding Source:	Not reported
Redev. Funding Entity Name:	Not reported
Redevelopment Start Date:	Not reported
Assessment Funding Entity:	Not reported
Cleanup Funding Entity:	Not reported
Grant Type:	N/A
Accomplishment Type:	Phase I Environmental Assessment
Accomplishment Count:	0
Cooperative Agreement Number:	98966801
Start Date:	03/31/2001 00:00:00
Ownership Entity:	Not reported
Completion Date:	03/31/2001 00:00:00
Current Owner:	Not reported
Did Owner Change:	Not reported
Cleanup Required:	Not reported
Video Available:	Not reported
Photo Available:	Not reported
Institutional Controls Required:	Not reported
IC Category Proprietary Controls:	Not reported
IC Cat. Info. Devices:	Not reported
IC Cat. Gov. Controls:	Not reported
IC Cat. Enforcement Permit Tools:	Not reported
IC in place date:	Not reported
IC in place:	U
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported

A&A SITE (Continued) **1016352515**

Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Not reported
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Surface Water:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
Nickel Cleaned Up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported

A&A SITE (Continued) **1016352515**

Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported
Property Description:	Not reported
Below Poverty Number:	989
Below Poverty Percent:	6.5%
Meidan Income:	4278
Meidan Income Number:	2482
Meidan Income Percent:	2.6%
Vacant Housing Number:	144
Vacant Housing Percent:	44.6%
Unemployed Number:	456
Unemployed Percent:	14.1%

FINDS:

Registry ID: 110039553104

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

J57 **BOB LEE SITE** **US BROWNFIELDS** **1012235149**
ENE **2192 CHERRY AVE** **N/A**
1/8-1/4 **SIGNAL HILL, CA 90755**
0.234 mi.
1233 ft. **Site 3 of 3 in cluster J**

Relative:
Higher

Actual:
125 ft.

US BROWNFIELDS:

Property Name:	BOB LEE SITE
Recipient Name:	Signal Hill, City of
Grant Type:	Assessment
Property Number:	Not reported
Parcel size:	4
Latitude:	33.79677
Longitude:	-118.167704
HCM Label:	Not reported
Map Scale:	Not reported

BOB LEE SITE (Continued) **1012235149**

Point of Reference:	Not reported
Highlights:	Not reported
Datum:	Not reported
Acres Property ID:	14389
IC Data Access:	Not reported
Start Date:	Not reported
Redev Completition Date:	Not reported
Completed Date:	Not reported
Acres Cleaned Up:	Not reported
Cleanup Funding:	Not reported
Cleanup Funding Source:	Not reported
Assessment Funding:	Not reported
Assessment Funding Source:	Not reported
Redevelopment Funding:	Not reported
Redev. Funding Source:	Not reported
Redev. Funding Entity Name:	Not reported
Redevelopment Start Date:	Not reported
Assessment Funding Entity:	Not reported
Cleanup Funding Entity:	Not reported
Grant Type:	N/A
Accomplishment Type:	Phase I Environmental Assessment
Accomplishment Count:	0
Cooperative Agreement Number:	98966801
Start Date:	03/31/2001 00:00:00
Ownership Entity:	Not reported
Completion Date:	03/31/2001 00:00:00
Current Owner:	Not reported
Did Owner Change:	Not reported
Cleanup Required:	Not reported
Video Available:	Not reported
Photo Available:	Not reported
Institutional Controls Required:	Not reported
IC Category Proprietary Controls:	Not reported
IC Cat. Info. Devices:	Not reported
IC Cat. Gov. Controls:	Not reported
IC Cat. Enforcement Permit Tools:	Not reported
IC in place date:	Not reported
IC in place:	U
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported

BOB LEE SITE (Continued) **1012235149**

Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Not reported
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Surface Water:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
Nickel Cleaned Up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported

BOB LEE SITE (Continued) **1012235149**

Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported
Property Description:	Not reported
Below Poverty Number:	989
Below Poverty Percent:	6.5%
Meidan Income:	4278
Meidan Income Number:	2482
Meidan Income Percent:	2.6%
Vacant Housing Number:	144
Vacant Housing Percent:	44.6%
Unemployed Number:	456
Unemployed Percent:	14.1%

K58 **NAKAMURA #63** **AST** **A100422603**
NNE **1776 CRESTON AVE** **N/A**
1/8-1/4 **SIGNAL HILL, CA 90755**
0.243 mi.
1281 ft. **Site 1 of 2 in cluster K**

Relative:
Higher

Actual:
114 ft.

AST:

Certified Unified Program Agencies:	Not reported
Owner:	THE TERMO COMPANY
Total Gallons:	Not reported
CERSID:	10155219
Facility ID:	Not reported
Business Name:	The Termo Company
Phone:	(562) 595-7401
Fax:	(562) 426-2769
Mailing Address:	PO BOX 2767
Mailing Address City:	LONG BEACH
Mailing Address State:	CA
Mailing Address Zip Code:	90801
Operator Name:	THE TERMO COMPANY
Operator Phone:	(562) 595-7401
Owner Phone:	(562) 595-7401
Owner Mail Address:	P O BOX 2767
Owner State:	CA
Owner Zip Code:	90801
Owner Country:	United States
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

K59 NNE 1/8-1/4 0.245 mi. 1291 ft. | **REEDY-DUBOIS LEASE**
1792 E CRESTON ST
SIGNAL HILL, CA 90755

SWEEPS UST | **S102058139**
LOS ANGELES CO. HMS | **N/A**

Site 2 of 2 in cluster K

Relative: Higher

Actual: 118 ft.

SWEEPS UST:

Status:	Active
Comp Number:	9205
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:	009398-009205
Facility Type:	Not reported
Facility Status:	Closed
Area:	1M
Permit Number:	Not reported
Permit Status:	Not reported

L60 North 1/8-1/4 0.248 mi. 1311 ft. | **BASIN VALVE CO**
1500 E BURNETT ST
SIGNAL HILL, CA 90806

RCRA-SQG | **1000255526**
FINDS | **CAD094001294**
ECHO
HAZNET

Site 1 of 2 in cluster L

Relative: Higher

Actual: 95 ft.

RCRA-SQG:

Date form received by agency:	08/01/1986
Facility name:	BASIN VALVE CO
Facility address:	1500 E BURNETT ST SIGNAL HILL, CA 90806
EPA ID:	CAD094001294
Mailing address:	PO BOX 1227 LONG BEACH, CA 90801
Contact:	ENVIRONMENTAL MANAGER
Contact address:	1500 E BURNETT ST SIGNAL HILL, CA 90806
Contact country:	US
Contact telephone:	(213) 424-8108
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

BASIN VALVE CO (Continued) **1000255526**

waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CONTROL SPECIALIST INC
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
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
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: 110002664153

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.

BASIN VALVE CO (Continued) **1000255526**

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000255526
Registry ID:	110002664153
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002664153

HAZNET:

envid:	1000255526
Year:	2005
GEPAID:	CAD094001294
Contact:	ALAN WALSH VP FINANCE & ADMIN
Telephone:	5624279358
Mailing Name:	Not reported
Mailing Address:	1500 E BURNETT ST
Mailing City,St,Zip:	SIGNAL HILL, CA 908063516
Gen County:	Not reported
TSD EPA ID:	NVT330010000
TSD County:	Not reported
Waste Category:	Other inorganic solid waste
Disposal Method:	Disposal, Other
Tons:	0.49
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	1000255526
Year:	2005
GEPAID:	CAD094001294
Contact:	ALAN WALSH VP FINANCE & ADMIN
Telephone:	5624279358
Mailing Name:	Not reported
Mailing Address:	1500 E BURNETT ST
Mailing City,St,Zip:	SIGNAL HILL, CA 908063516
Gen County:	Not reported
TSD EPA ID:	NVT330010000
TSD County:	Not reported
Waste Category:	Other inorganic solid waste
Disposal Method:	Disposal, Land Fill
Tons:	1.2
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	1000255526
Year:	2004
GEPAID:	CAD094001294
Contact:	ALAN WALSH VP FINANCE & ADMIN
Telephone:	5624279358
Mailing Name:	Not reported
Mailing Address:	1500 E BURNETT ST
Mailing City,St,Zip:	SIGNAL HILL, CA 908063516
Gen County:	Not reported
TSD EPA ID:	NVT330010000

BASIN VALVE CO (Continued) **1000255526**

TSD County:	Not reported
Waste Category:	Other inorganic solid waste
Disposal Method:	Disposal, Land Fill
Tons:	0.37
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	1000255526
Year:	2004
GEPAID:	CAD094001294
Contact:	ALAN WALSH VP FINANCE & ADMIN
Telephone:	5624279358
Mailing Name:	Not reported
Mailing Address:	1500 E BURNETT ST
Mailing City,St,Zip:	SIGNAL HILL, CA 908063516
Gen County:	Not reported
TSD EPA ID:	NVT330010000
TSD County:	Not reported
Waste Category:	Other inorganic solid waste
Disposal Method:	Disposal, Other
Tons:	0.97
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	1000255526
Year:	2004
GEPAID:	CAD094001294
Contact:	ALAN WALSH VP FINANCE & ADMIN
Telephone:	5624279358
Mailing Name:	Not reported
Mailing Address:	1500 E BURNETT ST
Mailing City,St,Zip:	SIGNAL HILL, CA 908063516
Gen County:	Not reported
TSD EPA ID:	NVT330010000
TSD County:	Not reported
Waste Category:	Other inorganic solid waste
Disposal Method:	Not reported
Tons:	0.9
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
18 additional CA_HAZNET: record(s) in the EDR Site Report.

L61 **BOB HILL CRANE COMPANY** **LUST** **S105034552**
North **1444 BURNETT ST E** **N/A**
1/4-1/2 **SIGNAL HILL, CA 90806**
0.288 mi.
1522 ft. **Site 2 of 2 in cluster L**

Relative:
Higher

Actual:
98 ft.

LUST:

Region:	STATE
Global Id:	T0603703324
Latitude:	33.8005631
Longitude:	-118.1736433

BOB HILL CRANE COMPANY (Continued) **S105034552**

Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	07/24/1996
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	YR
Local Agency:	LOS ANGELES COUNTY
RB Case Number:	I-08365
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603703324
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:	T0603703324
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

Status History:

Global Id:	T0603703324
Status:	Completed - Case Closed
Status Date:	07/24/1996

Global Id:	T0603703324
Status:	Open - Case Begin Date
Status Date:	09/29/1986

Global Id:	T0603703324
Status:	Open - Site Assessment
Status Date:	04/15/1988

Regulatory Activities:

Global Id:	T0603703324
Action Type:	Other
Date:	09/29/1986
Action:	Leak Reported

LUST REG 4:

Region:	4

BOB HILL CRANE COMPANY (Continued) **S105034552**

Regional Board:	04
County:	Los Angeles
Facility Id:	I-08365
Status:	Case Closed
Substance:	Gasoline
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Soil
Abatement Method Used at the Site:	Excavate and Treat
Global ID:	T0603703324
W Global ID:	Not reported
Staff:	UNK
Local Agency:	19000
Cross Street:	WALNUT
Enforcement Type:	Not reported
Date Leak Discovered:	Not reported
Date Leak First Reported:	9/29/1986
Date Leak Record Entered:	9/8/1987
Date Confirmation Began:	Not reported
Date Leak Stopped:	Not reported
Date Case Last Changed on Database:	2/2/1995
Date the Case was Closed:	7/24/1996
How Leak Discovered:	Not reported
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):	6238.025035452219587734031194 3
Source of Cleanup Funding:	UNK
Preliminary Site Assessment Workplan Submitted:	Not reported
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	4/15/1988
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:	Yes
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	BLANK RP
RP Address:	1390 BURNETT ST STE B, LONG BEACH, 90806
Program:	LUST
Lat/Long:	33.8005631 / -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

M62 South 1/4-1/2 0.289 mi. 1528 ft. | **KL GAS & OIL AUTO REPAIR**
1601 E PACIFIC COAST HWY
LONG BEACH, CA 90806 | **LUST**
SWEEPS UST
CA FID UST | **S101588350**
N/A

Site 1 of 3 in cluster M

Relative: Lower

Actual: 19 ft.

LUST:

Region:	STATE
Global Id:	T0603777036
Latitude:	33.790137
Longitude:	-118.171695
Case Type:	LUST Cleanup Site
Status:	Open - Site Assessment
Status Date:	05/29/1997
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	JC
Local Agency:	LONG BEACH, CITY OF
RB Case Number:	908061389
LOC Case Number:	TTPR0023173
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline, Diesel
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603777036
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Global Id:	T0603777036
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

Status History:

Global Id:	T0603777036
Status:	Open - Case Begin Date
Status Date:	05/27/1997

Global Id:	T0603777036
Status:	Open - Site Assessment
Status Date:	05/29/1997

Regulatory Activities:

Global Id:	T0603777036
Action Type:	ENFORCEMENT
Date:	03/18/2015
Action:	Referral to Regional Board

KL GAS & OIL AUTO REPAIR (Continued) **S101588350**

Global Id: T0603777036
Action Type: ENFORCEMENT
Date: 04/01/2015
Action: Staff Letter

Global Id: T0603777036
Action Type: ENFORCEMENT
Date: 08/04/2015
Action: Health and Safety Code Section 25296.10(c)

Global Id: T0603777036
Action Type: ENFORCEMENT
Date: 03/18/2015
Action: Referral to Regional Board

Global Id: T0603777036
Action Type: Other
Date: 01/20/1998
Action: Leak Reported

Global Id: T0603777036
Action Type: RESPONSE
Date: 04/24/2017
Action: Other Report / Document

Global Id: T0603777036
Action Type: RESPONSE
Date: 07/15/2017
Action: Soil and Water Investigation Report

Global Id: T0603777036
Action Type: RESPONSE
Date: 08/28/1997
Action: Tank Removal Report / UST Sampling Report

Global Id: T0603777036
Action Type: ENFORCEMENT
Date: 11/18/2016
Action: Health and Safety Code Section 25296.10(c)

Global Id: T0603777036
Action Type: ENFORCEMENT
Date: 01/20/2017
Action: Health and Safety Code Section 25296.10(c)

Global Id: T0603777036
Action Type: ENFORCEMENT
Date: 09/25/2015
Action: Health and Safety Code Section 25296.10(c)

Global Id: T0603777036
Action Type: RESPONSE
Date: 05/15/2015
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T0603777036
Action Type: RESPONSE

KL GAS & OIL AUTO REPAIR (Continued) **S101588350**

Date: 09/15/2015
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T0603777036
Action Type: RESPONSE
Date: 02/20/2017
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T0603777036
Action Type: ENFORCEMENT
Date: 03/08/2017
Action: Health and Safety Code Section 25296.10(c)

Global Id: T0603777036
Action Type: ENFORCEMENT
Date: 04/11/2001
Action: 13267 Requirement

Global Id: T0603777036
Action Type: RESPONSE
Date: 10/15/2016
Action: Site Assessment Report

Global Id: T0603777036
Action Type: RESPONSE
Date: 11/02/2015
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0603777036
Action Type: ENFORCEMENT
Date: 10/16/2012
Action: Letter - Notice

Global Id: T0603777036
Action Type: Other
Date: 05/27/1997
Action: Leak Discovery

Global Id: T0603777036
Action Type: RESPONSE
Date: 10/01/2015
Action: Correspondence

Global Id: T0603777036
Action Type: RESPONSE
Date: 01/15/2016
Action: Soil and Water Investigation Report

Global Id: T0603777036
Action Type: RESPONSE
Date: 01/17/2017
Action: Correspondence

SWEEPS UST:
Status: Active
Comp Number: 22360

KL GAS & OIL AUTO REPAIR (Continued) **S101588350**

Number:	2
Board Of Equalization:	Not reported
Referral Date:	03-23-92
Action Date:	03-23-92
Created Date:	03-23-92
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

CA FID UST:

Facility ID:	19056654
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	3105997337
Mail To:	Not reported
Mailing Address:	1601 E PACIFIC COAST HWY
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LONG BEACH 90806
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

M63 **U-HAUL MOVING CENTER #713-62** **LUST** **S103891173**
South **1600 PACIFIC COAST HWY E** **ENF** **N/A**
1/4-1/2 **LONG BEACH, CA 90806**
0.297 mi.
1569 ft. **Site 2 of 3 in cluster M**

Relative:
Lower

Actual:
19 ft.

LUST:

Region:	STATE
Global Id:	T0603701840
Latitude:	33.7898073
Longitude:	-118.1721791
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/13/2009
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	GK
Local Agency:	LONG BEACH, CITY OF
RB Case Number:	908061089
LOC Case Number:	Not reported
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603701840
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Global Id:	T0603701840
Contact Type:	Regional Board Caseworker
Contact Name:	GREGG KWEY
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 WEST 4TH ST. SUITE 200- 1ST FLOOR
City:	R4 UNKNOWN, LOS ANGELES
Email:	gkwey@waterboards.ca.gov
Phone Number:	2135766702

Status History:

Global Id:	T0603701840
Status:	Completed - Case Closed
Status Date:	01/13/2009

Global Id:	T0603701840
Status:	Open - Case Begin Date
Status Date:	06/10/1991

Global Id:	T0603701840
Status:	Open - Remediation
Status Date:	03/16/2001

Global Id:	T0603701840
Status:	Open - Remediation
Status Date:	11/05/2002

Global Id:	T0603701840
Status:	Open - Remediation
Status Date:	11/12/2002

Global Id:	T0603701840
Status:	Open - Remediation
Status Date:	05/05/2003

Global Id:	T0603701840
Status:	Open - Remediation
Status Date:	07/28/2003

Global Id:	T0603701840
Status:	Open - Remediation
Status Date:	12/11/2003

Global Id:	T0603701840
Status:	Open - Remediation

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

Status Date: 01/15/2004

Global Id: T0603701840
Status: Open - Remediation
Status Date: 07/20/2004

Global Id: T0603701840
Status: Open - Remediation
Status Date: 10/01/2004

Global Id: T0603701840
Status: Open - Remediation
Status Date: 12/23/2004

Global Id: T0603701840
Status: Open - Remediation
Status Date: 02/28/2005

Global Id: T0603701840
Status: Open - Remediation
Status Date: 12/02/2005

Global Id: T0603701840
Status: Open - Remediation
Status Date: 03/09/2006

Global Id: T0603701840
Status: Open - Remediation
Status Date: 04/13/2006

Global Id: T0603701840
Status: Open - Remediation
Status Date: 07/12/2006

Global Id: T0603701840
Status: Open - Remediation
Status Date: 01/11/2007

Global Id: T0603701840
Status: Open - Remediation
Status Date: 04/16/2007

Global Id: T0603701840
Status: Open - Remediation
Status Date: 07/30/2007

Global Id: T0603701840
Status: Open - Remediation
Status Date: 10/22/2007

Global Id: T0603701840
Status: Open - Remediation
Status Date: 01/15/2008

Global Id: T0603701840
Status: Open - Site Assessment
Status Date: 06/10/1991

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

Global Id: T0603701840
Status: Open - Site Assessment
Status Date: 08/18/2000

Regulatory Activities:

Global Id: T0603701840
Action Type: ENFORCEMENT
Date: 08/13/1999
Action: Staff Letter

Global Id: T0603701840
Action Type: ENFORCEMENT
Date: 06/14/2002
Action: Staff Letter

Global Id: T0603701840
Action Type: Other
Date: 07/15/1991
Action: Leak Reported

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2008
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/15/2006
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: ENFORCEMENT
Date: 10/25/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0603701840
Action Type: ENFORCEMENT
Date: 04/19/2004
Action: Site Visit / Inspection / Sampling

Global Id: T0603701840
Action Type: RESPONSE

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

Date: 10/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 10/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 10/15/2006
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 04/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 04/15/2006
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: ENFORCEMENT
Date: 06/09/2004
Action: Staff Letter

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/30/2007
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2007
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 04/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 04/15/2007
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 10/15/2007
Action: Remedial Progress Report

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/15/2003
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 04/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: REMEDIATION
Date: 10/15/2001
Action: Soil Vapor Extraction (SVE)

Global Id: T0603701840
Action Type: RESPONSE
Date: 10/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 04/15/2003
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/31/2002
Action: Other Report / Document

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 10/15/2002
Action: Final Remedial Action Report / Corrective Action Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 04/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 10/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2004
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: ENFORCEMENT

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

Date: 12/15/2000
Action: Staff Letter

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2003
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 10/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/15/2004
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 04/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 10/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 10/15/2003
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: ENFORCEMENT
Date: 12/02/2008
Action: Notification - Preclosure

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

Global Id: T0603701840
Action Type: ENFORCEMENT
Date: 01/13/2009
Action: Closure/No Further Action Letter

Global Id: T0603701840
Action Type: RESPONSE
Date: 04/15/2005
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 10/15/2004
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2005
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/15/2005
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 10/15/2005
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701840
Action Type: RESPONSE
Date: 01/15/2006
Action: Remedial Progress Report

Global Id: T0603701840
Action Type: RESPONSE
Date: 07/15/2005
Action: Monitoring Report - Quarterly

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: 908061089
Status: Remedial action (cleanup) Underway

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

Substance:	Gasoline	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Groundwater	
Abatement Method Used at the Site:		Not reported
Global ID:	T0603701840	
W Global ID:	Not reported	
Staff:	JLC	
Local Agency:	19060	
Cross Street:	Not reported	
Enforcement Type:	SEL	
Date Leak Discovered:	Not reported	
Date Leak First Reported:		7/15/1991
Date Leak Record Entered:	7/23/1991	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	Not reported	
Date Case Last Changed on Database:		7/29/2002
Date the Case was Closed:		Not reported
How Leak Discovered:	Not reported	
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):		7676.5999197290157532349099088
Source of Cleanup Funding:		UNK
Preliminary Site Assessment Workplan Submitted:		6/10/1991
Preliminary Site Assessment Began:		6/10/1991
Pollution Characterization Began:		8/18/2000
Remediation Plan Submitted:		3/16/2001
Remedial Action Underway:		7/20/2004
Post Remedial Action Monitoring Began:		Not reported
Enforcement Action Date:		12/15/2000
Historical Max MTBE Date:		10/2/2000
Hist Max MTBE Conc in Groundwater:		1800
Hist Max MTBE Conc in Soil:		.1
Significant Interim Remedial Action Taken:		Not reported
GW Qualifier:	Not reported	
Soil Qualifier:	<	
Organization:	Not reported	
Owner Contact:	Not reported	
Responsible Party:	REID RINER	
RP Address:	2721 CENTRAL AVE., SUITE 700	
Program:	LUST	
Lat/Long:	33.7898073 / -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:	7/10/00 2ND QTR GW MON RPT 2000; 11/1/00 3RD QTR GW MON RPT 2000; 11/30/00 REMED. INVESTIGATION & FEASIBILITY EVALUATION; 1/19/01 GW MON RPT 4TH 2001; 2/16/01 CORRECTIVE ACTION PLAN	

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

ENF:

Region:	4
Facility Id:	268891
Agency Name:	Amerco Real Estate Company
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	33.789855
Place Longitude:	-118.171953
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	908061089
Reg Measure Id:	167349
Reg Measure Type:	Unregulated
Region:	4
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	248967
Region:	4
Order / Resolution Number:	SEL
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	06/14/2002
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	06/14/2002
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 908061089
Description:	Level 1 enforcement letter sent 6/14/02 for failure to submit technical data in an electronic deliverable format (EDF) to SWRCB after 9/1/01 as required by AB 2886.
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	4
Facility Id:	268891
Agency Name:	Amerco Real Estate Company
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	33.789855
Place Longitude:	-118.171953
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	908061089
Reg Measure Id:	167349
Reg Measure Type:	Unregulated
Region:	4
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	229182
Region:	4
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	08/13/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	08/13/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 908061089
Description:	Level 1 enforcement letter sent 8/13/99 for FTS 3 groundwater monitoring reports.
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0

U-HAUL MOVING CENTER #713-62 (Continued) **S103891173**

Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

M64
South
1/4-1/2
0.297 mi.
1569 ft.

U-HAUL MOVING CENTER #713
1600 PACIFIC COAST
LONG BEACH, CA 90806

Site 3 of 3 in cluster M

HIST CORTESE **1000159938**
N/A

Relative:
Lower

Actual:
19 ft.

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	908061089

N65
South
1/4-1/2
0.326 mi.
1720 ft.

LONG BEACH CITY COLLEGE AUTO
1305 E PACIFIC COAST HWY
LONG BEACH, CA 90806

Site 1 of 2 in cluster N

RCRA-SQG **1000231627**
LUST **CAD981653454**
UST
CA FID UST
EMI
HIST CORTESE
NPDES

Relative:
Lower

Actual:
22 ft.

RCRA-SQG:

Date form received by agency:	09/15/1986
Facility name:	LONG BEACH CITY COLLEGE AUTO
Facility address:	1305 E PACIFIC COAST HWY LONG BEACH, CA 90806
EPA ID:	CAD981653454
Contact:	ENVIRONMENTAL MANAGER
Contact address:	1305 E PACIFIC COAST HWY LONG BEACH, CA 90806
Contact country:	US
Contact telephone:	(213) 533-2075
Contact email:	Not reported
EPA Region:	09
Land type:	Other land type
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
Legal status:	Municipal
Owner/Operator Type:	Operator

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: LONG BEACH CITY COLLEGE
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Municipal
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

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - Records/Reporting
Date violation determined: 08/18/2003
Date achieved compliance: 09/09/2003
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 08/18/2003
Date achieved compliance: 09/09/2003
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 08/18/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Records/Reporting
Date achieved compliance: 09/09/2003
Evaluation lead agency: EPA

Evaluation date: 08/18/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 09/09/2003
Evaluation lead agency: EPA

LUST:
Region: STATE
Global Id: T0603700061
Latitude: 33.7898716
Longitude: -118.1749716
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 07/07/1989
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: YR
Local Agency: LONG BEACH, CITY OF
RB Case Number: 022289-01
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Aviation
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0603700061
Contact Type: Local Agency Caseworker
Contact Name: CARMEN PIRO
Organization Name: LONG BEACH, CITY OF
Address: 2525 GRAND AVE.
City: LONG BEACH
Email: carmen.piro@longbeach.gov
Phone Number: 5625704137

Global Id: T0603700061
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

Status History:
Global Id: T0603700061

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

Status: Completed - Case Closed
Status Date: 07/07/1989

Global Id: T0603700061
Status: Open - Case Begin Date
Status Date: 02/15/1989

Global Id: T0603700061
Status: Open - Site Assessment
Status Date: 02/22/1989

Regulatory Activities:
Global Id: T0603700061
Action Type: Other
Date: 02/15/1989
Action: Leak Reported

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: 022289-01
Status: Case Closed
Substance: 1
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Groundwater
Abatement Method Used at the Site: Not reported
Global ID: T0603700061
W Global ID: Not reported
Staff: UNK
Local Agency: 19060
Cross Street: ALAMITOS AVE
Enforcement Type: Not reported
Date Leak Discovered: Not reported
Date Leak First Reported: 2/15/1989
Date Leak Record Entered: Not reported
Date Confirmation Began: Not reported
Date Leak Stopped: Not reported
Date Case Last Changed on Database: 2/22/1989
Date the Case was Closed: 7/7/1989
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): 8411.20925903216133941670871 7
Source of Cleanup Funding: Not reported
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: 2/22/1989
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

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:	LONG BEACH CITY COLLEGE
RP Address:	SAME AS SITE
Program:	LUST
Lat/Long:	33.7898423 / -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

LONG BEACH UST:

DATA AS OF 02/25/2014:

Region:	LONG BEACH
Tanks:	0T
Tank Test:	Not reported
Leak Test:	Not reported
Tank Status:	Not reported

CA FID UST:

Facility ID:	19056650
Regulated By:	UTNKA
Regulated ID:	00020909
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	2135997903
Mail To:	Not reported
Mailing Address:	4901 E CARSON ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	LONG BEACH 90806
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

EMI:

Year:	1995
County Code:	19
Air Basin:	SC
Facility ID:	25399
Air District Name:	SC

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

SIC Code:	8222
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:	1
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:	25399
Air District Name:	SC
SIC Code:	8222
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:	8
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	3
NOX - Oxides of Nitrogen Tons/Yr:	14
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers and Smllr Tons/Yr:	1

Year:	2002
County Code:	19
Air Basin:	SC
Facility ID:	25399
Air District Name:	SC
SIC Code:	8222
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:	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:	2003
County Code:	19
Air Basin:	SC
Facility ID:	25399
Air District Name:	SC
SIC Code:	8222
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:	1

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

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:	2004
County Code:	19
Air Basin:	SC
Facility ID:	25399
Air District Name:	SC
SIC Code:	8222
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:	1.4529
Reactive Organic Gases Tons/Yr:	1.42
Carbon Monoxide Emissions Tons/Yr:	0.276
NOX - Oxides of Nitrogen Tons/Yr:	0.329
SOX - Oxides of Sulphur Tons/Yr:	0.00197
Particulate Matter Tons/Yr:	0.025
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.03

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	022289-01

NPDES:

Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	4
Regulatory Measure Id:	417813
Order No:	Not reported
Regulatory Measure Type:	Construction
Place Id:	Not reported
WDID:	4 19C362726
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:	1/2/2014
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	12/5/2011
PROCESSED DATE:	12/28/2011
STATUS CODE NAME:	Terminated
STATUS DATE:	2/18/2014
PLACE SIZE:	1.35
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Tim Wootton

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	562-938-4072
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	twootton@lbcc.edu
OPERATOR NAME:	LONG BEACH CITY COLLEGE
OPERATOR ADDRESS:	4901 EAST CARSON STREET
OPERATOR CITY:	LONG BEACH
OPERATOR STATE:	California
OPERATOR ZIP:	90808
OPERATOR CONTACT NAME:	Tim Wootton
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	562-938-4072
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	twootton@lbcc.edu
OPERATOR TYPE:	State Agency
DEVELOPER NAME:	Long Beach City College
DEVELOPER ADDRESS:	4901 E Carson St
DEVELOPER CITY:	Long Beach
DEVELOPER STATE:	California
DEVELOPER ZIP:	90808
DEVELOPER CONTACT NAME:	Tim Wootton
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	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 DESRIPTION:	Community College
CONSTYPE OTHER IND:	Y
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:	Pacific Ocean
CERTIFIER NAME:	Timothy Wootton
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	05-DEC-11
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	4
Regulatory Measure Id:	457859
Order No:	Not reported
Regulatory Measure Type:	Construction

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

Place Id:	Not reported
WDID:	4 19C373445
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:	7/8/2015
PROCESSED DATE:	7/17/2015
STATUS CODE NAME:	Active
STATUS DATE:	7/17/2015
PLACE SIZE:	2.11
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Terrance DeGray
FACILITY CONTACT TITLE:	Construction Manager
FACILITY CONTACT PHONE:	562-938-5088
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	tdegray.bmt@lbcc.edu
OPERATOR NAME:	LONG BEACH CITY COLLEGE
OPERATOR ADDRESS:	4901 EAST CARSON STREET
OPERATOR CITY:	LONG BEACH
OPERATOR STATE:	California
OPERATOR ZIP:	90808
OPERATOR CONTACT NAME:	Timothy Wootton
OPERATOR CONTACT TITLE:	Director, Facilities
OPERATOR CONTACT PHONE:	562-938-4072
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	twootton@lbcc.edu
OPERATOR TYPE:	State Agency
DEVELOPER NAME:	LONG BEACH CITY COLLEGE
DEVELOPER ADDRESS:	4901 EAST CARSON STREET
DEVELOPER CITY:	LONG BEACH
DEVELOPER STATE:	California
DEVELOPER ZIP:	90808
DEVELOPER CONTACT NAME:	Timothy Wootton
DEVELOPER CONTACT TITLE:	Director, Facilities
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	804-955-5512
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:	N
CONSTYPE ELECTRICAL LINE IND:	N
CONSTYPE GAS LINE IND:	N
CONSTYPE INDUSTRIAL IND:	N
CONSTYPE OTHER DESRIPTION:	College
CONSTYPE OTHER IND:	Y
CONSTYPE RECONS IND:	N
CONSTYPE RESIDENTIAL IND:	N
CONSTYPE TRANSPORT IND:	N

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	N
CONSTYPE WATER SEWER IND:	N
DIR DISCHARGE USWATER IND:	Y
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Timothy Wootton
CERTIFIER TITLE:	Director, District Facilities
CERTIFICATION DATE:	08-JUL-15
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	CAS000002
Facility Status:	Active
Agency Id:	0
Region:	4
Regulatory Measure Id:	457859
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	4 19C373445
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	07/17/2015
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	LONG BEACH CITY COLLEGE
Discharge Address:	4901 EAST CARSON STREET
Discharge City:	LONG BEACH
Discharge State:	California
Discharge Zip:	90808
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY 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 NAME:	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 NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	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 DESRIPTION:	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 NAME:	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
Facility Status:	Not reported
Agency Id:	Not reported
Region:	4
Regulatory Measure Id:	405983
Order No:	Not reported
Regulatory Measure Type:	Construction
Place Id:	Not reported
WDID:	4 19C359335
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:	8/4/2010
PROCESSED DATE:	8/6/2010
STATUS CODE NAME:	Active
STATUS DATE:	8/6/2010
PLACE SIZE:	3
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	MICHAEL BOOMSMA

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

FACILITY CONTACT TITLE:	CONSTRUCTION MANAGER
FACILITY CONTACT PHONE:	562-938-5074
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	mboomsma.bmt@lbcc.edu
OPERATOR NAME:	LONG BEACH CITY COLLEGE
OPERATOR ADDRESS:	4901 EAST CARSON STREET
OPERATOR CITY:	LONG BEACH
OPERATOR STATE:	California
OPERATOR ZIP:	90808
OPERATOR CONTACT NAME:	Timothy Wootton
OPERATOR CONTACT TITLE:	Director, District Facilities
OPERATOR CONTACT PHONE:	562-938-4072
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	twootton@lbcc.edu
OPERATOR TYPE:	State Agency
DEVELOPER NAME:	LONG BEACH CITY COLLEGE
DEVELOPER ADDRESS:	4901 EAST CARSON STREET
DEVELOPER CITY:	LONG BEACH
DEVELOPER STATE:	California
DEVELOPER ZIP:	90808
DEVELOPER CONTACT NAME:	Timothy Wootton
DEVELOPER CONTACT TITLE:	Director, District Facilities
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	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:	N
CONSTYPE ELECTRICAL LINE IND:	N
CONSTYPE GAS LINE IND:	N
CONSTYPE INDUSTRIAL IND:	N
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	N
CONSTYPE RECONS IND:	Y
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:	Not reported
CERTIFIER NAME:	KENNY ELLIS
CERTIFIER TITLE:	PROJECT MANAGER
CERTIFICATION DATE:	04-AUG-10
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	4
Regulatory Measure Id:	446793
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

Place Id:	Not reported
WDID:	4 19C370211
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	07/09/2014
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	08/05/2016
Discharge Name:	LONG BEACH CITY COLLEGE
Discharge Address:	4901 EAST CARSON STREET
Discharge City:	LONG BEACH
Discharge State:	California
Discharge Zip:	90808
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY 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 NAME:	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 NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	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 DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

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 NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	4
Regulatory Measure Id:	417813
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	4 19C362726
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/28/2011
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	01/02/2014
Discharge Name:	LONG BEACH CITY COLLEGE
Discharge Address:	4901 EAST CARSON STREET
Discharge City:	LONG BEACH
Discharge State:	California
Discharge Zip:	90808
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY 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 NAME:	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 NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	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 DESRIPTION:	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 NAME:	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
Facility Status:	Not reported
Agency Id:	Not reported
Region:	4
Regulatory Measure Id:	446793
Order No:	Not reported
Regulatory Measure Type:	Construction
Place Id:	Not reported
WDID:	4 19C370211
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:	8/5/2016
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	6/19/2014
PROCESSED DATE:	7/9/2014
STATUS CODE NAME:	Terminated
STATUS DATE:	9/30/2016
PLACE SIZE:	1.2
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Timothy Wootton

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	562-938-4072
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	twootton@lbcc.edu
OPERATOR NAME:	LONG BEACH CITY COLLEGE
OPERATOR ADDRESS:	4901 EAST CARSON STREET
OPERATOR CITY:	LONG BEACH
OPERATOR STATE:	California
OPERATOR ZIP:	90808
OPERATOR CONTACT NAME:	Timothy Wootton
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	562-938-4072
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	twootton@lbcc.edu
OPERATOR TYPE:	State Agency
DEVELOPER NAME:	LONG BEACH CITY COLLEGE
DEVELOPER ADDRESS:	4901 EAST CARSON STREET
DEVELOPER CITY:	LONG BEACH
DEVELOPER STATE:	California
DEVELOPER ZIP:	90808
DEVELOPER CONTACT NAME:	Timothy Wootton
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	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 DESRIPTION:	Not reported
CONSTYPE OTHER IND:	N
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:	Los Angeles River
CERTIFIER NAME:	Timothy Wootton
CERTIFIER TITLE:	Director, District Facilities
CERTIFICATION DATE:	19-JUN-14
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	CAS000002
Facility Status:	Active
Agency Id:	0
Region:	4
Regulatory Measure Id:	405983
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

Place Id:	Not reported
WDID:	4 19C359335
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	08/06/2010
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	LONG BEACH CITY COLLEGE
Discharge Address:	4901 EAST CARSON STREET
Discharge City:	LONG BEACH
Discharge State:	California
Discharge Zip:	90808
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY 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 NAME:	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 NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	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 DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported

LONG BEACH CITY COLLEGE AUTO (Continued) **1000231627**

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 NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported

N66
South
1/4-1/2
0.334 mi.
1762 ft.

CARL'S FINE FURNITURE **LUST** **S104234286**
1300 PACIFIC COAST HWY E **HIST CORTESE** **N/A**
LONG BEACH, CA 90806

Site 2 of 2 in cluster N

Relative:
Lower

Actual:
22 ft.

LUST:

Region:	STATE
Global Id:	T0603701853
Latitude:	33.7897043
Longitude:	-118.1749352
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/15/2003
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	HDN
Local Agency:	LONG BEACH, CITY OF
RB Case Number:	908061216
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	* Solvents
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603701853
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Global Id:	T0603701853
Contact Type:	Regional Board Caseworker
Contact Name:	HA D. NGUYEN
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4th Street, Suite 200
City:	LOS ANGELES
Email:	hnguyen@waterboards.ca.gov
Phone Number:	2135766658

CARL'S FINE FURNITURE (Continued) **S104234286**

Status History:

Global Id:	T0603701853
Status:	Completed - Case Closed
Status Date:	09/15/2003
Global Id:	T0603701853
Status:	Open - Case Begin Date
Status Date:	02/09/1970
Global Id:	T0603701853
Status:	Open - Site Assessment
Status Date:	02/15/1999
Global Id:	T0603701853
Status:	Open - Site Assessment
Status Date:	11/03/1999
Global Id:	T0603701853
Status:	Open - Site Assessment
Status Date:	02/23/2001
Global Id:	T0603701853
Status:	Open - Verification Monitoring
Status Date:	10/20/1999

Regulatory Activities:

Global Id:	T0603701853
Action Type:	Other
Date:	10/20/1999
Action:	Leak Reported
Global Id:	T0603701853
Action Type:	ENFORCEMENT
Date:	08/06/2003
Action:	Notification - Preclosure
Global Id:	T0603701853
Action Type:	ENFORCEMENT
Date:	09/15/2003
Action:	Closure/No Further Action Letter
Global Id:	T0603701853
Action Type:	RESPONSE
Date:	10/15/2002
Action:	Monitoring Report - Quarterly
Global Id:	T0603701853
Action Type:	RESPONSE
Date:	07/15/2002
Action:	Monitoring Report - Quarterly
Global Id:	T0603701853
Action Type:	RESPONSE
Date:	04/15/2002
Action:	Monitoring Report - Quarterly

CARL'S FINE FURNITURE (Continued) **S104234286**

Global Id: T0603701853
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701853
Action Type: ENFORCEMENT
Date: 07/25/2003
Action: Site Visit / Inspection / Sampling

Global Id: T0603701853
Action Type: RESPONSE
Date: 04/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701853
Action Type: RESPONSE
Date: 11/12/2003
Action: Unknown

Global Id: T0603701853
Action Type: Other
Date: 10/18/1999
Action: Leak Discovery

Global Id: T0603701853
Action Type: RESPONSE
Date: 07/31/2001
Action: Soil and Water Investigation Report

Global Id: T0603701853
Action Type: RESPONSE
Date: 09/06/2003
Action: Other Report / Document

Global Id: T0603701853
Action Type: ENFORCEMENT
Date: 05/04/2001
Action: Staff Letter

Global Id: T0603701853
Action Type: Other
Date: 02/09/1970
Action: Leak Stopped

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: 908061216
Status: Case Closed
Substance: Solvents
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Groundwater
Abatement Method Used at the Site: Not reported

CARL'S FINE FURNITURE (Continued) **S104234286**

Global ID:	T0603701853	
W Global ID:	Not reported	
Staff:	HDN	
Local Agency:	19060	
Cross Street:	ALAMITOS AVE	
Enforcement Type:	CLOS	
Date Leak Discovered:	10/18/1999	
Date Leak First Reported:		10/20/1999
Date Leak Record Entered:	Not reported	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	2/9/1970	
Date Case Last Changed on Database:		8/2/2002
Date the Case was Closed:		9/15/2003
How Leak Discovered:	OM	
How Leak Stopped:	Not reported	
Cause of Leak:	Other Cause	
Leak Source:	UNK	
Operator:	RAY CARL & TOM CARL	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		8433.4741403180799793046450 7
Source of Cleanup Funding:		UNK
Preliminary Site Assessment Workplan Submitted:		2/15/1999
Preliminary Site Assessment Began:		11/3/1999
Pollution Characterization Began:		2/23/2001
Remediation Plan Submitted:		Not reported
Remedial Action Underway:		Not reported
Post Remedial Action Monitoring Began:		10/20/1999
Enforcement Action Date:		4/10/2001
Historical Max MTBE Date:		12/13/2002
Hist Max MTBE Conc in Groundwater:		100
Hist Max MTBE Conc in Soil:		Not reported
Significant Interim Remedial Action Taken:		Not reported
GW Qualifier:	ND	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact:	Not reported	
Responsible Party:	JOE LENTINI	
RP Address:	2255 N. ONTARIO ST.	
Program:	LUST	
Lat/Long:	33.7897043 / -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:	LONG BEACH FD UST TANK LIST INDICATES 4 TANKS REMOVED 2/9/70 (4000, 3000,1000, AND 550 GAL) AT 1230 E, PACIFIC COAST HWY. SHELL OIL CO. FUEL STATION CURRENT PROPERTY OWNER BOUGHT PROPERTY RIGHT AFTER USTS WERE REMOVED, FOR EX	

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	908061216

O67 NNW 1/4-1/2 0.344 mi. 1816 ft. | **FULLER HB CO INC**
2424 BRAYTON ST
SIGNAL HILL, CA 90806 | **SEMS-ARCHIVE** | **1003878377**
CAD081782278

Site 1 of 2 in cluster O

Relative: Higher

Actual: 89 ft.

SEMS-ARCHIVE:

Site ID:	901619
EPA ID:	CAD081782278
Federal Facility:	N
NPL:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

Following information was gathered from the prior CERCLIS update completed in 10/2013:

Site ID:	0901619
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:

Contact Sequence ID:	13285286.00000
Person ID:	13003854.00000
Contact Sequence ID:	13290881.00000
Person ID:	13003858.00000
Contact Sequence ID:	13296739.00000
Person ID:	13004003.00000

CERCLIS-NFRAP Assessment History:

Action:	DISCOVERY
Date Started:	/ /
Date Completed:	02/01/86
Priority Level:	Not reported
Action:	ARCHIVE SITE
Date Started:	/ /
Date Completed:	05/01/86
Priority Level:	Not reported
Action:	PRELIMINARY ASSESSMENT
Date Started:	12/01/85
Date Completed:	05/01/86
Priority Level:	NFRAP-Site does not qualify for the NPL based on existing information

---

P68 SE 1/4-1/2 0.345 mi. 1821 ft. | **SHELL GAS STATION**
1945 E. PACIIC COAST HIGH
LONG BEACH, CA | **Notify 65** | **S100179336**
N/A

Site 1 of 3 in cluster P

Relative: Lower

Actual: 21 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

P69 SSE 1/4-1/2 0.355 mi. 1874 ft. | **SHELL #204-4482-1407**
1945 PACIFIC COAST HWY E
LONG BEACH, CA 90806

Site 2 of 3 in cluster P

LUST **S102437010**
HIST CORTESE **N/A**

Relative: Lower

Actual: 21 ft.

LUST:

Region:	STATE
Global Id:	T0603701841
Latitude:	33.7899653
Longitude:	-118.168223
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	11/17/2016
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	NB
Local Agency:	LONG BEACH, CITY OF
RB Case Number:	908061098
LOC Case Number:	Not reported
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603701841
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Global Id:	T0603701841
Contact Type:	Regional Board Caseworker
Contact Name:	NHAN BAO
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 WEST 4TH STREET, SUITE 200
City:	LOS ANGELES
Email:	nbao@waterboards.ca.gov
Phone Number:	2135766703

Status History:

Global Id:	T0603701841
Status:	Completed - Case Closed
Status Date:	11/17/2016

Global Id:	T0603701841
Status:	Open - Case Begin Date
Status Date:	10/05/1989

Global Id:	T0603701841
Status:	Open - Eligible for Closure
Status Date:	07/07/2015

Global Id:	T0603701841

SHELL #204-4482-1407 (Continued) **S102437010**

Status: Open - Site Assessment
Status Date: 06/22/1995

Global Id: T0603701841
Status: Open - Site Assessment
Status Date: 12/09/2005

Regulatory Activities:

Global Id: T0603701841
Action Type: ENFORCEMENT
Date: 02/11/2000
Action: Staff Letter

Global Id: T0603701841
Action Type: ENFORCEMENT
Date: 07/03/2015
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0603701841
Action Type: ENFORCEMENT
Date: 07/17/2015
Action: State Water Board Closure Order

Global Id: T0603701841
Action Type: Other
Date: 10/11/1989
Action: Leak Reported

Global Id: T0603701841
Action Type: RESPONSE
Date: 12/09/2005
Action: Soil and Water Investigation Workplan

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 01/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 01/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 03/13/2012
Action: CAP/RAP - Feasibility Study Report

Global Id: T0603701841
Action Type: RESPONSE
Date: 04/15/2012
Action: Monitoring Report - Semi-Annually

SHELL #204-4482-1407 (Continued) **S102437010**

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0603701841
Action Type: RESPONSE
Date: 04/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 06/21/2006
Action: Soil and Water Investigation Report

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/03/2012
Action: Site Assessment Report

Global Id: T0603701841
Action Type: RESPONSE
Date: 11/12/2012
Action: Soil and Water Investigation Workplan

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 01/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2013
Action: Monitoring Report - Semi-Annually

Global Id: T0603701841
Action Type: ENFORCEMENT
Date: 11/16/2015
Action: State Water Board Closure Order

Global Id: T0603701841
Action Type: ENFORCEMENT
Date: 11/09/2016
Action: Closure/No Further Action Letter - #11/08/2016

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE

SHELL #204-4482-1407 (Continued) **S102437010**

Date: 01/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 07/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 07/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 04/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 01/15/2015
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 12/26/2013
Action: Request for Closure - Regulator Responded

Global Id: T0603701841
Action Type: RESPONSE
Date: 04/07/2016
Action: Well Destruction Report - Regulator Responded

Global Id: T0603701841
Action Type: RESPONSE
Date: 07/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0603701841
Action Type: RESPONSE
Date: 04/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 04/15/2006
Action: Monitoring Report - Quarterly

SHELL #204-4482-1407 (Continued) **S102437010**

Global Id: T0603701841
Action Type: RESPONSE
Date: 04/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603701841
Action Type: RESPONSE
Date: 04/15/2014
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: ENFORCEMENT
Date: 11/17/2016
Action: Closure/No Further Action Letter - #11/17/2016

Global Id: T0603701841
Action Type: RESPONSE
Date: 04/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 02/03/2015
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0603701841
Action Type: RESPONSE
Date: 07/15/2014
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 04/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 07/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 07/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 11/19/2003
Action: Soil and Water Investigation Report

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE

SHELL #204-4482-1407 (Continued) **S102437010**

Date: 04/15/2015
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: Other
Date: 10/06/1989
Action: Leak Discovery

Global Id: T0603701841
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 01/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2015
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 10/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 01/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 07/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 04/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701841
Action Type: RESPONSE
Date: 01/10/2011
Action: Soil and Water Investigation Workplan

SHELL #204-4482-1407 (Continued) **S102437010**

Global Id:	T0603701841
Action Type:	RESPONSE
Date:	01/15/2011
Action:	Monitoring Report - Semi-Annually

Global Id:	T0603701841
Action Type:	RESPONSE
Date:	10/15/2011
Action:	Monitoring Report - Semi-Annually

Global Id:	T0603701841
Action Type:	ENFORCEMENT
Date:	06/15/2009
Action:	Staff Letter

Global Id:	T0603701841
Action Type:	ENFORCEMENT
Date:	07/17/2015
Action:	Notification - Public Notice of Case Closure

Global Id:	T0603701841
Action Type:	Other
Date:	10/05/1989
Action:	Leak Stopped

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	908061098
Status:	Pollution Characterization
Substance:	Gasoline
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Groundwater
Abatement Method Used at the Site:	Not reported
Global ID:	T0603701841
W Global ID:	Not reported
Staff:	NB
Local Agency:	19060
Cross Street:	CHERRY
Enforcement Type:	SEL
Date Leak Discovered:	10/6/1989
Date Leak First Reported:	10/11/1989
Date Leak Record Entered:	11/13/1989
Date Confirmation Began:	10/11/1989
Date Leak Stopped:	10/5/1989
Date Case Last Changed on Database:	10/15/2002
Date the Case was Closed:	Not reported
How Leak Discovered:	Tank Closure
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	UNK
Operator:	NOH, JIMMY OLD CASE#008419
Water System:	Not reported
Well Name:	Not reported

SHELL #204-4482-1407 (Continued) **S102437010**

Approx. Dist To Production Well (ft): 6621.3270380286653368428134052
Source of Cleanup Funding: UNK
Preliminary Site Assessment Workplan Submitted: 6/22/1995
Preliminary Site Assessment Began: 6/22/1995
Pollution Characterization Began: 6/19/1997
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: 10/11/1989
Enforcement Action Date: Not reported
Historical Max MTBE Date: 8/15/2002
Hist Max MTBE Conc in Groundwater: 2400
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: =
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: JOSEPH LENTINI
RP Address: 2255 N. ONTARIO ST.
Program: LUST
Lat/Long: 33.7899653 / -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: ONE HAS BEEN OVER-EXCAVATED TO RECOVER CONTAMINATED SOILS. WE WILL BE USING A PUMP TRUCK TO RECOVER WATER THAT HAS ENTERED THE TANK ZONE.; 12/5/00 4TH QTR GW MON RPT 2000; 4/15/01 1ST QTR GW MON RPT 2001

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: 908061098

O70 **SIPPRELLE/GUZMAN PROPERTY** **LUST** **S108935342**
NNW **2409 ORANGE AVE** **N/A**
1/4-1/2 **SIGNAL HILL, CA 90755**
0.367 mi.
1936 ft. **Site 2 of 2 in cluster O**

Relative:
Higher

Actual:
84 ft.

LUST:
Region: STATE
Global Id: T0603722009
Latitude: 33.801116
Longitude: -118.176354
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 02/26/2010
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: HDN
Local Agency: LOS ANGELES COUNTY
RB Case Number: R-50024
LOC Case Number: 31809-50024
File Location: Regional Board

SIPPRELLE/GUZMAN PROPERTY (Continued) **S108935342**

Potential Media Affect: Under Investigation
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0603722009
Contact Type: Regional Board Caseworker
Contact Name: HA D. NGUYEN
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4th Street, Suite 200
City: LOS ANGELES
Email: hnguyen@waterboards.ca.gov
Phone Number: 2135766658

Global Id: T0603722009
Contact Type: Local Agency 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

Status History:
Global Id: T0603722009
Status: Completed - Case Closed
Status Date: 02/26/2010

Global Id: T0603722009
Status: Open - Case Begin Date
Status Date: 09/01/2006

Global Id: T0603722009
Status: Open - Site Assessment
Status Date: 07/23/2007

Global Id: T0603722009
Status: Open - Site Assessment
Status Date: 11/16/2007

Regulatory Activities:
Global Id: T0603722009
Action Type: ENFORCEMENT
Date: 10/22/2009
Action: Staff Letter

Global Id: T0603722009
Action Type: ENFORCEMENT
Date: 02/26/2010
Action: Closure/No Further Action Letter

Global Id: T0603722009
Action Type: ENFORCEMENT
Date: 02/09/2010
Action: Notification - Preclosure

SIPPRELLE/GUZMAN PROPERTY (Continued) **S108935342**

Global Id: T0603722009
Action Type: Other
Date: 07/23/2007
Action: Leak Reported

Global Id: T0603722009
Action Type: RESPONSE
Date: 05/15/2009
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0603722009
Action Type: RESPONSE
Date: 05/15/2009
Action: Soil and Water Investigation Workplan

Global Id: T0603722009
Action Type: RESPONSE
Date: 07/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603722009
Action Type: RESPONSE
Date: 12/14/2008
Action: Preliminary Site Assessment Report

Global Id: T0603722009
Action Type: RESPONSE
Date: 07/15/2008
Action: Preliminary Site Assessment Workplan

Global Id: T0603722009
Action Type: RESPONSE
Date: 01/31/2008
Action: Other Report / Document

Global Id: T0603722009
Action Type: REMEDIATION
Date: 07/23/2007
Action: Not reported

Global Id: T0603722009
Action Type: ENFORCEMENT
Date: 12/27/2007
Action: Staff Letter

Global Id: T0603722009
Action Type: RESPONSE
Date: 12/14/2008
Action: Preliminary Site Assessment Report

Global Id: T0603722009
Action Type: RESPONSE
Date: 01/15/2010
Action: Soil and Water Investigation Report

Global Id: T0603722009
Action Type: RESPONSE

SIPPRELLE/GUZMAN PROPERTY (Continued) **S108935342**

Date:	11/16/2007
Action:	Preliminary Site Assessment Report
Global Id:	T0603722009
Action Type:	ENFORCEMENT
Date:	06/03/2008
Action:	Staff Letter
Global Id:	T0603722009
Action Type:	RESPONSE
Date:	04/15/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0603722009
Action Type:	ENFORCEMENT
Date:	10/22/2008
Action:	Staff Letter
Global Id:	T0603722009
Action Type:	ENFORCEMENT
Date:	08/05/2008
Action:	Staff Letter
Global Id:	T0603722009
Action Type:	ENFORCEMENT
Date:	04/02/2009
Action:	Staff Letter
Global Id:	T0603722009
Action Type:	Other
Date:	09/01/2006
Action:	Leak Discovery

P71 **MOBIL #99-LNG (FORMER)** **LUST** **S104406341**
SE **2001 PACIFIC COAST HWY E** **HIST CORTESE** **N/A**
1/4-1/2 **LONG BEACH, CA 90804**
0.375 mi.
1979 ft. **Site 3 of 3 in cluster P**

Relative:
Lower

Actual:
22 ft.

LUST:

Region:	STATE
Global Id:	T0603701741
Latitude:	33.790239
Longitude:	-118.167314
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	07/24/1996
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	YR
Local Agency:	LONG BEACH, CITY OF
RB Case Number:	908040089
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

MOBIL #99-LNG (FORMER) (Continued) **S104406341**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603701741
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Global Id:	T0603701741
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

Status History:

Global Id:	T0603701741
Status:	Completed - Case Closed
Status Date:	07/24/1996

Global Id:	T0603701741
Status:	Open - Case Begin Date
Status Date:	03/06/1990

Global Id:	T0603701741
Status:	Open - Site Assessment
Status Date:	10/01/1991

Regulatory Activities:

Global Id:	T0603701741
Action Type:	Other
Date:	03/06/1990
Action:	Leak Reported

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	908040089
Status:	Case Closed
Substance:	Gasoline
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Groundwater
Abatement Method Used at the Site:	Excavate and Treat
Global ID:	T0603701741
W Global ID:	Not reported
Staff:	UNK

MOBIL #99-LNG (FORMER) (Continued) **S104406341**

Local Agency:	19060	
Cross Street:	CHERRY AVE	
Enforcement Type:	Not reported	
Date Leak Discovered:	Not reported	
Date Leak First Reported:		3/6/1990
Date Leak Record Entered:	3/5/1990	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	Not reported	
Date Case Last Changed on Database:		7/24/1996
Date the Case was Closed:		7/24/1996
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):		6407.1513551740747840530690168
Source of Cleanup Funding:		Not reported
Preliminary Site Assessment Workplan Submitted:		Not reported
Preliminary Site Assessment Began:		Not reported
Pollution Characterization Began:		10/1/1991
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:		Yes
GW Qualifier:	Not reported	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact:	Not reported	
Responsible Party:	MOBIL OIL COMPANY	
RP Address:	3225 GALLOWS RD, FAIRFAX VA 22037	
Program:	LUST	
Lat/Long:	33.7898333 / -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:	908040089

72 ENE 1/4-1/2 0.375 mi. 1982 ft. | **SIGNAL HILL PETROLEUM - HILLTOP**
2200 SKYLINE
SIGNAL HILL, CA 90806 | **SLIC** | **S106387189**
N/A

Relative: Higher

Actual: 289 ft.

SLIC:

Region:	STATE
Facility Status:	**Open - Verification Monitoring**
Status Date:	09/07/2011
Global Id:	SLT43670668
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number:	Not reported
Latitude:	33.7988887719421
Longitude:	-118.164310455322
Case Type:	Cleanup Program Site
Case Worker:	EPL
Local Agency:	Not reported
RB Case Number:	1029
File Location:	Regional Board
Potential Media Affected:	Aquifer used for drinking water supply, Soil
Potential Contaminants of Concern:	Total Petroleum Hydrocarbons (TPH)
Site History:	The Site is an active oil producing property owned by Signal Hill Petroleum undergoing redevelopment from oil production to residential land use.

Click here to access the California GeoTracker records for this facility:

SLIC REG 4:

Region:	4
Facility Status:	Remediation
SLIC:	1029
Substance:	TPH
Staff:	AH

Q73 NE 1/4-1/2 0.376 mi. 1984 ft. | **CONTINENTAL EMSCO CO**
2335 CHERRY AVE
SIGNAL HILL, CA 90806 | **SEMS-ARCHIVE** | **1003878398**
CAD125113050

Site 1 of 2 in cluster Q

Relative: Higher

Actual: 172 ft.

SEMS-ARCHIVE:

Site ID:	901709
EPA ID:	CAD125113050
Federal Facility:	N
NPL:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

Following information was gathered from the prior CERCLIS update completed in 10/2013:

Site ID:	0901709
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:

Contact Sequence ID:	13286802.00000
Person ID:	13003854.00000
Contact Sequence ID:	13292397.00000

CONTINENTAL EMSCO CO (Continued) **1003878398**

Person ID: 13003858.00000

Contact Sequence ID: 13298255.00000
Person ID: 13004003.00000

CERCLIS-NFRAP Site Alias Name(s):
Alias Name: SIGNAL HILL PETROLEUM CO
Alias Address: 2700 COMBELLACK DR
SIGNAL HILL, CA 90806

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: / /
Date Completed: 02/01/86
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: 01/01/86
Date Completed: 05/01/86
Priority Level: Low priority for further assessment

Action: ARCHIVE SITE
Date Started: / /
Date Completed: 12/29/88
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: / /
Date Completed: 12/29/88
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

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Q74
NE
1/4-1/2
0.376 mi.
1984 ft.

CONTINENTAL EMSCO COMPANY (2) **ENVIROSTOR** **1000412897**
2335 CHERRY AVENUE **HIST CORTESE** **N/A**
SIGNAL HILL, CA 90806

Site 2 of 2 in cluster Q

Relative:
Higher

Actual:
172 ft.

ENVIROSTOR:
Facility ID: 19350342
Status: Refer: Other Agency
Status Date: 05/01/1995
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: Referred - Not Assigned
Division Branch: Cleanup Cypress
Assembly: 70
Senate: 33
Special Program: * Site Char & Assess Grant (CERCLA 104)
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported

CONTINENTAL EMSCO COMPANY (2) (Continued) **1000412897**

Latitude: 33.79916
Longitude: -118.1675
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: * OIL/WATER SEPARATION SLUDGE * UNSPECIFIED OIL CONTAINING WASTE * WASTE OIL & MIXED OIL
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: SHELL OIL COMPANY (1920S - 1984)
Alias Type: Alternate Name
Alias Name: SIGNAL HILL PETROLEUM COMPANY
Alias Type: Alternate Name
Alias Name: CAD125113050
Alias Type: EPA Identification Number
Alias Name: 19350342
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 01/26/1983
Comments: FACILITY IDENTIFIED LA CHAM OF COMM BUS DIR 1971

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 05/01/1995
Comments: 12/7/94 File indicates EPA completed reassessment of the site and recommended NFA under CERCLA. Wastes generated at the site consists of oils and associated materials. Due to "petroleum exclusion" the Dept. refers the site to Los Angeles County Fire Dept.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 11/24/1987
Comments: SITE SCREENING DONE ON-SITE DISPOSAL OF WASTE IN PITS.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 12/01/1985
Comments: T/C W/P.FIX,CITY,213-590-6841,10/1/85- (SHELL & SIGNAL)2 PROD OIL WELLS,FORMTN WATER RE-INJECTION SYSTEM.(EMSCO)WARE- HOUSE FOR OILFIELD SUPPLIES & SUBSURFACE PUMP REPAIRS.EMSCO REP DISP OF HZD WASTE INTO IN SITE PIT. QUANTITY UNK. SUBMIT TO EPA PRELIM ASSESS DONE CERCLA 104

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

CONTINENTAL EMSCO COMPANY (2) (Continued) **1000412897**

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	CALSI
Reg Id:	19350342

75
NW
1/4-1/2
0.390 mi.
2060 ft.

SLOSSON PROPERTY **LUST** **S102437657**
1145 BURNETT **HIST CORTESE** **N/A**
SIGNAL HILL, CA 90810

Relative:
Higher

Actual:
68 ft.

LUST:

Region:	STATE
Global Id:	T0603704139
Latitude:	33.801069
Longitude:	-118.17762
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/25/1996
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	YR
Local Agency:	LOS ANGELES COUNTY
RB Case Number:	I-14150
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603704139
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:	T0603704139
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

Status History:

Global Id:	T0603704139
Status:	Completed - Case Closed
Status Date:	09/25/1996

Global Id:	T0603704139

SLOSSON PROPERTY (Continued) **S102437657**

Status: Open - Case Begin Date
Status Date: 04/20/1988

Global Id: T0603704139
Status: Open - Remediation
Status Date: 04/01/1996

Global Id: T0603704139
Status: Open - Site Assessment
Status Date: 04/20/1988

Regulatory Activities:
Global Id: T0603704139
Action Type: Other
Date: 11/28/1989
Action: Leak Reported

Global Id: T0603704139
Action Type: Other
Date: 12/09/1988
Action: Leak Discovery

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: I-14150
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: T0603704139
W Global ID: Not reported
Staff: UNK
Local Agency: 19000
Cross Street: CERRITOS AVENUE
Enforcement Type: Not reported
Date Leak Discovered: 12/9/1988
Date Leak First Reported: 11/28/1989
Date Leak Record Entered: 12/5/1989
Date Confirmation Began: Not reported
Date Leak Stopped: Not reported
Date Case Last Changed on Database: 1/17/1997
Date the Case was Closed: 9/25/1996
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): 6660.34782148398375809076872 97
Source of Cleanup Funding: UNK

SLOSSON PROPERTY (Continued) **S102437657**

Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: 4/20/1988
Pollution Characterization Began: Not reported
Remediation Plan Submitted: 4/1/1996
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: SLOSSON PROPERTY
RP Address: 2581 CALIFORNIA AVENUE, LONG BEACH, 90806
Program: LUST
Lat/Long: 33.8007572 / -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: 12/18/96 SITE DECOMISSION REPORT (WELL DESTRUCTION)

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: I-14150

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76 NNE 1/4-1/2 0.416 mi. 2197 ft. | **MCKERNIE FAMILY PARTNERSH** | **LUST** | **S104406625**
1698 025TH | **HIST CORTESE** | **N/A**
SIGNAL HILL, CA 90806

Relative: Higher

Actual: 182 ft.

LUST:
Region: STATE
Global Id: T0603704495
Latitude: 33.8024211
Longitude: -118.1708713
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 04/25/1997
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: YR
Local Agency: LOS ANGELES COUNTY
RB Case Number: I-22749
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Waste Oil / Motor / Hydraulic / Lubricating
Site History: Not reported

MCKERNIE FAMILY PARTNERSH (Continued) **S104406625**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603704495
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:	T0603704495
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

Status History:

Global Id:	T0603704495
Status:	Completed - Case Closed
Status Date:	04/25/1997

Global Id:	T0603704495
Status:	Open - Case Begin Date
Status Date:	07/27/1995

Global Id:	T0603704495
Status:	Open - Site Assessment
Status Date:	07/27/1995

Regulatory Activities:

Global Id:	T0603704495
Action Type:	Other
Date:	07/31/1995
Action:	Leak Reported

Global Id:	T0603704495
Action Type:	Other
Date:	07/27/1995
Action:	Leak Discovery

Global Id:	T0603704495
Action Type:	Other
Date:	07/27/1995
Action:	Leak Stopped

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles

MCKERNIE FAMILY PARTNERSH (Continued) **S104406625**

Facility Id:	I-22749	
Status:	Case Closed	
Substance:	Waste Oil	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Soil	
Abatement Method Used at the Site:		Not reported
Global ID:	T0603704495	
W Global ID:	Not reported	
Staff:	UNK	
Local Agency:	19000	
Cross Street:	GARDENIA	
Enforcement Type:	Not reported	
Date Leak Discovered:	7/27/1995	
Date Leak First Reported:		7/31/1995
Date Leak Record Entered:	1/4/1996	
Date Confirmation Began:	7/27/1995	
Date Leak Stopped:	7/27/1995	
Date Case Last Changed on Database:		7/8/1996
Date the Case was Closed:		4/25/1997
How Leak Discovered:	Tank Closure	
How Leak Stopped:	Not reported	
Cause of Leak:	UNK	
Leak Source:	Tank	
Operator:	TOM MCKERNIE	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		5345.988939125688028853637 3872
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:		Yes
GW Qualifier:	Not reported	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact:	Not reported	
Responsible Party:	MCKERNIE FAMILY PARTNERSHIP	
RP Address:	1698 E. 25TH ST., SIGNAL HILL CA 90806	
Program:	LUST	
Lat/Long:	33.8024211 / -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:	6600PPM TPH UNDER REMOVED TANK	

MCKERNIE FAMILY PARTNERSH (Continued) **S104406625**

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	I-22749

R77 **TOM TANK ENTERPRISES (FORMER)** **LUST** **S100273276**
NNW **2450 ORANGE AVE** **HIST CORTESE** **N/A**
1/4-1/2 **SIGNAL HILL, CA 90806** **LOS ANGELES CO. HMS**
0.417 mi.
2203 ft. **Site 1 of 3 in cluster R**

Relative:
Higher

Actual:
83 ft.

LUST:

Region:	STATE
Global Id:	T0603704338
Latitude:	33.802157
Longitude:	-118.176001
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/10/1997
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	YR
Local Agency:	LOS ANGELES COUNTY
RB Case Number:	I-15635
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603704338
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:	T0603704338
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

Status History:

Global Id:	T0603704338
Status:	Completed - Case Closed
Status Date:	04/10/1997

Global Id:	T0603704338

TOM TANK ENTERPRISES (FORMER) (Continued) **S100273276**

Status:	Open - Case Begin Date
Status Date:	04/26/1990
Global Id:	T0603704338
Status:	Open - Site Assessment
Status Date:	04/26/1990
Global Id:	T0603704338
Status:	Open - Site Assessment
Status Date:	05/01/1990

Regulatory Activities:

Global Id:	T0603704338
Action Type:	Other
Date:	11/26/1991
Action:	Leak Reported
Global Id:	T0603704338
Action Type:	Other
Date:	04/26/1990
Action:	Leak Discovery
Global Id:	T0603704338
Action Type:	Other
Date:	04/26/1990
Action:	Leak Stopped

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	I-15635
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:	T0603704338
W Global ID:	Not reported
Staff:	UNK
Local Agency:	19000
Cross Street:	025TH ST.
Enforcement Type:	Not reported
Date Leak Discovered:	4/26/1990
Date Leak First Reported:	11/26/1991
Date Leak Record Entered:	12/22/1991
Date Confirmation Began:	4/26/1990
Date Leak Stopped:	4/26/1990
Date Case Last Changed on Database:	2/7/1995
Date the Case was Closed:	4/10/1997
How Leak Discovered:	Tank Closure
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	UNK

TOM TANK ENTERPRISES (FORMER) (Continued) **S100273276**

Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 6150.4056069820274639727237633
Source of Cleanup Funding: UNK
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: 5/1/1990
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: THOMPSON TANK & MANUFACTURING
RP Address: PO BOX 90335, LONG BEACH, 90809-0335
Program: LUST
Lat/Long: 33.8017321 / -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: SOIL CONTAMINATION IS LIMITED. 2 TANKS HOLDING DIESEL/WASTE OIL. REMOVED IN 1990. NO BTEX. LOW TPH.

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: I-15635

LOS ANGELES CO. HMS:
Region: LA
Permit Category: Not reported
Facility Id: 014856-015635
Facility Type: Not reported
Facility Status: Closed
Area: 1M
Permit Number: Not reported
Permit Status: Not reported

S78 NNE 1/4-1/2 0.419 mi. 2210 ft. | **2475 GARDENA AVENUE**
2475 GARDENA AVENUE
SIGNAL HILL, CA 90755 | **US BROWNFIELDS** | **1011859662**
N/A

Site 1 of 2 in cluster S

Relative: Higher

Actual: 176 ft.

US BROWNFIELDS:

Property Name:	2475 GARDENA AVENUE
Recipient Name:	Signal Hill, City of
Grant Type:	Assessment
Property Number:	7214-005-015
Parcel size:	0
Latitude:	33.802021
Longitude:	-118.168904
HCM Label:	Not reported
Map Scale:	Not reported
Point of Reference:	Not reported
Highlights:	Not reported
Datum:	World Geodetic System of 1984
Acres Property ID:	77007
IC Data Access:	Not reported
Start Date:	Not reported
Redev Completition Date:	Not reported
Completed Date:	Not reported
Acres Cleaned Up:	Not reported
Cleanup Funding:	Not reported
Cleanup Funding Source:	Not reported
Assessment Funding:	8260
Assessment Funding Source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment Funding:	Not reported
Redev. Funding Source:	Not reported
Redev. Funding Entity Name:	Not reported
Redevelopment Start Date:	Not reported
Assessment Funding Entity:	EPA
Cleanup Funding Entity:	Not reported
Grant Type:	N/A
Accomplishment Type:	Phase I Environmental Assessment
Accomplishment Count:	1
Cooperative Agreement Number:	96914601
Start Date:	03/13/2008 00:00:00
Ownership Entity:	Private
Completion Date:	03/13/2008 00:00:00
Current Owner:	Heistand
Did Owner Change:	N
Cleanup Required:	U
Video Available:	Not reported
Photo Available:	Y
Institutional Controls Required:	Not reported
IC Category Proprietary Controls:	Not reported
IC Cat. Info. Devices:	Not reported
IC Cat. Gov. Controls:	Not reported
IC Cat. Enforcement Permit Tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported

2475 GARDENA AVENUE (Continued) **1011859662**

Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Not reported
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Surface Water:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
Nickel Cleaned Up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported

2475 GARDENA AVENUE (Continued) **1011859662**

Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported
Property Description:	Former petroleum exploration
Below Poverty Number:	370
Below Poverty Percent:	8.8%
Meidan Income:	11102
Meidan Income Number:	953
Meidan Income Percent:	3.4%
Vacant Housing Number:	66
Vacant Housing Percent:	49.5%
Unemployed Number:	239
Unemployed Percent:	13.7%

R79 **HEAT & POWER EQUIPMENT COMPANY** **LUST** **S102431278**
NNW **2459 ORANGE AVE** **N/A**
1/4-1/2 **SIGNAL HILL, CA 90806**
0.421 mi.
2223 ft. **Site 2 of 3 in cluster R**

Relative:
Higher

Actual:
80 ft.

LUST REG 4:

Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	I-16106	
Status:	Case Closed	
Substance:	Gasoline	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Soil	
Abatement Method Used at the Site:		VE
Global ID:	T0603704390	
W Global ID:	Not reported	
Staff:	UNK	
Local Agency:	19000	
Cross Street:	WILLOW	
Enforcement Type:	Not reported	
Date Leak Discovered:	1/11/1991	
Date Leak First Reported:		2/11/1991
Date Leak Record Entered:	8/24/1991	
Date Confirmation Began:	2/6/1991	
Date Leak Stopped:	1/11/1991	
Date Case Last Changed on Database:		3/26/1996
Date the Case was Closed:		2/7/1996

HEAT & POWER EQUIPMENT COMPANY (Continued) **S102431278**

How Leak Discovered:	Tank Closure
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	Tank
Operator:	PORTER, BOB
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	6156.458199213365923917916967 1
Source of Cleanup Funding:	Tank
Preliminary Site Assessment Workplan Submitted:	Not reported
Preliminary Site Assessment Began:	2/11/1991
Pollution Characterization Began:	8/26/1994
Remediation Plan Submitted:	10/28/1993
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	5/8/1995
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:	PORTER BOILER SERVICE
RP Address:	10152 THESEUS DR., HUNTINGTON BEACH, 92646
Program:	LUST
Lat/Long:	33.8018311 / -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:	AKA 908060189

R80 **HEAT & POWER EQUIPMENT COMPANY** **LUST** **S105024532**
NNW **2459 ORANGE AVE** **HIST CORTESE** **N/A**
1/4-1/2 **SIGNAL HILL, CA 90806**
0.421 mi.
2223 ft. **Site 3 of 3 in cluster R**

Relative:
Higher

Actual:
80 ft.

LUST:

Region:	STATE
Global Id:	T0603704390
Latitude:	33.802025
Longitude:	-118.176653
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/07/1996
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	YR
Local Agency:	LOS ANGELES COUNTY
RB Case Number:	I-16106
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline

HEAT & POWER EQUIPMENT COMPANY (Continued) **S105024532**

Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603704390
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:	T0603704390
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

Status History:

Global Id:	T0603704390
Status:	Completed - Case Closed
Status Date:	02/07/1996

Global Id:	T0603704390
Status:	Open - Case Begin Date
Status Date:	01/11/1991

Global Id:	T0603704390
Status:	Open - Remediation
Status Date:	10/28/1993

Global Id:	T0603704390
Status:	Open - Site Assessment
Status Date:	02/06/1991

Global Id:	T0603704390
Status:	Open - Site Assessment
Status Date:	02/11/1991

Global Id:	T0603704390
Status:	Open - Site Assessment
Status Date:	08/26/1994

Global Id:	T0603704390
Status:	Open - Verification Monitoring
Status Date:	05/08/1995

Regulatory Activities:

Global Id:	T0603704390
Action Type:	Other
Date:	02/11/1991
Action:	Leak Reported

HEAT & POWER EQUIPMENT COMPANY (Continued) **S105024532**

Global Id:	T0603704390
Action Type:	Other
Date:	01/11/1991
Action:	Leak Discovery
Global Id:	T0603704390
Action Type:	Other
Date:	01/11/1991
Action:	Leak Stopped

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	I-16106

S81 **2485 GARDENA AVENUE** **US BROWNFIELDS** **1011859663**
NNE **2485 GARDENA AVENUE** **N/A**
1/4-1/2 **SIGNAL HILL, CA 90755**
0.427 mi.
2253 ft. **Site 2 of 2 in cluster S**

Relative:
Higher

Actual:
174 ft.

US BROWNFIELDS:

Property Name:	2485 GARDENA AVENUE
Recipient Name:	Signal Hill, City of
Grant Type:	Assessment
Property Number:	7214-005-014
Parcel size:	0
Latitude:	33.802165
Longitude:	-118.168903
HCM Label:	Not reported
Map Scale:	Not reported
Point of Reference:	Not reported
Highlights:	Not reported
Datum:	World Geodetic System of 1984
Acres Property ID:	77008
IC Data Access:	Not reported
Start Date:	Not reported
Redev Completition Date:	Not reported
Completed Date:	Not reported
Acres Cleaned Up:	Not reported
Cleanup Funding:	Not reported
Cleanup Funding Source:	Not reported
Assessment Funding:	8238
Assessment Funding Source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment Funding:	Not reported
Redev. Funding Source:	Not reported
Redev. Funding Entity Name:	Not reported
Redevelopment Start Date:	Not reported
Assessment Funding Entity:	EPA
Cleanup Funding Entity:	Not reported
Grant Type:	N/A
Accomplishment Type:	Phase I Environmental Assessment
Accomplishment Count:	1
Cooperative Agreement Number:	96914601
Start Date:	03/14/2008 00:00:00

2485 GARDENA AVENUE (Continued) **1011859663**

Ownership Entity:	Private
Completion Date:	03/14/2008 00:00:00
Current Owner:	RRH Investments LLC
Did Owner Change:	N
Cleanup Required:	U
Video Available:	Not reported
Photo Available:	Y
Institutional Controls Required:	Not reported
IC Category Proprietary Controls:	Not reported
IC Cat. Info. Devices:	Not reported
IC Cat. Gov. Controls:	Not reported
IC Cat. Enforcement Permit Tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Not reported
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Surface Water:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported

2485 GARDENA AVENUE (Continued) **1011859663**

Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
Nickel Cleaned Up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported
Property Description:	Former petroleum exploration
Below Poverty Number:	370
Below Poverty Percent:	8.8%
Meidan Income:	11102
Meidan Income Number:	953
Meidan Income Percent:	3.4%
Vacant Housing Number:	66
Vacant Housing Percent:	49.5%
Unemployed Number:	239
Unemployed Percent:	13.7%

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82 **LONG BEACH REDEVELOPMENT AGENCY** **LUST** **S110369584**
WNW **2300 MARTIN LUTHER KING JR. AVENUE** **N/A**
1/4-1/2 **LONG BEACH, CA 90806**
0.440 mi.
2325 ft.

Relative:
Lower

Actual:
23 ft.

LUST:

Region:	STATE
Global Id:	T10000001031
Latitude:	33.787142
Longitude:	-118.1806911

LONG BEACH REDEVELOPMENT AGENCY (Continued) **S110369584**

Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	07/13/2009
Lead Agency:	LONG BEACH, CITY OF
Case Worker:	CP
Local Agency:	LONG BEACH, CITY OF
RB Case Number:	Not reported
LOC Case Number:	PR0022903
File Location:	Not reported
Potential Media Affect:	Not reported
Potential Contaminants of Concern:	Not reported
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T10000001031
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Status History:

Global Id:	T10000001031
Status:	Completed - Case Closed
Status Date:	07/13/2009
Global Id:	T10000001031
Status:	Open - Case Begin Date
Status Date:	04/17/2009
Global Id:	T10000001031
Status:	Open - Remediation
Status Date:	04/17/2009

Regulatory Activities:

Global Id:	T10000001031
Action Type:	ENFORCEMENT
Date:	07/13/2009
Action:	Closure/No Further Action Letter

83
SE
1/4-1/2
0.443 mi.
2337 ft.

CALTRANS - HIGHWAY 103
2100 PACIFIC COAST
LONG BEACH, CA 90804

SLIC **S104404907**
N/A

Relative:
Lower

Actual:
24 ft.

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	12/19/2003
Global Id:	SL2048R1707
Lead Agency:	LOS ANGELES RWQCB (REGION 4)

CALTRANS - HIGHWAY 103 (Continued) **S104404907**

Lead Agency Case Number:	Not reported
Latitude:	33.790242
Longitude:	-118.203101
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	0894
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:	0894
Substance:	TPH/VOCs/SVOCs
Staff:	SSH

T84 **GAINES ELECTRIC SUPPLY COMPANY INC** **LUST** **U003661119**
NNW **2501 ORANGE AVE** **UST** **N/A**
1/4-1/2 **LONG BEACH, CA** **HAZNET**
0.479 mi. **HIST CORTESE**
2530 ft. **Site 1 of 2 in cluster T**

Relative:
Higher

Actual:
81 ft.

LUST:

Region:	STATE
Global Id:	T0603704326
Latitude:	33.8024991
Longitude:	-118.1763945
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/10/1991
Lead Agency:	LOS ANGELES COUNTY
Case Worker:	JOA
Local Agency:	LOS ANGELES COUNTY
RB Case Number:	I-15572
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603704326
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:	T0603704326

GAINES ELECTRIC SUPPLY COMPANY INC (Continued) **U003661119**

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

Status History:
Global Id: T0603704326
Status: Completed - Case Closed
Status Date: 09/10/1991

Global Id: T0603704326
Status: Open - Case Begin Date
Status Date: 09/04/1990

Global Id: T0603704326
Status: Open - Site Assessment
Status Date: 10/29/1990

Regulatory Activities:
Global Id: T0603704326
Action Type: Other
Date: 10/29/1990
Action: Leak Reported

Global Id: T0603704326
Action Type: Other
Date: 09/04/1990
Action: Leak Discovery

Global Id: T0603704326
Action Type: Other
Date: 09/04/1990
Action: Leak Stopped

LONG BEACH UST:

DATA AS OF 02/25/2014:
Region: LONG BEACH
Tanks: 0T
Tank Test: Not reported
Leak Test: Not reported
Tank Status: Not reported

HAZNET:
envid: U003661119
Year: 2014
GEPAID: CAL000342409
Contact: JAY CRAWFORD
Telephone: 5626062727
Mailing Name: Not reported
Mailing Address: 2501 ORANGE AVE
Mailing City,St,Zip: SIGNAL HILL, CA 907550000

GAINES ELECTRIC SUPPLY COMPANY INC (Continued) **U003661119**

Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
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:	5.7
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	U003661119
Year:	2013
GEPAID:	CAL000342409
Contact:	JAY CRAWFORD
Telephone:	5626062727
Mailing Name:	Not reported
Mailing Address:	2501 ORANGE AVE
Mailing City,St,Zip:	SIGNAL HILL, CA 907550000
Gen County:	Los Angeles
TSD EPA ID:	CAD00852405
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Fuel Blending Prior To Energy Recovery At Another Site
Tons:	0.33
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-15572

T85 NNW 1/4-1/2 0.479 mi. 2530 ft. **GAINES ELECTRIC SUPPLY CO.** **LUST** **S100229444**
2501 ORANGE AVE **N/A**
SIGNAL HILL, CA 90801

Site 2 of 2 in cluster T

Relative: Higher

Actual: 81 ft.

LUST REG 4:

Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	I-15572	
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:	T0603704326	
W Global ID:	Not reported	
Staff:	UNK	
Local Agency:	19000	
Cross Street:	025TH ST.	

GAINES ELECTRIC SUPPLY CO. (Continued) **S100229444**

Enforcement Type:	Not reported	
Date Leak Discovered:	9/4/1990	
Date Leak First Reported:		10/29/1990
Date Leak Record Entered:	12/5/1990	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	9/4/1990	
Date Case Last Changed on Database:		9/10/1991
Date the Case was Closed:		9/10/1991
How Leak Discovered:	Tank Closure	
How Leak Stopped:	Not reported	
Cause of Leak:	UNK	
Leak Source:	UNK	
Operator:	PETERS, ERIC J.	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		5944.9562116271576873568925237
Source of Cleanup Funding:		UNK
Preliminary Site Assessment Workplan Submitted:		Not reported
Preliminary Site Assessment Began:		10/29/1990
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:	GAINES ELECTRIC SUPPLY CO.	
RP Address:	P.O. BOX 2970, LONG BEACH, 90801	
Program:	LUST	
Lat/Long:	33.8024991 / -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	

86
NNE
1/4-1/2
0.482 mi.
2547 ft.

TOWN CENTER WEST - COMMERCIAL SITE
W. CHERRY AVE
SIGNAL HILL, CA 90806

SLIC **S106485449**
N/A

Relative:
Higher

Actual:
173 ft.

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	10/23/2000
Global Id:	SLT4306058
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number:	Not reported
Latitude:	33.8033642920916

TOWN CENTER WEST - COMMERCIAL SITE (Continued) **S106485449**

Longitude:	-118.169803619385
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	0099A
File Location:	Regional Board
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:

87
NNE
1/4-1/2
0.494 mi.
2610 ft.

REPLANET LLC **SWRCY** **S109348835**
1600 E WILLOW ST **N/A**
SIGNAL HILL, CA 90755

Relative:
Higher

Actual:
170 ft.

SWRCY:

Reg Id:	156564
Cert Id:	RC156564.001
Mailing Address:	800 N Haven Ave Suite 120
Mailing City:	Ontario
Mailing State:	CA
Mailing Zip Code:	91764
Website:	http://www.replanet.com
Email:	Not reported
Phone Number:	(951) 520-1700
Grand Father:	N
Rural:	N
Operation Begin Date:	05/01/2012
Aluminium:	Y
Glass:	Y
Plastic:	Y
Bimetal:	Y
Agency:	N/A
Monday Hours Of Operation:	9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Tuesday Hours Of Operation:	9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Wednesday Hours Of Operation:	9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Thursday Hours Of Operation:	9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Friday Hours Of Operation:	9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Saturday Hours Of Operation:	9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Sunday Hours Of Operation:	9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Organization ID:	151891
Organization Name:	rePlanet LLC

U88
NNE
1/2-1
0.599 mi.
3161 ft.

ABBOTTS WASTE OIL SERVICE INCORPORATED **ENVIROSTOR** **1000319641**
1845 E WILLOW LOT A **DEED** **CAD981373665**
SIGNAL HILL, CA 90755 **RCRA NonGen / NLR**
FINDS
Site 1 of 2 in cluster U **ECHO**

Relative:
Higher

Actual:
148 ft.

ENVIROSTOR:

Facility ID:	19130002
Status:	Refer: Other Agency
Status Date:	08/31/1995

ABBOTTS WASTE OIL SERVICE INCORPORATED (Continued) **1000319641**

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:	Referred - Not Assigned
Division Branch:	Cleanup Cypress
Assembly:	70
Senate:	33
Special Program:	* Site Char & Assess Grant (CERCLA 104)
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	33.80444
Longitude:	-118.1697
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	* OIL/WATER SEPARATION SLUDGE * UNSPECIFIED SLUDGE WASTE * UNSPECIFIED SOLVENT MIXTURES
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	PEN TRANSPORTATION
Alias Type:	Alternate Name
Alias Name:	TCL CORPORATION (1952-58)
Alias Type:	Alternate Name
Alias Name:	WESTERN OIL REDUCTION COMPANY (1958-60)
Alias Type:	Alternate Name
Alias Name:	CAD980737076
Alias Type:	EPA Identification Number
Alias Name:	CAD981446800
Alias Type:	HWTS Identification Code
Alias Name:	19130002
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:	05/01/1995
Comments:	DATABASE VALIDATION PROGRAM CONFIRMS NFA FOR DTSC.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	06/05/1991
Comments:	Recommend referral to the Local Agency. ON 03/16/1990 screening site inspection done by EPA's FIT team, E&E recommends NFA.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	11/24/1987
Comments:	SITE SCREENING DONE PENDING DHS PERMIT - LOW INSPECTION REQUIRED
Completed Area Name:	PROJECT WIDE

ABBOTTS WASTE OIL SERVICE INCORPORATED (Continued) **1000319641**

Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 12/01/1985
Comments: SOURCE ACT: DHS/ASAP SURVEY 4/1/85 - STORAGE & PETROLEUM DEHYDRATION. YR OF OPER: 1960 TO PRESENT. SUBMIT TO EPA ENFORCEMENT(OTHER) RWQCB. NOW APPLYING FOR A PERMIT AS AN OIL RECYCLER. ALSO INVEST FOR THE PRESNC OF SUBSURFACE HYDROCARBON CONTMN. PRELIM ASSESS DONE CERCLA 104 Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 10/05/1980
Comments: FACILITY IDENTIFIED WADES' QUESTIONNAIRE

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

Facility ID: 80001745
Status: Certified O&M - Land Use Restrictions Only
Status Date: 06/19/2013
Site Code: 400322
Site Type: Corrective Action
Site Type Detailed: Corrective Action
Acres: 0.6
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: WM
Program Manager: Lance Mcmahan
Supervisor: Noel Shrum
Division Branch: Cleanup Sacramento
Assembly: 70
Senate: 33
Special Program: Not reported
Restricted Use: YES
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.80553
Longitude: -118.1692
APN: 7212-011-031, 7212-011-032
Past Use: ABOVE GROUND STORAGE TANKS, HAZARDOUS WASTE STORAGE - TANKS/CONTAINERS, HAZARDOUS WASTE TREATMENT, OIL/WATER SEPARATORS, RECYCLING - USED OIL , UNDERGROUND STORAGE TANKS
Potential COC: Total Chromium (1:6 ratio Cr VI:Cr III Lead Tetrachloroethylene (PCE TPH-diesel TPH-gas TPH-JET FUEL TPH-MOTOR OIL 1,1,1-Trichloroethane (TCA Acetone Ethylbenzene Polychlorinated biphenyls (PCBs, see IRIS Toluene Xylenes
Confirmed COC: Tetrachloroethylene (PCE TPH-diesel 30025-NO 1,1,1-Trichloroethane (TCA Acetone Polychlorinated biphenyls (PCBs, see IRIS Ethylbenzene Toluene 3002501-NO TPH-MOTOR OIL Xylenes Lead Total Chromium (1:6

ABBOTTS WASTE OIL SERVICE INCORPORATED (Continued) **1000319641**

ratio Cr VI:Cr III
Potential Description: SOIL, SV
Alias Name: 2H PROPERTIES L.C.C.
Alias Type: Alternate Name
Alias Name: 7212-011-031
Alias Type: APN
Alias Name: 7212-011-032
Alias Type: APN
Alias Name: CAD980737076
Alias Type: EPA Identification Number
Alias Name: 400322
Alias Type: Project Code (Site Code)
Alias Name: 19130002
Alias Type: Envirostor ID Number
Alias Name: 80001745
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 01/20/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Interim Measures Implementation Report
Completed Date: 05/05/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Interim Measures Questionnaire
Completed Date: 08/04/1994
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: RCRA Facility Assessment Report
Completed Date: 06/30/1994
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 02/08/2011
Comments: Removal Action completed by USEPA to Industrial Cleanup Goals. Land Use Advisory applied to restrict residential use.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Notice
Completed Date: 05/10/2010
Comments: NOV issued

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Unilateral Order (I/SE, RAO, CAO, EPA AO)

ABBOTTS WASTE OIL SERVICE INCORPORATED (Continued) **1000319641**

Completed Date: 04/06/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Other Instrument
Completed Date: 03/29/1989
Comments: Not reported

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: 5 Year Review Reports
Future Due Date: 2022
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

DEED:
Envirostor ID: 80001745
Area: PROJECT WIDE
Sub Area: Not reported
Site Type: CORRECTIVE ACTION
Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): 02/08/2011

RCRA NonGen / NLR:
Date form received by agency: 03/24/1994
Facility name: ABBOTTS WASTE OIL SVC INC
Facility address: 1845 E WILLOW LOT A
SIGNAL HILL, CA 90806
EPA ID: CAD981373665
Contact: GERALD ABBOTT
Contact address: P O BOX 682
HAWTHORNE, CA 902510682
Contact country: US
Contact telephone: (310) 880-7393
Contact email: Not reported
EPA Region: 09
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

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
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

ABBOTTS WASTE OIL SERVICE INCORPORATED (Continued) **1000319641**

Owner/operator name: GERALD F ABBOTT
Owner/operator address: 12632 S MENLO UNIT B
HAWTHORNE, CA 90251
Owner/operator country: Not reported
Owner/operator telephone: (310) 880-7393
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: Yes
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

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 05/11/2004
Date achieved compliance: 07/28/2004
Violation lead agency: State
Enforcement action: SINGLE SITE CA/FO
Enforcement action date: 05/26/2006
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 7500
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 05/11/2004
Date achieved compliance: 07/28/2004
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/18/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

ABBOTTS WASTE OIL SERVICE INCORPORATED (Continued) **1000319641**

Regulation violated: Not reported
Area of violation: Transporters - General
Date violation determined: 05/11/2004
Date achieved compliance: 07/28/2004
Violation lead agency: State
Enforcement action: SINGLE SITE CA/FO
Enforcement action date: 05/26/2006
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 7500
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 05/11/2004
Date achieved compliance: 07/28/2004
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/18/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Transporters - General
Date violation determined: 05/11/2004
Date achieved compliance: 07/28/2004
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/18/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 07/28/2004
Evaluation: NOT A SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/11/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Transporters - General
Date achieved compliance: 07/28/2004
Evaluation lead agency: State

Evaluation date: 05/11/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

ABBOTTS WASTE OIL SERVICE INCORPORATED (Continued) **1000319641**

Area of violation: TSD - Container Use and Management
Date achieved compliance: 07/28/2004
Evaluation lead agency: State

Evaluation date: 05/11/2004
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/11/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/28/2004
Evaluation lead agency: State

FINDS:

Registry ID: 110006177822

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: 1000319641
Registry ID: 110006177822
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110006177822

U89 **DICO OIL CO** **SEMS** **1000326368**
NNE **1845 E WILLOW** **CORRACTS** **CAD980737076**
1/2-1 **SIGNAL HILL, CA 90806** **RCRA-TSDF**
0.600 mi. **RCRA-SQG**
3170 ft. **Site 2 of 2 in cluster U** **US INST CONTROL**
US FIN ASSUR
Relative: **PRP**
Higher **FINDS**
ECHO
Actual: **EMI**
147 ft. **Financial Assurance**
HIST CORTESE
LOS ANGELES CO. HMS
HWP

DICO OIL CO (Continued) **1000326368**

SEMS:

Site ID:	902039
EPA ID:	CAD980737076
Federal Facility:	N
NPL:	Not on the NPL
Non NPL Status:	Removal Only Site (No Site Assessment Work Needed)

Following information was gathered from the prior CERCLIS update completed in 10/2013:

Site ID:	0902039
EPA ID:	CAD980737076
Facility County:	LOS ANGELES
Short Name:	DICO OIL CO
Congressional District:	32
IFMS ID:	09KP
SMSA Number:	4480
USGC Hydro Unit:	18070106
Federal Facility:	Not a Federal Facility
DMNSN Number:	0.00000
Site Orphan Flag:	N
RCRA ID:	Not reported
USGS Quadrangle:	Not reported
Site Init By Prog:	Not reported
NFRAP Flag:	Not reported
Parent ID:	Not reported
RST Code:	Not reported
EPA Region:	09
Classification:	Not reported
Site Settings Code:	Not reported
NPL Status:	Not on the NPL
DMNSN Unit Code:	Not reported
RBRAC Code:	Not reported
RResp Fed Agency Code:	Not reported
Non NPL Status:	Removal Only Site (No Site Assessment Work Needed)
Non NPL Status Date:	06/24/03
Site Fips Code:	06037
CC Concurrence Date:	/ /
CC Concurrence FY:	Not reported
Alias EPA ID:	Not reported
Site FUDS Flag:	Not reported

CERCLIS Site Contact Name(s):

Contact ID:	9270669.00000
Contact Name:	Craig Benson
Contact Tel:	(562) 499-6312
Contact Title:	On-Scene Coordinator (OSC)
Contact Email:	Not reported
Contact ID:	13003854.00000
Contact Name:	Leslie Ramirez
Contact Tel:	(415) 972-3978
Contact Title:	Site Assessment Manager (SAM)
Contact Email:	Not reported
Contact ID:	13003858.00000
Contact Name:	Sharon Murray
Contact Tel:	(415) 972-4250

DICO OIL CO (Continued) **1000326368**

Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

Contact ID: 13004003.00000
Contact Name: Carl Brickner
Contact Tel: Not reported
Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

Alias Comments: Not reported
Site Description: Not reported

CERCLIS Assessment History:

Action Code: 001
Action: DISCOVERY
Date Started: / /
Date Completed: 02/01/86
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: State, Fund Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: PRELIMINARY ASSESSMENT
Date Started: 01/01/86
Date Completed: 06/01/86
Priority Level: Low priority for further assessment
Operable Unit: SITEWIDE
Primary Responsibility: State, Fund Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: PRELIMINARY ASSESSMENT
Date Started: / /
Date Completed: 01/18/89
Priority Level: Low priority for further assessment
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: ARCHIVE SITE
Date Started: / /
Date Completed: 03/16/90
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA In-House
Planning Status: Not reported

DICO OIL CO (Continued) **1000326368**

Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: SITE INSPECTION
Date Started: / /
Date Completed: 03/16/90
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: UNILATERAL ADMIN ORDER
Date Started: / /
Date Completed: 09/03/03
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: ADMINISTRATIVE RECORDS
Date Started: 10/08/03
Date Completed: 10/08/03
Priority Level: Admin Record Compiled for a Removal Event
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: POTENTIALLY RESPONSIBLE PARTY REMOVAL
Date Started: 09/17/03
Date Completed: 04/11/04
Priority Level: Cleaned up
Operable Unit: SITEWIDE
Primary Responsibility: Responsible Party
Planning Status: Not reported
Urgency Indicator: Time Critical
Action Anomaly: Not reported

Action Code: 001
Action: REMOVAL
Date Started: / /
Date Completed: 05/05/04
Priority Level: Cleaned up

DICO OIL CO (Continued) **1000326368**

Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Time Critical
Action Anomaly: Other Start and Completion Anomaly

CORRACTS:

EPA ID: CAD980737076
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 19940804
Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CAD980737076
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 19940804
Action: CA225YE - Stabilization Measures Evaluation, This facility ,is amenable to stabilization activity based on the, status of corrective action work at the facility, technical factors, the degree of risk, timing considerations and administrative considerations
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CAD980737076
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 19940804
Action: CA225YE - Stabilization Measures Evaluation, This facility ,is amenable to stabilization activity based on the, status of corrective action work at the facility, technical factors, the degree of risk, timing considerations and administrative considerations
NAICS Code(s): Not reported
Original schedule date: 19940804
Schedule end date: Not reported

EPA ID: CAD980737076
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 20040505
Action: CA650SR
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CAD980737076
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 20110208
Action: CA772ID

DICO OIL CO (Continued) **1000326368**

NAICS Code(s): Not reported
Original schedule date: 20110703
Schedule end date: Not reported

EPA ID: CAD980737076
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 19940630
Action: CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
NAICS Code(s): Not reported
Original schedule date: 19940630
Schedule end date: Not reported

EPA ID: CAD980737076
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 19940630
Action: CA050RF - RFA Completed, Assessment was an RFA
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CAD980737076
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 19940630
Action: CA050 - RFA Completed
NAICS Code(s): Not reported
Original schedule date: 19940630
Schedule end date: Not reported

RCRA-TSDF:
Date form received by agency: 05/15/1995
Facility name: DICO OIL CO
Facility address: 1845 E WILLOW
SIGNAL HILL, CA 90806
EPA ID: CAD980737076
Mailing address: PO BOX 7654
LONG BEACH, CA 90807
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: TSDF
Description: Handler is engaged in the treatment, storage or disposal of hazardous waste

Owner/Operator Summary:
Owner/operator name: COWAN-JR RICHARD
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported

DICO OIL CO (Continued) **1000326368**

Owner/operator telephone: (415) 555-1212
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
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: 07/01/1982
Site name: DICO OIL CO
Classification: Not a generator, verified

Corrective Action Summary:
Event date: 06/30/1994
Event: RFA Completed

Event date: 06/30/1994
Event: RFA Completed, Assessment was an RFA.

Event date: 06/30/1994
Event: RFA Determination Of Need For An RFI, RFI is Necessary;

Event date: 08/04/1994
Event: CA Prioritization, Facility or area was assigned a medium corrective action priority.

Event date: 08/04/1994
Event: Stabilization Measures Evaluation,This facility is amenable to stabilization activity based on the status of corrective action work at the facility, technical factors, the degree of risk, timing

DICO OIL CO (Continued) **1000326368**

considerations and administrative considerations.

Event date: 08/04/1994
Event: Stabilization Measures Evaluation,This facility is amenable to stabilization activity based on the status of corrective action work at the facility, technical factors, the degree of risk, timing considerations and administrative considerations.

Event date: 05/05/2004
Event: CA650SR

Event date: 02/08/2011
Event: CA772ID

Facility Has Received Notices of Violations:
Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 09/30/1994
Date achieved compliance: 11/14/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/07/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 09/30/1994
Date achieved compliance: 11/14/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/07/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.190-201.J
Area of violation: TSD - General
Date violation determined: 09/30/1994
Date achieved compliance: 11/14/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/07/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

DICO OIL CO (Continued) **1000326368**

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 09/30/1994
Date achieved compliance: 11/14/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/07/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 09/30/1994
Date achieved compliance: 11/14/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/07/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 09/30/1994
Date achieved compliance: 11/14/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/07/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 09/30/1994
Date achieved compliance: 11/14/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/07/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.50-56.D

DICO OIL CO (Continued) **1000326368**

Area of violation: TSD - General
Date violation determined: 09/30/1994
Date achieved compliance: 11/14/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/07/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.190-201.J
Area of violation: TSD - General
Date violation determined: 05/13/1994
Date achieved compliance: 09/15/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 116894
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 05/13/1994
Date achieved compliance: 09/15/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 116894
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.50-56.D
Area of violation: TSD - General
Date violation determined: 05/13/1994
Date achieved compliance: 09/15/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 116894
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.50-56.D
Area of violation: TSD - General

DICO OIL CO (Continued) **1000326368**

Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 116894
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 116894
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/20/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.40-43.D
Area of violation: Generators - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/20/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.50-60
Area of violation: Generators - General
Date violation determined: 12/20/1993

DICO OIL CO (Continued) **1000326368**

Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 116894
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/20/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 116894
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.190-201.J
Area of violation: TSD - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/20/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994

DICO OIL CO (Continued) **1000326368**

Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/20/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 116894
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.50-56.D
Area of violation: TSD - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/20/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.190-201.J
Area of violation: TSD - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 116894
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State

DICO OIL CO (Continued) **1000326368**

Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/20/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 116894
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.40-43.D
Area of violation: Generators - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 116894
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.50-60
Area of violation: Generators - General
Date violation determined: 12/20/1993
Date achieved compliance: 05/13/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/20/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.50-60
Area of violation: Generators - General
Date violation determined: 09/30/1993
Date achieved compliance: 12/12/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL

DICO OIL CO (Continued) **1000326368**

Enforcement action date: 09/30/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 09/30/1993
Date achieved compliance: 12/20/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/30/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 09/30/1993
Date achieved compliance: 12/20/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/30/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 09/30/1993
Date achieved compliance: 12/20/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/30/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.70-77.E
Area of violation: TSD - General
Date violation determined: 01/29/1992
Date achieved compliance: 03/13/1992
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/13/1992

DICO OIL CO (Continued) **1000326368**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 500
Final penalty amount: 500
Paid penalty amount: 500

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 01/29/1992
Date achieved compliance: 03/13/1992
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/13/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 500
Final penalty amount: 500
Paid penalty amount: 500

Regulation violated: F - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 09/06/1985
Date achieved compliance: 10/15/1985
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 09/26/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/22/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Financial Requirements
Date achieved compliance: 11/14/1994
Evaluation lead agency: State

Evaluation date: 08/22/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 11/14/1994
Evaluation lead agency: State

Evaluation date: 08/22/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Closure/Post-Closure

DICO OIL CO (Continued) **1000326368**

Date achieved compliance: 11/14/1994
Evaluation lead agency: State

Evaluation date: 04/07/1994
Evaluation: FOLLOW-UP INSPECTION
Area of violation: TSD - General
Date achieved compliance: 09/15/1994
Evaluation lead agency: State

Evaluation date: 08/16/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 12/12/1993
Evaluation lead agency: State

Evaluation date: 08/16/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 05/13/1994
Evaluation lead agency: State

Evaluation date: 08/16/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/13/1994
Evaluation lead agency: State

Evaluation date: 08/16/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 12/20/1993
Evaluation lead agency: State

Evaluation date: 08/16/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Financial Requirements
Date achieved compliance: 05/13/1994
Evaluation lead agency: State

Evaluation date: 08/16/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Financial Requirements
Date achieved compliance: 12/20/1993
Evaluation lead agency: State

Evaluation date: 12/16/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 03/13/1992
Evaluation lead agency: State

Evaluation date: 09/06/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 10/15/1985
Evaluation lead agency: State

DICO OIL CO (Continued) **1000326368**

Evaluation date: 05/20/1985
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/20/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

US INST CONTROL:
EPA ID: CAD980737076
Site ID: Not reported
Name: DICO OIL CO
Action Name: Not reported
Address: 1845 E WILLOW
SIGNAL HILL, CA 90806
EPA Region: 9
County: LOS ANGELES
Event Code: CA772ID
Inst. Control: Not reported
Actual Date: 02/08/2011
Complet. Date: 01/01/1900
Operable Unit: Not reported
Contaminated Media : Not reported
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: INSTITUTIONAL CONTROLS ESTABLISHED-INFORMATIONAL DEVICE

US FIN ASSUR:
EPA ID: CAD980737076
Provider: FIRST STATE BANK OF SOUTHERN CALIFORNIA
EPA region: 9
County: Not reported
Mechanism type: TRUST FUND (FULLY FUNDED)
Mechanism ID: 1
Cost estimate: $20,500.00
Face value: $20,500.00
Effective date: 1/1/1998

PRP:
PRP name: DICO OIL COMPANY, INC
LUIS MARMOL
RICHARD COWAN

FINDS:

Registry ID: 110009534539

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

DICO OIL CO (Continued) **1000326368**

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:	1000326368
Registry ID:	110009534539
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110009534539

EMI:

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	52113
Air District Name:	SC
SIC Code:	2992
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:	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:	1990
County Code:	19
Air Basin:	SC
Facility ID:	52113
Air District Name:	SC
SIC Code:	2992
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:	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

CA Financial Assurance 1:

EPA ID Number:	CAD980737076
Sudden Amount1:	Not reported
Non Sudden Amount1:	Not reported
Closure Mechanism:	Not reported
Closure Amount:	Not reported
Post Closure Mechanism:	Not reported
Post Closure Amount:	Not reported
Corrective Action Mechanism:	CD

DICO OIL CO (Continued) **1000326368**

Corrective Action Amount:	$20,500.00
Sudden Mechanism Type:	Not reported
Sudden Mechanism Amount:	Not reported
Non Sudden Mechanism Type:	Not reported
Non Sudden Mechanism Amount:	Not reported
O and M Mechanism Type:	Not reported
O and M Amount:	Not reported

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	CALSI
Reg Id:	19130002

LOS ANGELES CO. HMS:

Region:	LA
Permit Category:	T
Facility Id:	013282-013606
Facility Type:	1
Facility Status:	Removed
Area:	1M
Permit Number:	000469911
Permit Status:	Removed

HWP:

EPA Id:	CAD980737076
Cleanup Status:	UNDERGOING CLOSURE
Latitude:	33.80586
Longitude:	-118.1695
Facility Type:	Historical - Non-Operating
Facility Size:	Not reported
Team:	Not reported
Supervisor:	Not reported
Site Code:	400322
Assembly District:	70
Senate District:	33
Public Information Officer:	Not reported
Public Information Officer:	Not reported

Activities:

EPA Id:	CAD980737076
Facility Type:	Historical - Non-Operating
Unit Names:	TANKTRT1
Event Description:	New Operating Permit - APPLICATION PART A RECEIVED
Actual Date:	04/17/1986

EPA Id:	CAD980737076
Facility Type:	Historical - Non-Operating
Unit Names:	TANKTRT1
Event Description:	New Operating Permit - PUBLIC COMMENT (BEGIN)
Actual Date:	04/17/1995

EPA Id:	CAD980737076
Facility Type:	Historical - Non-Operating
Unit Names:	TANKTRT1
Event Description:	New Operating Permit - FINAL PERMIT

DICO OIL CO (Continued) **1000326368**

Actual Date: 07/28/1995

EPA Id: CAD980737076
Facility Type: Historical - Non-Operating
Unit Names: TANKTRT1
Event Description: New Operating Permit - DRAFT PERMIT
Actual Date: 04/17/1995

EPA Id: CAD980737076
Facility Type: Historical - Non-Operating
Unit Names: TANKTRT1
Event Description: New Operating Permit - APPLICATION PART B RECEIVED
Actual Date: 01/01/1992

Closure:
EPA Id: CAD980737076
Facility Type: Historical - Non-Operating
Unit Names: TANKTRT1
Event Description: Referred for closure to other agency - REFERRED FOR CLOSURE TO OTHER AGENCY
Actual Date: 10/07/2013

EPA Id: CAD980737076
Facility Type: Historical - Non-Operating
Unit Names: TANKTRT1
Event Description: Closure - CLOSURE PLAN APPROVED
Actual Date: 08/08/2013

Alias:
EPA Id: CAD980737076
Facility Type: Historical - Non-Operating
Alias Type: Envirostor ID Number
Alias: 19130002

EPA Id: CAD980737076
Facility Type: Historical - Non-Operating
Alias Type: Project Code (Site Code)
Alias: 400322

---

90 East 1/2-1 0.601 mi. 3175 ft. **ALAMITOS LAND/BIXBY HILL HATHAWAY/TEMPLE/HILL ST. AREA SIGNAL HILL, CA 90806** **ENVIROSTOR** **S103393766 N/A**

Relative: Higher

Actual: 253 ft.

ENVIROSTOR:
Facility ID: 19130105
Status: Inactive - Needs Evaluation
Status Date: 05/05/2009
Site Code: 400674
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: 50
NPL: NO
Regulatory Agencies: DTSC
Lead Agency: DTSC
Program Manager: Rania Zabaneh

ALAMITOS LAND/BIXBY HILL (Continued) **S103393766**

Supervisor: Eileen Mananian
Division Branch: Cleanup Cypress
Assembly: 70
Senate: 33
Special Program: EPA - PASI
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 33.79717
Longitude: -118.1608
APN: NONE SPECIFIED
Past Use: FUEL - VEHICLE STORAGE/ REFUELING, OIL FIELD, UNKNOWN
Potential COC: * HALOGENATED ORGANIC COMPOUNDS * HYDROCARBON SOLVENTS * ORGANIC LIQUIDS WITH METALS * ORGANIC SOLIDS WITH HALOGENS * CONTAMINATED SOIL * OFF-SPECIFICATION, AGED, OR SURPLUS ORGANICS * UNSPECIFIED OIL CONTAINING WASTE * UNSPECIFIED SOLVENT MIXTURES * WASTE OIL & MIXED OIL * DRILLING MUD * OFF-SPECIFICATION, AGED, OR SURPLUS INORGANICS * ORGANIC LIQUIDS (NONSOLVENTS) WITH HALOGENS * OTHER INORGANIC SOLID WASTE * UNSPECIFIED ORGANIC LIQUID MIXTURE Arsenic Chromium VI Thallium and compounds Lead Mercury (elemental
Confirmed COC: Lead Mercury (elemental
Potential Description: SOIL
Alias Name: ALAMITOS LAND COMPANY - CENTRAL PARCEL
Alias Type: Alternate Name
Alias Name: ALAMITOS LAND COMPANY - NORTHWEST PARCEL
Alias Type: Alternate Name
Alias Name: ALAMITOS LAND COMPANY -LONG BEACH PARCEL
Alias Type: Alternate Name
Alias Name: ALAMITOS/BIXBY
Alias Type: Alternate Name
Alias Name: BIXBY RIDGE
Alias Type: Alternate Name
Alias Name: LE PLASTRIER COMPANIES
Alias Type: Alternate Name
Alias Name: 110033614079
Alias Type: EPA (FRS #)
Alias Name: 400674
Alias Type: Project Code (Site Code)
Alias Name: 19130105
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: 04/24/2009
Comments: Site Screening completed by DTSC and approved by EPA

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 01/26/1998
Comments: DTSC and Alamitos Land Company (owner) entered into a Voluntary Cleanup Agreement for DTSC review & comment on a Preliminary Endangerment (equivalent) for the site, which is to be developed for residential use.

Completed Area Name: PROJECT WIDE

ALAMITOS LAND/BIXBY HILL (Continued) **S103393766**

Completed Sub Area Name: Not reported
Completed Document Type: *Voluntary Cleanup Agreement Completion
Completed Date: 06/26/1998
Comments: Reviewed PEA equivalent document. Document was deficient. More site characterization is needed. Status on site is VCOMP. Facility does not want to continue working w/DTSC.

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

91
NE
1/2-1
0.664 mi.
3504 ft.

SIGNAL HILL PETROLEUM
2200 E. WILLOW ST
SIGNAL HILL, CA 90806

ENVIROSTOR **S103995330**
SLIC **N/A**

Relative:
Higher

Actual:
137 ft.

ENVIROSTOR:
Facility ID: 71003256
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: 70
Senate: 33
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.80431
Longitude: -118.1667
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CAL000055266
Alias Type: EPA Identification Number
Alias Name: 71003256
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported

SIGNAL HILL PETROLEUM (Continued) **S103995330**

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

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	01/24/1998
Global Id:	SLT4304543
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number:	Not reported
Latitude:	33.8043610864346
Longitude:	-118.170461386555
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	0078A
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:

92
West
1/2-1
0.691 mi.
3649 ft.

PETER H. BURNETT ELEMENTARY
568 EAST HILL STREET
LONG BEACH, CA 90806

ENVIROSTOR **S104735497**
SCH **N/A**

Relative:
Lower

Actual:
25 ft.

ENVIROSTOR:

Facility ID:	19990029
Status:	Inactive - Withdrawn
Status Date:	08/14/2000
Site Code:	404120
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	4.5
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Safouh Sayed
Supervisor:	Robert Senga
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	70
Senate:	33
Special Program:	Not reported

PETER H. BURNETT ELEMENTARY (Continued) **S104735497**

Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 33.79712
Longitude: -118.1857
APN: NONE SPECIFIED
Past Use: * UNKNOWN
Potential COC: NONE SPECIFIED No Contaminants found
Confirmed COC: NONE SPECIFIED
Potential Description: SOIL
Alias Name: LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: LONG BEACH USD-BURNETT ELEM/CDE
Alias Type: Alternate Name
Alias Name: LONG BEACH USD-PETER H.BURNERTT ELEM/VCA
Alias Type: Alternate Name
Alias Name: PETER H. BURNETT ELEMENTARY
Alias Type: Alternate Name
Alias Name: 404059
Alias Type: Project Code (Site Code)
Alias Name: 404120
Alias Type: Project Code (Site Code)
Alias Name: 19990029
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 08/14/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 04/04/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inactive Status Letter
Completed Date: 05/11/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 05/12/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/27/2000
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported

PETER H. BURNETT ELEMENTARY (Continued) **S104735497**

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

SCH:

Facility ID:	19990029
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	4.5
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Safouh Sayed
Supervisor:	Robert Senga
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404120
Assembly:	70
Senate:	33
Special Program Status:	Not reported
Status:	Inactive - Withdrawn
Status Date:	08/14/2000
Restricted Use:	NO
Funding:	School District
Latitude:	33.79712
Longitude:	-118.1857
APN:	NONE SPECIFIED
Past Use:	* UNKNOWN
Potential COC:	NONE SPECIFIED, No Contaminants found
Confirmed COC:	NONE SPECIFIED
Potential Description:	SOIL
Alias Name:	LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-BURNETT ELEM/CDE
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-PETER H.BURNERTT ELEM/VCA
Alias Type:	Alternate Name
Alias Name:	PETER H. BURNETT ELEMENTARY
Alias Type:	Alternate Name
Alias Name:	404059
Alias Type:	Project Code (Site Code)
Alias Name:	404120
Alias Type:	Project Code (Site Code)
Alias Name:	19990029
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	08/14/2000

PETER H. BURNETT ELEMENTARY (Continued) **S104735497**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 04/04/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inactive Status Letter
Completed Date: 05/11/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 05/12/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/27/2000
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

93
SW
1/2-1
0.791 mi.
4175 ft.

LONG BEACH POLYTECHNIC HIGH SCHOOL AUDITORIUM **ENVIROSTOR** **S113005813**
1600 ATLANTIC AVENUE **SCH** **N/A**
LONG BEACH, CA 90813 **HAZNET**

Relative:
Lower

Actual:
33 ft.

ENVIROSTOR:
Facility ID: 60001962
Status: No Further Action
Status Date: 11/19/2014
Site Code: 404893
Site Type: School Investigation
Site Type Detailed: School
Acres: 1.5
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Johnson Abraham
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Assembly: 70
Senate: 33

LONG BEACH POLYTECHNIC HIGH SCHOOL AUDITORIUM (Continued) **S113005813**

Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 33.78703
Longitude: -118.1845
APN: 7268-007-905
Past Use: UNKNOWN
Potential COC: Lead, Organic (tetraethyl lead Polychlorinated biphenyls (PCBs, see IRIS
Confirmed COC: Polychlorinated biphenyls (PCBs, see IRIS Lead, Organic (tetraethyl lead
Potential Description: SOIL
Alias Name: 7268-007-905
Alias Type: APN
Alias Name: 404893
Alias Type: Project Code (Site Code)
Alias Name: 60001962
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 09/26/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 03/03/2014
Comments: Fully executed SCA sent (FedEx) to District.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 03/18/2014
Comments: DTSC completed PEA and determined that Further Action is required at the Site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Tech Memo
Completed Date: 05/27/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 11/19/2014
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

LONG BEACH POLYTECHNIC HIGH SCHOOL AUDITORIUM (Continued) **S113005813**

Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

SCH:

Facility ID:	60001962
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	1.5
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Johnson Abraham
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404893
Assembly:	70
Senate:	33
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	11/19/2014
Restricted Use:	NO
Funding:	School District
Latitude:	33.78703
Longitude:	-118.1845
APN:	7268-007-905
Past Use:	UNKNOWN
Potential COC:	Lead, Organic (tetraethyl lead, Polychlorinated biphenyls (PCBs, see IRIS
Confirmed COC:	Polychlorinated biphenyls (PCBs, see IRIS, Lead, Organic (tetraethyl lead
Potential Description:	SOIL
Alias Name:	7268-007-905
Alias Type:	APN
Alias Name:	404893
Alias Type:	Project Code (Site Code)
Alias Name:	60001962
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Amendment - Order/Agreement
Completed Date:	09/26/2014
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	School Cleanup Agreement
Completed Date:	03/03/2014
Comments:	Fully executed SCA sent (FedEx) to District.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported

LONG BEACH POLYTECHNIC HIGH SCHOOL AUDITORIUM (Continued) **S113005813**

Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 03/18/2014
Comments: DTSC completed PEA and determined that Further Action is required at the Site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Tech Memo
Completed Date: 05/27/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 11/19/2014
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

HAZNET:
envid: S113005813
Year: 2015
GEPAID: CAD981420326
Contact: RON HOPPE
Telephone: 5629977504
Mailing Name: Not reported
Mailing Address: 2425 WEBSTER AVE
Mailing City,St,Zip: LONG BEACH, CA 908100000
Gen County: Los Angeles
TSD EPA ID: CAD028409019
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: 0.1251
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: S113005813
Year: 2015
GEPAID: CAD981420326
Contact: RON HOPPE
Telephone: 5629977504
Mailing Name: Not reported
Mailing Address: 2425 WEBSTER AVE
Mailing City,St,Zip: LONG BEACH, CA 908100000
Gen County: Los Angeles

LONG BEACH POLYTECHNIC HIGH SCHOOL AUDITORIUM (Continued) **S113005813**

TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Waste Category:	Laboratory waste chemicals
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.2
Cat Decode:	Laboratory waste chemicals
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Los Angeles

envid:	S113005813
Year:	2015
GEPAID:	CAD981420326
Contact:	RON HOPPE
Telephone:	5629977504
Mailing Name:	Not reported
Mailing Address:	2425 WEBSTER AVE
Mailing City,St,Zip:	LONG BEACH, CA 908100000
Gen County:	Los Angeles
TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Waste Category:	Other organic solids
Disposal Method:	Not reported
Tons:	0.05
Cat Decode:	Other organic solids
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	S113005813
Year:	2015
GEPAID:	CAD981420326
Contact:	RON HOPPE
Telephone:	5629977504
Mailing Name:	Not reported
Mailing Address:	2425 WEBSTER AVE
Mailing City,St,Zip:	LONG BEACH, CA 908100000
Gen County:	Los Angeles
TSD EPA ID:	AZC950823111
TSD County:	99
Waste Category:	Asbestos containing waste
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	18.4
Cat Decode:	Asbestos containing waste
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:	S113005813
Year:	2015
GEPAID:	CAD981420326
Contact:	RON HOPPE
Telephone:	5629977504
Mailing Name:	Not reported
Mailing Address:	2425 WEBSTER AVE
Mailing City,St,Zip:	LONG BEACH, CA 908100000

LONG BEACH POLYTECHNIC HIGH SCHOOL AUDITORIUM (Continued) **S113005813**

Gen County:	Los Angeles
TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	Not reported
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
147 additional CA_HAZNET: record(s) in the EDR Site Report.

94
WNW
1/2-1
0.827 mi.
4364 ft.

DOOLEY'S HARDWARE MART PROPERTY
HOME STREET/DEL AMO BOULEVARD
LONG BEACH, CA 90806

ENVIROSTOR SCH **S105628514**
N/A

Relative:
Lower

Actual:
25 ft.

ENVIROSTOR:

Facility ID:	19590004
Status:	Certified
Status Date:	04/10/2009
Site Code:	404243
Site Type:	School Cleanup
Site Type Detailed:	School
Acres:	4.8
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Joe Hwong
Supervisor:	Javier Hinojosa
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	70
Senate:	33
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	33.79931
Longitude:	-118.1874
APN:	7132-26-010, 7132-26-015, 7132-26-016, 7132-26-023, 7132-26-024, 7132-26-024, 7132-26-025, 7132-26-026, 7132-26-027, 7132-26-030, 7132-28-016
Past Use:	DRY CLEANING, ENGINE TESTING/REPAIR, PHOTOGRAPHIC PROCESSING, RESIDENTIAL AREA, RETAIL
Potential COC:	Benzene Methyl tertbutyl ether (MTBE Polynuclear aromatic hydrocarbons (PAHs TPH-gas
Confirmed COC:	30019-NO TPH-gas Benzene Methyl tertbutyl ether (MTBE
Potential Description:	OTH, SOIL
Alias Name:	DOOLEY'S HARDWARE MART PROPERTY
Alias Type:	Alternate Name
Alias Name:	LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-FRMR DOOLEYS HARDWARE STR
Alias Type:	Alternate Name

DOOLEY'S HARDWARE MART PROPERTY (Continued) **S105628514**

Alias Name: 7132-26-010
Alias Type: APN
Alias Name: 7132-26-015
Alias Type: APN
Alias Name: 7132-26-016
Alias Type: APN
Alias Name: 7132-26-023
Alias Type: APN
Alias Name: 7132-26-024
Alias Type: APN
Alias Name: 7132-26-024
Alias Type: APN
Alias Name: 7132-26-025
Alias Type: APN
Alias Name: 7132-26-026
Alias Type: APN
Alias Name: 7132-26-027
Alias Type: APN
Alias Name: 7132-26-030
Alias Type: APN
Alias Name: 7132-28-016
Alias Type: APN
Alias Name: 110033617691
Alias Type: EPA (FRS #)
Alias Name: 404243
Alias Type: Project Code (Site Code)
Alias Name: 19590004
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 01/29/2002
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 10/26/2005
Comments: Approved soil cleanup action; additional investigations necessary for GW impacts; district needs to submit a gw SSI WP to evaluate impact from on-site releases and off-site upgrade contribution.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 09/29/2004
Comments: Response to public comments and DTSC approved the RAW

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 08/21/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

DOOLEY'S HARDWARE MART PROPERTY (Continued) **S105628514**

Completed Document Type: Supplemental Site Investigation Report
Completed Date: 09/16/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 08/05/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 08/05/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 06/16/2005
Comments: Not reported

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 11/09/2006
Comments: Comment letter was sent out on 8/9/2006.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 4.15 Request
Completed Date: 12/15/2004
Comments: Approved.

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/20/2007
Comments: Issued comments. Need additional monitoring.

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/08/2008
Comments: Approval letter was sent out on 1/8/2008.

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/05/2008
Comments: DTSC approved the GW monitoring report.

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 05/14/2008
Comments: Approval Of Groundwater Monitoring Report, mailed to Long Beach

DOOLEY'S HARDWARE MART PROPERTY (Continued) **S105628514**

Unified School District.

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 09/23/2008
Comments: DTSC received the report for abandonment of GW on 9/11/2008.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 12/14/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 12/09/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/09/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 07/17/2002
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight/Voluntary Cleanup Agreement
Completed Date: 05/01/2007
Comments: Sent Master Agreement to district for signature

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 05/15/2008
Comments: CRU Memo completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Notice of Exemption
Completed Date: 09/29/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 07/23/2001
Comments: Not reported

Future Area Name: Not reported

DOOLEY'S HARDWARE MART PROPERTY (Continued) **S105628514**

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

SCH:

Facility ID:	19590004
Site Type:	School Cleanup
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	4.8
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Joe Hwong
Supervisor:	Javier Hinojosa
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404243
Assembly:	70
Senate:	33
Special Program Status:	Not reported
Status:	Certified
Status Date:	04/10/2009
Restricted Use:	NO
Funding:	School District
Latitude:	33.79931
Longitude:	-118.1874
APN:	7132-26-010, 7132-26-015, 7132-26-016, 7132-26-023, 7132-26-024, 7132-26-024, 7132-26-025, 7132-26-026, 7132-26-027, 7132-26-030, 7132-28-016
Past Use:	DRY CLEANING, ENGINE TESTING/REPAIR, PHOTOGRAPHIC PROCESSING, RESIDENTIAL AREA, RETAIL
Potential COC:	Benzene, Methyl tertbutyl ether (MTBE, Polynuclear aromatic hydrocarbons (PAHs, TPH-gas
Confirmed COC:	30019-NO, TPH-gas, Benzene, Methyl tertbutyl ether (MTBE
Potential Description:	OTH, SOIL
Alias Name:	DOOLEY'S HARDWARE MART PROPERTY
Alias Type:	Alternate Name
Alias Name:	LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-FRMR DOOLEYS HARDWARE STR
Alias Type:	Alternate Name
Alias Name:	7132-26-010
Alias Type:	APN
Alias Name:	7132-26-015
Alias Type:	APN
Alias Name:	7132-26-016
Alias Type:	APN
Alias Name:	7132-26-023
Alias Type:	APN
Alias Name:	7132-26-024

DOOLEY'S HARDWARE MART PROPERTY (Continued) **S105628514**

Alias Type: APN
Alias Name: 7132-26-024
Alias Type: APN
Alias Name: 7132-26-025
Alias Type: APN
Alias Name: 7132-26-026
Alias Type: APN
Alias Name: 7132-26-027
Alias Type: APN
Alias Name: 7132-26-030
Alias Type: APN
Alias Name: 7132-28-016
Alias Type: APN
Alias Name: 110033617691
Alias Type: EPA (FRS #)
Alias Name: 404243
Alias Type: Project Code (Site Code)
Alias Name: 19590004
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 01/29/2002
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 10/26/2005
Comments: Approved soil cleanup action; additional investigations necessary for GW impacts; district needs to submit a gw SSI WP to evaluate impact from on-site releases and off-site upgrade contribution.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 09/29/2004
Comments: Response to public comments and DTSC approved the RAW

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 08/21/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 09/16/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 08/05/2004
Comments: Not reported

DOOLEY'S HARDWARE MART PROPERTY (Continued) **S105628514**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 08/05/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 06/16/2005
Comments: Not reported

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 11/09/2006
Comments: Comment letter was sent out on 8/9/2006.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 4.15 Request
Completed Date: 12/15/2004
Comments: Approved.

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/20/2007
Comments: Issued comments. Need additional monitoring.

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/08/2008
Comments: Approval letter was sent out on 1/8/2008.

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/05/2008
Comments: DTSC approved the GW monitoring report.

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 05/14/2008
Comments: Approval Of Groundwater Monitoring Report, mailed to Long Beach Unified School District.

Completed Area Name: GW
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 09/23/2008
Comments: DTSC received the report for abandonment of GW on 9/11/2008.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

DOOLEY'S HARDWARE MART PROPERTY (Continued) **S105628514**

Completed Document Type: Certification
Completed Date: 12/14/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 12/09/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/09/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 07/17/2002
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight/Voluntary Cleanup Agreement
Completed Date: 05/01/2007
Comments: Sent Master Agreement to district for signature

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 05/15/2008
Comments: CRU Memo completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Notice of Exemption
Completed Date: 09/29/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 07/23/2001
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

95 SE 1/2-1 0.844 mi. 4457 ft. | **ROBERT E. LEE SCHOOL SITE**
1620 TEMPLE AVENUE
LONG BEACH, CA 90804 | **ENVIROSTOR SCH** | **S118756567**
N/A

Relative: Higher

Actual: 53 ft.

ENVIROSTOR:

Facility ID:	19820022
Status:	No Action Required
Status Date:	02/11/2000
Site Code:	404076
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	Mark Malinowski
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	70
Senate:	33
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	33.78722
Longitude:	-118.1588
APN:	NONE SPECIFIED
Past Use:	* EDUCATIONAL SERVICES
Potential COC:	NONE SPECIFIED No Contaminants found
Confirmed COC:	NONE SPECIFIED
Potential Description:	NMA
Alias Name:	LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-ROBERT E. LEE ELEM/VCA
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-ROBERT E. LEE SCHOOL/CDE
Alias Type:	Alternate Name
Alias Name:	ROBERT E. LEE SCHOOL SITE
Alias Type:	Alternate Name
Alias Name:	110002699866
Alias Type:	EPA (FRS #)
Alias Name:	404027
Alias Type:	Project Code (Site Code)
Alias Name:	404076
Alias Type:	Project Code (Site Code)
Alias Name:	19820022
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	02/04/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1

ROBERT E. LEE SCHOOL SITE (Continued) **S118756567**

Completed Date:	02/11/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	06/29/2000
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

SCH:

Facility ID:	19820022
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	Not reported
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Not reported
Supervisor:	Mark Malinowski
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404076
Assembly:	70
Senate:	33
Special Program Status:	Not reported
Status:	No Action Required
Status Date:	02/11/2000
Restricted Use:	NO
Funding:	School District
Latitude:	33.78722
Longitude:	-118.1588
APN:	NONE SPECIFIED
Past Use:	* EDUCATIONAL SERVICES
Potential COC:	NONE SPECIFIED, No Contaminants found
Confirmed COC:	NONE SPECIFIED
Potential Description:	NMA
Alias Name:	LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-ROBERT E. LEE ELEM/VCA
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-ROBERT E. LEE SCHOOL/CDE
Alias Type:	Alternate Name
Alias Name:	ROBERT E. LEE SCHOOL SITE
Alias Type:	Alternate Name
Alias Name:	110002699866

ROBERT E. LEE SCHOOL SITE (Continued) **S118756567**

Alias Type:	EPA (FRS #)
Alias Name:	404027
Alias Type:	Project Code (Site Code)
Alias Name:	404076
Alias Type:	Project Code (Site Code)
Alias Name:	19820022
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	02/04/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	02/11/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	06/29/2000
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

96
North
1/2-1
0.860 mi.
4540 ft.

KENYON PRESS INC
2850 WALNUT AVE
SIGNAL HILL, CA 90755

ENVIROSTOR **S108211137**
EMI **N/A**

Relative:
Higher

Actual:
104 ft.

ENVIROSTOR:

Facility ID:	19350466
Status:	Refer: Other Agency
Status Date:	04/25/1995
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:	Referred - Not Assigned
Division Branch:	Cleanup Cypress
Assembly:	70

KENYON PRESS INC (Continued) **S108211137**

Senate: 33
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.80910
Longitude: -118.1714
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: * OIL/WATER SEPARATION SLUDGE * CONTAMINATED SOIL * UNSPECIFIED OIL CONTAINING WASTE * UNSPECIFIED SOLVENT MIXTURES * WASTE OIL & MIXED OIL
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: 19350466
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: 04/25/1995
Comments: 1987 PA INDICATES THE SITE IS CONTAMINATED WITH OIL WASTES. THERE IS NO INDICATION OF GW CONTAMINATION. DUE TO "PETROLEUM EXCLUSION" STAFF RECOMMENDS THE SITE BE REFERRED TO COUNTY FOR ANY FURTHER ACTION.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 05/04/1987
Comments: PRELIM ASSESS DONE CONTACT W GEORGE MCKINTOSH - STORE MANAG STATED SUMP USED FOR DISP OF WAST OILS FROM CLEANING OIL FIELD EQUIP - SUMP NO LONGER USED, NOW WAREHOUSE FOR OIL FIELD SUPPLIES. OPERATOR DID REPORT DISP WASTE OILS ONSITE

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 10/28/1986
Comments: SITE SCREENING DONE PA DONE ON OLD SITE AT 2335 CHERRY IND CT LONG BEACH REC SIRL_ASPIS 19-35-0342 RATIONALE FOR PA - POSS ON-SITE DISP BASED ON QUESTIONAIRE

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

EMI:
Year: 2005
County Code: 19
Air Basin: SC

KENYON PRESS INC (Continued) **S108211137**

Facility ID:	143975
Air District Name:	SC
SIC Code:	2752
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:	1.135435
Reactive Organic Gases Tons/Yr:	1.13490123
Carbon Monoxide Emissions Tons/Yr:	.00175
NOX - Oxides of Nitrogen Tons/Yr:	.0065
SOX - Oxides of Sulphur Tons/Yr:	.00003
Particulate Matter Tons/Yr:	.000375
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.000375

97
NE
1/2-1
0.889 mi.
4694 ft.

JUNIPERO AVENUE SITE **ENVIROSTOR** **S104549066**
2740-2760 JUNIPERO AVENUE **VCP** **N/A**
SIGNAL HILL, CA 90806 **LIENS**

Relative:
Higher

Actual:
92 ft.

ENVIROSTOR:

Facility ID:	19340779
Status:	Inactive - Needs Evaluation
Status Date:	11/07/2016
Site Code:	400828
Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	1
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Rania Zabaneh
Supervisor:	Eileen Mananian
Division Branch:	Cleanup Cypress
Assembly:	70
Senate:	33
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	33.80707
Longitude:	-118.1628
APN:	7212021024
Past Use:	MACHINE SHOP, METAL PLATING - OTHER, PAINT/DEPAINT FACILITY, TRANSPORTATION - WAREHOUSING
Potential COC:	Tetrachloroethylene (PCE
Confirmed COC:	Tetrachloroethylene (PCE
Potential Description:	SOIL
Alias Name:	JUNIPERO AVENUE SITE
Alias Type:	Alternate Name
Alias Name:	7212021024
Alias Type:	APN
Alias Name:	110033606827
Alias Type:	EPA (FRS #)
Alias Name:	400828
Alias Type:	Project Code (Site Code)
Alias Name:	19340779
Alias Type:	Envirostor ID Number

JUNIPERO AVENUE SITE (Continued) **S104549066**

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: PA/SI Site Screening
Completed Date: 04/24/2009
Comments: Site Screening completed by DTSC and approved by EPA

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 06/28/2000
Comments: DTSC entered into a Voluntary Cleanup Agreement with Ms. Goldie Chernick and Ms. Dina Chernick (Proponent) to review and comment on a Preliminary Endangerment Assessment (PEA) for the Junipero Avenue Site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 04/11/2011
Comments: Letter sent.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Form 1479 - Site and Collections Summary
Completed Date: 10/10/2014
Comments: Lien was placed on property as of 10/10/2014. For other cost recovery issues, a new activity will be scheduled as necessary.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 09/08/2016
Comments: DTSC is placing this site on "Backlog" in Envirostor with a memo-to-file explaining what occurred and where this Site stands. (The Responsible Party (RP) defaulted on payment of costs owed under the voluntary cleanup agreement (VCA) which DTSC eventually terminated because the RP opted not to proceed with the additional sampling recommended by DTSC. In an effort to collect DTSC's past costs, the RP was contacted several times but they did not respond to any of DTSC s collection or demand letters. In 2008, DTSC spoke with Dina B. Chernick, the owner of the property and she stated that there is a closure report from the City of Long Beach. She also stated that removal has occurred at the site. She said she will try to find the records. Ms. Chernick was contacted again on February 11, 2009 regarding the closure report and she said that her assistant is still searching for it. DTSC contacted the City of Long Beach and the City of Signal Hill, and they stated that they have no record of the site address. On 9/26/2014, DTSC recorded a lien with the County of Los Angeles against the property for the money owed to DTSC regarding this site. This site will remain open until additional investigation/remediation is conducted.)

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 10/23/2002

JUNIPERO AVENUE SITE (Continued) **S104549066**

Comments: PEA completed. Further action required.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Lien
Completed Date: 10/10/2014
Comments: DTSC received recorded lien from Imperial County Clerk.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 01/19/2010
Comments: Third Cost Recovery Demand Letter sent by certified mail.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 11/17/2009
Comments: Cost Recovery Letter sent certified mail.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 12/17/2009
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

VCP:
Facility ID: 19340779
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Site Mgmt. Req.: NONE SPECIFIED
Acres: 1
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Rania Zabaneh
Supervisor: Eileen Mananian
Division Branch: Cleanup Cypress
Site Code: 400828
Assembly: 70
Senate: 33
Special Programs Code: Not reported
Status: Inactive - Needs Evaluation
Status Date: 11/07/2016
Restricted Use: NO
Funding: Responsible Party

JUNIPERO AVENUE SITE (Continued) **S104549066**

Lat/Long:	33.80707 / -118.1628
APN:	7212021024
Past Use:	MACHINE SHOP, METAL PLATING - OTHER, PAINT/DEPAINT FACILITY, TRANSPORTATION - WAREHOUSING
Potential COC:	30022
Confirmed COC:	30022
Potential Description:	SOIL
Alias Name:	JUNIPERO AVENUE SITE
Alias Type:	Alternate Name
Alias Name:	7212021024
Alias Type:	APN
Alias Name:	110033606827
Alias Type:	EPA (FRS #)
Alias Name:	400828
Alias Type:	Project Code (Site Code)
Alias Name:	19340779
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:	04/24/2009
Comments:	Site Screening completed by DTSC and approved by EPA

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	06/28/2000
Comments:	DTSC entered into a Voluntary Cleanup Agreement with Ms. Goldie Chernick and Ms. Dina Chernick (Proponent) to review and comment on a Preliminary Endangerment Assessment (PEA) for the Junipero Avenue Site.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Letter - Demand
Completed Date:	04/11/2011
Comments:	Letter sent.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Form 1479 - Site and Collections Summary
Completed Date:	10/10/2014
Comments:	Lien was placed on property as of 10/10/2014. For other cost recovery issues, a new activity will be scheduled as necessary.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	09/08/2016
Comments:	DTSC is placing this site on "Backlog" in Envirostor with a memo-to-file explaining what occurred and where this Site stands. (The Responsible Party (RP) defaulted on payment of costs owed under the voluntary cleanup agreement (VCA) which DTSC eventually terminated because the RP opted not to proceed with the additional sampling recommended by DTSC. In an effort to collect DTSC's past costs, the RP was contacted several times but they did not respond to

JUNIPERO AVENUE SITE (Continued) **S104549066**

any of DTSC s collection or demand letters. In 2008, DTSC spoke with Dina B. Chernick, the owner of the property and she stated that there is a closure report from the City of Long Beach. She also stated that removal has occurred at the site. She said she will try to find the records. Ms. Chernick was contacted again on February 11, 2009 regarding the closure report and she said that her assistant is still searching for it. DTSC contacted the City of Long Beach and the City of Signal Hill, and they stated that they have no record of the site address. On 9/26/2014, DTSC recorded a lien with the County of Los Angeles against the property for the money owed to DTSC regarding this site. This site will remain open until additional investigation/remediation is conducted.)

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 10/23/2002
Comments: PEA completed. Further action required.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Lien
Completed Date: 10/10/2014
Comments: DTSC received recorded lien from Imperial County Clerk.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 01/19/2010
Comments: Third Cost Recovery Demand Letter sent by certified mail.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 11/17/2009
Comments: Cost Recovery Letter sent certified mail.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 12/17/2009
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

LIENS:
Envirostor Id: 19340779
Latitude: 33.807075
Longitude: -118.16282

JUNIPERO AVENUE SITE (Continued) **S104549066**

Project Mgr:	RANIA ZABANEH
Project Code:	400828
If Satisfied:	NO
Date Satisfied:	Not reported
Site Status:	ACTIVE
Site Type:	STATE RESPONSE OR NPL
Completed:	10/10/2014
Lien Amount:	$47,898.54
Amount Remaining:	Not reported
Description:	This 1- acre site consists of a single- story industrial building with surrounding paved landscape areas with two separate entrances and addresses. The surrounding area is predominately industrial. the 2760 Junipero Avenue site was used for warehousing; the 2740 Junipero Avenue space was used as a plumbing equipment warehouse. Previous uses have included warehousing, tool storage, machine shop, field office for an oil company, a metal painting facility with machine shop, paint booths, and a metal fabrication business with painting and degreasing operations. Although the property housed oil company facilities, a review of property records and aerial photographs found no evidence of oil production or storage operations at the site. The site has been used by three business tenants for metal painting, metal fabrication and warehousing. From 1975 to 1997, Accurate Metals used the Site as a metal painting facility and machine shop which included equipment such as an automated deburring machine and spray booths. During that time period Aircoat, Inc. operated a metal fabrication business using degreasers and paint booths. From 1997 to about 2002, Southwest Products Corporation used the Site as a warehousing facility. Also, from November 1999 to about 2002, another wholesale company used the adjacent portion of the site as a warehousing facility. A Preliminary Endangerment Assessment (PEA) was reviewed by the Department of Toxic Substances Control (DTSC) under a Voluntary Cleanup Agreement (VCA) [docket no.: HSA-A-99/00-112] and it was indicated that there was a need for additional sampling of the area around the clarifier for VOCs in soil and soil gas and to delineate the contaminants and their boundaries, if detected. A workplan for this additional sampling was prepared and reviewed by DTSC. Groundwater depth and quality are unknown at the Site. Further investigation and/or remediation is required for this Site. The VCA was eventually terminated on October 23, 2002 by DTSC because the project proponent did not comply with the agreement terms. Cost recovery has been referred to DTSC legal staff.

V98 **URBAN PACIFIC BUILDERS DEVELOPMENT** **ENVIROSTOR** **S106797595**
NNE **1835-1899 ORIZABA AVE. & 1860 ELLIS AVE.** **N/A**
1/2-1 **SIGNAL HILL, CA 90804**
0.925 mi.
4883 ft. **Site 1 of 3 in cluster V**

Relative:
Higher

Actual:
95 ft.

ENVIROSTOR:

Facility ID:	19950001
Status:	Refer: 1248 Local Agency
Status Date:	01/10/2005
Site Code:	Not reported
Site Type:	Evaluation
Site Type Detailed:	Evaluation
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED

URBAN PACIFIC BUILDERS DEVELOPMENT (Continued) **S106797595**

Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	Referred - Not Assigned
Division Branch:	Cleanup Cypress
Assembly:	54
Senate:	Not reported
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not Applicable
Latitude:	33.79078
Longitude:	-118.1578
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	19950001
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

V99 **ENVIROPUR WEST CORP** **SEMS-ARCHIVE** **1000367256**
NNE **1835 E 29TH ST** **CORRACTS** **CAT080011059**
1/2-1 **SIGNAL HILL, CA 90806** **RCRA-TSDF**
0.930 mi. **RCRA-SQG**
4908 ft. **Site 2 of 3 in cluster V** **UST**
2020 COR ACTION
Relative: **EMI**
Higher **HAZNET**
LOS ANGELES CO. HMS
Actual:
94 ft.

SEMS-ARCHIVE:

Site ID:	900178
EPA ID:	CAT080011059
Federal Facility:	N
NPL:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

Following information was gathered from the prior CERCLIS update completed in 10/2013:

Site ID:	0900178
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL

ENVIROPUR WEST CORP (Continued) **1000367256**

Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:
Contact Sequence ID: 13289020.00000
Person ID: 13003854.00000

Contact Sequence ID: 13294615.00000
Person ID: 13003858.00000

Contact Sequence ID: 13300473.00000
Person ID: 13004003.00000

Program Priority:
Description: RCRA Deferral - New Decision

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: / /
Date Completed: 03/01/91
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: / /
Date Completed: 08/20/91
Priority Level: Deferred to RCRA (Subtitle C)

Action: ARCHIVE SITE
Date Started: / /
Date Completed: 01/23/96
Priority Level: Not reported

CORRACTS:

EPA ID: CAT080011059
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 19940922
Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CAT080011059
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 20110926
Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): Not reported
Original schedule date: 20110926
Schedule end date: Not reported

EPA ID: CAT080011059
EPA Region: 9

ENVIROPUR WEST CORP (Continued) **1000367256**

Area Name: ENTIRE FACILITY
Actual Date: 20110928
Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): Not reported
Original schedule date: 20110928
Schedule end date: Not reported

EPA ID: CAT080011059
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 19910730
Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

RCRA-TSDF:
Date form received by agency: 11/27/1996
Facility name: ENVIROPUR WEST CORP
Facility address: 1835 E 29TH ST
SIGNAL HILL, CA 908061830
EPA ID: CAT080011059
Contact: MICHAEL PETTY
Contact address: 2651 WALNUT AVE
SIGNAL HILL, CA 908061830
Contact country: US
Contact telephone: (310) 595-7431
Contact email: Not reported
EPA Region: 09
Land type: Private
Classification: TSDF
Description: Handler is engaged in the treatment, storage or disposal of hazardous waste

Owner/Operator Summary:
Owner/operator name: ENVIROPUR WASTE REFINING & TECH
Owner/operator address: 7601 W 47TH ST
MCCOOK, IL 60525
Owner/operator country: Not reported
Owner/operator telephone: (708) 442-6000
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: PETROLEUM RECYCLING CORP
Owner/operator address: 2651 WALNUT AVE
SIGNAL HILL, CA 90806
Owner/operator country: Not reported
Owner/operator telephone: (213) 595-7431
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

ENVIROPUR WEST CORP (Continued) **1000367256**

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:	Yes
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:	Yes
User oil refiner:	Yes
Used oil fuel marketer to burner:	Yes
Used oil Specification marketer:	Yes
Used oil transfer facility:	No
Used oil transporter:	Yes

Historical Generators:

Date form received by agency: 11/27/1996
Site name: ENVIROPUR WEST CORP
Classification: Small Quantity Generator

Date form received by agency: 09/01/1996
Site name: ENVIROPUR WEST CORP
Classification: Large Quantity Generator

Date form received by agency: 03/02/1991
Site name: PETROLEUM RECYCLING CORPORATION
Classification: Large Quantity Generator

Date form received by agency: 04/13/1990
Site name: PETROLEUM RECYCLING CORPORATION
Classification: Small Quantity Generator

Corrective Action Summary:

Event date: 07/30/1991
Event: CA029EP

Event date: 07/30/1991
Event: CA049PA

Event date: 07/30/1991
Event: RFA Completed, Assessment was a PA-Plus.

Event date: 07/30/1991
Event: CA074ME

Event date: 07/30/1991
Event: CA Prioritization, Facility or area was assigned a medium corrective action priority.

Event date: 09/22/1994
Event: CA Prioritization, Facility or area was assigned a medium corrective action priority.

Event date: 09/22/1994

ENVIROPUR WEST CORP (Continued) **1000367256**

Event: Stabilization Measures Evaluation,This facility is not amenable to stabilization activity because of a lack of technical data. An evaluation has been completed, but further data is necessary to determine stabilization measures, feasibility or appropriateness. This status should be changed when data becomes available.

Event date: 09/26/2011
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Event date: 09/28/2011
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Facility Has Received Notices of Violations:
Regulation violated: F - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 12/13/1996
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/15/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 03/22/1996
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/22/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 12/21/1995
Date achieved compliance: 09/15/1997

ENVIROPUR WEST CORP (Continued) **1000367256**

Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.190-201.J
Area of violation: TSD - General
Date violation determined: 12/21/1995
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 12/21/1995
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 12/21/1995
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 11/21/1995
Date achieved compliance: 09/15/1997
Violation lead agency: State

ENVIROPUR WEST CORP (Continued) **1000367256**

Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 11/21/1995
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.20-23.B
Area of violation: Generators - General
Date violation determined: 08/31/1994
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/31/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 08/31/1994
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/31/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.30-34.C
Area of violation: Generators - General
Date violation determined: 08/31/1994
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL

ENVIROPUR WEST CORP (Continued) **1000367256**

Enforcement action date: 08/31/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.50-60
Area of violation: Generators - General
Date violation determined: 08/31/1994
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/31/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 08/31/1994
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/31/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.70-77.E
Area of violation: TSD - General
Date violation determined: 08/31/1994
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/31/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 08/31/1994
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/31/1994

ENVIROPUR WEST CORP (Continued) **1000367256**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.190-201.J
Area of violation: TSD - General
Date violation determined: 08/31/1994
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/31/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 08/31/1994
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/31/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 12/10/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 12/10/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported

ENVIROPUR WEST CORP (Continued) **1000367256**

Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 12/10/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/10/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.30-34.C
Area of violation: Generators - General
Date violation determined: 12/10/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.30-34.C
Area of violation: Generators - General
Date violation determined: 12/10/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/10/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 12/10/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

ENVIROPUR WEST CORP (Continued) **1000367256**

Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 12/10/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/10/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 12/10/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/10/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 03/12/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 03/12/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported

ENVIROPUR WEST CORP (Continued) **1000367256**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 03/12/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 03/12/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.50-56.D
Area of violation: TSD - General
Date violation determined: 03/12/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 03/12/1993
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported

ENVIROPUR WEST CORP (Continued) **1000367256**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 11/22/1991
Date achieved compliance: 01/01/1992
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 268.7
Area of violation: LDR - General
Date violation determined: 11/05/1990
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/10/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 11/05/1990
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/10/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 268 ALL
Area of violation: LDR - General
Date violation determined: 11/05/1990
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported

ENVIROPUR WEST CORP (Continued) **1000367256**

Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 11/05/1990
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 268.7
Area of violation: LDR - General
Date violation determined: 11/05/1990
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 268 ALL
Area of violation: LDR - General
Date violation determined: 11/05/1990
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/10/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 10/05/1990
Date achieved compliance: 11/20/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/11/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

ENVIROPUR WEST CORP (Continued) **1000367256**

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 02/28/1990
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/12/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 02/17/1989
Date achieved compliance: 10/02/1989
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/28/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 02/17/1989
Date achieved compliance: 10/02/1989
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/28/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 02/17/1989
Date achieved compliance: 10/02/1989
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/07/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.140-150.H

ENVIROPUR WEST CORP (Continued) **1000367256**

Area of violation: TSD - Financial Requirements
Date violation determined: 02/17/1989
Date achieved compliance: 10/02/1989
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/07/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 02/10/1989
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/22/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 02/10/1989
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/08/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 40000
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.140-150.H
Area of violation: TSD - Financial Requirements
Date violation determined: 08/28/1987
Date achieved compliance: 09/15/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/26/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 09/15/1997

ENVIROPUR WEST CORP (Continued) **1000367256**

Evaluation: NOT A SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/13/1996
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Financial Requirements
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 03/19/1996
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: TSD - General
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 11/06/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Financial Requirements
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 11/06/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 08/02/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 08/02/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 12/10/1993
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 10/27/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 10/27/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 09/15/1997

ENVIROPUR WEST CORP (Continued) **1000367256**

Evaluation lead agency: State

Evaluation date: 01/29/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 01/29/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 01/29/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Financial Requirements
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 06/16/1992
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 11/22/1991
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 01/01/1992
Evaluation lead agency: EPA Contractor/Grantee

Evaluation date: 11/05/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 11/05/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 10/05/1990
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 11/20/1990
Evaluation lead agency: State

Evaluation date: 02/28/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 09/15/1997
Evaluation lead agency: State

Evaluation date: 02/27/1990

ENVIROPUR WEST CORP (Continued) **1000367256**

Evaluation:	FINANCIAL RECORD REVIEW
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	02/17/1989
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	TSD - Financial Requirements
Date achieved compliance:	10/02/1989
Evaluation lead agency:	State

Evaluation date:	02/17/1989
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	TSD - General
Date achieved compliance:	10/02/1989
Evaluation lead agency:	State

Evaluation date:	02/10/1989
Evaluation:	FINANCIAL RECORD REVIEW
Area of violation:	TSD - Financial Requirements
Date achieved compliance:	09/15/1997
Evaluation lead agency:	State

Evaluation date:	08/28/1987
Evaluation:	FINANCIAL RECORD REVIEW
Area of violation:	TSD - Financial Requirements
Date achieved compliance:	09/15/1997
Evaluation lead agency:	State

LONG BEACH UST:

DATA AS OF 02/25/2014:

Region:	LONG BEACH
Tanks:	0T
Tank Test:	Not reported
Leak Test:	Not reported
Tank Status:	Not reported

2020 COR ACTION:

EPA ID:	CAT080011059
Region:	9
Action:	Not reported

EMI:

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	46056
Air District Name:	SC
SIC Code:	2992
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:	4

ENVIROPUR WEST CORP (Continued) **1000367256**

SOX - Oxides of Sulphur Tons/Yr: 4
Particulate Matter Tons/Yr: 1
Part. Matter 10 Micrometers and Smllr Tons/Yr: 1

Year: 1990
County Code: 19
Air Basin: SC
Facility ID: 46056
Air District Name: SC
SIC Code: 2992
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: 29
Reactive Organic Gases Tons/Yr: 21
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: 1993
County Code: 19
Air Basin: SC
Facility ID: 46056
Air District Name: SC
SIC Code: 2992
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: 24
Reactive Organic Gases Tons/Yr: 14
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: 46056
Air District Name: SC
SIC Code: 2992
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: 24
Reactive Organic Gases Tons/Yr: 14
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

HAZNET:
envid: 1000367256

ENVIROPUR WEST CORP (Continued) **1000367256**

Year:	2003
GEPAID:	CAT080011059
Contact:	ENVIROPUR WEST CORP
Telephone:	3105957431
Mailing Name:	Not reported
Mailing Address:	1835 E 29TH ST
Mailing City,St,Zip:	SIGNAL HILL, CA 907551905
Gen County:	Not reported
TSD EPA ID:	CAT080014079
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus organics
Disposal Method:	Transfer Station
Tons:	0.72
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	1000367256
Year:	2002
GEPAID:	CAT080011059
Contact:	ENVIROPUR WEST CORP
Telephone:	3105957431
Mailing Name:	Not reported
Mailing Address:	1835 E 29TH ST
Mailing City,St,Zip:	SIGNAL HILL, CA 907551905
Gen County:	Not reported
TSD EPA ID:	CAD008252405
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus organics
Disposal Method:	Recycler
Tons:	0.06
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	1000367256
Year:	1999
GEPAID:	CAT080011059
Contact:	ENVIROPUR WEST CORP
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	1835 E 29TH ST
Mailing City,St,Zip:	SIGNAL HILL, CA 908060000
Gen County:	Not reported
TSD EPA ID:	CAT080033681
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Recycler
Tons:	.4587
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

envid:	1000367256
Year:	1999
GEPAID:	CAT080011059
Contact:	ENVIROPUR WEST CORP

ENVIROPUR WEST CORP (Continued) **1000367256**

Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 1835 E 29TH ST
Mailing City,St,Zip: SIGNAL HILL, CA 908060000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Tons: .4587
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

envid: 1000367256
Year: 1998
GEPAID: CAT080011059
Contact: ENVIROPUR WEST CORP
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 1835 E 29TH ST
Mailing City,St,Zip: SIGNAL HILL, CA 908060000
Gen County: Not reported
TSD EPA ID: CAT080033681
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Disposal, Land Fill
Tons: .2293
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
469 additional CA_HAZNET: record(s) in the EDR Site Report.

LOS ANGELES CO. HMS:
Region: LA
Permit Category: Not reported
Facility Id: 013430-013781
Facility Type: Not reported
Facility Status: Closed
Area: 1M
Permit Number: Not reported
Permit Status: Not reported

V100 **ENVIROPUR WEST CORP** **ENVIROSTOR** **U001566100**
NNE **1835 E 29TH ST** **HIST UST** **N/A**
1/2-1 **SIGNAL HILL, CA 90755** **HWP**
0.930 mi.
4908 ft. **Site 3 of 3 in cluster V**

Relative:
Higher

Actual:
94 ft.

ENVIROSTOR:
Facility ID: 80001829
Status: Inactive - Action Required
Status Date: 06/29/2016
Site Code: 400239
Site Type: Corrective Action

ENVIROPUR WEST CORP (Continued) **U001566100**

Site Type Detailed:	Corrective Action
Acres:	3.7
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	WM
Program Manager:	Lance Mcmahan
Supervisor:	Noel Shrum
Division Branch:	Cleanup Sacramento
Assembly:	70
Senate:	33
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	33.81013
Longitude:	-118.1706
APN:	NONE SPECIFIED
Past Use:	HAZARDOUS WASTE TREATMENT, OIL FIELD, OIL/WATER SEPARATORS, RECYCLING - USED OIL
Potential COC:	Benzene Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs Tetrachloroethylene (PCE Trichloroethylene (TCE Polychlorinated biphenyls (PCBs, see IRIS
Confirmed COC:	Benzene Polynuclear aromatic hydrocarbons (PAHs Tetrachloroethylene (PCE Polychlorinated biphenyls (PCBs, see IRIS Polychlorinated biphenyls (PCBs Trichloroethylene (TCE
Potential Description:	AQUI, SOIL
Alias Name:	CAT080011059
Alias Type:	EPA Identification Number
Alias Name:	400239
Alias Type:	Project Code (Site Code)
Alias Name:	80001829
Alias Type:	Envirostor ID Number
Alias Name:	http://www.allbusiness.com/banking-finance/financial-markets-investing securities/7214962-1.html
Alias Type:	External Website Link / URL
Alias Name:	http://www.epa.gov/myenv/MYENVIEW.results2?pQuery=&minx=-118.17650&min =33.78072&maxx=-118.12500&maxy=33.81281&mw=750&mh=290&ve=14,33.79677,-18.16771&pText=Signal%20Hill,%20CA&pFilter=undefined
Alias Type:	External Website Link / URL
Alias Name:	http://www.gpo.gov/fdsys/pkg/FR-1998-03-13/html/98-6539.htm
Alias Type:	External Website Link / URL
Alias Name:	http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/ce6c60ee7382a473882571af 07af70d/214b9f38bbc2b990882570070063c3a3/$FILE/ENVPUR.PDF
Alias Type:	External Website Link / URL
Alias Name:	http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/f8728d1c79f1b30f88257426 072d053/6c9241e2736151938825700700608 5a0!OpenDocument
Alias Type:	External Website Link / URL

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	01/19/2010
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	*Correspondence - Received

ENVIROPUR WEST CORP (Continued) **U001566100**

Completed Date: 08/22/2011
Comments: DTSC has determined that releases of hazardous substances occurred at EnviroPur, and that those releases may have contributed to groundwater contamination in the area. Further. acquiring property after contamination has occurred does not absolve the new property owner from liability. Under state law, the new owner is a responsible party. Finally, DTSC Management Memo 90-11 relates to properties which have not had a release of hazardous substances, and simply over-lie groundwater contamination coming from other properties. Even so, DTSC Management Memo 90-11 does not preclude DTSC from pursuing action against such a property owner. DTSC respectfully declined to render a no further action decision for groundwater for the EnviroPur site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 06/30/1998
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/27/2007
Comments: .

Completed Area Name: Soils
Completed Sub Area Name: Not reported
Completed Document Type: No Further Action Letter
Completed Date: 03/07/2011
Comments: DTSC has determined no further action is necessary at this time to address soil contamination at EnviroPur. In the event new information indicates soils at EnviroPur remain impacted, DTSC reserves the right to require additional investigation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/17/1996
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/05/1997
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/10/2010
Comments: The extent and nature of contamination are unknown, and there is insufficient information to conduct a risk assessment considering the three primary risk elements: exposure to soils; exposure to soil vapor; and exposure to groundwater. Therefore, there is insufficient information to adopt a RAP. However, there is clearly contamination which could be partially mitigated via a LUC.

ENVIROPUR WEST CORP (Continued) **U001566100**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Order
Completed Date: 01/01/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: RCRA Facility Assessment Report
Completed Date: 07/30/1991
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/29/2008
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 10/03/2000
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Interim Measures Questionnaire
Completed Date: 09/22/1994
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Human Exposure Controlled
Completed Date: 09/26/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 10/05/1992
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 06/14/1994
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 04/09/1996
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence

ENVIROPUR WEST CORP (Continued) **U001566100**

Completed Date: 07/08/2005
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 07/11/2008
Comments: .

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Groundwater Migration Controlled
Future Due Date: 2031
Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Remedy Constructed
Future Due Date: 2031
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 UST:
File Number: 00027AF2
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00027AF2.pdf
Region: STATE
Facility ID: 00000029214
Facility Type: Other
Other Type: DEHYDRATION PLANT
Contact Name: WALTER WARNER
Telephone: 2135956597
Owner Name: MCAULEY OIL COMPANY
Owner Address: P.O. BOX 176
Owner City,St,Zip: BUENA PARK, CA 90621
Total Tanks: 0005

Tank Num: 001
Container Num: 5
Year Installed: Not reported
Tank Capacity: 00000500
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: 2
Leak Detection: Visual

Tank Num: 002
Container Num: 4
Year Installed: 1975
Tank Capacity: 00001200
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: 1/4
Leak Detection: Visual

Tank Num: 003
Container Num: 3

ENVIROPUR WEST CORP (Continued) **U001566100**

Year Installed:	1974
Tank Capacity:	00001400
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	3/8
Leak Detection:	Visual

Tank Num:	004
Container Num:	2
Year Installed:	1974
Tank Capacity:	00001400
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	3/8
Leak Detection:	Visual

Tank Num:	005
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00008400
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	8
Leak Detection:	Visual

Click here for Geo Tracker PDF:

HWP:

EPA Id:	CAT080011059
Cleanup Status:	UNDERGOING CLOSURE
Latitude:	33.81052
Longitude:	-118.1710
Facility Type:	Historical - Non-Operating
Facility Size:	Not reported
Team:	Not reported
Supervisor:	Not reported
Site Code:	400239
Assembly District:	63
Senate District:	33
Public Information Officer:	Not reported
Public Information Officer:	Not reported

Activities:

EPA Id:	CAT080011059
Facility Type:	Historical - Non-Operating
Unit Names:	CONTAIN1 (GPRA Unit), CONTAIN2 (GPRA Unit), OTHRTRT1 (GPRA Unit), OTHRTRT4 (GPRA Unit), OTHRTRT5 (GPRA Unit), SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit), TANKTRT2 (GPRA Unit)
Event Description:	New Operating Permit - APPLICATION PART B RECEIVED
Actual Date:	05/16/1983

EPA Id:	CAT080011059
Facility Type:	Historical - Non-Operating
Unit Names:	CONTAIN1 (GPRA Unit), CONTAIN2 (GPRA Unit), OTHRTRT1 (GPRA Unit), OTHRTRT4 (GPRA Unit), OTHRTRT5 (GPRA Unit), SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit), TANKTRT2 (GPRA Unit)
Event Description:	New Operating Permit - FINAL PERMIT

ENVIROPUR WEST CORP (Continued) **U001566100**

Actual Date: 07/01/1999

EPA Id: CAT080011059
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1 (GPRA Unit), CONTAIN2 (GPRA Unit), OTHRTRT1 (GPRA Unit), OTHRTRT4 (GPRA Unit), OTHRTRT5 (GPRA Unit), SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit), TANKTRT2 (GPRA Unit)
Event Description: New Operating Permit - CALL-IN LETTER ISSUED
Actual Date: 03/23/1983

EPA Id: CAT080011059
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1 (GPRA Unit), CONTAIN2 (GPRA Unit), OTHRTRT1 (GPRA Unit), OTHRTRT4 (GPRA Unit), OTHRTRT5 (GPRA Unit), SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit), TANKTRT2 (GPRA Unit)
Event Description: New Operating Permit - TECHNICAL COMPLETE LETTER
Actual Date: 06/30/1996

EPA Id: CAT080011059
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1 (GPRA Unit), CONTAIN2 (GPRA Unit), OTHRTRT1 (GPRA Unit), OTHRTRT4 (GPRA Unit), OTHRTRT5 (GPRA Unit), SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit), TANKTRT2 (GPRA Unit)
Event Description: New Operating Permit - APPLICATION PART A RECEIVED
Actual Date: 05/02/1991

EPA Id: CAT080011059
Facility Type: Historical - Non-Operating
Unit Names: CONTAIN1 (GPRA Unit), CONTAIN2 (GPRA Unit), OTHRTRT1 (GPRA Unit), OTHRTRT4 (GPRA Unit), OTHRTRT5 (GPRA Unit), SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit), TANKTRT2 (GPRA Unit)
Event Description: New Operating Permit - PUBLIC COMMENT (BEGIN)
Actual Date: 12/19/1996

Alias:
EPA Id: CAT080011059
Facility Type: Historical - Non-Operating
Alias Type: Project Code (Site Code)
Alias: 400239

W101 SW 1/2-1 0.934 mi. 4934 ft. | **UNITED METHODIST CHURCH PROPERTY** | **ENVIROSTOR SCH** | **S118757046 N/A**
1535 ATLANTIC AVENUE
LONG BEACH, CA 90813

Site 1 of 3 in cluster W

Relative: Lower
Actual: 36 ft.

ENVIROSTOR:
Facility ID: 60000028
Status: No Action Required
Status Date: 12/14/2004
Site Code: 404506
Site Type: School Investigation
Site Type Detailed: School
Acres: 0.5
NPL: NO
Regulatory Agencies: SMBRP

UNITED METHODIST CHURCH PROPERTY (Continued) **S118757046**

Lead Agency: SMBRP
Program Manager: Angela Garcia
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Assembly: 70
Senate: 33
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 33.78603
Longitude: -118.1853
APN: 7269032905
Past Use: * UNKNOWN
Potential COC: NONE SPECIFIED No Contaminants found
Confirmed COC: 31000-NO
Potential Description: NMA
Alias Name: LONG BEACH USD-UNITED METHODIST CHURCH
Alias Type: Alternate Name
Alias Name: 7269032905
Alias Type: APN
Alias Name: 404506
Alias Type: Project Code (Site Code)
Alias Name: 60000028
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 12/15/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 01/21/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1 Addendum
Completed Date: 12/14/2004
Comments: DTSC issued a No Futher Actio o the PHase One addendum

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 12/17/2003
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

UNITED METHODIST CHURCH PROPERTY (Continued) **S118757046**

Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Facility ID: 60000028
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 0.5
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Angela Garcia
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Site Code: 404506
Assembly: 70
Senate: 33
Special Program Status: Not reported
Status: No Action Required
Status Date: 12/14/2004
Restricted Use: NO
Funding: School District
Latitude: 33.78603
Longitude: -118.1853
APN: 7269032905
Past Use: * UNKNOWN
Potential COC: NONE SPECIFIED, No Contaminants found
Confirmed COC: 31000-NO
Potential Description: NMA
Alias Name: LONG BEACH USD-UNITED METHODIST CHURCH
Alias Type: Alternate Name
Alias Name: 7269032905
Alias Type: APN
Alias Name: 404506
Alias Type: Project Code (Site Code)
Alias Name: 60000028
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 12/15/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 01/21/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1 Addendum

UNITED METHODIST CHURCH PROPERTY (Continued) **S118757046**

Completed Date:	12/14/2004
Comments:	DTSC issued a No Futher Actio o the PHase One addendum
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	12/17/2003
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

W102 **ROOSEVELT ELEMENTARY SCHOOL** **ENVIROSTOR** **S102806961**
SW **1574 LINDEN AVENUE** **SCH** **N/A**
1/2-1 **LONG BEACH, CA 90813** **NPDES**
0.941 mi.
4966 ft. **Site 2 of 3 in cluster W**

Relative:
Lower

Actual:
36 ft.

ENVIROSTOR:

Facility ID:	60001492
Status:	No Further Action
Status Date:	01/17/2012
Site Code:	404863
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	5
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Ivy Osornio
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	70
Senate:	33
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	33.7865
Longitude:	-118.186
APN:	NONE SPECIFIED
Past Use:	RESIDENTIAL AREA, SCHOOL - ELEMENTARY
Potential COC:	Under Investigation
Confirmed COC:	NONE SPECIFIED
Potential Description:	UE
Alias Name:	404863
Alias Type:	Project Code (Site Code)
Alias Name:	60001492
Alias Type:	Envirostor ID Number

Completed Info:

ROOSEVELT ELEMENTARY SCHOOL (Continued) **S102806961**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 07/25/2011
Comments: DTSC issued a Phase I Addendum required determination based on the Phase I report

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1 Addendum
Completed Date: 01/12/2012
Comments: DTSC approved the Phase I Addendum with a No Further Action determination

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 01/26/2015
Comments: DTSC concurred with the soil export request

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 01/13/2012
Comments: DTSC prepared a project closeout Cost Recovery Unit Memorandum

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 05/26/2015
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

SCH:

Facility ID: 60001492
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 5
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Ivy Osornio
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Site Code: 404863

ROOSEVELT ELEMENTARY SCHOOL (Continued) **S102806961**

Assembly:	70
Senate:	33
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	01/17/2012
Restricted Use:	NO
Funding:	School District
Latitude:	33.7865
Longitude:	-118.186
APN:	NONE SPECIFIED
Past Use:	RESIDENTIAL AREA, SCHOOL - ELEMENTARY
Potential COC:	Under Investigation
Confirmed COC:	NONE SPECIFIED
Potential Description:	UE
Alias Name:	404863
Alias Type:	Project Code (Site Code)
Alias Name:	60001492
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	07/25/2011
Comments:	DTSC issued a Phase I Addendum required determination based on the Phase I report

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1 Addendum
Completed Date:	01/12/2012
Comments:	DTSC approved the Phase I Addendum with a No Further Action determination

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	01/26/2015
Comments:	DTSC concurred with the soil export request

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	01/13/2012
Comments:	DTSC prepared a project closeout Cost Recovery Unit Memorandum

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	05/26/2015
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

ROOSEVELT ELEMENTARY SCHOOL (Continued) **S102806961**

Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

NPDES:

Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	4
Regulatory Measure Id:	429122
Order No:	Not reported
Regulatory Measure Type:	Construction
Place Id:	Not reported
WDID:	4 19C364095
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:	3/20/2013
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	7/16/2012
PROCESSED DATE:	7/17/2012
STATUS CODE NAME:	Terminated
STATUS DATE:	7/29/2013
PLACE SIZE:	4.43
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Robert Krzyszkowski
FACILITY CONTACT TITLE:	Project Superintendent
FACILITY CONTACT PHONE:	951-538-8352
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	rkrzyszkowski@tilden-coil.com
OPERATOR NAME:	Long Beach Unified School District
OPERATOR ADDRESS:	2425 Webster Avenue
OPERATOR CITY:	Long Beach
OPERATOR STATE:	California
OPERATOR ZIP:	90810
OPERATOR CONTACT NAME:	Vince Marchetti
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	562-997-7550
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	vmarchetti@lbschools.net
OPERATOR TYPE:	Special District
DEVELOPER NAME:	Tilden Coil Constructors
DEVELOPER ADDRESS:	3612 Mission Inn Avenue
DEVELOPER CITY:	Riverside
DEVELOPER STATE:	California
DEVELOPER ZIP:	92501
DEVELOPER CONTACT NAME:	Robert Krzyszkowski
DEVELOPER CONTACT TITLE:	Project Superintendent
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	951-684-5901
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported

ROOSEVELT ELEMENTARY SCHOOL (Continued) **S102806961**

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 DESRIPTION:	Public Elementary School
CONSTYPE OTHER IND:	Y
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:	Not reported
CERTIFIER NAME:	Vince Marchetti
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	16-JUL-12
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	4
Regulatory Measure Id:	439655
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	4 19C367902
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	10/04/2013
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	12/04/2015
Discharge Name:	Long Beach Unified School District
Discharge Address:	2425 Webster Avenue
Discharge City:	Long Beach
Discharge State:	California
Discharge Zip:	90810
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported
OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported

ROOSEVELT ELEMENTARY SCHOOL (Continued) **S102806961**

OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	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 NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	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 DESRIPTION:	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 NAME:	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
Facility Status:	Not reported
Agency Id:	Not reported
Region:	4
Regulatory Measure Id:	439655
Order No:	Not reported
Regulatory Measure Type:	Construction
Place Id:	Not reported
WDID:	4 19C367902
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:	12/4/2015

ROOSEVELT ELEMENTARY SCHOOL (Continued) **S102806961**

Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	10/3/2013
PROCESSED DATE:	10/4/2013
STATUS CODE NAME:	Terminated
STATUS DATE:	2/22/2016
PLACE SIZE:	4.41
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Tom Rizzuti
FACILITY CONTACT TITLE:	Administrative Coordinator
FACILITY CONTACT PHONE:	562-997-7552
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	trizzuti@lbschools.net
OPERATOR NAME:	Long Beach Unified School District
OPERATOR ADDRESS:	2425 Webster Avenue
OPERATOR CITY:	Long Beach
OPERATOR STATE:	California
OPERATOR ZIP:	90810
OPERATOR CONTACT NAME:	Les Leahy
OPERATOR CONTACT TITLE:	Business Services Administrator
OPERATOR CONTACT PHONE:	562-997-7550
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	lleahy@lbschools.net
OPERATOR TYPE:	Special District
DEVELOPER NAME:	Tilden Coil Constructors
DEVELOPER ADDRESS:	3612 Mission Inn Avenue
DEVELOPER CITY:	Riverside
DEVELOPER STATE:	California
DEVELOPER ZIP:	92501
DEVELOPER CONTACT NAME:	David Joseph
DEVELOPER CONTACT TITLE:	Superintendent
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	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:	N
CONSTYPE ELECTRICAL LINE IND:	N
CONSTYPE GAS LINE IND:	N
CONSTYPE INDUSTRIAL IND:	N
CONSTYPE OTHER DESRIPTION:	Public Elementary School
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:	Not reported
CERTIFIER NAME:	Les Leahy
CERTIFIER TITLE:	Administrative Coordinator

ROOSEVELT ELEMENTARY SCHOOL (Continued) **S102806961**

CERTIFICATION DATE: 02-SEP-15
PRIMARY SIC: Not reported
SECONDARY SIC: Not reported
TERTIARY SIC: Not reported

103
NNW
1/2-1
0.945 mi.
4991 ft.

SIGNAL HILL BUSINESS PARK
29TH AND ORANGE STREET
SIGNAL HILL, CA 90806

ENVIROSTOR **S118756521**
VCP **N/A**

Relative:
Higher

Actual:
97 ft.

ENVIROSTOR:
Facility ID: 19130099
Status: No Action Required
Status Date: 05/22/2014
Site Code: 400421
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 1.93
NPL: NO
Regulatory Agencies: DTSC
Lead Agency: DTSC
Program Manager: Safouh Sayed
Supervisor: Robert Senga
Division Branch: Cleanup Cypress
Assembly: 70
Senate: 33
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.81
Longitude: -118.1766
APN: NONE SPECIFIED
Past Use: OIL FIELD, UNDERGROUND STORAGE TANKS
Potential COC: * UNSPECIFIED OIL CONTAINING WASTE
Confirmed COC: NONE SPECIFIED
Potential Description: SOIL
Alias Name: T0603705179
Alias Type: GeoTracker Global ID
Alias Name: 400421
Alias Type: Project Code (Site Code)
Alias Name: 19130099
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 08/28/1995
Comments: DTSC completed its review of the PEA Report for the Signal Hill Business Park site. Based on the findings at the site, DTSC determined that further action is required.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported

SIGNAL HILL BUSINESS PARK (Continued) **S118756521**

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

VCP:

Facility ID:	19130099
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	1.93
National Priorities List:	NO
Cleanup Oversight Agencies:	DTSC
Lead Agency:	DTSC
Lead Agency Description:	* DTSC
Project Manager:	Safouh Sayed
Supervisor:	Robert Senga
Division Branch:	Cleanup Cypress
Site Code:	400421
Assembly:	70
Senate:	33
Special Programs Code:	Not reported
Status:	No Action Required
Status Date:	05/22/2014
Restricted Use:	NO
Funding:	Not reported
Lat/Long:	33.81 / -118.1766
APN:	NONE SPECIFIED
Past Use:	OIL FIELD, UNDERGROUND STORAGE TANKS
Potential COC:	10196
Confirmed COC:	NONE SPECIFIED
Potential Description:	SOIL
Alias Name:	T0603705179
Alias Type:	GeoTracker Global ID
Alias Name:	400421
Alias Type:	Project Code (Site Code)
Alias Name:	19130099
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	08/28/1995
Comments:	DTSC completed its review of the PEA Report for the Signal Hill Business Park site. Based on the findings at the site, DTSC determined that further action is required.
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

SIGNAL HILL BUSINESS PARK (Continued) **S118756521**

Schedule Revised Date: Not reported

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104 SW 1/2-1 0.959 mi. 5061 ft.

ROOSEVELT ELEMENTARY SCHOOL
1574 LINDEN AVENUE
LONG BEACH, CA 90813

ENVIROSTOR SCH **S118756600 N/A**

Relative: Lower

Actual: 35 ft.

ENVIROSTOR:

Facility ID:	19820124
Status:	No Action Required
Status Date:	02/11/2000
Site Code:	404028
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	Mark Malinowski
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	70
Senate:	33
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	33.78666
Longitude:	-118.1866
APN:	NONE SPECIFIED
Past Use:	* EDUCATIONAL SERVICES
Potential COC:	NONE SPECIFIED No Contaminants found
Confirmed COC:	NONE SPECIFIED
Potential Description:	NMA
Alias Name:	LONG BEACH USD-ROOSEVELT ELEM/CDE
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-THEO.ROOSEVELT ELEM./VCA
Alias Type:	Alternate Name
Alias Name:	404028
Alias Type:	Project Code (Site Code)
Alias Name:	19820124
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	02/04/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	02/11/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE

ROOSEVELT ELEMENTARY SCHOOL (Continued) **S118756600**

Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	06/29/2000
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

SCH:

Facility ID:	19820124
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	Not reported
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Not reported
Supervisor:	Mark Malinowski
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404028
Assembly:	70
Senate:	33
Special Program Status:	Not reported
Status:	No Action Required
Status Date:	02/11/2000
Restricted Use:	NO
Funding:	School District
Latitude:	33.78666
Longitude:	-118.1866
APN:	NONE SPECIFIED
Past Use:	* EDUCATIONAL SERVICES
Potential COC:	NONE SPECIFIED, No Contaminants found
Confirmed COC:	NONE SPECIFIED
Potential Description:	NMA
Alias Name:	LONG BEACH USD-ROOSEVELT ELEM/CDE
Alias Type:	Alternate Name
Alias Name:	LONG BEACH USD-THEO.ROOSEVELT ELEM./VCA
Alias Type:	Alternate Name
Alias Name:	404028
Alias Type:	Project Code (Site Code)
Alias Name:	19820124
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)

ROOSEVELT ELEMENTARY SCHOOL (Continued) **S118756600**

Completed Date:	02/04/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	02/11/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	06/29/2000
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

---

105 East 1/2-1 0.961 mi. 5076 ft. | **BROWNING SITE (AKA TRACT 10548)** | **ENVIROSTOR** | **S112205472**
3230 EAST HILL STREET | **SCH** | **N/A**
LONG BEACH, CA 90755 | **NPDES**

Relative: Higher

Actual: 93 ft.

ENVIROSTOR:

Facility ID:	19760019
Status:	Active
Status Date:	03/11/2013
Site Code:	404044
Site Type:	School Cleanup
Site Type Detailed:	School
Acres:	10
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Amit Pathak
Supervisor:	Yolanda Garza
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	70
Senate:	33
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	33.79669
Longitude:	-118.1529
APN:	NONE SPECIFIED
Past Use:	* MISCELLANEOUS REPAIR SERVICES
Potential COC:	TPH-diesel Arsenic
Confirmed COC:	NONE SPECIFIED
Potential Description:	SOIL

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

Alias Name: Browning Site
Alias Type: Alternate Name
Alias Name: LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: Signal Hill
Alias Type: Alternate Name
Alias Name: TRACT 10548 AKA BURNETT ACADEMY
Alias Type: Alternate Name
Alias Name: TRACT 10548 HILL ST SCH/VCA AKA LB USD
Alias Type: Alternate Name
Alias Name: 110033609584
Alias Type: EPA (FRS #)
Alias Name: 404044
Alias Type: Project Code (Site Code)
Alias Name: 19760019
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 09/17/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 12/15/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 10/13/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 05/19/2016
Comments: Visited Site, met with Long Beach Reps and walked over constructed methane mitigation futures.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 03/01/2015
Comments: Site visit was conducted to look at the current site conditions.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 03/26/2013
Comments: Fully executed signature page w/ Scope of Work Amendment and Cost Estimate sent (FedEx) to District.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/17/2015
Comments: Annual cost estimate emailed and mailed to BP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 12/14/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/26/2016
Comments: Annual Cost Estimate letter, dated 9/26/16, sent to RP via email and regular mail.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/03/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/05/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 06/18/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 08/22/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 02/21/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Workplan
Completed Date: 03/02/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Workplan
Completed Date: 07/12/2002

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 07/18/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 07/12/2002
Comments: Focused Site Investigation Work Plan

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 10/08/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 07/02/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 02/11/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/13/2014
Comments: Field work oversight was completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/21/2014
Comments: Site visit to look at the stockpile

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/26/2014
Comments: Conducted field work oversight to look at the TPH impacted soil along the property boundary.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Tank Removal Report
Completed Date: 06/25/2015
Comments: Not reported

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 05/19/2016
Comments: Visted the Site on 05/19/2016. Went over the constructed features of the methane mitigation features.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 02/28/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 03/12/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Environmental Impact Report
Completed Date: 08/22/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 09/26/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Public Participation
Completed Date: 07/22/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Public Participation
Completed Date: 07/10/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 10/13/2004
Comments: Site certified follwing completion of methan monitoring. copy of Cert sent to District.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 04/10/2000
Comments: Not reported

Future Area Name: Not reported

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

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

SCH:

Facility ID:	19760019
Site Type:	School Cleanup
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	10
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Amit Pathak
Supervisor:	Yolanda Garza
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404044
Assembly:	70
Senate:	33
Special Program Status:	Not reported
Status:	Active
Status Date:	03/11/2013
Restricted Use:	NO
Funding:	School District
Latitude:	33.79669
Longitude:	-118.1529
APN:	NONE SPECIFIED
Past Use:	* MISCELLANEOUS REPAIR SERVICES
Potential COC:	TPH-diesel, TPH-diesel, Arsenic
Confirmed COC:	NONE SPECIFIED
Potential Description:	SOIL
Alias Name:	Browning Site
Alias Type:	Alternate Name
Alias Name:	LONG BEACH UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	Signal Hill
Alias Type:	Alternate Name
Alias Name:	TRACT 10548 AKA BURNETT ACADEMY
Alias Type:	Alternate Name
Alias Name:	TRACT 10548 HILL ST SCH/VCA AKA LB USD
Alias Type:	Alternate Name
Alias Name:	110033609584
Alias Type:	EPA (FRS #)
Alias Name:	404044
Alias Type:	Project Code (Site Code)
Alias Name:	19760019
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 09/17/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 12/15/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 10/13/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 05/19/2016
Comments: Visited Site, met with Long Beach Reps and walked over constructed methane mitigation futures.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 03/01/2015
Comments: Site visit was conducted to look at the current site conditions.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 03/26/2013
Comments: Fully executed signature page w/ Scope of Work Amendment and Cost Estimate sent (FedEx) to District.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/17/2015
Comments: Annual cost estimate emailed and mailed to BP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 12/14/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/26/2016
Comments: Annual Cost Estimate letter, dated 9/26/16, sent to RP via email and regular mail.

Completed Area Name: PROJECT WIDE

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/03/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/05/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 06/18/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 08/22/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 02/21/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Workplan
Completed Date: 03/02/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Workplan
Completed Date: 07/12/2002
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 07/18/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 07/12/2002
Comments: Focused Site Investigation Work Plan

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 10/08/2013

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 07/02/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 02/11/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/13/2014
Comments: Field work oversight was completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/21/2014
Comments: Site visit to look at the stockpile

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/26/2014
Comments: Conducted field work oversight to look at the TPH impacted soil along the property boundary.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Tank Removal Report
Completed Date: 06/25/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 05/19/2016
Comments: Visted the Site on 05/19/2016. Went over the constructed features of the methane mitigation features.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 02/28/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 03/12/2001
Comments: Not reported

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Environmental Impact Report
Completed Date: 08/22/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 09/26/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Public Participation
Completed Date: 07/22/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Public Participation
Completed Date: 07/10/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 10/13/2004
Comments: Site certified follwing completion of methan monitoring. copy of Cert sent to District.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 04/10/2000
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

NPDES:
Npdes Number: Not reported
Facility Status: Not reported
Agency Id: Not reported
Region: 4
Regulatory Measure Id: 433161
Order No: Not reported
Regulatory Measure Type: Construction
Place Id: Not reported
WDID: 4 19C365261

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

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:	10/3/2014
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	12/3/2012
PROCESSED DATE:	12/17/2012
STATUS CODE NAME:	Terminated
STATUS DATE:	12/9/2014
PLACE SIZE:	10.36
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Tom Rizzuti
FACILITY CONTACT TITLE:	Administrative Coordinator
FACILITY CONTACT PHONE:	562-997-7552
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	trizzuti@lbschools.net
OPERATOR NAME:	Long Beach Unified School District
OPERATOR ADDRESS:	2425 Webster Avenue
OPERATOR CITY:	Long Beach
OPERATOR STATE:	California
OPERATOR ZIP:	90810
OPERATOR CONTACT NAME:	Tom Rizzuti
OPERATOR CONTACT TITLE:	Administrative Coordinator
OPERATOR CONTACT PHONE:	562-997-7552
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	trizzuti@lbschools.net
OPERATOR TYPE:	Special District
DEVELOPER NAME:	Long Beach Unified School District
DEVELOPER ADDRESS:	2425 Webster Avenue
DEVELOPER CITY:	Long Beach
DEVELOPER STATE:	California
DEVELOPER ZIP:	90810
DEVELOPER CONTACT NAME:	Tom Rizzuti
DEVELOPER CONTACT TITLE:	Administrative Coordinator
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	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:	N
CONSTYPE ELECTRICAL LINE IND:	N
CONSTYPE GAS LINE IND:	N
CONSTYPE INDUSTRIAL IND:	N
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	N
CONSTYPE RECONS IND:	N
CONSTYPE RESIDENTIAL IND:	N
CONSTYPE TRANSPORT IND:	N
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	N

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

CONSTYPE WATER SEWER IND:	N
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Tom Rizzuti
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	13-MAY-14
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	4
Regulatory Measure Id:	433161
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	4 19C365261
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/17/2012
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	10/03/2014
Discharge Name:	Long Beach Unified School District
Discharge Address:	2425 Webster Avenue
Discharge City:	Long Beach
Discharge State:	California
Discharge Zip:	90810
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY 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 NAME:	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 NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported

BROWNING SITE (AKA TRACT 10548) (Continued) **S112205472**

DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	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 DESRIPTION:	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 NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported

W106 **ROOSEVELT ELEMENTARY SCHOOL - SOUTH ANNEX** **ENVIROSTOR** **S115779963**
SW **SW CORNER OF ATLANTIC AVE. & 15TH ST.** **SCH** **N/A**
1/2-1 **LONG BEACH, CA 90813**
0.973 mi.
5136 ft. **Site 3 of 3 in cluster W**

Relative:
Lower

Actual:
37 ft.

ENVIROSTOR:

Facility ID:	60001953
Status:	No Further Action
Status Date:	06/06/2016
Site Code:	404892
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	0.16
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Johnson Abraham
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	70
Senate:	33
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	33.78552
Longitude:	-118.1857
APN:	7269-031-900

ROOSEVELT ELEMENTARY SCHOOL - SOUTH ANNEX (Continued) **S115779963**

Past Use: UNDERGROUND STORAGE TANKS, VEHICLE MAINTENANCE
Potential COC: Benzene Lead
Confirmed COC: Benzene Lead
Potential Description: SOIL, SV
Alias Name: 7269-031-900
Alias Type: APN
Alias Name: 404892
Alias Type: Project Code (Site Code)
Alias Name: 60001953
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 03/03/2014
Comments: Fully executed SCA sent (FedEx) to District.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/17/2015
Comments: Annual Cost Estimate emailed and mailed to BP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/17/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Tech Memo
Completed Date: 10/13/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 05/14/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 09/04/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 02/11/2016
Comments: DTSC determined that no further soil vapor sampling is needed at the site. However, further investigation is needed at the formerly inaccessible areas beneath the trailers of the site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

ROOSEVELT ELEMENTARY SCHOOL - SOUTH ANNEX (Continued) **S115779963**

Completed Document Type:	Supplemental Site Investigation Report
Completed Date:	06/07/2016
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Amendment - Order/Agreement
Completed Date:	09/26/2014
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

SCH:

Facility ID:	60001953
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	0.16
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Johnson Abraham
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404892
Assembly:	70
Senate:	33
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	06/06/2016
Restricted Use:	NO
Funding:	School District
Latitude:	33.78552
Longitude:	-118.1857
APN:	7269-031-900
Past Use:	UNDERGROUND STORAGE TANKS, VEHICLE MAINTENANCE
Potential COC:	Benzene, Lead
Confirmed COC:	Benzene, Lead
Potential Description:	SOIL, SV
Alias Name:	7269-031-900
Alias Type:	APN
Alias Name:	404892
Alias Type:	Project Code (Site Code)
Alias Name:	60001953
Alias Type:	Envirostor ID Number

Completed Info:

ROOSEVELT ELEMENTARY SCHOOL - SOUTH ANNEX (Continued) **S115779963**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 03/03/2014
Comments: Fully executed SCA sent (FedEx) to District.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/17/2015
Comments: Annual Cost Estimate emailed and mailed to BP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/17/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Tech Memo
Completed Date: 10/13/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 05/14/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 09/04/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 02/11/2016
Comments: DTSC determined that no further soil vapor sampling is needed at the site. However, further investigation is needed at the formerly inaccessible areas beneath the trailers of the site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 06/07/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 09/26/2014
Comments: Not reported

Future Area Name: Not reported

ROOSEVELT ELEMENTARY SCHOOL - SOUTH ANNEX (Continued) **S115779963**

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

Count: 3 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
LONG BEACH	S105628511	ANAHEIM STREET SCHOOL	ANAHEIM STREET/PACIFIC AVENUE	90813	ENVIROSTOR, SCH
SIGNAL HILL	S106386925	TOWN CENTER WEST - COMMERCIAL SITE	CHERRY	90806	SLIC
SIGNAL HILL	S103878683	REINGART PROPERTY	GARDENA	90806	SLIC

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: 04/05/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 10/16/2017
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: 04/05/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 10/16/2017
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: 04/05/2017	Source: EPA
Date Data Arrived at EDR: 04/21/2017	Telephone: N/A
Date Made Active in Reports: 05/12/2017	Last EDR Contact: 07/07/2017
Number of Days to Update: 21	Next Scheduled EDR Contact: 10/16/2017
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/05/2017	Telephone: 703-603-8704
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 07/07/2017
Number of Days to Update: 92	Next Scheduled EDR Contact: 10/16/2017
	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: 02/07/2017	Source: EPA
Date Data Arrived at EDR: 04/19/2017	Telephone: 800-424-9346
Date Made Active in Reports: 05/05/2017	Last EDR Contact: 07/21/2017
Number of Days to Update: 16	Next Scheduled EDR Contact: 10/30/2017
	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: 02/07/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/28/2017
Next Scheduled EDR Contact: 10/30/2017
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: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/11/2017
Next Scheduled EDR Contact: 10/09/2017
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: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 08/11/2017
Next Scheduled EDR Contact: 10/09/2017
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: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 08/11/2017
Next Scheduled EDR Contact: 10/09/2017
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: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 08/11/2017
Next Scheduled EDR Contact: 10/09/2017
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: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 08/11/2017
Next Scheduled EDR Contact: 10/09/2017
Data Release Frequency: Varies

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: 12/28/2016
Date Data Arrived at EDR: 01/04/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 93

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/10/2017
Next Scheduled EDR Contact: 11/27/2017
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: 02/13/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 101

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
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: 02/13/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 101

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
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: 09/26/2016
Date Data Arrived at EDR: 09/29/2016
Date Made Active in Reports: 11/11/2016
Number of Days to Update: 43

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/28/2017
Next Scheduled EDR Contact: 10/09/2017
Data Release Frequency: Annually

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: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
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: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
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: 02/13/2017
Date Data Arrived at EDR: 02/15/2017
Date Made Active in Reports: 05/02/2017
Number of Days to Update: 76

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/17/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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: 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: 06/12/2017
Date Data Arrived at EDR: 06/14/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 69

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/14/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Quarterly

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

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 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 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

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
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: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/28/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Semi-Annually

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
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: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
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: 10/17/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

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: 10/06/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

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: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

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: 06/12/2017
Date Data Arrived at EDR: 06/14/2017
Date Made Active in Reports: 08/23/2017
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/14/2017
Next Scheduled EDR Contact: 09/25/2017
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: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/14/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/12/2017
Date Data Arrived at EDR: 06/14/2017
Date Made Active in Reports: 08/23/2017
Number of Days to Update: 70

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/14/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Semi-Annually

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: 06/21/2017
Next Scheduled EDR Contact: 10/09/2017
Data Release Frequency: Quarterly

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: 01/14/2017
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
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: 09/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
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: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/28/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Semi-Annually

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: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
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: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

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: 10/06/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

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: 10/17/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
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: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Semi-Annually

State and tribal voluntary cleanup sites

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: 06/27/2017
Next Scheduled EDR Contact: 10/09/2017
Data Release Frequency: Varies

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

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: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Quarterly

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: 01/03/2017
Date Data Arrived at EDR: 01/04/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 57

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 06/28/2017
Next Scheduled EDR Contact: 10/09/2017
Data Release Frequency: Varies

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: 03/02/2017
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/20/2017
Next Scheduled EDR Contact: 10/02/2017
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: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 03/13/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 50

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/14/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 05/31/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 76

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/10/2017
Next Scheduled EDR Contact: 11/27/2017
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: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Varies

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: 07/24/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: No Update Planned

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

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: 08/29/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Varies

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: 02/09/2017
Date Data Arrived at EDR: 03/08/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 93

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
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: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
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: 12/31/2016
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 54

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 08/14/2017
Next Scheduled EDR Contact: 10/23/2017
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: 02/09/2017
Date Data Arrived at EDR: 03/08/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 93

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
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: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 80

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
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

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

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: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
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: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/26/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

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: 06/05/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/10/2017
Number of Days to Update: 65

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/06/2017
Next Scheduled EDR Contact: 09/18/2017
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: 12/28/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 37

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/28/2017
Next Scheduled EDR Contact: 10/09/2017
Data Release Frequency: Annually

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: 12/06/2016
Date Data Arrived at EDR: 01/25/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 105

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/26/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

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: 06/12/2017
Date Data Arrived at EDR: 06/14/2017
Date Made Active in Reports: 08/18/2017
Number of Days to Update: 65

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/14/2017
Next Scheduled EDR Contact: 09/25/2017
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: 06/12/2017
Date Data Arrived at EDR: 06/14/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 69

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/14/2017
Next Scheduled EDR Contact: 09/25/2017
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: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 08/11/2017
Next Scheduled EDR Contact: 10/09/2017
Data Release Frequency: Varies

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: 08/25/2017
Next Scheduled EDR Contact: 12/04/2017
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: 07/12/2017
Next Scheduled EDR Contact: 10/23/2017
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: 07/14/2017
Next Scheduled EDR Contact: 10/23/2017
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: 08/18/2017
Next Scheduled EDR Contact: 11/27/2017
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: 02/13/2017
Date Data Arrived at EDR: 02/15/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 08/11/2017
Next Scheduled EDR Contact: 10/09/2017
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: 08/07/2017
Next Scheduled EDR Contact: 11/20/2017
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: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 11/20/2017
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: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/21/2017
Next Scheduled EDR Contact: 10/02/2017
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: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/23/2017
Next Scheduled EDR Contact: 12/04/2017
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: 07/28/2017
Next Scheduled EDR Contact: 11/08/2017
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: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/18/2017
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: 02/01/2017
Date Data Arrived at EDR: 02/09/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/24/2017
Next Scheduled EDR Contact: 11/08/2017
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: 08/08/2017
Next Scheduled EDR Contact: 11/20/2017
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: 01/20/2016
Date Data Arrived at EDR: 04/28/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 127

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
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: 07/28/2017
Next Scheduled EDR Contact: 10/23/2017
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: 08/01/2017
Next Scheduled EDR Contact: 11/20/2017
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: 06/05/2017
Next Scheduled EDR Contact: 09/18/2017
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: 06/05/2017
Next Scheduled EDR Contact: 09/18/2017
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: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 07/28/2017
Next Scheduled EDR Contact: 11/08/2017
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: 01/04/2017
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/12/2017
Next Scheduled EDR Contact: 10/16/2017
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: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
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: 09/30/2016
Date Data Arrived at EDR: 11/18/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 77

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/21/2017
Next Scheduled EDR Contact: 10/09/2017
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: 12/31/2013
Date Data Arrived at EDR: 02/24/2015
Date Made Active in Reports: 09/30/2015
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/25/2017
Next Scheduled EDR Contact: 12/04/2017
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: 07/11/2017
Next Scheduled EDR Contact: 10/23/2017
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: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
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: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/22/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 12/05/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 10/16/2017
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: 08/11/2017
Next Scheduled EDR Contact: 10/09/2017
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: 08/11/2017
Next Scheduled EDR Contact: 10/09/2017
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: 02/08/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 38

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
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: 09/01/2017
Next Scheduled EDR Contact: 12/11/2017
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: 09/01/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

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: 03/14/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 21

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/25/2017
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: 04/04/2017
Date Data Arrived at EDR: 04/07/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 35

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/07/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 06/03/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 91

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 67

Source: Department of Defense
Telephone: 571-373-0407
Last EDR Contact: 07/17/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 03/19/2017
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/07/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Quarterly

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: 02/22/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 79

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/17/2017
Next Scheduled EDR Contact: 12/04/2017
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: 12/28/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 64

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 06/28/2017
Next Scheduled EDR Contact: 10/09/2017
Data Release Frequency: Quarterly

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: 03/09/2017
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 42

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 08/08/2017
Next Scheduled EDR Contact: 12/18/2017
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: 12/31/2015
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 147

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/23/2017
Next Scheduled EDR Contact: 10/02/2017
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: 05/01/2017
Date Data Arrived at EDR: 05/03/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 104

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 06/05/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 67

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 10/30/2017
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: 05/16/2017
Date Data Arrived at EDR: 05/19/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 88

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/10/2017
Next Scheduled EDR Contact: 11/27/2017
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: 12/31/2015
Date Data Arrived at EDR: 10/12/2016
Date Made Active in Reports: 12/15/2016
Number of Days to Update: 64

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/12/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/22/2017
Date Data Arrived at EDR: 05/24/2017
Date Made Active in Reports: 08/18/2017
Number of Days to Update: 86

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 08/22/2017
Next Scheduled EDR Contact: 12/04/2017
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: 05/22/2017
Date Data Arrived at EDR: 05/24/2017
Date Made Active in Reports: 08/18/2017
Number of Days to Update: 86

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/22/2017
Next Scheduled EDR Contact: 12/04/2017
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: 04/11/2017
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 04/26/2017
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/12/2017
Next Scheduled EDR Contact: 10/23/2017
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: 09/12/2016
Date Data Arrived at EDR: 09/14/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 30

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/14/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Varies

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: 05/25/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/23/2017
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/06/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 11/14/2016
Date Data Arrived at EDR: 11/15/2016
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 107

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/17/2017
Next Scheduled EDR Contact: 11/27/2017
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: 06/05/2017
Date Data Arrived at EDR: 06/07/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 79

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/07/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/13/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 50

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/14/2017
Next Scheduled EDR Contact: 09/25/2017
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: 12/16/2016
Date Data Arrived at EDR: 12/22/2016
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/16/2017
Next Scheduled EDR Contact: 10/02/2017
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: 01/20/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 50

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/14/2017
Next Scheduled EDR Contact: 09/25/2017
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 board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/14/2017
Next Scheduled EDR Contact: 10/23/2017
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: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
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: 06/27/2017
Next Scheduled EDR Contact: 10/09/2017
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 Historic Gas 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 Historic Dry 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

COUNTY RECORDS

ALAMEDA COUNTY:

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: 04/10/2017
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 31

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 07/07/2017
Date Data Arrived at EDR: 07/11/2017
Date Made Active in Reports: 08/23/2017
Number of Days to Update: 43

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 06/20/2017
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 49

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

BUTTE COUNTY:

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: 08/21/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 04/25/2017
Date Data Arrived at EDR: 04/27/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 104

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/27/2017
Next Scheduled EDR Contact: 10/09/2017
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 02/23/2017
Date Data Arrived at EDR: 02/24/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 77

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 05/26/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 07/27/2017
Number of Days to Update: 58

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/31/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 05/02/2017
Date Data Arrived at EDR: 05/04/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 92

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 06/19/2017
Date Data Arrived at EDR: 06/20/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 50

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 07/31/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Varies

FRESNO COUNTY:

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: 06/30/2017
Date Data Arrived at EDR: 07/05/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 30

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 06/29/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 12/02/2016
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 111

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 03/20/2017
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 05/17/2017
Number of Days to Update: 57

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 04/24/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 101

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/08/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 56

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 02/07/2017
Date Data Arrived at EDR: 02/10/2017
Date Made Active in Reports: 05/02/2017
Number of Days to Update: 81

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

KINGS COUNTY:

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: 03/06/2017
Date Data Arrived at EDR: 03/07/2017
Date Made Active in Reports: 05/17/2017
Number of Days to Update: 71

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 05/09/2017
Date Data Arrived at EDR: 05/11/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 90

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/17/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/13/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 101

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

LOS ANGELES COUNTY:

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: 06/16/2017
Next Scheduled EDR Contact: 10/02/2017
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 04/18/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/18/2017
Number of Days to Update: 115

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/17/2017
Date Data Arrived at EDR: 04/18/2017
Date Made Active in Reports: 05/02/2017
Number of Days to Update: 14

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/18/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2016
Date Data Arrived at EDR: 01/26/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 56

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/13/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/29/2016
Date Data Arrived at EDR: 04/06/2016
Date Made Active in Reports: 06/13/2016
Number of Days to Update: 68

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/17/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/17/2017
Date Data Arrived at EDR: 01/18/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 112

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/13/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Semi-Annually

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: 07/21/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/10/2017
Date Data Arrived at EDR: 01/13/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 110

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: Semi-Annually

MADERA COUNTY:

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: 06/01/2017
Date Data Arrived at EDR: 06/02/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 63

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 03/31/2017
Date Data Arrived at EDR: 04/06/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 27

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 06/29/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/22/2017
Date Data Arrived at EDR: 02/23/2017
Date Made Active in Reports: 05/17/2017
Number of Days to Update: 83

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 02/21/2017
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 05/17/2017
Number of Days to Update: 76

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/08/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/22/2017
Date Data Arrived at EDR: 06/23/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 47

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

NAPA COUNTY:

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: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 05/31/2017
Date Data Arrived at EDR: 06/01/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 85

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 05/08/2017
Date Data Arrived at EDR: 05/09/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 92

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/03/2017
Date Data Arrived at EDR: 05/11/2017
Date Made Active in Reports: 08/18/2017
Number of Days to Update: 99

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/04/2016
Date Data Arrived at EDR: 11/11/2016
Date Made Active in Reports: 01/23/2017
Number of Days to Update: 73

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/06/2017
Date Data Arrived at EDR: 02/07/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 85

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/09/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 77

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 06/19/2017
Date Data Arrived at EDR: 07/05/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 35

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/18/2017
Date Data Arrived at EDR: 04/20/2017
Date Made Active in Reports: 04/21/2017
Number of Days to Update: 1

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/19/2017
Next Scheduled EDR Contact: 10/02/2017
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/19/2017
Date Data Arrived at EDR: 01/25/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 98

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/19/2017
Next Scheduled EDR Contact: 10/02/2017
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/06/2017
Date Data Arrived at EDR: 04/04/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 127

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/06/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Quarterly

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: 05/03/2017
Date Data Arrived at EDR: 07/06/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 47

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/06/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 11/30/2016
Date Data Arrived at EDR: 02/09/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 105

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

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: 05/30/2017
Date Data Arrived at EDR: 06/01/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 85

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

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: 06/05/2017
Date Data Arrived at EDR: 06/07/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 69

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/07/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

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: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

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: 08/07/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 05/03/2017
Date Data Arrived at EDR: 05/08/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 109

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 03/21/2017
Date Data Arrived at EDR: 03/23/2017
Date Made Active in Reports: 05/09/2017
Number of Days to Update: 47

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 08/28/2017
Next Scheduled EDR Contact: 10/02/2017
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/05/2017
Date Data Arrived at EDR: 06/16/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 54

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 03/15/2017
Date Data Arrived at EDR: 04/07/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 33

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

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: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 02/22/2017
Date Data Arrived at EDR: 02/23/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 89

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

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

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: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 05/04/2017
Date Data Arrived at EDR: 05/08/2017
Date Made Active in Reports: 07/27/2017
Number of Days to Update: 80

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

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: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SHASTA COUNTY:

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: 08/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/20/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 63

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 08/29/2017
Number of Days to Update: 69

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 06/27/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 43

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/21/2017
Next Scheduled EDR Contact: 10/09/2017
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/05/2017
Date Data Arrived at EDR: 07/06/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 47

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/21/2017
Next Scheduled EDR Contact: 10/09/2017
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 05/10/2017
Date Data Arrived at EDR: 05/16/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 85

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/17/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Varies

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 80

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA Facility List
Cupa facilities

Date of Government Version: 05/01/2017
Date Data Arrived at EDR: 05/08/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 93

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 04/24/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

TULARE COUNTY:

CUPA Facility List
Cupa program facilities

Date of Government Version: 01/05/2017
Date Data Arrived at EDR: 02/10/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 104

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 04/27/2017
Date Data Arrived at EDR: 04/27/2017
Date Made Active in Reports: 08/10/2017
Number of Days to Update: 105

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

VENTURA COUNTY:

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: 12/27/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 103

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/24/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

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: 06/29/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Annually

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: 08/10/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Quarterly

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: 09/26/2016
Date Data Arrived at EDR: 10/27/2016
Date Made Active in Reports: 01/24/2017
Number of Days to Update: 89

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/24/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 02/27/2017
Date Data Arrived at EDR: 03/15/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 06/29/2017
Date Data Arrived at EDR: 07/05/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 51

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/29/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/30/2017
Date Data Arrived at EDR: 01/31/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 112

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/13/2017
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: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 07/27/2017
Number of Days to Update: 107

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/10/2017
Next Scheduled EDR Contact: 10/23/2017
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: 01/30/2017
Date Data Arrived at EDR: 02/01/2017
Date Made Active in Reports: 02/13/2017
Number of Days to Update: 12

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 07/22/2016
Date Made Active in Reports: 11/22/2016
Number of Days to Update: 123

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/17/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/12/2017
Next Scheduled EDR Contact: 09/25/2017
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 & Game
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

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA 90755

TARGET PROPERTY COORDINATES

Latitude (North):	33.795985 - 33˚ 47’ 45.55’’
Longitude (West):	118.1728 - 118˚ 10’ 22.08’’
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	391430.9
UTM Y (Meters):	3739960.0
Elevation:	42 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5652670 LONG BEACH, 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 principal 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).

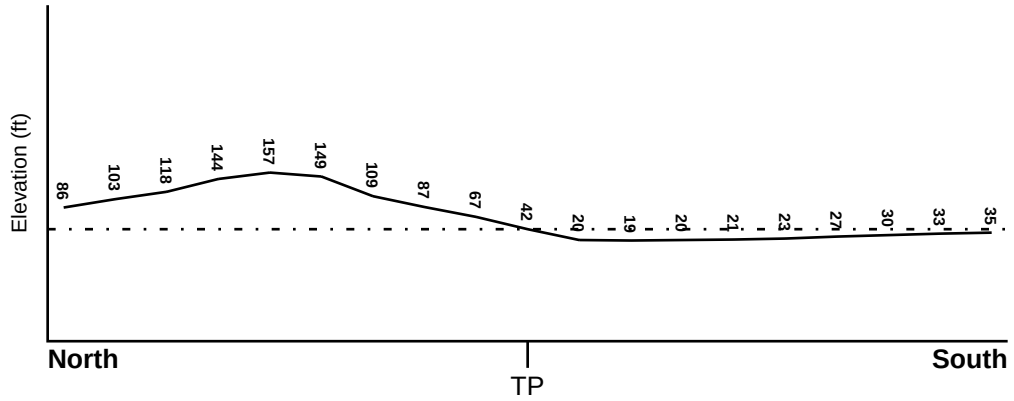
TOPOGRAPHIC INFORMATION

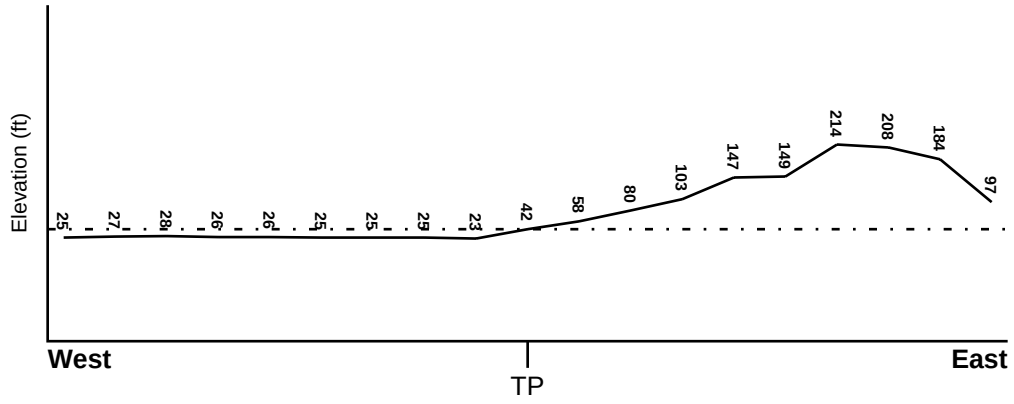
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

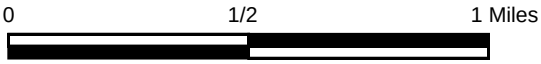
General Topographic Gradient: General SW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 42 ft.



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
06037C1970F	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06037C1962F	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NORTH LONG BEACH (OE)	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
Location Relative to TP:	1/2 - 1 Mile NNE
Site Name:	DICO OIL CO
Site EPA ID Number:	CAD980737076
Surficial Aquifer Flow Dir.:	NOT AVAILABLE.
Inferred Depth to Water:	approximately 105 feet in the Gage aquifer.
Hydraulic Connection:	The Bellflower aquiclude is continuous at the site and extends from the ground surface to an apparent depth of 105 feet. Aquifers underlying the Bellflower aquiclude are interconnected in the site vicinity.
Sole Source Aquifer:	No information about a sole source aquifer is available
Data Quality:	Information is inferred in the CERCLIS investigation report(s)

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

* ©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

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
8	1/4 - 1/2 Mile SSW	Not Reported
9	1/2 - 1 Mile SW	Not Reported
11	1/2 - 1 Mile WNW	Not Reported
12	1/2 - 1 Mile South	WNW
13	1/2 - 1 Mile WNW	E
14	1/2 - 1 Mile WSW	SW
1G	1/2 - 1 Mile WNW	Not Reported
2G	1/2 - 1 Mile WNW	E
3G	1/2 - 1 Mile WSW	SW
4G	1/2 - 1 Mile SW	Not Reported
5G	1/4 - 1/2 Mile SSW	Not Reported
6G	1/2 - 1 Mile South	WNW

For additional site information, refer to Physical Setting Source Map Findings.

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 Min: 0.00	Max: 0.00 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 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS40000138217	1/8 - 1/4 Mile SSE
A2	USGS40000138218	1/8 - 1/4 Mile SSE
A3	USGS40000138214	1/8 - 1/4 Mile SSE
A4	USGS40000138213	1/8 - 1/4 Mile SSE
A5	USGS40000138216	1/8 - 1/4 Mile SSE
A6	USGS40000138215	1/8 - 1/4 Mile SSE
7	USGS40000138299	1/4 - 1/2 Mile NNE
15	USGS40000138334	1/2 - 1 Mile NW

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
10	4063	1/2 - 1 Mile ESE

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	CAOG11000208008	0 - 1/8 Mile NE
A2	CAOG11000207524	1/8 - 1/4 Mile NE
A3	CAOG11000207816	1/8 - 1/4 Mile NE
A4	CAOG11000207531	1/8 - 1/4 Mile NNE
A5	CAOG11000207995	1/8 - 1/4 Mile NE
A6	CAOG11000208600	1/8 - 1/4 Mile NE
A7	CAOG11000208176	1/8 - 1/4 Mile NNE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A8	CAOG11000207901	1/8 - 1/4 Mile NNE
B9	CAOG11000208141	1/8 - 1/4 Mile NNE
A10	CAOG11000208763	1/8 - 1/4 Mile NNE
A11	CAOG11000209097	1/8 - 1/4 Mile NE
A12	CAOG11000207038	1/8 - 1/4 Mile NE
B13	CAOG11000207035	1/8 - 1/4 Mile NNE
B14	CAOG11000206677	1/8 - 1/4 Mile NNE
C15	CAOG11000208601	1/8 - 1/4 Mile East
A16	CAOG11000207050	1/8 - 1/4 Mile NE
B17	CAOG11000207631	1/8 - 1/4 Mile NNE
A18	CAOG11000207290	1/8 - 1/4 Mile NE
B19	CAOG11000215425	1/8 - 1/4 Mile North
B20	CAOG11000207039	1/8 - 1/4 Mile NE
B22	CAOG11000207294	1/8 - 1/4 Mile North
B21	CAOG11000207293	1/8 - 1/4 Mile North
B23	CAOG11000206697	1/8 - 1/4 Mile NE
D24	CAOG11000207510	1/8 - 1/4 Mile NE
B25	CAOG11000207603	1/8 - 1/4 Mile NNE
C26	CAOG11000208261	1/8 - 1/4 Mile ENE
B27	CAOG11000207823	1/8 - 1/4 Mile NNE
B28	CAOG11000207363	1/8 - 1/4 Mile NE
D29	CAOG11000208098	1/8 - 1/4 Mile ENE
B30	CAOG11000207920	1/8 - 1/4 Mile NNE
D31	CAOG11000207896	1/8 - 1/4 Mile NE
B32	CAOG11000207120	1/8 - 1/4 Mile NNE
D33	CAOG11000207546	1/8 - 1/4 Mile ENE
D34	CAOG11000207834	1/8 - 1/4 Mile NE
D35	CAOG11000207895	1/8 - 1/4 Mile NE
D36	CAOG11000207476	1/8 - 1/4 Mile ENE
B37	CAOG11000207605	1/8 - 1/4 Mile NNE
B38	CAOG11000207935	1/8 - 1/4 Mile NE
D39	CAOG11000208097	1/8 - 1/4 Mile ENE
D40	CAOG11000208096	1/8 - 1/4 Mile NE
B41	CAOG11000208162	1/8 - 1/4 Mile NE
B43	CAOG11000207349	1/8 - 1/4 Mile NNE
B42	CAOG11000207348	1/8 - 1/4 Mile NNE
B44	CAOG11000208836	1/8 - 1/4 Mile NNE
D45	CAOG11000208465	1/8 - 1/4 Mile NE
D46	CAOG11000207525	1/8 - 1/4 Mile NE
D47	CAOG11000207817	1/8 - 1/4 Mile NE
D48	CAOG11000209037	1/8 - 1/4 Mile ENE
B49	CAOG11000208283	1/8 - 1/4 Mile NNE
D50	CAOG11000206830	1/8 - 1/4 Mile NE
B51	CAOG11000208180	1/8 - 1/4 Mile NNE
D52	CAOG11000209272	1/8 - 1/4 Mile NE
D53	CAOG11000208163	1/8 - 1/4 Mile NE
E54	CAOG11000207852	1/8 - 1/4 Mile North
F55	CAOG11000208164	1/8 - 1/4 Mile NNE
D56	CAOG11000207104	1/8 - 1/4 Mile ENE
F57	CAOG11000207676	1/8 - 1/4 Mile NNE
D58	CAOG11000207043	1/8 - 1/4 Mile NE
D59	CAOG11000207897	1/8 - 1/4 Mile NE
E60	CAOG11000207917	1/8 - 1/4 Mile North
D61	CAOG11000207606	1/8 - 1/4 Mile ENE
D62	CAOG11000207633	1/4 - 1/2 Mile ENE
F63	CAOG11000208521	1/4 - 1/2 Mile NE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
D64	CAOG11000207781	1/4 - 1/2 Mile ENE
D65	CAOG11000208179	1/4 - 1/2 Mile NE
F66	CAOG11000207140	1/4 - 1/2 Mile NE
D67	CAOG11000207632	1/4 - 1/2 Mile ENE
F68	CAOG11000208284	1/4 - 1/2 Mile NE
F69	CAOG11000207649	1/4 - 1/2 Mile NE
E70	CAOG11000207274	1/4 - 1/2 Mile North
E71	CAOG11000208835	1/4 - 1/2 Mile NNE
D72	CAOG11000207712	1/4 - 1/2 Mile NE
D73	CAOG11000207172	1/4 - 1/2 Mile NE
D74	CAOG11000208434	1/4 - 1/2 Mile NE
E75	CAOG11000207230	1/4 - 1/2 Mile North
G76	CAOG11000207518	1/4 - 1/2 Mile ENE
F77	CAOG11000207202	1/4 - 1/2 Mile NE
E78	CAOG11000207764	1/4 - 1/2 Mile North
D79	CAOG11000206681	1/4 - 1/2 Mile NE
H80	CAOG11000207003	1/4 - 1/2 Mile NNW
F81	CAOG11000206711	1/4 - 1/2 Mile NE
H82	CAOG11000207701	1/4 - 1/2 Mile NNW
E83	CAOG11000208115	1/4 - 1/2 Mile NNE
G84	CAOG11000207332	1/4 - 1/2 Mile ENE
F85	CAOG11000208278	1/4 - 1/2 Mile NNE
F86	CAOG11000207174	1/4 - 1/2 Mile NE
E87	CAOG11000207020	1/4 - 1/2 Mile North
E88	CAOG11000208116	1/4 - 1/2 Mile North
F89	CAOG11000207213	1/4 - 1/2 Mile NNE
I90	CAOG11000206714	1/4 - 1/2 Mile East
H91	CAOG11000207234	1/4 - 1/2 Mile NNW
G92	CAOG11000209034	1/4 - 1/2 Mile ENE
G93	CAOG11000206444	1/4 - 1/2 Mile ENE
E94	CAOG11000208862	1/4 - 1/2 Mile North
E95	CAOG11000207362	1/4 - 1/2 Mile North
F96	CAOG11000207211	1/4 - 1/2 Mile NE
E97	CAOG11000207999	1/4 - 1/2 Mile North
G98	CAOG11000207824	1/4 - 1/2 Mile ENE
G99	CAOG11000208560	1/4 - 1/2 Mile ENE
F100	CAOG11000207135	1/4 - 1/2 Mile NNE
F101	CAOG11000200816	1/4 - 1/2 Mile NNE
F102	CAOG11000207132	1/4 - 1/2 Mile NNE
G103	CAOG11000200798	1/4 - 1/2 Mile ENE
F104	CAOG11000200815	1/4 - 1/2 Mile NNE
H105	CAOG11000207681	1/4 - 1/2 Mile NNW
E106	CAOG11000209244	1/4 - 1/2 Mile North
F107	CAOG11000207133	1/4 - 1/2 Mile NNE
J108	CAOG11000207586	1/4 - 1/2 Mile NE
F109	CAOG11000207642	1/4 - 1/2 Mile NNE
G110	CAOG11000207304	1/4 - 1/2 Mile ENE
F111	CAOG11000207641	1/4 - 1/2 Mile NNE
F112	CAOG11000207587	1/4 - 1/2 Mile NE
G113	CAOG11000208433	1/4 - 1/2 Mile ENE
F114	CAOG11000190767	1/4 - 1/2 Mile NE
E115	CAOG11000207477	1/4 - 1/2 Mile North
J116	CAOG11000208432	1/4 - 1/2 Mile NE
J117	CAOG11000209114	1/4 - 1/2 Mile NE
G118	CAOG11000208435	1/4 - 1/2 Mile ENE
F119	CAOG11000207585	1/4 - 1/2 Mile NE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
K120	CAOG11000208861	1/4 - 1/2 Mile NNE
I121	CAOG11000207392	1/4 - 1/2 Mile ENE
G122	CAOG11000207793	1/4 - 1/2 Mile ENE
K123	CAOG11000208865	1/4 - 1/2 Mile NNE
G124	CAOG11000207394	1/4 - 1/2 Mile ENE
I125	CAOG11000207994	1/4 - 1/2 Mile East
L126	CAOG11000207547	1/4 - 1/2 Mile North
J127	CAOG11000207182	1/4 - 1/2 Mile NE
J128	CAOG11000208231	1/4 - 1/2 Mile NE
L129	CAOG11000207478	1/4 - 1/2 Mile North
L130	CAOG11000207744	1/4 - 1/2 Mile North
L131	CAOG11000207489	1/4 - 1/2 Mile North
G132	CAOG11000208585	1/4 - 1/2 Mile ENE
G133	CAOG11000207303	1/4 - 1/2 Mile ENE
H134	CAOG11000207691	1/4 - 1/2 Mile NNW
J135	CAOG11000207306	1/4 - 1/2 Mile NE
K136	CAOG11000208268	1/4 - 1/2 Mile NNE
L137	CAOG11000208472	1/4 - 1/2 Mile North
G138	CAOG11000207305	1/4 - 1/2 Mile ENE
J139	CAOG11000209039	1/4 - 1/2 Mile NE
J140	CAOG11000208211	1/4 - 1/2 Mile NE
J141	CAOG11000208559	1/4 - 1/2 Mile NE
G142	CAOG11000208584	1/4 - 1/2 Mile ENE
K143	CAOG11000209040	1/4 - 1/2 Mile NNE
M144	CAOG11000207801	1/4 - 1/2 Mile ENE
I145	CAOG11000207032	1/4 - 1/2 Mile East
J146	CAOG11000208870	1/4 - 1/2 Mile NNE
I147	CAOG11000207295	1/4 - 1/2 Mile East
J148	CAOG11000208523	1/4 - 1/2 Mile NE
K149	CAOG11000207396	1/4 - 1/2 Mile NNE
K150	CAOG11000208866	1/4 - 1/2 Mile NNE
H151	CAOG11000208001	1/4 - 1/2 Mile NNW
J152	CAOG11000208230	1/4 - 1/2 Mile NE
L153	CAOG11000208277	1/4 - 1/2 Mile North
J154	CAOG11000191003	1/4 - 1/2 Mile NE
J155	CAOG11000191596	1/4 - 1/2 Mile NNE
J156	CAOG11000208271	1/4 - 1/2 Mile NE
L157	CAOG11000209241	1/4 - 1/2 Mile North
H158	CAOG11000208002	1/4 - 1/2 Mile NNW
J159	CAOG11000191000	1/4 - 1/2 Mile NE
L160	CAOG11000208460	1/4 - 1/2 Mile North
L161	CAOG11000208461	1/4 - 1/2 Mile North
M162	CAOG11000207393	1/4 - 1/2 Mile ENE
J163	CAOG11000208431	1/4 - 1/2 Mile NE
L164	CAOG11000191004	1/4 - 1/2 Mile North
M165	CAOG11000207395	1/4 - 1/2 Mile ENE
N166	CAOG11000208420	1/4 - 1/2 Mile ENE
O167	CAOG11000208003	1/4 - 1/2 Mile NNW
L168	CAOG11000207599	1/4 - 1/2 Mile NNW
J169	CAOG11000208524	1/4 - 1/2 Mile NE
M170	CAOG11000208390	1/4 - 1/2 Mile ENE
P171	CAOG11000206678	1/4 - 1/2 Mile East
J172	CAOG11000208860	1/4 - 1/2 Mile NE
O173	CAOG11000207679	1/4 - 1/2 Mile NNW
O174	CAOG11000209047	1/4 - 1/2 Mile NNW
J175	CAOG11000191313	1/4 - 1/2 Mile NE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
M176	CAOG11000208595	1/4 - 1/2 Mile ENE
M177	CAOG11000208419	1/4 - 1/2 Mile ENE
K178	CAOG11000208871	1/4 - 1/2 Mile NNE
N179	CAOG11000208418	1/4 - 1/2 Mile ENE
P180	CAOG11000207381	1/4 - 1/2 Mile East
O181	CAOG11000207682	1/4 - 1/2 Mile NNW
Q182	CAOG11000191590	1/4 - 1/2 Mile North
P183	CAOG11000206713	1/4 - 1/2 Mile East
P184	CAOG11000207398	1/4 - 1/2 Mile East
N185	CAOG11000207389	1/4 - 1/2 Mile East
P186	CAOG11000207046	1/4 - 1/2 Mile East
J187	CAOG11000190999	1/4 - 1/2 Mile NE
K188	CAOG11000191599	1/4 - 1/2 Mile NNE
O189	CAOG11000209259	1/4 - 1/2 Mile NNW
N190	CAOG11000208421	1/4 - 1/2 Mile ENE
L191	CAOG11000200813	1/4 - 1/2 Mile North
P192	CAOG11000207588	1/4 - 1/2 Mile East
R193	CAOG11000208270	1/4 - 1/2 Mile NE
L194	CAOG11000200814	1/4 - 1/2 Mile North
P195	CAOG11000207169	1/4 - 1/2 Mile East
R196	CAOG11000190733	1/4 - 1/2 Mile NNE
R197	CAOG11000191002	1/4 - 1/2 Mile NE
O198	CAOG11000207554	1/4 - 1/2 Mile NNW
P199	CAOG11000207983	1/4 - 1/2 Mile East
K200	CAOG11000191601	1/4 - 1/2 Mile NNE
O201	CAOG11000206673	1/4 - 1/2 Mile NNW
L202	CAOG11000191006	1/4 - 1/2 Mile North
O203	CAOG11000207943	1/4 - 1/2 Mile NNW
N204	CAOG11000190817	1/4 - 1/2 Mile East
L205	CAOG11000207619	1/4 - 1/2 Mile North
K206	CAOG11000191594	1/4 - 1/2 Mile NNE
R207	CAOG11000190998	1/4 - 1/2 Mile NE
R208	CAOG11000191001	1/4 - 1/2 Mile NE
S209	CAOG11000207233	1/4 - 1/2 Mile NNW
L210	CAOG11000207822	1/4 - 1/2 Mile North
L211	CAOG11000209240	1/4 - 1/2 Mile North
R212	CAOG11000191297	1/4 - 1/2 Mile NE
Q213	CAOG11000191595	1/4 - 1/2 Mile North
O214	CAOG11000207445	1/4 - 1/2 Mile NNW
O215	CAOG11000207629	1/4 - 1/2 Mile NNW
L216	CAOG11000200812	1/4 - 1/2 Mile North
R217	CAOG11000191454	1/4 - 1/2 Mile NNE
Q218	CAOG11000191600	1/4 - 1/2 Mile NNE
L219	CAOG11000209239	1/4 - 1/2 Mile North
P220	CAOG11000208042	1/4 - 1/2 Mile ESE
R221	CAOG11000191602	1/4 - 1/2 Mile NNE
P222	CAOG11000207137	1/4 - 1/2 Mile East
S223	CAOG11000207656	1/4 - 1/2 Mile NNW
Q224	CAOG11000200807	1/4 - 1/2 Mile NNE
M225	CAOG11000191384	1/4 - 1/2 Mile ENE
S226	CAOG11000191715	1/4 - 1/2 Mile North
O227	CAOG11000207439	1/4 - 1/2 Mile NNW
Q228	CAOG11000208869	1/4 - 1/2 Mile North
Q229	CAOG11000208276	1/4 - 1/2 Mile North
S230	CAOG11000207002	1/4 - 1/2 Mile NNW
S231	CAOG11000207130	1/4 - 1/2 Mile North

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
S232	CAOG11000209246	1/4 - 1/2 Mile North
O233	CAOG11000205289	1/4 - 1/2 Mile NNW
N234	CAOG11000190819	1/4 - 1/2 Mile East
T235	CAOG11000191005	1/4 - 1/2 Mile North
O236	CAOG11000207136	1/4 - 1/2 Mile NNW
P237	CAOG11000208099	1/4 - 1/2 Mile East
U238	CAOG11000208828	1/4 - 1/2 Mile NW
R239	CAOG11000190997	1/4 - 1/2 Mile NE
S240	CAOG11000190824	1/4 - 1/2 Mile North
N242	CAOG11000207388	1/4 - 1/2 Mile East
N241	CAOG11000207387	1/4 - 1/2 Mile East
R243	CAOG11000191296	1/4 - 1/2 Mile NE
N244	CAOG11000190818	1/4 - 1/2 Mile East
S245	CAOG11000208873	1/4 - 1/2 Mile North
R246	CAOG11000208855	1/4 - 1/2 Mile NNE
S247	CAOG11000209119	1/4 - 1/2 Mile North
P248	CAOG11000207984	1/4 - 1/2 Mile East
T249	CAOG11000209109	1/4 - 1/2 Mile North
V250	CAOG11000189628	1/4 - 1/2 Mile East
N251	CAOG11000190820	1/4 - 1/2 Mile East
N252	CAOG11000190821	1/4 - 1/2 Mile East
O253	CAOG11000207382	1/4 - 1/2 Mile NNW
P254	CAOG11000206672	1/4 - 1/2 Mile East
W257	CAOG11000191383	1/4 - 1/2 Mile ENE
W256	CAOG11000191382	1/4 - 1/2 Mile ENE
W255	CAOG11000191381	1/4 - 1/2 Mile ENE
T258	CAOG11000209110	1/4 - 1/2 Mile North
Q259	CAOG11000208135	1/4 - 1/2 Mile North
Q260	CAOG11000208212	1/4 - 1/2 Mile North
T261	CAOG11000208874	1/4 - 1/2 Mile North
T262	CAOG11000209111	1/4 - 1/2 Mile North
Q263	CAOG11000208868	1/4 - 1/2 Mile North
S264	CAOG11000190945	1/4 - 1/2 Mile NNW
U265	CAOG11000208476	1/4 - 1/2 Mile NW
T266	CAOG11000209108	1/4 - 1/2 Mile North
S267	CAOG11000207242	1/4 - 1/2 Mile NNW
T268	CAOG11000191734	1/4 - 1/2 Mile North
W269	CAOG11000208392	1/4 - 1/2 Mile ENE
R270	CAOG11000208767	1/4 - 1/2 Mile NNE
N271	CAOG11000207049	1/4 - 1/2 Mile East
N272	CAOG11000191286	1/4 - 1/2 Mile ENE
S273	CAOG11000207892	1/4 - 1/2 Mile NNW
S274	CAOG11000208462	1/4 - 1/2 Mile North
S275	CAOG11000191716	1/4 - 1/2 Mile North
W276	CAOG11000208391	1/4 - 1/2 Mile ENE
S277	CAOG11000208029	1/4 - 1/2 Mile NNW
W278	CAOG11000191170	1/4 - 1/2 Mile ENE
W279	CAOG11000191171	1/4 - 1/2 Mile ENE
V280	CAOG11000191094	1/4 - 1/2 Mile East
X281	CAOG11000208416	1/4 - 1/2 Mile ENE
O282	CAOG11000208288	1/4 - 1/2 Mile NNW
W284	CAOG11000191386	1/4 - 1/2 Mile ENE
W283	CAOG11000191385	1/4 - 1/2 Mile ENE
O285	CAOG11000207438	1/4 - 1/2 Mile NNW
W287	CAOG11000191141	1/4 - 1/2 Mile NE
W286	CAOG11000191140	1/4 - 1/2 Mile NE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
N288	CAOG11000191289	1/4 - 1/2 Mile ENE
Q289	CAOG11000191591	1/4 - 1/2 Mile NNE
T290	CAOG11000191735	1/4 - 1/2 Mile North
S291	CAOG11000209117	1/4 - 1/2 Mile North
R292	CAOG11000190949	1/4 - 1/2 Mile NE
S293	CAOG11000207094	1/4 - 1/2 Mile NNW
W294	CAOG11000208389	1/4 - 1/2 Mile NE
S295	CAOG11000207958	1/4 - 1/2 Mile North
Y296	CAOG11000207441	1/4 - 1/2 Mile East
S297	CAOG11000207891	1/4 - 1/2 Mile NNW
X298	CAOG11000208422	1/4 - 1/2 Mile ENE
V299	CAOG11000208064	1/4 - 1/2 Mile East
S300	CAOG11000190811	1/4 - 1/2 Mile North
Y301	CAOG11000207324	1/4 - 1/2 Mile ESE
T302	CAOG11000209056	1/4 - 1/2 Mile North
R303	CAOG11000208863	1/4 - 1/2 Mile NE
S304	CAOG11000207054	1/4 - 1/2 Mile NNW
T305	CAOG11000207956	1/4 - 1/2 Mile North
Z306	CAOG11000208867	1/4 - 1/2 Mile NNE
V307	CAOG11000208348	1/4 - 1/2 Mile East
W308	CAOG11000208503	1/4 - 1/2 Mile ENE
Z309	CAOG11000191597	1/4 - 1/2 Mile NNE
Z310	CAOG11000191592	1/4 - 1/2 Mile NNE
T311	CAOG11000208859	1/4 - 1/2 Mile North
S312	CAOG11000190858	1/4 - 1/2 Mile NNW
R313	CAOG11000190595	1/4 - 1/2 Mile NE
R314	CAOG11000205280	1/4 - 1/2 Mile NE
S315	CAOG11000207811	1/4 - 1/2 Mile North
AA316	CAOG11000207710	1/4 - 1/2 Mile NNW
R317	CAOG11000206831	1/4 - 1/2 Mile NE
W319	CAOG11000191133	1/4 - 1/2 Mile NE
W318	CAOG11000191132	1/4 - 1/2 Mile NE
T320	CAOG11000209055	1/4 - 1/2 Mile North
T321	CAOG11000209118	1/4 - 1/2 Mile North
X322	CAOG11000191287	1/4 - 1/2 Mile ENE
X323	CAOG11000191288	1/4 - 1/2 Mile ENE
Y324	CAOG11000207442	1/4 - 1/2 Mile East
S325	CAOG11000207180	1/4 - 1/2 Mile NNW
Y326	CAOG11000207756	1/4 - 1/2 Mile East
T327	CAOG11000191705	1/4 - 1/2 Mile North
S328	CAOG11000207055	1/4 - 1/2 Mile NNW
S329	CAOG11000189657	1/4 - 1/2 Mile North
V330	CAOG11000190868	1/4 - 1/2 Mile East
AA331	CAOG11000207184	1/4 - 1/2 Mile NNW
S332	CAOG11000207890	1/4 - 1/2 Mile NNW
U333	CAOG11000208188	1/4 - 1/2 Mile NNW
Z334	CAOG11000208858	1/4 - 1/2 Mile NNE
AB335	CAOG11000191143	1/4 - 1/2 Mile NE
V336	CAOG11000208349	1/4 - 1/2 Mile East
U337	CAOG11000207449	1/4 - 1/2 Mile NW
Z338	CAOG11000208857	1/4 - 1/2 Mile NNE
X339	CAOG11000208417	1/4 - 1/2 Mile ENE
Z340	CAOG11000209250	1/4 - 1/2 Mile NE
Z341	CAOG11000190587	1/4 - 1/2 Mile NNE
S342	CAOG11000207831	1/4 - 1/2 Mile NNW
T343	CAOG11000209107	1/4 - 1/2 Mile North

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
Z344	CAOG11000190593	1/4 - 1/2 Mile NNE
T345	CAOG11000208137	1/4 - 1/2 Mile North
AB346	CAOG11000190594	1/4 - 1/2 Mile NE
Z347	CAOG11000208864	1/4 - 1/2 Mile NNE
AC348	CAOG11000208117	1/4 - 1/2 Mile NNW
AB349	CAOG11000208377	1/4 - 1/2 Mile NE
S350	CAOG11000207635	1/4 - 1/2 Mile NNW
W351	CAOG11000208372	1/4 - 1/2 Mile NE
AC352	CAOG11000208661	1/4 - 1/2 Mile NNW
T353	CAOG11000208213	1/4 - 1/2 Mile North
AC354	CAOG11000207221	1/4 - 1/2 Mile NNW
T355	CAOG11000208872	1/4 - 1/2 Mile North
Y356	CAOG11000206695	1/4 - 1/2 Mile East
U357	CAOG11000207536	1/4 - 1/2 Mile NW
AC358	CAOG11000190580	1/4 - 1/2 Mile NNW
AA359	CAOG11000207175	1/4 - 1/2 Mile NNW
AA360	CAOG11000207287	1/4 - 1/2 Mile NNW
T361	CAOG11000207959	1/4 - 1/2 Mile North
W362	CAOG11000208502	1/4 - 1/2 Mile ENE
AC363	CAOG11000206818	1/4 - 1/2 Mile NNW
AA364	CAOG11000207686	1/4 - 1/2 Mile NNW
AB365	CAOG11000191142	1/4 - 1/2 Mile NE
AC366	CAOG11000206820	1/4 - 1/2 Mile NNW
V367	CAOG11000208063	1/4 - 1/2 Mile East
AD368	CAOG11000206340	1/4 - 1/2 Mile North
T369	CAOG11000208136	1/4 - 1/2 Mile North
AE370	CAOG11000189647	1/4 - 1/2 Mile North
X371	CAOG11000208346	1/4 - 1/2 Mile ENE
X372	CAOG11000208347	1/4 - 1/2 Mile ENE
V373	CAOG11000191101	1/4 - 1/2 Mile East
Z374	CAOG11000190764	1/4 - 1/2 Mile NNE
AD375	CAOG11000208185	1/4 - 1/2 Mile NNE
AA376	CAOG11000207990	1/4 - 1/2 Mile NNW
AA377	CAOG11000207529	1/4 - 1/2 Mile NNW
AA378	CAOG11000207948	1/4 - 1/2 Mile NNW
AA379	CAOG11000190843	1/4 - 1/2 Mile NNW
AD380	CAOG11000207640	1/4 - 1/2 Mile North
Z381	CAOG11000190570	1/4 - 1/2 Mile NNE
AC382	CAOG11000190582	1/4 - 1/2 Mile North
AA383	CAOG11000207855	1/4 - 1/2 Mile NNW
AF384	CAOG11000190836	1/4 - 1/2 Mile NNE
AC385	CAOG11000206811	1/4 - 1/2 Mile NNW
Z386	CAOG11000207936	1/4 - 1/2 Mile NNE
AG387	CAOG11000190596	1/4 - 1/2 Mile NE
AD388	CAOG11000207645	1/4 - 1/2 Mile NNE
Z389	CAOG11000207752	1/4 - 1/2 Mile NNE
Y390	CAOG11000208452	1/4 - 1/2 Mile East
AD391	CAOG11000191710	1/4 - 1/2 Mile North
AA392	CAOG11000207129	1/4 - 1/2 Mile NNW
Z393	CAOG11000190982	1/4 - 1/2 Mile NNE
AF394	CAOG11000207277	1/4 - 1/2 Mile NNE
AF395	CAOG11000207575	1/4 - 1/2 Mile NNE
AD396	CAOG11000207643	1/4 - 1/2 Mile North
AE397	CAOG11000190922	1/4 - 1/2 Mile North
Z398	CAOG11000200811	1/4 - 1/2 Mile NNE
AH399	CAOG11000208344	1/4 - 1/2 Mile ENE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
AH400	CAOG11000208345	1/4 - 1/2 Mile ENE
Z401	CAOG11000190985	1/4 - 1/2 Mile NNE
W402	CAOG11000208373	1/4 - 1/2 Mile NE
AA403	CAOG11000207520	1/4 - 1/2 Mile NNW
AD404	CAOG11000191593	1/4 - 1/2 Mile North
AE405	CAOG11000205290	1/4 - 1/2 Mile North
Z406	CAOG11000206709	1/4 - 1/2 Mile NNE
AE407	CAOG11000189646	1/4 - 1/2 Mile North
AG408	CAOG11000190983	1/4 - 1/2 Mile NE
AA409	CAOG11000207859	1/4 - 1/2 Mile NNW
AG410	CAOG11000208383	1/4 - 1/2 Mile NE
W411	CAOG11000208497	1/4 - 1/2 Mile ENE
AD412	CAOG11000209057	1/4 - 1/2 Mile North
AF413	CAOG11000207646	1/4 - 1/2 Mile NNE
AD414	CAOG11000207965	1/4 - 1/2 Mile North
AF415	CAOG11000190857	1/4 - 1/2 Mile NNE
AA416	CAOG11000208101	1/4 - 1/2 Mile NW
AH417	CAOG11000208341	1/4 - 1/2 Mile ENE
Z418	CAOG11000207460	1/4 - 1/2 Mile NNE
AF419	CAOG11000207461	1/4 - 1/2 Mile NNE
AA420	CAOG11000206812	1/4 - 1/2 Mile NNW
AA421	CAOG11000207336	1/4 - 1/2 Mile NNW
AF422	CAOG11000208758	1/4 - 1/2 Mile NNE
AE423	CAOG11000207981	1/4 - 1/2 Mile North
AI424	CAOG11000207548	1/4 - 1/2 Mile NW
AD425	CAOG11000191598	1/4 - 1/2 Mile North
AJ426	CAOG11000208343	1/4 - 1/2 Mile ENE
AA427	CAOG11000207128	1/2 - 1 Mile NNW
AJ429	CAOG11000191092	1/2 - 1 Mile ENE
AJ428	CAOG11000191091	1/2 - 1 Mile ENE
AJ430	CAOG11000191093	1/2 - 1 Mile ENE
AD431	CAOG11000208856	1/2 - 1 Mile North
AA432	CAOG11000207335	1/2 - 1 Mile NNW
AF433	CAOG11000207807	1/2 - 1 Mile NNE
AG434	CAOG11000208252	1/2 - 1 Mile NNE
435	CAOG11000209099	1/2 - 1 Mile NW
AJ436	CAOG11000191097	1/2 - 1 Mile ENE
AF437	CAOG11000188694	1/2 - 1 Mile NNE
AE438	CAOG11000207966	1/2 - 1 Mile North
AA439	CAOG11000207609	1/2 - 1 Mile NNW
AC440	CAOG11000206815	1/2 - 1 Mile NNW
AB441	CAOG11000208378	1/2 - 1 Mile NE
AI442	CAOG11000207403	1/2 - 1 Mile NW
Z443	CAOG11000208557	1/2 - 1 Mile NNE
AE444	CAOG11000190583	1/2 - 1 Mile North
AH446	CAOG11000191100	1/2 - 1 Mile ENE
AH445	CAOG11000191099	1/2 - 1 Mile ENE
AJ447	CAOG11000208388	1/2 - 1 Mile East
AJ448	CAOG11000191114	1/2 - 1 Mile ENE
AE449	CAOG11000207964	1/2 - 1 Mile North
AF450	CAOG11000208757	1/2 - 1 Mile NNE
AD451	CAOG11000200800	1/2 - 1 Mile North
AD452	CAOG11000207639	1/2 - 1 Mile North
AG453	CAOG11000190984	1/2 - 1 Mile NNE
AH454	CAOG11000205288	1/2 - 1 Mile ENE
AI455	CAOG11000208030	1/2 - 1 Mile NW

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
AK456	CAOG11000208371	1/2 - 1 Mile NE
AF457	CAOG11000190855	1/2 - 1 Mile NNE
AH458	CAOG11000205286	1/2 - 1 Mile ENE
AH459	CAOG11000205285	1/2 - 1 Mile ENE
AD460	CAOG11000206333	1/2 - 1 Mile North
AF461	CAOG11000208275	1/2 - 1 Mile NNE
AL462	CAOG11000208382	1/2 - 1 Mile East
AB463	CAOG11000208385	1/2 - 1 Mile NE
AD464	CAOG11000200801	1/2 - 1 Mile North
AH465	CAOG11000205284	1/2 - 1 Mile ENE
AH466	CAOG11000206719	1/2 - 1 Mile ENE
AJ467	CAOG11000191115	1/2 - 1 Mile ENE
AM468	CAOG11000208554	1/2 - 1 Mile NNE
AL469	CAOG11000208380	1/2 - 1 Mile East
AJ470	CAOG11000208381	1/2 - 1 Mile East
AH471	CAOG11000190737	1/2 - 1 Mile ENE
AJ472	CAOG11000191116	1/2 - 1 Mile ENE
AH473	CAOG11000208374	1/2 - 1 Mile NE
AG475	CAOG11000191369	1/2 - 1 Mile NE
AG474	CAOG11000191368	1/2 - 1 Mile NE
AG476	CAOG11000191370	1/2 - 1 Mile NE
AG477	CAOG11000191371	1/2 - 1 Mile NE
AF478	CAOG11000208552	1/2 - 1 Mile NNE
AH479	CAOG11000208826	1/2 - 1 Mile ENE
AL480	CAOG11000206963	1/2 - 1 Mile East
AF481	CAOG11000209053	1/2 - 1 Mile NNE
AE482	CAOG11000206822	1/2 - 1 Mile North
AN483	CAOG11000208384	1/2 - 1 Mile NE
AH484	CAOG11000207301	1/2 - 1 Mile ENE
AE485	CAOG11000190581	1/2 - 1 Mile NNW
AH486	CAOG11000208355	1/2 - 1 Mile ENE
AL487	CAOG11000208386	1/2 - 1 Mile East
AL488	CAOG11000208387	1/2 - 1 Mile East
AC489	CAOG11000206813	1/2 - 1 Mile NNW
AM490	CAOG11000208555	1/2 - 1 Mile NNE
AO491	CAOG11000207527	1/2 - 1 Mile NW
AD492	CAOG11000207954	1/2 - 1 Mile North
AH493	CAOG11000190738	1/2 - 1 Mile ENE
AG494	CAOG11000208587	1/2 - 1 Mile NE
AH495	CAOG11000208453	1/2 - 1 Mile ENE
AI496	CAOG11000207900	1/2 - 1 Mile NW
AP497	CAOG11000206459	1/2 - 1 Mile NNW
AL498	CAOG11000207422	1/2 - 1 Mile East
AQ499	CAOG11000206334	1/2 - 1 Mile North
AD500	CAOG11000191709	1/2 - 1 Mile North
AO501	CAOG11000191695	1/2 - 1 Mile NW
AD502	CAOG11000208068	1/2 - 1 Mile North
AI503	CAOG11000207282	1/2 - 1 Mile NW
AK504	CAOG11000207082	1/2 - 1 Mile ENE
AJ507	CAOG11000191149	1/2 - 1 Mile East
AJ506	CAOG11000191148	1/2 - 1 Mile East
AJ505	CAOG11000191147	1/2 - 1 Mile East
AM508	CAOG11000208558	1/2 - 1 Mile NNE
AF509	CAOG11000190875	1/2 - 1 Mile NNE
AH510	CAOG11000208354	1/2 - 1 Mile ENE
AR511	CAOG11000207953	1/2 - 1 Mile North

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
AM512	CAOG11000190953	1/2 - 1 Mile NNE
AE513	CAOG11000206817	1/2 - 1 Mile North
AK514	CAOG11000208379	1/2 - 1 Mile NE
AK515	CAOG11000208191	1/2 - 1 Mile ENE
AQ516	CAOG11000191711	1/2 - 1 Mile North
AQ517	CAOG11000191720	1/2 - 1 Mile North
AH518	CAOG11000208776	1/2 - 1 Mile ENE
AM519	CAOG11000208551	1/2 - 1 Mile NNE
AF520	CAOG11000207727	1/2 - 1 Mile NNE
AP521	CAOG11000206819	1/2 - 1 Mile NNW
AJ523	CAOG11000190431	1/2 - 1 Mile ENE
AJ522	CAOG11000190430	1/2 - 1 Mile ENE
AJ524	CAOG11000191098	1/2 - 1 Mile ENE
AJ526	CAOG11000191089	1/2 - 1 Mile ENE
AJ527	CAOG11000191090	1/2 - 1 Mile ENE
AJ525	CAOG11000191088	1/2 - 1 Mile ENE
AS528	CAOG11000191387	1/2 - 1 Mile NNE
AT529	CAOG11000207576	1/2 - 1 Mile ENE
AQ530	CAOG11000207963	1/2 - 1 Mile North
AR531	CAOG11000191780	1/2 - 1 Mile NNE
AL532	CAOG11000207326	1/2 - 1 Mile East
AI533	CAOG11000207846	1/2 - 1 Mile NW
AR534	CAOG11000207973	1/2 - 1 Mile NNE
AQ535	CAOG11000207955	1/2 - 1 Mile North
AQ536	CAOG11000209072	1/2 - 1 Mile North
AK537	CAOG11000207081	1/2 - 1 Mile ENE
AT538	CAOG11000208775	1/2 - 1 Mile ENE
AM539	CAOG11000208608	1/2 - 1 Mile NNE
AJ540	CAOG11000206429	1/2 - 1 Mile ENE
AK541	CAOG11000191103	1/2 - 1 Mile NE
AM542	CAOG11000191392	1/2 - 1 Mile NNE
AM543	CAOG11000208553	1/2 - 1 Mile NNE
AU544	CAOG11000207327	1/2 - 1 Mile East
AP545	CAOG11000206456	1/2 - 1 Mile NNW
AV546	CAOG11000190579	1/2 - 1 Mile North
AS547	CAOG11000191391	1/2 - 1 Mile NNE
AW548	CAOG11000207928	1/2 - 1 Mile ESE
AK550	CAOG11000191713	1/2 - 1 Mile ENE
AK551	CAOG11000191714	1/2 - 1 Mile ENE
AK549	CAOG11000191712	1/2 - 1 Mile ENE
AK552	CAOG11000208370	1/2 - 1 Mile ENE
AU553	CAOG11000208161	1/2 - 1 Mile East
AK554	CAOG11000208353	1/2 - 1 Mile ENE
AM555	CAOG11000208769	1/2 - 1 Mile NNE
AO556	CAOG11000207947	1/2 - 1 Mile NNW
AP557	CAOG11000206458	1/2 - 1 Mile NNW
AV558	CAOG11000206816	1/2 - 1 Mile NNW
AQ559	CAOG11000207164	1/2 - 1 Mile North
AR560	CAOG11000209054	1/2 - 1 Mile North
AM561	CAOG11000208556	1/2 - 1 Mile NNE
AM562	CAOG11000190954	1/2 - 1 Mile NNE
AV563	CAOG11000206821	1/2 - 1 Mile North
AO564	CAOG11000207899	1/2 - 1 Mile NW
AK565	CAOG11000191102	1/2 - 1 Mile NE
AV566	CAOG11000206787	1/2 - 1 Mile North
AL567	CAOG11000191158	1/2 - 1 Mile East

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
AP568	CAOG11000208154	1/2 - 1 Mile NNW
AX570	CAOG11000191096	1/2 - 1 Mile East
AX569	CAOG11000191095	1/2 - 1 Mile East
AU571	CAOG11000207338	1/2 - 1 Mile ESE
AO572	CAOG11000206686	1/2 - 1 Mile NW
AL573	CAOG11000207325	1/2 - 1 Mile East
AL574	CAOG11000191154	1/2 - 1 Mile East
AL575	CAOG11000191155	1/2 - 1 Mile East
AO576	CAOG11000191731	1/2 - 1 Mile NNW
AU577	CAOG11000207064	1/2 - 1 Mile ESE
AP578	CAOG11000208071	1/2 - 1 Mile NNW
AN579	CAOG11000208589	1/2 - 1 Mile NE
AY580	CAOG11000208447	1/2 - 1 Mile NW
AS581	CAOG11000208607	1/2 - 1 Mile NNE
AZ582	CAOG11000191277	1/2 - 1 Mile NE
AZ583	CAOG11000191278	1/2 - 1 Mile NE
AX584	CAOG11000206432	1/2 - 1 Mile ENE
AS585	CAOG11000207820	1/2 - 1 Mile NNE
AT586	CAOG11000206426	1/2 - 1 Mile ENE
AT587	CAOG11000206433	1/2 - 1 Mile ENE
AM588	CAOG11000207544	1/2 - 1 Mile NNE
AO589	CAOG11000190571	1/2 - 1 Mile NW
AU590	CAOG11000207320	1/2 - 1 Mile East
AX591	CAOG11000191150	1/2 - 1 Mile East
AM592	CAOG11000190951	1/2 - 1 Mile NNE
AN593	CAOG11000208588	1/2 - 1 Mile NE
AL594	CAOG11000191156	1/2 - 1 Mile East
AL595	CAOG11000191157	1/2 - 1 Mile East
AM596	CAOG11000190952	1/2 - 1 Mile NNE
AS597	CAOG11000208606	1/2 - 1 Mile NNE
AP598	CAOG11000206457	1/2 - 1 Mile NNW
AM599	CAOG11000190874	1/2 - 1 Mile NNE
AM600	CAOG11000207545	1/2 - 1 Mile NNE
AY601	CAOG11000202099	1/2 - 1 Mile NW
AX602	CAOG11000206430	1/2 - 1 Mile ENE
AT603	CAOG11000206431	1/2 - 1 Mile ENE
AP604	CAOG11000206814	1/2 - 1 Mile NNW
AR605	CAOG11000207505	1/2 - 1 Mile North
BA606	CAOG11000191129	1/2 - 1 Mile ENE
AM607	CAOG11000191704	1/2 - 1 Mile NNE
AM608	CAOG11000206698	1/2 - 1 Mile NNE
AM609	CAOG11000208768	1/2 - 1 Mile NNE
AV610	CAOG11000206785	1/2 - 1 Mile NNW
AO611	CAOG11000209081	1/2 - 1 Mile NNW
AT612	CAOG11000206428	1/2 - 1 Mile ENE
AQ613	CAOG11000190598	1/2 - 1 Mile North
AO614	CAOG11000207278	1/2 - 1 Mile NNW
AS615	CAOG11000208610	1/2 - 1 Mile NNE
AM616	CAOG11000207543	1/2 - 1 Mile NNE
AP617	CAOG11000207749	1/2 - 1 Mile NNW
AQ618	CAOG11000208547	1/2 - 1 Mile North
AQ619	CAOG11000190599	1/2 - 1 Mile North
AO620	CAOG11000208041	1/2 - 1 Mile NW
AP621	CAOG11000206786	1/2 - 1 Mile NNW
AR622	CAOG11000207506	1/2 - 1 Mile North
AQ623	CAOG11000206835	1/2 - 1 Mile North

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
AZ627	CAOG11000191284	1/2 - 1 Mile NNE
AZ628	CAOG11000191283	1/2 - 1 Mile NNE
AZ629	CAOG11000191282	1/2 - 1 Mile NNE
AZ624	CAOG11000191281	1/2 - 1 Mile NNE
AZ625	CAOG11000191280	1/2 - 1 Mile NNE
AZ626	CAOG11000191279	1/2 - 1 Mile NNE
AO630	CAOG11000190877	1/2 - 1 Mile NW
AX631	CAOG11000208342	1/2 - 1 Mile East
AV632	CAOG11000208545	1/2 - 1 Mile North
AP633	CAOG11000207750	1/2 - 1 Mile NNW
AZ634	CAOG11000207482	1/2 - 1 Mile NNE
AT638	CAOG11000191083	1/2 - 1 Mile ENE
AT636	CAOG11000191079	1/2 - 1 Mile ENE
AT637	CAOG11000191081	1/2 - 1 Mile ENE
AT635	CAOG11000191080	1/2 - 1 Mile ENE
AT639	CAOG11000191082	1/2 - 1 Mile ENE
AO640	CAOG11000191577	1/2 - 1 Mile NNW
AO641	CAOG11000207072	1/2 - 1 Mile NW
AQ642	CAOG11000190600	1/2 - 1 Mile North
AR643	CAOG11000207000	1/2 - 1 Mile NNE
AS644	CAOG11000207776	1/2 - 1 Mile NNE
AS645	CAOG11000200803	1/2 - 1 Mile NNE
AS646	CAOG11000208609	1/2 - 1 Mile NNE
AU647	CAOG11000207311	1/2 - 1 Mile East
AX648	CAOG11000190915	1/2 - 1 Mile ENE
AU649	CAOG11000207065	1/2 - 1 Mile East
AX651	CAOG11000191152	1/2 - 1 Mile East
AX650	CAOG11000191151	1/2 - 1 Mile East
AX652	CAOG11000191153	1/2 - 1 Mile East
AV653	CAOG11000208548	1/2 - 1 Mile North
AU654	CAOG11000209262	1/2 - 1 Mile ESE
AO655	CAOG11000190880	1/2 - 1 Mile NW
AP656	CAOG11000208155	1/2 - 1 Mile NNW
AT657	CAOG11000207731	1/2 - 1 Mile ENE
AQ658	CAOG11000191315	1/2 - 1 Mile North
AS659	CAOG11000206999	1/2 - 1 Mile NNE
BB660	CAOG11000208352	1/2 - 1 Mile NE
BA661	CAOG11000206427	1/2 - 1 Mile ENE
AZ662	CAOG11000191285	1/2 - 1 Mile NE
AS663	CAOG11000190876	1/2 - 1 Mile NNE
AR664	CAOG11000191729	1/2 - 1 Mile North
AT665	CAOG11000208336	1/2 - 1 Mile ENE
AV666	CAOG11000191317	1/2 - 1 Mile North
AQ667	CAOG11000190597	1/2 - 1 Mile North
BC668	CAOG11000207771	1/2 - 1 Mile NNE
AR669	CAOG11000191723	1/2 - 1 Mile North
AT670	CAOG11000191085	1/2 - 1 Mile ENE
AT671	CAOG11000191086	1/2 - 1 Mile ENE
AU672	CAOG11000207316	1/2 - 1 Mile ESE
AT673	CAOG11000206828	1/2 - 1 Mile ENE
AQ674	CAOG11000206836	1/2 - 1 Mile North
BD675	CAOG11000207397	1/2 - 1 Mile NW
AP676	CAOG11000208156	1/2 - 1 Mile NNW
AO677	CAOG11000207805	1/2 - 1 Mile NNW
BB678	CAOG11000280214	1/2 - 1 Mile NE
BB679	CAOG11000193310	1/2 - 1 Mile NE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
AV680	CAOG11000207908	1/2 - 1 Mile North
AV681	CAOG11000207911	1/2 - 1 Mile NNW
AU682	CAOG11000208267	1/2 - 1 Mile East
AY683	CAOG11000207598	1/2 - 1 Mile NW
BB688	CAOG11000191107	1/2 - 1 Mile NE
BB687	CAOG11000191108	1/2 - 1 Mile NE
BB684	CAOG11000191105	1/2 - 1 Mile NE
BB685	CAOG11000191104	1/2 - 1 Mile NE
BB686	CAOG11000191106	1/2 - 1 Mile NE
BB690	CAOG11000193399	1/2 - 1 Mile NE
BB689	CAOG11000193398	1/2 - 1 Mile NE
AR691	CAOG11000191727	1/2 - 1 Mile North
AU692	CAOG11000207700	1/2 - 1 Mile East
AY693	CAOG11000191603	1/2 - 1 Mile NW
AX694	CAOG11000208339	1/2 - 1 Mile ENE
BE695	CAOG11000208153	1/2 - 1 Mile NNW
BF696	CAOG11000208546	1/2 - 1 Mile North
BB698	CAOG11000193519	1/2 - 1 Mile NE
BB697	CAOG11000193518	1/2 - 1 Mile NE
BG700	CAOG11000190995	1/2 - 1 Mile East
BG699	CAOG11000190994	1/2 - 1 Mile East
BG701	CAOG11000190996	1/2 - 1 Mile East
AT702	CAOG11000190834	1/2 - 1 Mile ENE
BB703	CAOG11000303265	1/2 - 1 Mile NE
AU704	CAOG11000207315	1/2 - 1 Mile ESE
BE705	CAOG11000208157	1/2 - 1 Mile NNW
BF706	CAOG11000206400	1/2 - 1 Mile North
BB707	CAOG11000193311	1/2 - 1 Mile NE
BB708	CAOG11000193312	1/2 - 1 Mile NE
BB710	CAOG11000193397	1/2 - 1 Mile NE
BB709	CAOG11000193396	1/2 - 1 Mile NE
BE711	CAOG11000191305	1/2 - 1 Mile NNW
BH712	CAOG11000191721	1/2 - 1 Mile NNE
BC713	CAOG11000190950	1/2 - 1 Mile NNE
BA714	CAOG11000206425	1/2 - 1 Mile ENE
BE715	CAOG11000191306	1/2 - 1 Mile NNW
BB716	CAOG11000193440	1/2 - 1 Mile NE
AZ717	CAOG11000208411	1/2 - 1 Mile NE
AW718	CAOG11000209258	1/2 - 1 Mile ESE
BE719	CAOG11000191411	1/2 - 1 Mile NNW
BI720	CAOG11000200802	1/2 - 1 Mile NNW
BG721	CAOG11000208375	1/2 - 1 Mile East
BD722	CAOG11000190920	1/2 - 1 Mile NW
AS723	CAOG11000208594	1/2 - 1 Mile NNE
BA725	CAOG11000190433	1/2 - 1 Mile ENE
BA724	CAOG11000190432	1/2 - 1 Mile ENE
AV726	CAOG11000207056	1/2 - 1 Mile NNW
BB728	CAOG11000193517	1/2 - 1 Mile NE
BB727	CAOG11000193516	1/2 - 1 Mile NE
AZ729	CAOG11000208415	1/2 - 1 Mile NE
AZ730	CAOG11000208412	1/2 - 1 Mile NNE
BD731	CAOG11000190592	1/2 - 1 Mile NNW
BB732	CAOG11000191113	1/2 - 1 Mile NE
BA733	CAOG11000191109	1/2 - 1 Mile NE
BA734	CAOG11000191110	1/2 - 1 Mile NE
BH735	CAOG11000191726	1/2 - 1 Mile North

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
BE736	CAOG11000209248	1/2 - 1 Mile NNW
BG737	CAOG11000190990	1/2 - 1 Mile East
BA739	CAOG11000190435	1/2 - 1 Mile ENE
BA738	CAOG11000190434	1/2 - 1 Mile ENE
AV740	CAOG11000207909	1/2 - 1 Mile North
BB741	CAOG11000300039	1/2 - 1 Mile NE
BG742	CAOG11000208266	1/2 - 1 Mile East
BC743	CAOG11000207770	1/2 - 1 Mile NNE
AU744	CAOG11000207118	1/2 - 1 Mile East
AT745	CAOG11000207491	1/2 - 1 Mile ENE
AU746	CAOG11000209032	1/2 - 1 Mile East
BE747	CAOG11000209080	1/2 - 1 Mile NNW
BG748	CAOG11000191138	1/2 - 1 Mile East
BG749	CAOG11000191139	1/2 - 1 Mile East
AX752	CAOG11000191146	1/2 - 1 Mile East
AX750	CAOG11000191144	1/2 - 1 Mile East
AX751	CAOG11000191145	1/2 - 1 Mile East
BH753	CAOG11000208578	1/2 - 1 Mile NNE
BG754	CAOG11000208573	1/2 - 1 Mile East
BJ755	CAOG11000207410	1/2 - 1 Mile ESE
AV756	CAOG11000191322	1/2 - 1 Mile North
BK757	CAOG11000208564	1/2 - 1 Mile ENE
BD758	CAOG11000207933	1/2 - 1 Mile NNW
BA759	CAOG11000208351	1/2 - 1 Mile NE
BE760	CAOG11000209079	1/2 - 1 Mile NNW
AY761	CAOG11000189637	1/2 - 1 Mile NW
AZ762	CAOG11000208409	1/2 - 1 Mile NNE
BD763	CAOG11000190919	1/2 - 1 Mile NW
AX764	CAOG11000191084	1/2 - 1 Mile ENE
BH765	CAOG11000191724	1/2 - 1 Mile NNE
BF766	CAOG11000208550	1/2 - 1 Mile North
BG767	CAOG11000190991	1/2 - 1 Mile East
BG768	CAOG11000190992	1/2 - 1 Mile East
BG769	CAOG11000190993	1/2 - 1 Mile East
AX770	CAOG11000191087	1/2 - 1 Mile East
BJ771	CAOG11000207844	1/2 - 1 Mile ESE
BD772	CAOG11000207048	1/2 - 1 Mile NW
BA773	CAOG11000206775	1/2 - 1 Mile ENE
BL774	CAOG11000208627	1/2 - 1 Mile ENE
BL775	CAOG11000208628	1/2 - 1 Mile ENE
BA776	CAOG11000206424	1/2 - 1 Mile ENE
BD777	CAOG11000207898	1/2 - 1 Mile NNW
BC779	CAOG11000191380	1/2 - 1 Mile NNE
BC778	CAOG11000191379	1/2 - 1 Mile NNE
BD780	CAOG11000208147	1/2 - 1 Mile NW
BK781	CAOG11000208563	1/2 - 1 Mile ENE
BA782	CAOG11000191134	1/2 - 1 Mile ENE
BA783	CAOG11000191135	1/2 - 1 Mile ENE
BK784	CAOG11000211724	1/2 - 1 Mile ENE
BE785	CAOG11000209247	1/2 - 1 Mile NNW
BI786	CAOG11000208543	1/2 - 1 Mile North
BD787	CAOG11000207697	1/2 - 1 Mile NW
BC788	CAOG11000191351	1/2 - 1 Mile NNE
BD789	CAOG11000189640	1/2 - 1 Mile NW
BC790	CAOG11000208413	1/2 - 1 Mile NNE
BL791	CAOG11000208624	1/2 - 1 Mile ENE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
BA793	CAOG11000191131	1/2 - 1 Mile ENE
BA792	CAOG11000191130	1/2 - 1 Mile ENE
BD794	CAOG11000193295	1/2 - 1 Mile NNW
BI795	CAOG11000191410	1/2 - 1 Mile NNW
BD796	CAOG11000207930	1/2 - 1 Mile NNW
BL797	CAOG11000208623	1/2 - 1 Mile ENE
BD798	CAOG11000193212	1/2 - 1 Mile NNW
BK799	CAOG11000207601	1/2 - 1 Mile ENE
BD800	CAOG11000207345	1/2 - 1 Mile NW
BH801	CAOG11000191725	1/2 - 1 Mile North
BF802	CAOG11000191321	1/2 - 1 Mile North
BG803	CAOG11000208626	1/2 - 1 Mile East
BG804	CAOG11000208567	1/2 - 1 Mile East
BD805	CAOG11000193211	1/2 - 1 Mile NNW
BI806	CAOG11000190914	1/2 - 1 Mile NNW
BJ807	CAOG11000207296	1/2 - 1 Mile ESE
BI808	CAOG11000207912	1/2 - 1 Mile NNW
BM809	CAOG11000208072	1/2 - 1 Mile NNW
BD810	CAOG11000189638	1/2 - 1 Mile NW
BD811	CAOG11000189639	1/2 - 1 Mile NW
BL812	CAOG11000208337	1/2 - 1 Mile ENE
BA813	CAOG11000208369	1/2 - 1 Mile ENE
BD814	CAOG11000208459	1/2 - 1 Mile NW
BD815	CAOG11000207825	1/2 - 1 Mile NW
BK816	CAOG11000208289	1/2 - 1 Mile ENE
BI817	CAOG11000208544	1/2 - 1 Mile North
BJ818	CAOG11000207858	1/2 - 1 Mile East
BJ819	CAOG11000207842	1/2 - 1 Mile East
BD820	CAOG11000190573	1/2 - 1 Mile NW
BJ821	CAOG11000190746	1/2 - 1 Mile East
BJ822	CAOG11000190747	1/2 - 1 Mile East
BH823	CAOG11000193495	1/2 - 1 Mile NNE
BB825	CAOG11000191112	1/2 - 1 Mile NE
BB824	CAOG11000191111	1/2 - 1 Mile NE
BM826	CAOG11000206684	1/2 - 1 Mile NNW
BL827	CAOG11000208081	1/2 - 1 Mile ENE
BD828	CAOG11000207696	1/2 - 1 Mile NW
BM829	CAOG11000208070	1/2 - 1 Mile NNW
BH830	CAOG11000193494	1/2 - 1 Mile NNE
BC831	CAOG11000191348	1/2 - 1 Mile NNE
BD832	CAOG11000190572	1/2 - 1 Mile NW
BK833	CAOG11000207108	1/2 - 1 Mile ENE
BD834	CAOG11000208838	1/2 - 1 Mile NW
BC835	CAOG11000206956	1/2 - 1 Mile NNE
BI836	CAOG11000191409	1/2 - 1 Mile NNW
BD837	CAOG11000190918	1/2 - 1 Mile NNW
BL838	CAOG11000208076	1/2 - 1 Mile ENE
BJ839	CAOG11000207420	1/2 - 1 Mile ESE
BN840	CAOG11000208414	1/2 - 1 Mile NE
BH841	CAOG11000193493	1/2 - 1 Mile NNE
BK842	CAOG11000211725	1/2 - 1 Mile ENE
BO843	CAOG11000208540	1/2 - 1 Mile NE
BB844	CAOG11000208532	1/2 - 1 Mile NE
BB845	CAOG11000208350	1/2 - 1 Mile NE
BJ846	CAOG11000207034	1/2 - 1 Mile East
BK847	CAOG11000206993	1/2 - 1 Mile ENE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
BP848	CAOG11000191343	1/2 - 1 Mile East
BP849	CAOG11000191344	1/2 - 1 Mile East
BD850	CAOG11000206986	1/2 - 1 Mile NW
BQ852	CAOG11000191328	1/2 - 1 Mile ENE
BQ851	CAOG11000191327	1/2 - 1 Mile ENE
BH853	CAOG11000193491	1/2 - 1 Mile NNE
BH854	CAOG11000193492	1/2 - 1 Mile NNE
BM855	CAOG11000208074	1/2 - 1 Mile NNW
BG856	CAOG11000208572	1/2 - 1 Mile East
BD857	CAOG11000207379	1/2 - 1 Mile NW
BF859	CAOG11000191320	1/2 - 1 Mile North
BF858	CAOG11000191319	1/2 - 1 Mile North
BJ861	CAOG11000190749	1/2 - 1 Mile East
BJ860	CAOG11000190748	1/2 - 1 Mile East
BH862	CAOG11000193851	1/2 - 1 Mile NNE
BL863	CAOG11000190938	1/2 - 1 Mile ENE
BD864	CAOG11000190916	1/2 - 1 Mile NW
BF865	CAOG11000191314	1/2 - 1 Mile North
BR866	CAOG11000209073	1/2 - 1 Mile North
BG867	CAOG11000208625	1/2 - 1 Mile East
BK868	CAOG11000190837	1/2 - 1 Mile ENE
BK869	CAOG11000190838	1/2 - 1 Mile ENE
BK870	CAOG11000207600	1/2 - 1 Mile ENE
BL871	CAOG11000208338	1/2 - 1 Mile ENE
BH872	CAOG11000243497	1/2 - 1 Mile NNE
BL873	CAOG11000208078	1/2 - 1 Mile ENE
BM874	CAOG11000208080	1/2 - 1 Mile NNW
BN875	CAOG11000207495	1/2 - 1 Mile NNE
BP876	CAOG11000208570	1/2 - 1 Mile East
BS877	CAOG11000207051	1/2 - 1 Mile NW
BG879	CAOG11000191346	1/2 - 1 Mile East
BG878	CAOG11000191345	1/2 - 1 Mile East
BT880	CAOG11000208542	1/2 - 1 Mile North
BM881	CAOG11000207373	1/2 - 1 Mile NNW
BI882	CAOG11000191304	1/2 - 1 Mile NNW
BD883	CAOG11000206763	1/2 - 1 Mile NW
BN884	CAOG11000207566	1/2 - 1 Mile NNE
BU885	CAOG11000207047	1/2 - 1 Mile East
BD886	CAOG11000207380	1/2 - 1 Mile NW
BK887	CAOG11000207980	1/2 - 1 Mile ENE
BH888	CAOG11000193786	1/2 - 1 Mile NNE
BV889	CAOG11000206959	1/2 - 1 Mile NNE
BK890	CAOG11000191128	1/2 - 1 Mile ENE
BK891	CAOG11000207767	1/2 - 1 Mile ENE
BM892	CAOG11000207124	1/2 - 1 Mile NW
BH894	CAOG11000193489	1/2 - 1 Mile NNE
BH893	CAOG11000193488	1/2 - 1 Mile NNE
BH895	CAOG11000193490	1/2 - 1 Mile NNE
BN896	CAOG11000207526	1/2 - 1 Mile NNE
BG897	CAOG11000191393	1/2 - 1 Mile East
BG899	CAOG11000191395	1/2 - 1 Mile East
BG898	CAOG11000191394	1/2 - 1 Mile East
BK900	CAOG11000207766	1/2 - 1 Mile ENE
BR901	CAOG11000191722	1/2 - 1 Mile North
BN902	CAOG11000208410	1/2 - 1 Mile NE
BR903	CAOG11000191728	1/2 - 1 Mile North

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
BU904	CAOG11000207843	1/2 - 1 Mile East
BV905	CAOG11000207803	1/2 - 1 Mile NNE
BV906	CAOG11000209044	1/2 - 1 Mile NNE
BJ907	CAOG11000207079	1/2 - 1 Mile East
BH908	CAOG11000304041	1/2 - 1 Mile NNE
BF909	CAOG11000191316	1/2 - 1 Mile North
BH910	CAOG11000209074	1/2 - 1 Mile NNE
BN911	CAOG11000209045	1/2 - 1 Mile NNE
BJ912	CAOG11000208004	1/2 - 1 Mile ESE
BH913	CAOG11000193485	1/2 - 1 Mile NNE
BH915	CAOG11000193487	1/2 - 1 Mile NNE
BH914	CAOG11000193486	1/2 - 1 Mile NNE
BG916	CAOG11000208571	1/2 - 1 Mile East
BK917	CAOG11000207596	1/2 - 1 Mile ENE
BQ920	CAOG11000191354	1/2 - 1 Mile NE
BQ919	CAOG11000191353	1/2 - 1 Mile NE
BQ918	CAOG11000191352	1/2 - 1 Mile NE
BJ921	CAOG11000207832	1/2 - 1 Mile ESE
BU922	CAOG11000208059	1/2 - 1 Mile East
BM923	CAOG11000207934	1/2 - 1 Mile NW
BV924	CAOG11000207931	1/2 - 1 Mile NNE
BI925	CAOG11000191408	1/2 - 1 Mile NNW
BT926	CAOG11000191318	1/2 - 1 Mile North
BN927	CAOG11000208644	1/2 - 1 Mile NNE
BK928	CAOG11000207730	1/2 - 1 Mile ENE
BL929	CAOG11000208077	1/2 - 1 Mile East
BV931	CAOG11000190924	1/2 - 1 Mile NNE
BV930	CAOG11000190923	1/2 - 1 Mile NNE
BI932	CAOG11000207913	1/2 - 1 Mile NNW
BH933	CAOG11000193502	1/2 - 1 Mile NNE
BP934	CAOG11000190867	1/2 - 1 Mile East
BK937	CAOG11000191125	1/2 - 1 Mile ENE
BK935	CAOG11000191123	1/2 - 1 Mile ENE
BK936	CAOG11000191124	1/2 - 1 Mile ENE
BW938	CAOG11000207658	1/2 - 1 Mile NW
BN939	CAOG11000207893	1/2 - 1 Mile NNE
BL940	CAOG11000191374	1/2 - 1 Mile East
BL941	CAOG11000191375	1/2 - 1 Mile East
BK942	CAOG11000190759	1/2 - 1 Mile ENE
BK944	CAOG11000190761	1/2 - 1 Mile ENE
BK943	CAOG11000190760	1/2 - 1 Mile ENE
BK945	CAOG11000207416	1/2 - 1 Mile ENE
BL946	CAOG11000207415	1/2 - 1 Mile ENE
BS947	CAOG11000207608	1/2 - 1 Mile NW
BJ948	CAOG11000209030	1/2 - 1 Mile ESE
BR950	CAOG11000193483	1/2 - 1 Mile NNE
BR949	CAOG11000193482	1/2 - 1 Mile NNE
BI951	CAOG11000191407	1/2 - 1 Mile NNW
BT952	CAOG11000208549	1/2 - 1 Mile North
BL953	CAOG11000207602	1/2 - 1 Mile ENE
BR954	CAOG11000193484	1/2 - 1 Mile NNE
BQ956	CAOG11000191324	1/2 - 1 Mile NE
BQ955	CAOG11000191323	1/2 - 1 Mile NE
BN957	CAOG11000206437	1/2 - 1 Mile NNE
BN958	CAOG11000208642	1/2 - 1 Mile NNE
BR959	CAOG11000193480	1/2 - 1 Mile NNE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
BR960	CAOG11000193481	1/2 - 1 Mile NNE
BW961	CAOG11000207707	1/2 - 1 Mile NW
BL962	CAOG11000208217	1/2 - 1 Mile East
BK963	CAOG11000207319	1/2 - 1 Mile ENE
BL965	CAOG11000191378	1/2 - 1 Mile ENE
BL964	CAOG11000191377	1/2 - 1 Mile ENE
BQ967	CAOG11000191359	1/2 - 1 Mile NE
BQ966	CAOG11000191358	1/2 - 1 Mile NE
BJ968	CAOG11000208441	1/2 - 1 Mile ESE
BN969	CAOG11000207139	1/2 - 1 Mile NNE
BW970	CAOG11000209082	1/2 - 1 Mile NW
BS971	CAOG11000200804	1/2 - 1 Mile NW
BU972	CAOG11000190789	1/2 - 1 Mile East
BR973	CAOG11000207110	1/2 - 1 Mile North
BN975	CAOG11000208537	1/2 - 1 Mile NE
BN974	CAOG11000208536	1/2 - 1 Mile NE
BT976	CAOG11000207052	1/2 - 1 Mile NNW
BR977	CAOG11000190763	1/2 - 1 Mile North
BW978	CAOG11000208149	1/2 - 1 Mile NW
BJ979	CAOG11000209029	1/2 - 1 Mile East
BU980	CAOG11000190788	1/2 - 1 Mile East
BX981	CAOG11000206998	1/2 - 1 Mile ESE
BR982	CAOG11000207841	1/2 - 1 Mile North
BL983	CAOG11000208079	1/2 - 1 Mile East
BN984	CAOG11000209271	1/2 - 1 Mile NE
BP985	CAOG11000208488	1/2 - 1 Mile East
BO986	CAOG11000208541	1/2 - 1 Mile NE
BP987	CAOG11000207321	1/2 - 1 Mile East
BT988	CAOG11000190913	1/2 - 1 Mile NNW
BQ989	CAOG11000191136	1/2 - 1 Mile ENE
BQ990	CAOG11000191137	1/2 - 1 Mile ENE
BT991	CAOG11000207910	1/2 - 1 Mile NNW
BT992	CAOG11000208249	1/2 - 1 Mile NNW
BS993	CAOG11000207061	1/2 - 1 Mile NW
BR994	CAOG11000191460	1/2 - 1 Mile North
BN995	CAOG11000207127	1/2 - 1 Mile NNE
BR996	CAOG11000191718	1/2 - 1 Mile North
BP997	CAOG11000206826	1/2 - 1 Mile East
BX998	CAOG11000208458	1/2 - 1 Mile ESE
BW999	CAOG11000206761	1/2 - 1 Mile NW
BN1000	CAOG11000207985	1/2 - 1 Mile NNE
BT1001	CAOG11000208250	1/2 - 1 Mile NNW
BY1003	CAOG11000191350	1/2 - 1 Mile NNE
BY1002	CAOG11000191349	1/2 - 1 Mile NNE
BR1004	CAOG11000190718	1/2 - 1 Mile North
BN1005	CAOG11000207537	1/2 - 1 Mile NE
BN1006	CAOG11000207986	1/2 - 1 Mile NE
BN1007	CAOG11000208031	1/2 - 1 Mile NNE
BN1008	CAOG11000207138	1/2 - 1 Mile NNE
BP1009	CAOG11000190866	1/2 - 1 Mile East
BZ1010	CAOG11000207146	1/2 - 1 Mile ENE
BP1011	CAOG11000191308	1/2 - 1 Mile East
BP1012	CAOG11000191309	1/2 - 1 Mile East
BU1013	CAOG11000190785	1/2 - 1 Mile East
BT1014	CAOG11000190981	1/2 - 1 Mile NNW
BR1015	CAOG11000207313	1/2 - 1 Mile North

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
BU1016	CAOG11000208486	1/2 - 1 Mile East
BR1017	CAOG11000209067	1/2 - 1 Mile North
BN1018	CAOG11000207987	1/2 - 1 Mile NNE
BT1019	CAOG11000190969	1/2 - 1 Mile North
BT1020	CAOG11000190970	1/2 - 1 Mile North
CA1021	CAOG11000208533	1/2 - 1 Mile NE
BP1022	CAOG11000208566	1/2 - 1 Mile East
BY1023	CAOG11000208664	1/2 - 1 Mile NNE
BY1024	CAOG11000208579	1/2 - 1 Mile NNE
CB1025	CAOG11000206710	1/2 - 1 Mile ESE
BR1026	CAOG11000207314	1/2 - 1 Mile North
BX1027	CAOG11000208612	1/2 - 1 Mile ESE
BT1028	CAOG11000208244	1/2 - 1 Mile North
CC1029	CAOG11000208569	1/2 - 1 Mile East
BN1030	CAOG11000209234	1/2 - 1 Mile NE
BR1031	CAOG11000191717	1/2 - 1 Mile North
BU1032	CAOG11000207109	1/2 - 1 Mile ESE
BY1033	CAOG11000208485	1/2 - 1 Mile NNE
BZ1034	CAOG11000191126	1/2 - 1 Mile ENE
BZ1035	CAOG11000191127	1/2 - 1 Mile ENE
CD1036	CAOG11000191456	1/2 - 1 Mile North
BW1037	CAOG11000207062	1/2 - 1 Mile NW
BZ1038	CAOG11000208649	1/2 - 1 Mile ENE
BZ1039	CAOG11000208650	1/2 - 1 Mile ENE
BY1040	CAOG11000191698	1/2 - 1 Mile NNE
BY1041	CAOG11000207229	1/2 - 1 Mile NNE
BX1042	CAOG11000200799	1/2 - 1 Mile ESE
BY1043	CAOG11000207228	1/2 - 1 Mile NNE
BW1044	CAOG11000208877	1/2 - 1 Mile NW
BT1045	CAOG11000208240	1/2 - 1 Mile North
BY1046	CAOG11000208847	1/2 - 1 Mile NNE
CE1047	CAOG11000191331	1/2 - 1 Mile ENE
BZ1048	CAOG11000206978	1/2 - 1 Mile ENE
BZ1049	CAOG11000206979	1/2 - 1 Mile ENE
BT1050	CAOG11000190974	1/2 - 1 Mile North
BT1051	CAOG11000190980	1/2 - 1 Mile NNW
BT1052	CAOG11000208243	1/2 - 1 Mile NNW
BT1053	CAOG11000200796	1/2 - 1 Mile North
BW1054	CAOG11000205298	1/2 - 1 Mile NW
BR1055	CAOG11000209068	1/2 - 1 Mile North
BX1056	CAOG11000208611	1/2 - 1 Mile ESE
CF1057	CAOG11000191587	1/2 - 1 Mile NNW
BR1058	CAOG11000206976	1/2 - 1 Mile North
BN1059	CAOG11000209236	1/2 - 1 Mile NE
BZ1060	CAOG11000206975	1/2 - 1 Mile ENE
BR1061	CAOG11000207068	1/2 - 1 Mile North
BZ1063	CAOG11000191163	1/2 - 1 Mile ENE
BZ1062	CAOG11000191162	1/2 - 1 Mile ENE
CG1064	CAOG11000209235	1/2 - 1 Mile NE
BQ1067	CAOG11000191362	1/2 - 1 Mile ENE
BQ1066	CAOG11000191361	1/2 - 1 Mile ENE
BQ1065	CAOG11000191360	1/2 - 1 Mile ENE
BY1068	CAOG11000208850	1/2 - 1 Mile NNE
CG1069	CAOG11000206706	1/2 - 1 Mile NE
BY1070	CAOG11000208848	1/2 - 1 Mile NNE
BZ1071	CAOG11000208525	1/2 - 1 Mile ENE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
BZ1073	CAOG11000208527	1/2 - 1 Mile ENE
BZ1072	CAOG11000208526	1/2 - 1 Mile ENE
CA1074	CAOG11000191329	1/2 - 1 Mile NE
CA1075	CAOG11000191330	1/2 - 1 Mile NE
CH1078	CAOG11000191357	1/2 - 1 Mile ENE
CH1077	CAOG11000191356	1/2 - 1 Mile ENE
CH1076	CAOG11000191355	1/2 - 1 Mile ENE
CG1079	CAOG11000208376	1/2 - 1 Mile NE
BW1080	CAOG11000208100	1/2 - 1 Mile NW
BW1081	CAOG11000207063	1/2 - 1 Mile NW
CH1082	CAOG11000191325	1/2 - 1 Mile ENE
CH1083	CAOG11000191326	1/2 - 1 Mile ENE
BU1084	CAOG11000207235	1/2 - 1 Mile East
CF1085	CAOG11000207662	1/2 - 1 Mile NNW
BW1086	CAOG11000206760	1/2 - 1 Mile NW
BU1087	CAOG11000190791	1/2 - 1 Mile East
BV1088	CAOG11000206960	1/2 - 1 Mile NNE
BW1089	CAOG11000206970	1/2 - 1 Mile NW
CI1090	CAOG11000207657	1/2 - 1 Mile NW
BZ1094	CAOG11000208530	1/2 - 1 Mile ENE
BZ1093	CAOG11000208531	1/2 - 1 Mile ENE
BZ1092	CAOG11000208528	1/2 - 1 Mile ENE
BZ1091	CAOG11000208529	1/2 - 1 Mile ENE
BU1095	CAOG11000207239	1/2 - 1 Mile East
BY1096	CAOG11000208484	1/2 - 1 Mile NNE
CD1097	CAOG11000191459	1/2 - 1 Mile North
CG1098	CAOG11000209237	1/2 - 1 Mile NE
CJ1099	CAOG11000191332	1/2 - 1 Mile East
CJ1100	CAOG11000191333	1/2 - 1 Mile East
CJ1101	CAOG11000191334	1/2 - 1 Mile East
CC1102	CAOG11000191338	1/2 - 1 Mile East
CC1103	CAOG11000191339	1/2 - 1 Mile East
BY1104	CAOG11000207937	1/2 - 1 Mile NNE
CB1107	CAOG11000190841	1/2 - 1 Mile ESE
CB1106	CAOG11000190840	1/2 - 1 Mile ESE
CB1105	CAOG11000190839	1/2 - 1 Mile ESE
CC1108	CAOG11000191340	1/2 - 1 Mile East
CC1110	CAOG11000191342	1/2 - 1 Mile East
CC1109	CAOG11000191341	1/2 - 1 Mile East
CB1111	CAOG11000207101	1/2 - 1 Mile ESE
CG1112	CAOG11000208535	1/2 - 1 Mile NE
CK1113	CAOG11000190567	1/2 - 1 Mile North
CL1114	CAOG11000190757	1/2 - 1 Mile East
BU1115	CAOG11000190755	1/2 - 1 Mile East
CK1116	CAOG11000207027	1/2 - 1 Mile North
BW1117	CAOG11000207272	1/2 - 1 Mile NW
CH1118	CAOG11000208565	1/2 - 1 Mile ENE
BZ1119	CAOG11000191164	1/2 - 1 Mile ENE
BZ1120	CAOG11000191165	1/2 - 1 Mile ENE
CM1121	CAOG11000207008	1/2 - 1 Mile NNE
CK1122	CAOG11000208258	1/2 - 1 Mile North
CJ1123	CAOG11000191376	1/2 - 1 Mile East
CL1124	CAOG11000207356	1/2 - 1 Mile East
CM1125	CAOG11000209065	1/2 - 1 Mile NNE
CF1126	CAOG11000190886	1/2 - 1 Mile NNW
CF1127	CAOG11000208241	1/2 - 1 Mile NNW

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
CL1128	CAOG11000190756	1/2 - 1 Mile East
CL1129	CAOG11000207830	1/2 - 1 Mile East
CC1130	CAOG11000206971	1/2 - 1 Mile East
BW1131	CAOG11000208833	1/2 - 1 Mile NW
CC1133	CAOG11000191336	1/2 - 1 Mile East
CC1132	CAOG11000191335	1/2 - 1 Mile East
CC1134	CAOG11000191337	1/2 - 1 Mile East
CG1135	CAOG11000207069	1/2 - 1 Mile NE
CE1136	CAOG11000191372	1/2 - 1 Mile ENE
CE1137	CAOG11000191373	1/2 - 1 Mile ENE
CE1138	CAOG11000207550	1/2 - 1 Mile ENE
CF1139	CAOG11000190888	1/2 - 1 Mile NNW
CB1140	CAOG11000190782	1/2 - 1 Mile East
CC1141	CAOG11000208568	1/2 - 1 Mile East
CE1142	CAOG11000206336	1/2 - 1 Mile ENE
CF1143	CAOG11000207669	1/2 - 1 Mile NNW
CI1144	CAOG11000207559	1/2 - 1 Mile NW
CM1145	CAOG11000206789	1/2 - 1 Mile NNE
CF1146	CAOG11000207232	1/2 - 1 Mile NNW
BY1147	CAOG11000208233	1/2 - 1 Mile NNE
CG1148	CAOG11000207982	1/2 - 1 Mile NE
BX1149	CAOG11000207100	1/2 - 1 Mile ESE
CB1150	CAOG11000207768	1/2 - 1 Mile ESE
CG1151	CAOG11000207375	1/2 - 1 Mile NE
CM1152	CAOG11000206438	1/2 - 1 Mile NNE
CK1153	CAOG11000190566	1/2 - 1 Mile North
BY1154	CAOG11000191581	1/2 - 1 Mile NNE
CL1155	CAOG11000190758	1/2 - 1 Mile East
CC1156	CAOG11000207738	1/2 - 1 Mile East
CM1157	CAOG11000206790	1/2 - 1 Mile NNE
CG1158	CAOG11000207070	1/2 - 1 Mile NE
BY1159	CAOG11000208232	1/2 - 1 Mile NNE
CL1160	CAOG11000190722	1/2 - 1 Mile East
CK1161	CAOG11000207029	1/2 - 1 Mile NNE
CG1162	CAOG11000208160	1/2 - 1 Mile NE
CE1163	CAOG11000208590	1/2 - 1 Mile ENE
CK1164	CAOG11000190735	1/2 - 1 Mile NNE
CA1165	CAOG11000208539	1/2 - 1 Mile NE
CC1166	CAOG11000190871	1/2 - 1 Mile East
CE1167	CAOG11000206338	1/2 - 1 Mile ENE
CN1169	CAOG11000190976	1/2 - 1 Mile North
CN1168	CAOG11000190975	1/2 - 1 Mile North
CC1170	CAOG11000209120	1/2 - 1 Mile East
CO1171	CAOG11000207670	1/2 - 1 Mile NNW
CC1173	CAOG11000190779	1/2 - 1 Mile East
CC1174	CAOG11000190780	1/2 - 1 Mile East
CC1172	CAOG11000190778	1/2 - 1 Mile East
CH1175	CAOG11000208577	1/2 - 1 Mile ENE
CJ1176	CAOG11000208591	1/2 - 1 Mile East
CF1177	CAOG11000190971	1/2 - 1 Mile NNW
CH1178	CAOG11000208575	1/2 - 1 Mile ENE
CB1179	CAOG11000207436	1/2 - 1 Mile ESE
CM1180	CAOG11000208449	1/2 - 1 Mile NNE
CM1181	CAOG11000207045	1/2 - 1 Mile NNE
CL1182	CAOG11000190777	1/2 - 1 Mile East
CP1183	CAOG11000207280	1/2 - 1 Mile ESE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
CK1184	CAOG11000208260	1/2 - 1 Mile North
CB1185	CAOG11000207208	1/2 - 1 Mile ESE
CL1186	CAOG11000190781	1/2 - 1 Mile East
CM1187	CAOG11000207972	1/2 - 1 Mile NNE
CQ1188	CAOG11000208515	1/2 - 1 Mile NW
CE1189	CAOG11000206335	1/2 - 1 Mile ENE
CG1190	CAOG11000207212	1/2 - 1 Mile NE
CQ1191	CAOG11000207435	1/2 - 1 Mile NW
CI1192	CAOG11000208520	1/2 - 1 Mile NW
CL1193	CAOG11000190786	1/2 - 1 Mile East
CL1194	CAOG11000190787	1/2 - 1 Mile East
CE1195	CAOG11000206337	1/2 - 1 Mile ENE
CL1196	CAOG11000209116	1/2 - 1 Mile East
BY1197	CAOG11000190806	1/2 - 1 Mile NNE
CE1198	CAOG11000208500	1/2 - 1 Mile ENE
CL1199	CAOG11000190790	1/2 - 1 Mile East
CR1200	CAOG11000191461	1/2 - 1 Mile North
CJ1201	CAOG11000208592	1/2 - 1 Mile East
CJ1202	CAOG11000208593	1/2 - 1 Mile East
CG1203	CAOG11000207402	1/2 - 1 Mile NE
CL1204	CAOG11000209102	1/2 - 1 Mile East
CG1205	CAOG11000207374	1/2 - 1 Mile NE
CE1206	CAOG11000208501	1/2 - 1 Mile ENE
CN1207	CAOG11000190972	1/2 - 1 Mile North
BZ1208	CAOG11000208582	1/2 - 1 Mile ENE
CF1209	CAOG11000207661	1/2 - 1 Mile NNW
CL1210	CAOG11000206974	1/2 - 1 Mile East
CO1211	CAOG11000207668	1/2 - 1 Mile NNW
CK1212	CAOG11000207726	1/2 - 1 Mile North
CS1213	CAOG11000208538	1/2 - 1 Mile NE
CT1215	CAOG11000190784	1/2 - 1 Mile East
CT1214	CAOG11000190783	1/2 - 1 Mile East
CQ1216	CAOG11000190860	1/2 - 1 Mile NW
CU1217	CAOG11000191366	1/2 - 1 Mile ENE
CU1218	CAOG11000191367	1/2 - 1 Mile ENE
CI1219	CAOG11000208287	1/2 - 1 Mile NW
CU1220	CAOG11000208580	1/2 - 1 Mile ENE
CM1221	CAOG11000207044	1/2 - 1 Mile NNE
CP1222	CAOG11000208114	1/2 - 1 Mile ESE
CG1224	CAOG11000207992	1/2 - 1 Mile NE
CG1223	CAOG11000207991	1/2 - 1 Mile NE
CP1225	CAOG11000207853	1/2 - 1 Mile ESE
CD1226	CAOG11000208773	1/2 - 1 Mile North
CL1227	CAOG11000208495	1/2 - 1 Mile East
CH1228	CAOG11000208576	1/2 - 1 Mile ENE
CK1229	CAOG11000208259	1/2 - 1 Mile North
CK1230	CAOG11000206670	1/2 - 1 Mile NNE
CM1231	CAOG11000207838	1/2 - 1 Mile NNE
CV1232	CAOG11000209101	1/2 - 1 Mile NNE
CO1233	CAOG11000190889	1/2 - 1 Mile NNW
CU1234	CAOG11000208583	1/2 - 1 Mile ENE
CJ1235	CAOG11000190941	1/2 - 1 Mile East
CV1236	CAOG11000208175	1/2 - 1 Mile NNE
CP1237	CAOG11000208113	1/2 - 1 Mile ESE
CV1238	CAOG11000207071	1/2 - 1 Mile NNE
CJ1239	CAOG11000206779	1/2 - 1 Mile East

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
CG1240	CAOG11000190844	1/2 - 1 Mile NE
CR1241	CAOG11000208771	1/2 - 1 Mile North
CQ1242	CAOG11000207078	1/2 - 1 Mile NNW
CW1243	CAOG11000207444	1/2 - 1 Mile NNE
CQ1244	CAOG11000207077	1/2 - 1 Mile NNW
CR1245	CAOG11000208770	1/2 - 1 Mile North
CX1246	CAOG11000206410	1/2 - 1 Mile NW
CY1249	CAOG11000191161	1/2 - 1 Mile ENE
CY1247	CAOG11000191159	1/2 - 1 Mile ENE
CY1248	CAOG11000191160	1/2 - 1 Mile ENE
CT1250	CAOG11000191119	1/2 - 1 Mile East
CM1251	CAOG11000207833	1/2 - 1 Mile NNE
CO1252	CAOG11000207863	1/2 - 1 Mile NNW
CT1253	CAOG11000208366	1/2 - 1 Mile East
CJ1254	CAOG11000200805	1/2 - 1 Mile East
CV1255	CAOG11000208236	1/2 - 1 Mile NNE
CN1256	CAOG11000190966	1/2 - 1 Mile North
CP1257	CAOG11000208112	1/2 - 1 Mile ESE
CV1258	CAOG11000208174	1/2 - 1 Mile NNE
CQ1259	CAOG11000209091	1/2 - 1 Mile NW
CK1260	CAOG11000208842	1/2 - 1 Mile North
CQ1261	CAOG11000208518	1/2 - 1 Mile NW
CY1263	CAOG11000191167	1/2 - 1 Mile ENE
CY1262	CAOG11000191166	1/2 - 1 Mile ENE
CQ1264	CAOG11000208517	1/2 - 1 Mile NW
CN1265	CAOG11000208245	1/2 - 1 Mile North
CZ1266	CAOG11000208492	1/2 - 1 Mile East
CM1267	CAOG11000206955	1/2 - 1 Mile NNE
CV1268	CAOG11000207589	1/2 - 1 Mile NNE
CO1269	CAOG11000190908	1/2 - 1 Mile NNW
CK1270	CAOG11000207607	1/2 - 1 Mile North
CQ1271	CAOG11000200806	1/2 - 1 Mile NW
CJ1273	CAOG11000191216	1/2 - 1 Mile East
CJ1274	CAOG11000191217	1/2 - 1 Mile East
CJ1272	CAOG11000191215	1/2 - 1 Mile East
CP1275	CAOG11000208368	1/2 - 1 Mile ESE
CO1276	CAOG11000190912	1/2 - 1 Mile NNW
DA1277	CAOG11000207663	1/2 - 1 Mile NNW
CL1278	CAOG11000208493	1/2 - 1 Mile East
CY1279	CAOG11000191176	1/2 - 1 Mile ENE
DB1280	CAOG11000209279	1/2 - 1 Mile NE
CU1281	CAOG11000191168	1/2 - 1 Mile ENE
CU1282	CAOG11000191169	1/2 - 1 Mile ENE
CL1283	CAOG11000208356	1/2 - 1 Mile East
DC1284	CAOG11000207117	1/2 - 1 Mile NW
DD1285	CAOG11000190887	1/2 - 1 Mile NNW
DB1286	CAOG11000207962	1/2 - 1 Mile NE
CU1287	CAOG11000191347	1/2 - 1 Mile ENE
CP1288	CAOG11000207205	1/2 - 1 Mile ESE
CW1290	CAOG11000207828	1/2 - 1 Mile NNE
CW1289	CAOG11000207827	1/2 - 1 Mile NNE
CO1291	CAOG11000190909	1/2 - 1 Mile NNW
CQ1292	CAOG11000206455	1/2 - 1 Mile NNW
CQ1293	CAOG11000209269	1/2 - 1 Mile NW
CV1294	CAOG11000190568	1/2 - 1 Mile NNE
CV1295	CAOG11000208234	1/2 - 1 Mile NNE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
CR1296	CAOG11000206824	1/2 - 1 Mile North
DD1297	CAOG11000190906	1/2 - 1 Mile NNW
DD1298	CAOG11000190907	1/2 - 1 Mile NNW
CR1299	CAOG11000206825	1/2 - 1 Mile North
CZ1300	CAOG11000206780	1/2 - 1 Mile East
CV1301	CAOG11000207593	1/2 - 1 Mile NNE
CT1302	CAOG11000208365	1/2 - 1 Mile ESE
CW1303	CAOG11000207945	1/2 - 1 Mile NNE
CR1304	CAOG11000206784	1/2 - 1 Mile North
CQ1305	CAOG11000207988	1/2 - 1 Mile NW
CV1306	CAOG11000208235	1/2 - 1 Mile NNE
CV1307	CAOG11000190842	1/2 - 1 Mile NNE
DE1308	CAOG11000208489	1/2 - 1 Mile North
DE1309	CAOG11000207028	1/2 - 1 Mile North
CQ1310	CAOG11000206699	1/2 - 1 Mile NW
CU1312	CAOG11000193376	1/2 - 1 Mile ENE
CU1313	CAOG11000193377	1/2 - 1 Mile ENE
CU1311	CAOG11000193375	1/2 - 1 Mile ENE
DF1315	CAOG11000191244	1/2 - 1 Mile East
DF1316	CAOG11000191245	1/2 - 1 Mile East
DF1314	CAOG11000191243	1/2 - 1 Mile East
CU1317	CAOG11000193378	1/2 - 1 Mile ENE
CU1318	CAOG11000193379	1/2 - 1 Mile ENE
DG1319	CAOG11000207942	1/2 - 1 Mile NNE
CU1320	CAOG11000193382	1/2 - 1 Mile ENE
DD1321	CAOG11000190910	1/2 - 1 Mile NNW
CQ1322	CAOG11000209092	1/2 - 1 Mile NW
CU1323	CAOG11000193441	1/2 - 1 Mile ENE
CU1324	CAOG11000193442	1/2 - 1 Mile ENE
DH1325	CAOG11000207288	1/2 - 1 Mile ESE
CU1326	CAOG11000193401	1/2 - 1 Mile ENE
CU1327	CAOG11000193443	1/2 - 1 Mile ENE
CU1328	CAOG11000193444	1/2 - 1 Mile ENE
DE1329	CAOG11000207659	1/2 - 1 Mile North
CX1330	CAOG11000207914	1/2 - 1 Mile NW
CU1332	CAOG11000191364	1/2 - 1 Mile ENE
CU1333	CAOG11000191365	1/2 - 1 Mile ENE
CU1331	CAOG11000191363	1/2 - 1 Mile ENE
CO1334	CAOG11000190905	1/2 - 1 Mile NNW
CQ1335	CAOG11000208516	1/2 - 1 Mile NW
DA1336	CAOG11000207865	1/2 - 1 Mile NNW
CQ1337	CAOG11000208519	1/2 - 1 Mile NW
CP1338	CAOG11000208885	1/2 - 1 Mile ESE
CV1339	CAOG11000215141	1/2 - 1 Mile North
CS1340	CAOG11000208534	1/2 - 1 Mile NE
CV1341	CAOG11000207496	1/2 - 1 Mile NNE
DI1342	CAOG11000208360	1/2 - 1 Mile East
CT1343	CAOG11000191120	1/2 - 1 Mile East
CT1344	CAOG11000191121	1/2 - 1 Mile East
CT1345	CAOG11000191122	1/2 - 1 Mile East
DG1346	CAOG11000207437	1/2 - 1 Mile NNE
CR1347	CAOG11000208660	1/2 - 1 Mile North
CQ1348	CAOG11000207878	1/2 - 1 Mile NNW
DF1349	CAOG11000191223	1/2 - 1 Mile ENE
DF1350	CAOG11000191224	1/2 - 1 Mile ENE
CZ1351	CAOG11000206781	1/2 - 1 Mile East

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
CV1352	CAOG11000207500	1/2 - 1 Mile NNE
CX1353	CAOG11000207916	1/2 - 1 Mile NW
CX1354	CAOG11000207448	1/2 - 1 Mile NW
CU1356	CAOG11000193600	1/2 - 1 Mile ENE
CU1355	CAOG11000193599	1/2 - 1 Mile ENE
CR1357	CAOG11000190925	1/2 - 1 Mile North
CV1358	CAOG11000207881	1/2 - 1 Mile North
CY1361	CAOG11000191242	1/2 - 1 Mile ENE
CY1360	CAOG11000191241	1/2 - 1 Mile ENE
CY1359	CAOG11000191240	1/2 - 1 Mile ENE
CP1362	CAOG11000208884	1/2 - 1 Mile ESE
CQ1363	CAOG11000208093	1/2 - 1 Mile NW
CU1364	CAOG11000208581	1/2 - 1 Mile ENE
DD1365	CAOG11000190965	1/2 - 1 Mile NNW
CZ1366	CAOG11000208494	1/2 - 1 Mile East
DA1367	CAOG11000207451	1/2 - 1 Mile NNW
CO1368	CAOG11000190883	1/2 - 1 Mile NNW
CR1369	CAOG11000208007	1/2 - 1 Mile North
DJ1370	CAOG11000190973	1/2 - 1 Mile North
1371	CAOG11000208182	1/2 - 1 Mile NE
DE1372	CAOG11000208491	1/2 - 1 Mile North
DJ1373	CAOG11000191457	1/2 - 1 Mile North
CV1374	CAOG11000207532	1/2 - 1 Mile NNE
DA1375	CAOG11000207875	1/2 - 1 Mile NNW
DD1376	CAOG11000207862	1/2 - 1 Mile NNW
CZ1377	CAOG11000206423	1/2 - 1 Mile East
CZ1378	CAOG11000190736	1/2 - 1 Mile East
CQ1379	CAOG11000207312	1/2 - 1 Mile NW
DA1380	CAOG11000207876	1/2 - 1 Mile NNW
DA1381	CAOG11000207864	1/2 - 1 Mile NNW
DI1382	CAOG11000206445	1/2 - 1 Mile East
CY1383	CAOG11000191262	1/2 - 1 Mile ENE
CY1384	CAOG11000191263	1/2 - 1 Mile ENE
DA1385	CAOG11000208631	1/2 - 1 Mile NW
CZ1386	CAOG11000191449	1/2 - 1 Mile East
CZ1387	CAOG11000191450	1/2 - 1 Mile East
CZ1388	CAOG11000191451	1/2 - 1 Mile East
DI1389	CAOG11000207644	1/2 - 1 Mile East
DD1390	CAOG11000207664	1/2 - 1 Mile NNW
DH1391	CAOG11000207022	1/2 - 1 Mile ESE
DE1392	CAOG11000190803	1/2 - 1 Mile North
DJ1393	CAOG11000208772	1/2 - 1 Mile North
DI1394	CAOG11000190856	1/2 - 1 Mile East
DD1395	CAOG11000200810	1/2 - 1 Mile NNW
DK1396	CAOG11000208367	1/2 - 1 Mile ESE
CV1397	CAOG11000207979	1/2 - 1 Mile NNE
DI1398	CAOG11000206446	1/2 - 1 Mile East
DD1399	CAOG11000190978	1/2 - 1 Mile NNW
DA1400	CAOG11000207877	1/2 - 1 Mile NNW
DE1401	CAOG11000190804	1/2 - 1 Mile North
CZ1402	CAOG11000208764	1/2 - 1 Mile East
CZ1404	CAOG11000208766	1/2 - 1 Mile East
CZ1403	CAOG11000208765	1/2 - 1 Mile East
DL1405	CAOG11000190588	1/2 - 1 Mile ENE
DH1406	CAOG11000208142	1/2 - 1 Mile ESE
DM1407	CAOG11000209069	1/2 - 1 Mile ENE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
DJ1408	CAOG11000190979	1/2 - 1 Mile North
CV1409	CAOG11000190808	1/2 - 1 Mile NNE
DC1410	CAOG11000207748	1/2 - 1 Mile NW
DN1411	CAOG11000190590	1/2 - 1 Mile North
DN1412	CAOG11000190591	1/2 - 1 Mile North
DG1413	CAOG11000208498	1/2 - 1 Mile NE
DC1414	CAOG11000208468	1/2 - 1 Mile NW
DF1416	CAOG11000191249	1/2 - 1 Mile East
DF1415	CAOG11000191248	1/2 - 1 Mile East
DI1417	CAOG11000207167	1/2 - 1 Mile East
DI1418	CAOG11000207168	1/2 - 1 Mile East
CY1419	CAOG11000191185	1/2 - 1 Mile ENE
CY1420	CAOG11000191186	1/2 - 1 Mile ENE
DL1421	CAOG11000208052	1/2 - 1 Mile ENE
DE1422	CAOG11000190859	1/2 - 1 Mile North
DA1423	CAOG11000214794	1/2 - 1 Mile NNW
DM1424	CAOG11000208574	1/2 - 1 Mile NE
CV1425	CAOG11000209071	1/2 - 1 Mile NNE
DA1426	CAOG11000191699	1/2 - 1 Mile NNW
DO1427	CAOG11000207378	1/2 - 1 Mile NW
CZ1428	CAOG11000209061	1/2 - 1 Mile East
DA1429	CAOG11000208638	1/2 - 1 Mile NW
DM1430	CAOG11000209066	1/2 - 1 Mile ENE
DO1431	CAOG11000207317	1/2 - 1 Mile NW
DL1432	CAOG11000208050	1/2 - 1 Mile ENE
DE1433	CAOG11000190805	1/2 - 1 Mile North
DP1434	CAOG11000207660	1/2 - 1 Mile North
DE1435	CAOG11000208490	1/2 - 1 Mile North
DA1436	CAOG11000209046	1/2 - 1 Mile NNW
DP1437	CAOG11000191719	1/2 - 1 Mile NNE
DJ1438	CAOG11000190977	1/2 - 1 Mile North
CZ1439	CAOG11000206671	1/2 - 1 Mile East
DA1440	CAOG11000206957	1/2 - 1 Mile NNW
CZ1441	CAOG11000208282	1/2 - 1 Mile East
DO1442	CAOG11000208455	1/2 - 1 Mile NW
DH1443	CAOG11000209021	1/2 - 1 Mile ESE
DF1445	CAOG11000191201	1/2 - 1 Mile East
DF1444	CAOG11000191200	1/2 - 1 Mile East
DF1446	CAOG11000191202	1/2 - 1 Mile East
CY1449	CAOG11000191261	1/2 - 1 Mile ENE
CY1450	CAOG11000191260	1/2 - 1 Mile ENE
CY1447	CAOG11000191259	1/2 - 1 Mile ENE
CY1448	CAOG11000191258	1/2 - 1 Mile ENE
CZ1451	CAOG11000206422	1/2 - 1 Mile East
DQ1452	CAOG11000208105	1/2 - 1 Mile East
CZ1453	CAOG11000209060	1/2 - 1 Mile East
DR1454	CAOG11000191117	1/2 - 1 Mile East
DR1455	CAOG11000191118	1/2 - 1 Mile East
DN1456	CAOG11000206809	1/2 - 1 Mile North
DN1457	CAOG11000190724	1/2 - 1 Mile North
DO1458	CAOG11000207309	1/2 - 1 Mile NW
DN1459	CAOG11000190726	1/2 - 1 Mile North
DR1460	CAOG11000208357	1/2 - 1 Mile East
DQ1463	CAOG11000191220	1/2 - 1 Mile East
DQ1462	CAOG11000191219	1/2 - 1 Mile East
DQ1461	CAOG11000191218	1/2 - 1 Mile East

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
DH1464	CAOG11000206980	1/2 - 1 Mile ESE
DL1465	CAOG11000208053	1/2 - 1 Mile ENE
DN1466	CAOG11000208655	1/2 - 1 Mile North
CZ1468	CAOG11000191453	1/2 - 1 Mile East
CZ1467	CAOG11000191452	1/2 - 1 Mile East
CZ1471	CAOG11000209064	1/2 - 1 Mile East
CZ1469	CAOG11000209062	1/2 - 1 Mile East
CZ1470	CAOG11000209063	1/2 - 1 Mile East
DM1472	CAOG11000207372	1/2 - 1 Mile ENE
DI1473	CAOG11000193567	1/2 - 1 Mile East
DI1474	CAOG11000193568	1/2 - 1 Mile East
DA1475	CAOG11000207666	1/2 - 1 Mile NNW
DO1476	CAOG11000206958	1/2 - 1 Mile NW
DQ1477	CAOG11000208522	1/2 - 1 Mile East
DM1478	CAOG11000209070	1/2 - 1 Mile ENE
DO1479	CAOG11000206794	1/2 - 1 Mile NW
DF1481	CAOG11000191268	1/2 - 1 Mile East
DF1480	CAOG11000191267	1/2 - 1 Mile East
DI1482	CAOG11000193565	1/2 - 1 Mile East
DI1483	CAOG11000193566	1/2 - 1 Mile East
DI1484	CAOG11000200809	1/2 - 1 Mile East
DJ1485	CAOG11000191455	1/2 - 1 Mile North
DA1486	CAOG11000206950	1/2 - 1 Mile NNW
DL1487	CAOG11000208853	1/2 - 1 Mile ENE
DP1488	CAOG11000208166	1/2 - 1 Mile NNE
DL1489	CAOG11000190589	1/2 - 1 Mile ENE
DH1490	CAOG11000208602	1/2 - 1 Mile ESE
DO1491	CAOG11000207310	1/2 - 1 Mile NW
DI1493	CAOG11000190775	1/2 - 1 Mile East
DI1492	CAOG11000190774	1/2 - 1 Mile East
DI1494	CAOG11000190776	1/2 - 1 Mile East
DM1495	CAOG11000208139	1/2 - 1 Mile NE
DO1496	CAOG11000206791	1/2 - 1 Mile NW
DJ1497	CAOG11000208242	1/2 - 1 Mile North
DK1499	CAOG11000208364	1/2 - 1 Mile ESE
DK1498	CAOG11000208363	1/2 - 1 Mile ESE
DO1500	CAOG11000214877	1/2 - 1 Mile NW
DS1501	CAOG11000190903	1/2 - 1 Mile NNW
DS1502	CAOG11000190904	1/2 - 1 Mile NNW
DI1503	CAOG11000190437	1/2 - 1 Mile East
DI1504	CAOG11000190438	1/2 - 1 Mile East
DI1505	CAOG11000190439	1/2 - 1 Mile East
DJ1506	CAOG11000208774	1/2 - 1 Mile North
DP1507	CAOG11000209270	1/2 - 1 Mile NNE
DO1508	CAOG11000206776	1/2 - 1 Mile NW
DQ1510	CAOG11000191311	1/2 - 1 Mile East
DQ1511	CAOG11000191312	1/2 - 1 Mile East
DQ1509	CAOG11000191310	1/2 - 1 Mile East
DT1512	CAOG11000207751	1/2 - 1 Mile NW
DU1513	CAOG11000191266	1/2 - 1 Mile ENE
DF1514	CAOG11000191195	1/2 - 1 Mile ENE
DO1515	CAOG11000206792	1/2 - 1 Mile NW
DM1516	CAOG11000207622	1/2 - 1 Mile NE
DI1517	CAOG11000190768	1/2 - 1 Mile East
DI1519	CAOG11000190770	1/2 - 1 Mile East
DI1518	CAOG11000190769	1/2 - 1 Mile East

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
DN1520	CAOG11000208665	1/2 - 1 Mile North
DT1521	CAOG11000208286	1/2 - 1 Mile NW
1522	CAOG11000208499	1/2 - 1 Mile NE
DO1523	CAOG11000190415	1/2 - 1 Mile NNW
DN1524	CAOG11000206808	1/2 - 1 Mile North
DV1525	CAOG11000207867	1/2 - 1 Mile NNW
DL1526	CAOG11000208051	1/2 - 1 Mile ENE
DK1527	CAOG11000207790	1/2 - 1 Mile ESE
DO1528	CAOG11000206795	1/2 - 1 Mile NW
DT1529	CAOG11000207571	1/2 - 1 Mile NW
DR1530	CAOG11000208361	1/2 - 1 Mile East
DR1531	CAOG11000208362	1/2 - 1 Mile East
DL1533	CAOG11000190728	1/2 - 1 Mile ENE
DL1532	CAOG11000190727	1/2 - 1 Mile ENE
DP1534	CAOG11000206680	1/2 - 1 Mile NNE
DN1535	CAOG11000190725	1/2 - 1 Mile North
DO1536	CAOG11000208636	1/2 - 1 Mile NNW
DJ1537	CAOG11000190967	1/2 - 1 Mile North
DW1538	CAOG11000191447	1/2 - 1 Mile North
DP1539	CAOG11000191448	1/2 - 1 Mile North
DR1542	CAOG11000190773	1/2 - 1 Mile East
DR1541	CAOG11000190772	1/2 - 1 Mile East
DR1540	CAOG11000190771	1/2 - 1 Mile East
DQ1543	CAOG11000191255	1/2 - 1 Mile East
DO1544	CAOG11000207231	1/2 - 1 Mile NW
DX1545	CAOG11000207227	1/2 - 1 Mile ESE
DO1546	CAOG11000207514	1/2 - 1 Mile NW
DL1548	CAOG11000190741	1/2 - 1 Mile ENE
DL1547	CAOG11000190740	1/2 - 1 Mile ENE
1549	CAOG11000207533	1/2 - 1 Mile NNE
DP1550	CAOG11000209086	1/2 - 1 Mile NNE
DN1551	CAOG11000208656	1/2 - 1 Mile North
DY1552	CAOG11000207813	1/2 - 1 Mile NNE
DZ1553	CAOG11000190408	1/2 - 1 Mile East
DM1554	CAOG11000207961	1/2 - 1 Mile ENE
DO1555	CAOG11000191398	1/2 - 1 Mile NNW
DO1556	CAOG11000206796	1/2 - 1 Mile NW
DK1557	CAOG11000208358	1/2 - 1 Mile ESE
DK1558	CAOG11000208359	1/2 - 1 Mile ESE
EA1559	CAOG11000190968	1/2 - 1 Mile North
DN1560	CAOG11000191458	1/2 - 1 Mile North
DK1561	CAOG11000190338	1/2 - 1 Mile ESE
DU1562	CAOG11000191253	1/2 - 1 Mile ENE
DL1563	CAOG11000191187	1/2 - 1 Mile ENE
DO1564	CAOG11000206793	1/2 - 1 Mile NW
DO1565	CAOG11000207377	1/2 - 1 Mile NNW
EB1566	CAOG11000206411	1/2 - 1 Mile NNW
DY1567	CAOG11000208827	1/2 - 1 Mile NNE
DZ1568	CAOG11000191221	1/2 - 1 Mile East
DZ1569	CAOG11000191222	1/2 - 1 Mile East
DO1570	CAOG11000207450	1/2 - 1 Mile NW
DK1571	CAOG11000190870	1/2 - 1 Mile ESE
EB1572	CAOG11000206949	1/2 - 1 Mile NNW
DR1573	CAOG11000190339	1/2 - 1 Mile East
DO1574	CAOG11000206951	1/2 - 1 Mile NNW
DR1575	CAOG11000206339	1/2 - 1 Mile East

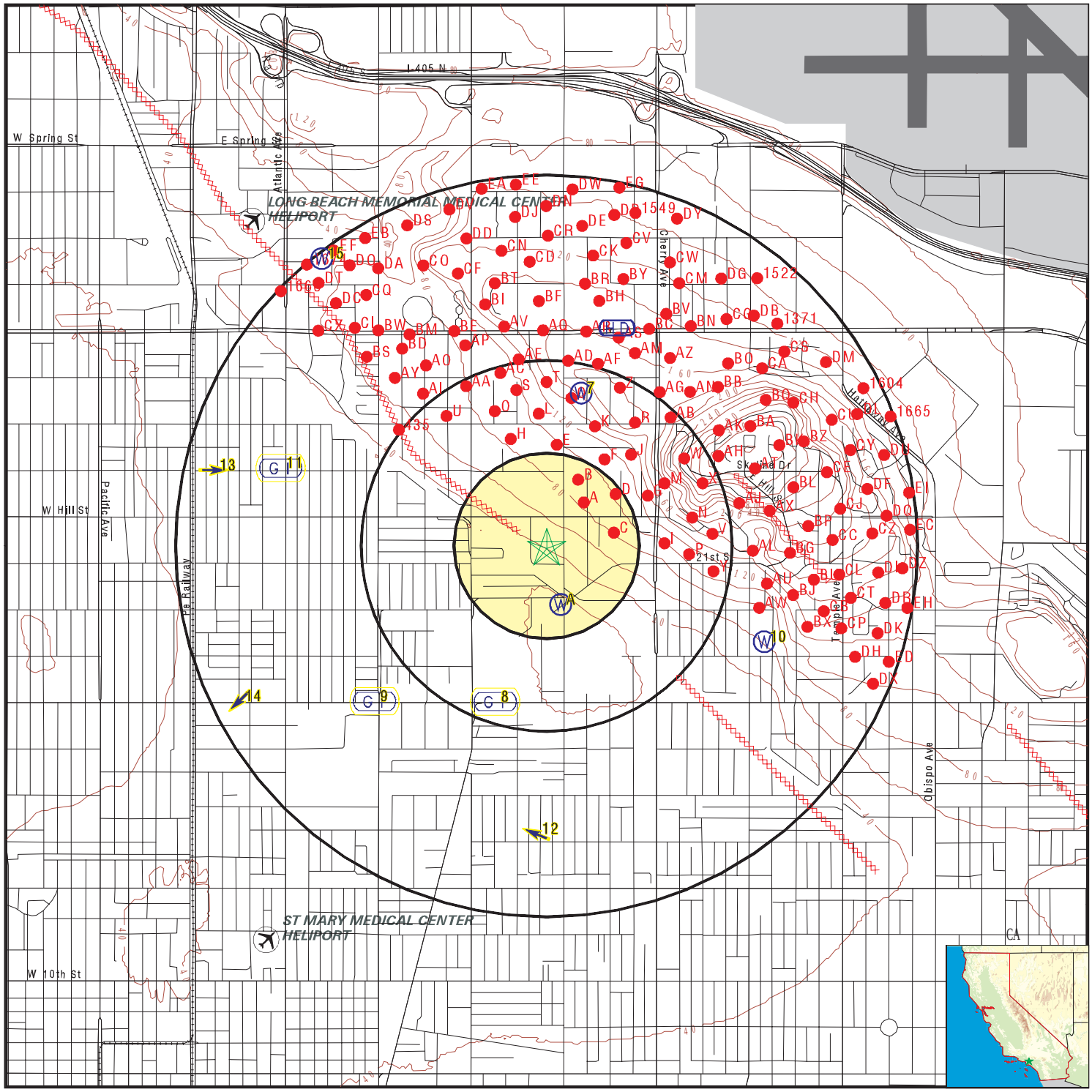
STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
DZ1576	CAOG11000190962	1/2 - 1 Mile East
DZ1577	CAOG11000190963	1/2 - 1 Mile East
DZ1578	CAOG11000190964	1/2 - 1 Mile East
DN1579	CAOG11000206810	1/2 - 1 Mile North
DO1580	CAOG11000208621	1/2 - 1 Mile NW
DS1581	CAOG11000190885	1/2 - 1 Mile NNW
DV1582	CAOG11000304234	1/2 - 1 Mile NNW
EB1583	CAOG11000190713	1/2 - 1 Mile NNW
DV1584	CAOG11000190863	1/2 - 1 Mile NNW
DK1585	CAOG11000190829	1/2 - 1 Mile ESE
DN1586	CAOG11000190721	1/2 - 1 Mile North
DZ1587	CAOG11000191174	1/2 - 1 Mile East
DZ1588	CAOG11000191175	1/2 - 1 Mile East
EC1589	CAOG11000191208	1/2 - 1 Mile East
DZ1590	CAOG11000191173	1/2 - 1 Mile East
DQ1591	CAOG11000191172	1/2 - 1 Mile East
DO1592	CAOG11000208446	1/2 - 1 Mile NW
ED1593	CAOG11000207789	1/2 - 1 Mile ESE
DU1594	CAOG11000191254	1/2 - 1 Mile ENE
DQ1597	CAOG11000188743	1/2 - 1 Mile East
DQ1596	CAOG11000188742	1/2 - 1 Mile East
DQ1595	CAOG11000188741	1/2 - 1 Mile East
DO1598	CAOG11000208629	1/2 - 1 Mile NW
DT1599	CAOG11000206700	1/2 - 1 Mile NW
EA1600	CAOG11000208246	1/2 - 1 Mile North
EB1601	CAOG11000207053	1/2 - 1 Mile NNW
DV1602	CAOG11000300289	1/2 - 1 Mile NNW
DO1603	CAOG11000207989	1/2 - 1 Mile NW
1604	CAOG11000208049	1/2 - 1 Mile ENE
DX1605	CAOG11000207023	1/2 - 1 Mile ESE
DO1606	CAOG11000206946	1/2 - 1 Mile NW
EB1607	CAOG11000206412	1/2 - 1 Mile NNW
DN1608	CAOG11000207762	1/2 - 1 Mile North
DW1609	CAOG11000207757	1/2 - 1 Mile North
DV1610	CAOG11000190884	1/2 - 1 Mile NNW
DR1611	CAOG11000190442	1/2 - 1 Mile ESE
DZ1612	CAOG11000190822	1/2 - 1 Mile East
DR1613	CAOG11000190444	1/2 - 1 Mile ESE
DO1614	CAOG11000191700	1/2 - 1 Mile NW
DT1615	CAOG11000207574	1/2 - 1 Mile NW
DT1616	CAOG11000190413	1/2 - 1 Mile NW
ED1617	CAOG11000216627	1/2 - 1 Mile ESE
ED1618	CAOG11000206973	1/2 - 1 Mile ESE
EE1619	CAOG11000190873	1/2 - 1 Mile North
DZ1620	CAOG11000208238	1/2 - 1 Mile East
EF1621	CAOG11000209243	1/2 - 1 Mile NW
EB1622	CAOG11000209050	1/2 - 1 Mile NNW
DU1623	CAOG11000191196	1/2 - 1 Mile ENE
DW1624	CAOG11000190828	1/2 - 1 Mile North
EB1625	CAOG11000190814	1/2 - 1 Mile NNW
DW1626	CAOG11000207761	1/2 - 1 Mile North
DW1627	CAOG11000190942	1/2 - 1 Mile North
DW1628	CAOG11000190943	1/2 - 1 Mile North
DW1629	CAOG11000190944	1/2 - 1 Mile North
DS1630	CAOG11000190861	1/2 - 1 Mile NNW
ED1631	CAOG11000207694	1/2 - 1 Mile ESE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
EE1632	CAOG11000207758	1/2 - 1 Mile North
DZ1633	CAOG11000208423	1/2 - 1 Mile East
DS1634	CAOG11000190911	1/2 - 1 Mile NNW
EC1636	CAOG11000191271	1/2 - 1 Mile East
EC1635	CAOG11000191270	1/2 - 1 Mile East
DZ1638	CAOG11000207391	1/2 - 1 Mile East
DZ1637	CAOG11000207390	1/2 - 1 Mile East
EB1639	CAOG11000206947	1/2 - 1 Mile NNW
DW1640	CAOG11000207417	1/2 - 1 Mile North
EB1641	CAOG11000207366	1/2 - 1 Mile NNW
DZ1643	CAOG11000191204	1/2 - 1 Mile East
DZ1644	CAOG11000191205	1/2 - 1 Mile East
DZ1642	CAOG11000191203	1/2 - 1 Mile East
ED1645	CAOG11000208239	1/2 - 1 Mile ESE
EG1646	CAOG11000206982	1/2 - 1 Mile North
ED1647	CAOG11000207214	1/2 - 1 Mile ESE
DZ1650	CAOG11000191293	1/2 - 1 Mile East
DZ1649	CAOG11000191290	1/2 - 1 Mile East
DZ1648	CAOG11000191291	1/2 - 1 Mile East
DZ1651	CAOG11000191292	1/2 - 1 Mile East
DZ1652	CAOG11000207401	1/2 - 1 Mile East
EH1653	CAOG11000208424	1/2 - 1 Mile East
ED1654	CAOG11000207177	1/2 - 1 Mile ESE
EE1655	CAOG11000191442	1/2 - 1 Mile North
DY1656	CAOG11000207850	1/2 - 1 Mile NNE
EB1657	CAOG11000190812	1/2 - 1 Mile NNW
DX1658	CAOG11000208450	1/2 - 1 Mile ESE
EF1659	CAOG11000207618	1/2 - 1 Mile NW
EI1660	CAOG11000191193	1/2 - 1 Mile East
EI1661	CAOG11000191194	1/2 - 1 Mile East
ED1662	CAOG11000190823	1/2 - 1 Mile ESE
EG1664	CAOG11000191697	1/2 - 1 Mile NNE
EG1663	CAOG11000191696	1/2 - 1 Mile NNE
1665	CAOG11000208854	1/2 - 1 Mile ENE
EE1666	CAOG11000191440	1/2 - 1 Mile North
ED1667	CAOG11000207159	1/2 - 1 Mile ESE
1668	CAOG11000208511	1/2 - 1 Mile NW
EA1669	CAOG11000191444	1/2 - 1 Mile North
EF1670	CAOG11000209242	1/2 - 1 Mile NW
EH1671	CAOG11000190441	1/2 - 1 Mile East
EA1672	CAOG11000208743	1/2 - 1 Mile North
EA1673	CAOG11000208744	1/2 - 1 Mile North
1674	CAOG11000206405	1/2 - 1 Mile NW
EB1675	CAOG11000207057	1/2 - 1 Mile NNW
EC1678	CAOG11000191229	1/2 - 1 Mile East
EC1676	CAOG11000191227	1/2 - 1 Mile East
EC1677	CAOG11000191228	1/2 - 1 Mile East
EA1679	CAOG11000208742	1/2 - 1 Mile North

PHYSICAL SETTING SOURCE MAP - 5042323.2s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Airports
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

N

SITE NAME:	Former Chemoil Refinery	CLIENT:	Hazard Management Consulting
ADDRESS:	2020 Walnut Avenue Signal Hill CA 90755	CONTACT:	Mark Cousineau
		INQUIRY #:	5042323.2s
LAT/LONG:	33.795985 / 118.1728	DATE:	September 06, 2017 6:34 pm

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Map ID Direction Distance Elevation	Database	EDR ID Number
A1 **SSE** **1/8 - 1/4 Mile** **Lower**	**FED USGS**	**USGS40000138217**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334737118101905		
Monloc name:	004S012W30J005S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.7936917
Longitude:	-118.172136	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	17
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	20030121	Welldepth:	435
Welldepth units:	ft	Wellholedepth:	1515
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

A2 **SSE** **1/8 - 1/4 Mile** **Lower**	**FED USGS**	**USGS40000138218**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334737118101906		
Monloc name:	004S012W30J006S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.7936917
Longitude:	-118.172136	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	17
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	20030121	Welldepth:	185
Welldepth units:	ft	Wellholedepth:	1515
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

A3
SSE **FED USGS** **USGS40000138214**
1/8 - 1/4 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334737118101902		
Monloc name:	004S012W30J002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.7936917
Longitude:	-118.172136	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	17
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	20030121	Welldepth:	1040
Welldepth units:	ft	Wellholedepth:	1515
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

A4
SSE **FED USGS** **USGS40000138213**
1/8 - 1/4 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334737118101901		
Monloc name:	004S012W30J001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.7936917
Longitude:	-118.172136	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	17
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	20030121	Welldepth:	1495
Welldepth units:	ft	Wellholedepth:	1515
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

A5
SSE **FED USGS** **USGS40000138216**
1/8 - 1/4 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334737118101904		
Monloc name:	004S012W30J004S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.7936917
Longitude:	-118.172136	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	17
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	20030121	Welldepth:	655
Welldepth units:	ft	Wellholedepth:	1515
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

A6
SSE **FED USGS** **USGS40000138215**
1/8 - 1/4 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334737118101903		
Monloc name:	004S012W30J003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.7936917
Longitude:	-118.172136	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	17
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	20030121	Welldepth:	800
Welldepth units:	ft	Wellholedepth:	1515
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

7
NNE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000138299**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334807118101301		
Monloc name:	004S012W18R001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8019615
Longitude:	-118.171179	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	615
Welldepth units:	ft	Wellholedepth:	962
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

8
SSW
1/4 - 1/2 Mile
Lower

AQUIFLOW **69565**

Site ID:	0222
Groundwater Flow:	Not Reported
Shallow Water Depth:	7'bgs
Deep Water Depth:	8'bgs
Average Water Depth:	Not Reported
Date:	11/20/1998

9
SW
1/2 - 1 Mile
Lower

AQUIFLOW **69595**

Site ID:	0413
Groundwater Flow:	Not Reported
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	46.5'
Date:	02/22/1996

10
ESE
1/2 - 1 Mile
Higher

CA WELLS **4063**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Water System Information:

Prime Station Code:	03S/12W-31J02 S	User ID:	4TH
FRDS Number:	1910149006	County:	Los Angeles
District Number:	07	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	334732.0 1180942.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	WELL 08		
System Number:	1910149		
System Name:	SIGNAL HILL - CITY, WATER DEPT.		
Organization That Operates System:			
	2175 Cherry Avenue		
	Signal Hill, CA 90806		
Pop Served:	8500	Connections:	2317
Area Served:	SIGNAL HILL		
Sample Collected:	11-JAN-11	Findings:	42. UG/L
Chemical:	MANGANESE		
Sample Collected:	07-FEB-11	Findings:	19. UG/L
Chemical:	ARSENIC		
Sample Collected:	07-FEB-11	Findings:	37. UG/L
Chemical:	MANGANESE		
Sample Collected:	08-FEB-11	Findings:	39. UG/L
Chemical:	MANGANESE		
Sample Collected:	07-MAR-11	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	07-MAR-11	Findings:	220. UG/L
Chemical:	IRON		
Sample Collected:	07-MAR-11	Findings:	38. UG/L
Chemical:	MANGANESE		
Sample Collected:	08-MAR-11	Findings:	37. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-APR-11	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	04-APR-11	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	11-APR-11	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	02-MAY-11	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	02-MAY-11	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	24-MAY-11	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	06-JUN-11	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	06-JUN-11	Findings:	33. UG/L
Chemical:	MANGANESE		

Sample Collected:	14-JUN-11	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-JUL-11	Findings:	11. UG/L
Chemical:	ARSENIC		
Sample Collected:	05-JUL-11	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	22-JUL-11	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	01-AUG-11	Findings:	10. UG/L
Chemical:	ARSENIC		
Sample Collected:	01-AUG-11	Findings:	31. UG/L
Chemical:	MANGANESE		
Sample Collected:	12-AUG-11	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	06-SEP-11	Findings:	11. UG/L
Chemical:	ARSENIC		
Sample Collected:	06-SEP-11	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	08-SEP-11	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	03-OCT-11	Findings:	11. UG/L
Chemical:	ARSENIC		
Sample Collected:	03-OCT-11	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	21-OCT-11	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	07-NOV-11	Findings:	11. UG/L
Chemical:	ARSENIC		
Sample Collected:	07-NOV-11	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	17-NOV-11	Findings:	36. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-DEC-11	Findings:	11. UG/L
Chemical:	ARSENIC		
Sample Collected:	05-DEC-11	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	08-DEC-11	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	03-JAN-12	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	03-JAN-12	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	13-JAN-12	Findings:	32. UG/L
Chemical:	MANGANESE		

Sample Collected:	06-FEB-12	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	06-FEB-12	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	14-FEB-12	Findings:	760. UG/L
Chemical:	IRON		
Sample Collected:	14-FEB-12	Findings:	47. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-MAR-12	Findings:	10. UG/L
Chemical:	ARSENIC		
Sample Collected:	05-MAR-12	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	20-MAR-12	Findings:	21.6 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	20-MAR-12	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	02-APR-12	Findings:	11. UG/L
Chemical:	ARSENIC		
Sample Collected:	02-APR-12	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	23-APR-12	Findings:	19.9 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	23-APR-12	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	08-MAY-12	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	08-MAY-12	Findings:	28. UG/L
Chemical:	MANGANESE		
Sample Collected:	15-MAY-12	Findings:	21.3 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	15-MAY-12	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-JUN-12	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	04-JUN-12	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	14-JUN-12	Findings:	21.6 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	14-JUN-12	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	02-JUL-12	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	02-JUL-12	Findings:	32. UG/L
Chemical:	MANGANESE		

Sample Collected:	23-JUL-12	Findings:	23.3 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	23-JUL-12	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	06-AUG-12	Findings:	11. UG/L
Chemical:	ARSENIC		
Sample Collected:	06-AUG-12	Findings:	38. UG/L
Chemical:	MANGANESE		
Sample Collected:	14-AUG-12	Findings:	22.7 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	14-AUG-12	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-SEP-12	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	04-SEP-12	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	20-SEP-12	Findings:	23.1 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	20-SEP-12	Findings:	28. UG/L
Chemical:	MANGANESE		
Sample Collected:	16-OCT-12	Findings:	21.8 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	16-OCT-12	Findings:	31. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-NOV-12	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	05-NOV-12	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	27-NOV-12	Findings:	19.7 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	27-NOV-12	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	03-DEC-12	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	03-DEC-12	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	18-DEC-12	Findings:	20.3 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	18-DEC-12	Findings:	29. UG/L
Chemical:	MANGANESE		
Sample Collected:	07-JAN-13	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	07-JAN-13	Findings:	33. UG/L
Chemical:	MANGANESE		

Sample Collected:	22-JAN-13	Findings:	18.8 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	22-JAN-13	Findings:	450. UG/L
Chemical:	IRON		
Sample Collected:	22-JAN-13	Findings:	43. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-FEB-13	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	04-FEB-13	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	25-FEB-13	Findings:	18.8 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	25-FEB-13	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-MAR-13	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	04-MAR-13	Findings:	160. UG/L
Chemical:	IRON		
Sample Collected:	04-MAR-13	Findings:	38. UG/L
Chemical:	MANGANESE		
Sample Collected:	11-MAR-13	Findings:	21.2 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	11-MAR-13	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	01-APR-13	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	01-APR-13	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	23-APR-13	Findings:	21.8 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	23-APR-13	Findings:	440. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	23-APR-13	Findings:	8.09
Chemical:	PH, LABORATORY		
Sample Collected:	23-APR-13	Findings:	150. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	23-APR-13	Findings:	180. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	23-APR-13	Findings:	130. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	23-APR-13	Findings:	47. MG/L
Chemical:	CALCIUM		
Sample Collected:	23-APR-13	Findings:	3.9 MG/L
Chemical:	MAGNESIUM		

Sample Collected:	23-APR-13	Findings:	44. MG/L
Chemical:	SODIUM		
Sample Collected:	23-APR-13	Findings:	2.7 MG/L
Chemical:	POTASSIUM		
Sample Collected:	23-APR-13	Findings:	23. MG/L
Chemical:	CHLORIDE		
Sample Collected:	23-APR-13	Findings:	41. MG/L
Chemical:	SULFATE		
Sample Collected:	23-APR-13	Findings:	0.36 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	23-APR-13	Findings:	15. UG/L
Chemical:	ARSENIC		
Sample Collected:	23-APR-13	Findings:	150. UG/L
Chemical:	BARIUM		
Sample Collected:	23-APR-13	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	23-APR-13	Findings:	290. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	23-APR-13	Findings:	12.
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	14-MAY-13	Findings:	22.8 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	14-MAY-13	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	28-MAY-13	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	28-MAY-13	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	30-MAY-13	Findings:	22.5 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	03-JUN-13	Findings:	14. UG/L
Chemical:	ARSENIC		
Sample Collected:	03-JUN-13	Findings:	510. UG/L
Chemical:	IRON		
Sample Collected:	03-JUN-13	Findings:	45. UG/L
Chemical:	MANGANESE		
Sample Collected:	20-JUN-13	Findings:	21.9 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	20-JUN-13	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	01-JUL-13	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	01-JUL-13	Findings:	32. UG/L
Chemical:	MANGANESE		

Sample Collected:	22-JUL-13	Findings:	22.2 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	22-JUL-13	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-AUG-13	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	05-AUG-13	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	12-AUG-13	Findings:	22.1 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	12-AUG-13	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	03-SEP-13	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	03-SEP-13	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	17-SEP-13	Findings:	22.1 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	17-SEP-13	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	07-OCT-13	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	07-OCT-13	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	22-OCT-13	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-NOV-13	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	04-NOV-13	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	19-NOV-13	Findings:	20.6 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	19-NOV-13	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	02-DEC-13	Findings:	14. UG/L
Chemical:	ARSENIC		
Sample Collected:	02-DEC-13	Findings:	36. UG/L
Chemical:	MANGANESE		
Sample Collected:	17-DEC-13	Findings:	22.2 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	17-DEC-13	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	03-FEB-14	Findings:	35. UG/L
Chemical:	ARSENIC		

Sample Collected:	03-FEB-14	Findings:	40. UG/L
Chemical:	MANGANESE		
Sample Collected:	03-MAR-14	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	03-MAR-14	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	10-MAR-14	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	07-APR-14	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	07-APR-14	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	21-APR-14	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-MAY-14	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	05-MAY-14	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	15-MAY-14	Findings:	36. UG/L
Chemical:	MANGANESE		
Sample Collected:	02-JUN-14	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	02-JUN-14	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	09-JUN-14	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	07-JUL-14	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	07-JUL-14	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	25-JUL-14	Findings:	36. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-AUG-14	Findings:	23. UG/L
Chemical:	ARSENIC		
Sample Collected:	04-AUG-14	Findings:	44. UG/L
Chemical:	MANGANESE		
Sample Collected:	25-AUG-14	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	02-SEP-14	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	02-SEP-14	Findings:	30. UG/L
Chemical:	MANGANESE		
Sample Collected:	06-OCT-14	Findings:	13. UG/L
Chemical:	ARSENIC		

Sample Collected:	06-OCT-14	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	26-MAR-15	Findings:	39. UG/L
Chemical:	MANGANESE		
Sample Collected:	21-APR-15	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	27-APR-15	Findings:	15. UG/L
Chemical:	ARSENIC		
Sample Collected:	27-APR-15	Findings:	30. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-MAY-15	Findings:	14. UG/L
Chemical:	ARSENIC		
Sample Collected:	04-MAY-15	Findings:	29. UG/L
Chemical:	MANGANESE		
Sample Collected:	21-MAY-15	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	25-JUN-15	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	31-JUL-15	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	03-AUG-15	Findings:	9.2 UG/L
Chemical:	ARSENIC		
Sample Collected:	03-AUG-15	Findings:	31. UG/L
Chemical:	MANGANESE		
Sample Collected:	25-AUG-15	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	08-SEP-15	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	08-SEP-15	Findings:	30. UG/L
Chemical:	MANGANESE		
Sample Collected:	24-SEP-15	Findings:	35. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-OCT-15	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	05-OCT-15	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	22-OCT-15	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	02-NOV-15	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	02-NOV-15	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	24-NOV-15	Findings:	34. UG/L
Chemical:	MANGANESE		

Sample Collected:	23-DEC-15	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	28-JAN-16	Findings:	37. UG/L
Chemical:	MANGANESE		
Sample Collected:	25-FEB-16	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	23-MAR-16	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-APR-16	Findings:	11. UG/L
Chemical:	ARSENIC		
Sample Collected:	04-APR-16	Findings:	34. UG/L
Chemical:	MANGANESE		
Sample Collected:	20-APR-16	Findings:	8.1
Chemical:	PH, LABORATORY		
Sample Collected:	20-APR-16	Findings:	170. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	20-APR-16	Findings:	210. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	20-APR-16	Findings:	126. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	20-APR-16	Findings:	43.6 MG/L
Chemical:	CALCIUM		
Sample Collected:	20-APR-16	Findings:	4.15 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	20-APR-16	Findings:	43. MG/L
Chemical:	SODIUM		
Sample Collected:	20-APR-16	Findings:	2.7 MG/L
Chemical:	POTASSIUM		
Sample Collected:	20-APR-16	Findings:	22. MG/L
Chemical:	CHLORIDE		
Sample Collected:	20-APR-16	Findings:	38. MG/L
Chemical:	SULFATE		
Sample Collected:	20-APR-16	Findings:	0.22 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	20-APR-16	Findings:	14. UG/L
Chemical:	ARSENIC		
Sample Collected:	20-APR-16	Findings:	120. UG/L
Chemical:	BARIUM		
Sample Collected:	20-APR-16	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	20-APR-16	Findings:	12.4
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	04-MAY-16	Findings:	720. US
Chemical:	SPECIFIC CONDUCTANCE		

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Sample Collected:	04-MAY-16	Findings:	7.95
Chemical:	PH, LABORATORY		
Sample Collected:	04-MAY-16	Findings:	170. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	04-MAY-16	Findings:	210. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	04-MAY-16	Findings:	2.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	04-MAY-16	Findings:	240. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	04-MAY-16	Findings:	68.6 MG/L
Chemical:	CALCIUM		
Sample Collected:	04-MAY-16	Findings:	16. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	04-MAY-16	Findings:	45. MG/L
Chemical:	SODIUM		
Sample Collected:	04-MAY-16	Findings:	3.2 MG/L
Chemical:	POTASSIUM		
Sample Collected:	04-MAY-16	Findings:	57. MG/L
Chemical:	CHLORIDE		
Sample Collected:	04-MAY-16	Findings:	110. MG/L
Chemical:	SULFATE		
Sample Collected:	04-MAY-16	Findings:	0.24 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	04-MAY-16	Findings:	5.88 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	04-MAY-16	Findings:	0.323 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	04-MAY-16	Findings:	1.3 UG/L
Chemical:	TRICHLOROETHYLENE		
Sample Collected:	04-MAY-16	Findings:	460. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04-MAY-16	Findings:	12.4
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	04-MAY-16	Findings:	8.6 UG/L
Chemical:	1,4-DIOXANE		
Sample Collected:	04-MAY-16	Findings:	4.e-002 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	24-MAY-16	Findings:	31. UG/L
Chemical:	MANGANESE		
Sample Collected:	21-JUN-16	Findings:	28. UG/L
Chemical:	MANGANESE		
Sample Collected:	30-JUN-16	Findings:	430. US
Chemical:	SPECIFIC CONDUCTANCE		

Sample Collected:	30-JUN-16	Findings:	270. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	05-JUL-16	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	05-JUL-16	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	12-JUL-16	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	01-AUG-16	Findings:	13. UG/L
Chemical:	ARSENIC		
Sample Collected:	01-AUG-16	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	17-AUG-16	Findings:	32. UG/L
Chemical:	MANGANESE		
Sample Collected:	06-SEP-16	Findings:	12. UG/L
Chemical:	ARSENIC		
Sample Collected:	06-SEP-16	Findings:	33. UG/L
Chemical:	MANGANESE		
Sample Collected:	20-SEP-16	Findings:	30. UG/L
Chemical:	MANGANESE		

11	Site ID:	908081125		
WNW	Groundwater Flow:	Not Reported	**AQUIFLOW**	**70529**
1/2 - 1 Mile	Shallow Water Depth:	Not Reported		
Lower	Deep Water Depth:	Not Reported		
	Average Water Depth:	28		
	Date:	11/29/1989		

12	Site ID:	908130289		
South	Groundwater Flow:	WNW	**AQUIFLOW**	**70507**
1/2 - 1 Mile	Shallow Water Depth:	23.76		
Lower	Deep Water Depth:	24.63		
	Average Water Depth:	Not Reported		
	Date:	07/1999		

13	Site ID:	908061116		
WNW	Groundwater Flow:	E	**AQUIFLOW**	**70536**
1/2 - 1 Mile	Shallow Water Depth:	26.33		
Lower	Deep Water Depth:	27.57		
	Average Water Depth:	Not Reported		
	Date:	05/1999		

14	Site ID:	0023		
WSW	Groundwater Flow:	SW	**AQUIFLOW**	**69242**
1/2 - 1 Mile	Shallow Water Depth:	22.01		
Lower	Deep Water Depth:	36.53		
	Average Water Depth:	Not Reported		
	Date:	11/21/1995		

Map ID Direction Distance Elevation		Database	EDR ID Number
15 **NW** **1/2 - 1 Mile** **Higher**		**FED USGS**	**USGS40000138334**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334826118161002		
Monloc name:	004S013W20N002S		
Monloc type:	Well		
Monloc desc:	WG24302 GPS UPDATE FROM 12-11-95 MAP LAT/LONG		
Huc code:	18070105	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8072222
Longitude:	-118.1833333	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	38
Vert measure units:	feet	Vertacc measure val:	2.5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19891027	Welldepth:	577
Welldepth units:	ft	Wellholedepth:	1014
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1999-03-08	81.53	

1G **WNW** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	908081125 Not Reported Not Reported Not Reported 28 11/29/1989	**AQUIFLOW**	**70529**

2G **WNW** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	908061116 E 26.33 27.57 Not Reported 05/1999	**AQUIFLOW**	**70536**

3G **WSW** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	0023 SW 22.01 36.53 Not Reported 11/21/1995	**AQUIFLOW**	**69242**

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Map ID Direction Distance Elevation			Database	EDR ID Number
4G **SW** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	0413 Not Reported Not Reported Not Reported 46.5' 02/22/1996	**AQUIFLOW**	**69595**
5G **SSW** **1/4 - 1/2 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	0222 Not Reported 7'bgs 8'bgs Not Reported 11/20/1998	**AQUIFLOW**	**69565**
6G **South** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	908130289 WNW 23.76 24.63 Not Reported 07/1999	**AQUIFLOW**	**70507**

Map ID Direction Distance	Database	EDR ID Number

A1
NE
0 - 1/8 Mile

OIL_GAS **CAOG11000208008**

District nun:	1	Api number:	03710413
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Harry C. Noonan & Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000208008		

A2
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207524**

District nun:	1	Api number:	03709848
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	H. & G. Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207524		

A3
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207816**

District nun:	1	Api number:	03710182
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Old Colony Trust No. 1		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207816		

A4
NNE **OIL_GAS** **CAOG11000207531**
1/8 - 1/4 Mile

District nun:	1	Api number:	03709855
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	John F. Phillips		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Phillips	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:	CAOG11000207531		

A5
NE **OIL_GAS** **CAOG11000207995**
1/8 - 1/4 Mile

District nun:	1	Api number:	03710399
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	H. W. Nall		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Nall	Wellnumber:	1
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:	CAOG11000207995		

A6
NE **OIL_GAS** **CAOG11000208600**
1/8 - 1/4 Mile

District nun:	1	Api number:	03711286
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Belle Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal Belle	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208600		

A7
NNE **OIL_GAS** **CAOG11000208176**
1/8 - 1/4 Mile

District nun:	1	Api number:	03710600
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	McBroom Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jeannerett	Wellnumber:	1
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:	CAOG11000208176		

Map ID Direction Distance	Database	EDR ID Number

A8
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207901**

District nun:	1	Api number:	03710294
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hysom & Young		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hysom & Young	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207901		

B9
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000208141**

District nun:	1	Api number:	03710561
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Jose Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jose	Wellnumber:	2
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:	CAOG11000208141		

A10
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000208763**

District nun:	1	Api number:	03711505
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Ella Clark	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:	CAOG11000208763		

A11
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000209097**

District nun:	1	Api number:	03712186
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	World Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000209097		

A12
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207038**

District nun:	1	Api number:	03709284
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A & K Oil Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Security	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207038		

B13
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207035**

District nun:	1	Api number:	03709281
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Alum Rock Oil Co., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Alum Rock	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207035		

B14
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000206677**

District nun:	1	Api number:	03708786
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Bremmor Petro. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Roberts	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206677		

Map ID Direction Distance	Database	EDR ID Number

C15
East
1/8 - 1/4 Mile

OIL_GAS **CAOG11000208601**

District nun:	1	Api number:	03711287
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal City Oil Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal City	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:	CAOG11000208601		

A16
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207050**

District nun:	1	Api number:	03709296
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Angel-Denny Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207050		

B17
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207631**

District nun:	1	Api number:	03709972
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hillman Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hillman	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207631		

A18
NE **OIL_GAS** **CAOG11000207290**
1/8 - 1/4 Mile

District nun:	1	Api number:	03709582
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Century Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207290		

B19
North **OIL_GAS** **CAOG11000215425**
1/8 - 1/4 Mile

District nun:	1	Api number:	03725236
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Albert L. Cheney, Trustee		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1-X1
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:	CAOG11000215425		

B20
NE **OIL_GAS** **CAOG11000207039**
1/8 - 1/4 Mile

District nun:	1	Api number:	03709285
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. & T. Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Conine	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207039		

B22
North **OIL_GAS** **CAOG11000207294**
1/8 - 1/4 Mile

District nun:	1	Api number:	03709586
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Albert L. Cheney, Trustee		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207294		

Map ID
Direction
Distance

Database | EDR ID Number

B21
North
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207293**

District nun:	1	Api number:	03709586
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Albert L. Cheney, Trustee		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207293		

B23
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000206697**

District nun:	1	Api number:	03708811
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Bunker Hill Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Consolidated	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206697		

D24
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207510**

District nun:	1	Api number:	03709833
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Good-Rich Oil Corp., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207510		

B25
NNE **OIL_GAS** **CAOG11000207603**
1/8 - 1/4 Mile

District nun:	1	Api number:	03709932
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	H. G. Haney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	P. A. Kingsland	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207603		

C26
ENE **OIL_GAS** **CAOG11000208261**
1/8 - 1/4 Mile

District nun:	1	Api number:	03710731
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Nelson	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:	CAOG11000208261		

B27
NNE **OIL_GAS** **CAOG11000207823**
1/8 - 1/4 Mile

District nun:	1	Api number:	03710189
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Omeco Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Omeco	Wellnumber:	1
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:	CAOG11000207823		

B28
NE **OIL_GAS** **CAOG11000207363**
1/8 - 1/4 Mile

District nun:	1	Api number:	03709665
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Consolidated Empire Petro. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Empire	Wellnumber:	4
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:	CAOG11000207363		

Map ID
Direction
Distance

	Database	EDR ID Number
D29 **ENE** **1/8 - 1/4 Mile**	**OIL_GAS**	**CAOG11000208098**

District nun:	1	Api number:	03710516
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Sentinel Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Sentinel	Wellnumber:	3
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:	CAOG11000208098		

B30 **NNE** **1/8 - 1/4 Mile**	**OIL_GAS**	**CAOG11000207920**

District nun:	1	Api number:	03710315
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Jackson & Jackson		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jackson Bros	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207920		

D31 **NE** **1/8 - 1/4 Mile**	**OIL_GAS**	**CAOG11000207896**

District nun:	1	Api number:	03710289
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Huntington Investment		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207896		

B32
NNE **OIL_GAS** **CAOG11000207120**
1/8 - 1/4 Mile

District nun:	1	Api number:	03709385
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	H. C. Domengeaux		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jackson	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207120		

D33
ENE **OIL_GAS** **CAOG11000207546**
1/8 - 1/4 Mile

District nun:	1	Api number:	03709870
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Prosperity Oil Co., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Prosperity	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207546		

D34
NE
1/8 - 1/4 Mile **OIL_GAS** **CAOG11000207834**

District nun:	1	Api number:	03710200
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Pacific Empire Petro. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Empire	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207834		

D35
NE
1/8 - 1/4 Mile **OIL_GAS** **CAOG11000207895**

District nun:	1	Api number:	03710288
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Huntington Investment		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207895		

Map ID
Direction
Distance

	Database	EDR ID Number

D36
ENE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207476**

District nun:	1	Api number:	03709798
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Geneva Marie Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207476		

B37
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207605**

District nun:	1	Api number:	03709934
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Harmony Dobyns Oil Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207605		

B38
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207935**

District nun:	1	Api number:	03710337
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Milpet Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Campbell	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207935		

D39
ENE **OIL_GAS** **CAOG11000208097**
1/8 - 1/4 Mile

District nun:	1	Api number:	03710515
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Sentinel Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Sentinel	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208097		

D40
NE **OIL_GAS** **CAOG11000208096**
1/8 - 1/4 Mile

District nun:	1	Api number:	03710514
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Sentinel Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Sentinel	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208096		

B41
NE **OIL_GAS** **CAOG11000208162**
1/8 - 1/4 Mile

District nun:	1	Api number:	03710583
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Kiowa Petro. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Kiowa	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208162		

B43
NNE **OIL_GAS** **CAOG11000207349**
1/8 - 1/4 Mile

District nun:	1	Api number:	03709648
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Russell B. Coffman		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207349		

Map ID
Direction
Distance

Database EDR ID Number

B42
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207348**

District nun:	1	Api number:	03709648
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Russell B. Coffman		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207348		

B44
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000208836**

District nun:	1	Api number:	03711789
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Tucker & Johnston Lease		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208836		

D45
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000208465**

District nun:	1	Api number:	03711110
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Southern Empire Petro., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Empire	Wellnumber:	2
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:	CAOG11000208465		

D46
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207525**

District nun:	1	Api number:	03709849
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	H & T Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
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:	CAOG11000207525		

D47
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207817**

District nun:	1	Api number:	03710183
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	E. L. Olmstead Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Mckenzie	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207817		

D48
ENE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000209037**

District nun:	1	Api number:	03712097
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Warrior Petro. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000209037		

B49
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000208283**

District nun:	1	Api number:	03710769
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	J. C. Theriot		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
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:	CAOG11000208283		

Map ID Direction Distance	Database	EDR ID Number

D50
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000206830**

District nun:	1	Api number:	03708960
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Kethroe	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:	CAOG11000206830		

B51
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000208180**

District nun:	1	Api number:	03710605
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Medal Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208180		

D52
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000209272**

District nun:	1	Api number:	03712420
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Williams Petro. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209272		

D53
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000208163**

District nun:	1	Api number:	03710584
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Kiowa Petro. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Kiowa	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208163		

E54
North
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207852**

District nun:	1	Api number:	03710218
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Petcamp Oil Co., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Petcamp	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:	CAOG11000207852		

F55
NNE **OIL_GAS** **CAOG11000208164**
1/8 - 1/4 Mile

District nun:	1	Api number:	03710585
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Kiowa Petro. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Kiowa	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208164		

D56
ENE **OIL_GAS** **CAOG11000207104**
1/8 - 1/4 Mile

District nun:	1	Api number:	03709362
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Delaney Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Chief	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207104		

Map ID Direction Distance	Database	EDR ID Number

F57
NNE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207676**

District nun:	1	Api number:	03710030
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Ladden Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Ladden	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207676		

D58
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207043**

District nun:	1	Api number:	03709289
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Affiliated Oil Producers Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Randall	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207043		

D59
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000207897**

District nun:	1	Api number:	03710290
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Huntington Investment		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mckenzie	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207897		

E60
North **OIL_GAS** **CAOG11000207917**
1/8 - 1/4 Mile

District nun:	1	Api number:	03710312
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Inspiration Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S. & W.	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:	CAOG11000207917		

D61
ENE **OIL_GAS** **CAOG11000207606**
1/8 - 1/4 Mile

District nun:	1	Api number:	03709935
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Harmony Dobyns Oil Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207606		

D62
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207633**

District nun:	1	Api number:	03709974
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hil-Mar Drilling Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207633		

F63
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208521**

District nun:	1	Api number:	03711173
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Arenz	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208521		

Map ID Direction Distance	Database	EDR ID Number

D64
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207781**

District nun:	1	Api number:	03710145
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	J. E. O'Donnell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207781		

D65
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208179**

District nun:	1	Api number:	03710604
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Medal Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208179		

F66
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207140**

District nun:	1	Api number:	03709407
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	W. O. Dye		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Randall	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207140		

D67
ENE **OIL_GAS** **CAOG11000207632**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709973
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hil-Mar Drilling Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207632		

F68
NE **OIL_GAS** **CAOG11000208284**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710770
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	J. C. Theriot		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Black Star	Wellnumber:	1
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:	CAOG11000208284		

F69
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207649**

District nun:	1	Api number:	03709994
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Otis Hoyt		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207649		

E70
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207274**

District nun:	1	Api number:	03709557
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Cambria Syndicates		
County name:	Los Angeles	Fieldname:	Any Field
Area name:	Any Area	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207274		

Map ID
Direction
Distance

Database | EDR ID Number

E71
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208835**

District nun:	1	Api number:	03711788
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Tucker & Johnston Lease		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000208835		

D72
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207712**

District nun:	1	Api number:	03710067
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	MacGregor Oil Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Macgregor	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207712		

D73
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207172**

District nun:	1	Api number:	03709443
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207172		

D74
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208434**

District nun:	1	Api number:	03711073
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cherry Hill Community	Wellnumber:	5
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:	CAOG11000208434		

E75
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207230**

District nun:	1	Api number:	03709501
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Dabney Oil Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	23
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:	CAOG11000207230		

G76
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207518**

District nun:	1	Api number:	03709842
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Great Western Petro. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	G. W. P.	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207518		

F77
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207202**

District nun:	1	Api number:	03709473
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	64
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207202		

Map ID Direction Distance	Database	EDR ID Number

E78
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207764**

District nun:	1	Api number:	03710127
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ADCO Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Foundation	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207764		

D79
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206681**

District nun:	1	Api number:	03708791
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Britannic Oil Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000206681		

H80
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207003**

District nun:	1	Api number:	03709244
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Benwell Drilling Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Benwell	Wellnumber:	3
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:	CAOG11000207003		

F81
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206711**

District nun:	1	Api number:	03708825
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	C & F Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Young	Wellnumber:	1
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:	CAOG11000206711		

H82
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207701**

District nun:	1	Api number:	03710055
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Lone Star Oil Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207701		

E83
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208115**

District nun:	1	Api number:	03710535
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208115		

G84
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207332**

District nun:	1	Api number:	03709631
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coastridge Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Phillips	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207332		

Map ID Direction Distance	Database	EDR ID Number

F85
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208278**

District nun:	1	Api number:	03710764
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Shimizu	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208278		

F86
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207174**

District nun:	1	Api number:	03709445
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
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:	CAOG11000207174		

E87
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207020**

District nun:	1	Api number:	03709264
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Black Diamond Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Murchison	Wellnumber:	1
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:	CAOG11000207020		

E88
North **OIL_GAS** **CAOG11000208116**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710536
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Rohrig Petroleum Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208116		

F89
NNE **OIL_GAS** **CAOG11000207213**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709484
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	91
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207213		

I90
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206714**

District nun:	1	Api number:	03708828
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	C & S Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Benson	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:	CAOG11000206714		

H91
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207234**

District nun:	1	Api number:	03709506
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Davis Investment Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	5
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:	CAOG11000207234		

Map ID Direction Distance	Database	EDR ID Number

G92
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209034**

District nun:	1	Api number:	03712094
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Walden Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000209034		

G93
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206444**

District nun:	1	Api number:	03708441
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Fackler	Wellnumber:	1
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:	CAOG11000206444		

E94
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208862**

District nun:	1	Api number:	03711827
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208862		

E95
North **OIL_GAS** **CAOG11000207362**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709664
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Concord Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Concord	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207362		

F96
NE **OIL_GAS** **CAOG11000207211**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709482
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	89
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207211		

E97
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207999**

District nun:	1	Api number:	03710403
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Nedal Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
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:	CAOG11000207999		

G98
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207824**

District nun:	1	Api number:	03710190
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Onyx Oil Co., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207824		

Map ID
Direction
Distance

Database | EDR ID Number

G99
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208560**

District nun:	1	Api number:	03711216
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cherry Hill Community	Wellnumber:	9
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:	CAOG11000208560		

F100
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207135**

District nun:	1	Api number:	03709402
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	D. D. Dunlap Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	30
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207135		

F101
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000200816**

District nun:	1	Api number:	03700418
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Nakamura	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200816		

F102
NNE **OIL_GAS** **CAOG11000207132**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709399
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	D. D. Dunlap Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207132		

G103
ENE **OIL_GAS** **CAOG11000200798**
1/4 - 1/2 Mile

District nun:	1	Api number:	03700390
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cree Oil Limited		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Harriman-Jones	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200798		

F104
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000200815**

District nun:	1	Api number:	03700417
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Nakamura	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200815		

H105
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207681**

District nun:	1	Api number:	03710035
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	L. A. Lambert Oil Synd. #2		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207681		

Map ID
Direction
Distance

	Database	EDR ID Number

E106
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209244**

District nun:	1	Api number:	03712392
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bolton	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209244		

F107
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207133**

District nun:	1	Api number:	03709400
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	D. D. Dunlap Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207133		

J108
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207586**

District nun:	1	Api number:	03709911
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Jack C. Roger		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Enterprise	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207586		

F109
NNE **OIL_GAS** **CAOG11000207642**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709984
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George Hocking		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dunlap	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207642		

G110
ENE **OIL_GAS** **CAOG11000207304**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709598
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hondo Oil & Gas Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Miller	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207304		

F111
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207641**

District nun:	1	Api number:	03709983
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George Hocking		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207641		

F112
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207587**

District nun:	1	Api number:	03709912
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Jack C. Roger		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Enterprise	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207587		

Map ID
Direction
Distance

Database | EDR ID Number

G113
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208433**

District nun:	1	Api number:	03711072
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cherry Hill Community	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208433		

F114
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190767**

District nun:	1	Api number:	03709429
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	120.298
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Nakamura	Wellnumber:	63
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:	CAOG11000190767		

E115
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207477**

District nun:	1	Api number:	03709799
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cobb	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207477		

J116
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208432**

District nun:	1	Api number:	03711071
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cherry Hill Community	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208432		

J117
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209114**

District nun:	1	Api number:	03712205
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Nakamura	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209114		

G118
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208435**

District nun:	1	Api number:	03711075
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cherry Hill Community	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208435		

F119
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207585**

District nun:	1	Api number:	03709910
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Jack C. Roger		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Enterprise	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207585		

Map ID Direction Distance	Database	EDR ID Number

K120
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208861**

District nun:	1	Api number:	03711826
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208861		

I121
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207392**

District nun:	1	Api number:	03709702
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cree Oil Limited		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hall-Webber	Wellnumber:	3A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207392		

G122
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207793**

District nun:	1	Api number:	03710160
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	J. E. O'Donnell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Miller	Wellnumber:	11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207793		

K123
NNE **OIL_GAS** **CAOG11000208865**
1/4 - 1/2 Mile

District nun:	1	Api number:	03711836
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	17
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:	CAOG11000208865		

G124
ENE **OIL_GAS** **CAOG11000207394**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709704
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cree Oil Limited		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Harriman-Jones	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207394		

I125
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207994**

District nun:	1	Api number:	03710398
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	N Y K Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207994		

L126
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207547**

District nun:	1	Api number:	03709871
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Prouhet & Troupe		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207547		

Map ID Direction Distance	Database	EDR ID Number

J127
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207182**

District nun:	1	Api number:	03709453
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	15
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207182		

J128
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208231**

District nun:	1	Api number:	03710680
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Goddard	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208231		

L129
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207478**

District nun:	1	Api number:	03709800
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cobb	Wellnumber:	18
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207478		

L130
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207744**

District nun:	1	Api number:	03710101
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Maier-Yerkes Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207744		

L131
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207489**

District nun:	1	Api number:	03709811
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	L.B.	Wellnumber:	17
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207489		

G132
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208585**

District nun:	1	Api number:	03711262
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Harriman-Jones	Wellnumber:	1-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208585		

G133
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207303**

District nun:	1	Api number:	03709597
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hondo Oil & Gas Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Miller	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207303		

Map ID Direction Distance	Database	EDR ID Number

H134
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207691**

District nun:	1	Api number:	03710045
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	E G Lewis		
County name:	Los Angeles	Fieldname:	Any Field
Area name:	Any Area	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Review	Wellnumber:	1
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:	CAOG11000207691		

J135
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207306**

District nun:	1	Api number:	03709600
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hondo Oil & Gas Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Miller	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207306		

K136
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208268**

District nun:	1	Api number:	03710744
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Reedy-Dubois	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208268		

L137
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208472**

District nun:	1	Api number:	03711118
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The State Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208472		

G138
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207305**

District nun:	1	Api number:	03709599
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hondo Oil & Gas Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Miller	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207305		

J139
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209039**

District nun:	1	Api number:	03712099
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Watkins and Dolley, Operators		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Breen	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209039		

J140
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208211**

District nun:	1	Api number:	03710648
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208211		

Map ID Direction Distance	Database	EDR ID Number

J141
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208559**

District nun:	1	Api number:	03711215
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cherry Hill Community	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208559		

G142
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208584**

District nun:	1	Api number:	03711261
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Harriman-Jones	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:	CAOG11000208584		

K143
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209040**

District nun:	1	Api number:	03712100
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Watkins and Dolley, Operators		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dubois	Wellnumber:	1-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209040		

M144
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207801**

District nun:	1	Api number:	03710167
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	J. E. O'Donnell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	O'Donnell	Wellnumber:	62
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207801		

I145
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207032**

District nun:	1	Api number:	03709278
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Allen Petro. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207032		

J146
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208870**

District nun:	1	Api number:	03711848
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	30
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208870		

I147
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207295**

District nun:	1	Api number:	03709587
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cherry Hill Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cherry Hill	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207295		

Map ID
Direction
Distance

Database | EDR ID Number

J148
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208523**

District nun:	1	Api number:	03711177
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cherry Hill Community	Wellnumber:	11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208523		

K149
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207396**

District nun:	1	Api number:	03709706
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cree Oil Limited		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Reedy	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207396		

K150
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208866**

District nun:	1	Api number:	03711839
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	20
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208866		

H151
NNW **OIL_GAS** **CAOG11000208001**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710405
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Jesse M. Nelson Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000208001		

J152
NE **OIL_GAS** **CAOG11000208230**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710679
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Goddard	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208230		

L153
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208277**

District nun:	1	Api number:	03710760
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Schilling	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208277		

J154
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191003**

District nun:	1	Api number:	03710753
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	132.476
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Robinson	Wellnumber:	8
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:	CAOG11000191003		

Map ID
Direction
Distance

Database | EDR ID Number

J155
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191596**

District nun:	1	Api number:	03711837
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	147.797
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Long Beach Community	Wellnumber:	18
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:	CAOG11000191596		

J156
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208271**

District nun:	1	Api number:	03710754
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Robinson	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208271		

L157
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209241**

District nun:	1	Api number:	03712389
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209241		

H158
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208002**

District nun:	1	Api number:	03710406
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Jesse M. Nelson Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
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:	CAOG11000208002		

J159
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191000**

District nun:	1	Api number:	03710750
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	134.247
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212078.ssf		
Leasename:	Robinson	Wellnumber:	5
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:	CAOG11000191000		

L160
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208460**

District nun:	1	Api number:	03711106
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Souther Leasehold		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
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:	CAOG11000208460		

L161
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208461**

District nun:	1	Api number:	03711106
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Souther Leasehold		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
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:	CAOG11000208461		

Map ID
Direction
Distance

Database | EDR ID Number

M162
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207393**

District nun:	1	Api number:	03709703
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cree Oil Limited		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Harriman-Jones	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207393		

J163
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208431**

District nun:	1	Api number:	03711069
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cherry Hill 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:	POG
Site id:	CAOG11000208431		

L164
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191004**

District nun:	1	Api number:	03710761
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	122.92
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Schilling	Wellnumber:	3
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:	CAOG11000191004		

M165
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207395**

District nun:	1	Api number:	03709705
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cree Oil Limited		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Harriman-Jones	Wellnumber:	4
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:	CAOG11000207395		

N166
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208420**

District nun:	1	Api number:	03711056
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Babb & Tucker	Wellnumber:	7
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:	CAOG11000208420		

O167
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208003**

District nun:	1	Api number:	03710407
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Jesse M. Nelson Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
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:	CAOG11000208003		

L168
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207599**

District nun:	1	Api number:	03709927
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hagar & Deniston		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	63
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207599		

Map ID
Direction
Distance

Database | EDR ID Number

J169
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208524**

District nun:	1	Api number:	03711178
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cherry Hill Community	Wellnumber:	12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208524		

M170
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208390**

District nun:	1	Api number:	03710972
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wilbur Community	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208390		

P171
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206678**

District nun:	1	Api number:	03708787
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Brennan Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Beck	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:	CAOG11000206678		

J172
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208860**

District nun:	1	Api number:	03711825
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208860		

O173
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207679**

District nun:	1	Api number:	03710033
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Lambert Hampton Oil Synd. No.1		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207679		

O174
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209047**

District nun:	1	Api number:	03712108
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	West Continental Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000209047		

J175
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191313**

District nun:	1	Api number:	03711176
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	145.46
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Cherry Hill Community	Wellnumber:	10
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:	CAOG11000191313		

Map ID
Direction
Distance

Database | EDR ID Number

M176
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208595**

District nun:	1	Api number:	03711278
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wilbur Community	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208595		

M177
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208419**

District nun:	1	Api number:	03711054
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Babb & Tucker	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208419		

K178
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208871**

District nun:	1	Api number:	03711849
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	31
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208871		

N179
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208418**

District nun:	1	Api number:	03711051
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Babb & Tucker	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208418		

P180
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207381**

District nun:	1	Api number:	03709687
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Covington Oil Co., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207381		

O181
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207682**

District nun:	1	Api number:	03710036
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	L. A. Lambert Oil Synd. #3		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207682		

Q182
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191590**

District nun:	1	Api number:	03711828
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	137.061
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Long Beach Community	Wellnumber:	9
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:	CAOG11000191590		

Map ID
Direction
Distance

	Database	EDR ID Number

P183
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206713**

District nun:	1	Api number:	03708827
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	C. & N. Oil Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	C & N	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:	CAOG11000206713		

P184
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207398**

District nun:	1	Api number:	03709708
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Wm. H. Cree - Cannon Lease		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Murphy	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207398		

N185
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207389**

District nun:	1	Api number:	03709697
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cree Oil Limited		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bush-Hall-Webber	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207389		

P186
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207046**

District nun:	1	Api number:	03709292
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Alamo Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Elaine	Wellnumber:	1
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:	CAOG11000207046		

J187
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190999**

District nun:	1	Api number:	03710749
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	152.405
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D56
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:	CAOG11000190999		

K188
NNE **OIL_GAS** **CAOG11000191599**
1/4 - 1/2 Mile

District nun:	1	Api number:	03711843
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	159.536
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Long Beach Community	Wellnumber:	24
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:	CAOG11000191599		

O189
NNW **OIL_GAS** **CAOG11000209259**
1/4 - 1/2 Mile

District nun:	1	Api number:	03712407
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Western States Drilling Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Indiana	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209259		

Map ID Direction Distance	Database	EDR ID Number

N190
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208421**

District nun:	1	Api number:	03711057
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	61-8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208421		

L191
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000200813**

District nun:	1	Api number:	03700415
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Schilling	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	POG
Site id:	CAOG11000200813		

P192
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207588**

District nun:	1	Api number:	03709914
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Rotary Drillers Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hinshaw	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207588		

R193
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208270**

District nun:	1	Api number:	03710747
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Robinson	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208270		

L194
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000200814**

District nun:	1	Api number:	03700416
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	26
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200814		

P195
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207169**

District nun:	1	Api number:	03709440
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	D. W. M. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Corbett	Wellnumber:	1
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:	CAOG11000207169		

R196
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190733**

District nun:	1	Api number:	03709259
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	184.26
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D49
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:	CAOG11000190733		

Map ID Direction Distance	Database	EDR ID Number

R197
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191002**

District nun:	1	Api number:	03710752
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	177.711
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Robinson	Wellnumber:	7
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:	CAOG11000191002		

O198
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207554**

District nun:	1	Api number:	03709878
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Pugh-Miller Drilling Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Harris-Maier-Brayton	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207554		

P199
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207983**

District nun:	1	Api number:	03710387
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Morton and Dolley		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hinshaw	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207983		

K200
NNE **OIL_GAS** **CAOG11000191601**
1/4 - 1/2 Mile

District nun:	1	Api number:	03711845
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	165.445
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Long Beach Community	Wellnumber:	27
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191601		

O201
NNW **OIL_GAS** **CAOG11000206673**
1/4 - 1/2 Mile

District nun:	1	Api number:	03708782
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	O. O. Boyd		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000206673		

L202
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191006**

District nun:	1	Api number:	03710763
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	132.513
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Schilling	Wellnumber:	5
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:	CAOG11000191006		

O203
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207943**

District nun:	1	Api number:	03710345
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Alfred D. Mitchell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	40
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207943		

Map ID
Direction
Distance

Database | EDR ID Number

N204
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190817**

District nun:	1	Api number:	03709696
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cree Oil Limited		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.092
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Bush-Hall-Webber	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190817		

L205
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207619**

District nun:	1	Api number:	03709955
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	R. E. Havenstrite		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Havenstrite & Baker	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207619		

K206
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191594**

District nun:	1	Api number:	03711834
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	181.054
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Long Beach Community	Wellnumber:	15
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:	CAOG11000191594		

R207
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190998**

District nun:	1	Api number:	03710748
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	186.031
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D55
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:	CAOG11000190998		

R208
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191001**

District nun:	1	Api number:	03710751
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.651
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D50
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:	CAOG11000191001		

S209
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207233**

District nun:	1	Api number:	03709505
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Davis Investment Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207233		

L210
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207822**

District nun:	1	Api number:	03710188
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	R. B. O'Meara		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dye	Wellnumber:	11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207822		

Map ID Direction Distance	Database	EDR ID Number

L211
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209240**

District nun:	1	Api number:	03712388
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209240		

R212
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191297**

District nun:	1	Api number:	03711074
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	160.634
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D62
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:	CAOG11000191297		

Q213
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191595**

District nun:	1	Api number:	03711835
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.947
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Long Beach Community	Wellnumber:	16
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:	CAOG11000191595		

O214
NNW **OIL_GAS** **CAOG11000207445**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709764
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	J. E. Ford		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Michener	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207445		

O215
NNW **OIL_GAS** **CAOG11000207629**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709970
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Highlin Oil Co., Inc. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207629		

L216
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000200812**

District nun:	1	Api number:	03700414
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Schilling	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200812		

R217
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191454**

District nun:	1	Api number:	03711510
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	191.212
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Croswell	Wellnumber:	2
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:	CAOG11000191454		

Map ID
Direction
Distance

	Database	EDR ID Number
Q218 **NNE** **1/4 - 1/2 Mile**	**OIL_GAS**	**CAOG11000191600**

District nun:	1	Api number:	03711844
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	157.055
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Long Beach Community	Wellnumber:	25
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:	CAOG11000191600		

L219 **North** **1/4 - 1/2 Mile**	**OIL_GAS**	**CAOG11000209239**

District nun:	1	Api number:	03712387
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209239		

P220 **ESE** **1/4 - 1/2 Mile**	**OIL_GAS**	**CAOG11000208042**

District nun:	1	Api number:	03710453
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Sankey Oil Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000208042		

R221
NNE **OIL_GAS** **CAOG11000191602**
1/4 - 1/2 Mile

District nun:	1	Api number:	03711846
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	190.457
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Long Beach Community	Wellnumber:	28
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:	CAOG11000191602		

P222
East **OIL_GAS** **CAOG11000207137**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709404
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George Duty		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Kale	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207137		

S223
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207656**

District nun:	1	Api number:	03710001
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Hughes Drilling Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207656		

Q224
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000200807**

District nun:	1	Api number:	03700408
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Croswell	Wellnumber:	1-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200807		

Map ID
Direction
Distance

Database | EDR ID Number

M225
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191384**

District nun:	1	Api number:	03711280
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	254.395
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	60-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191384		

S226
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191715**

District nun:	1	Api number:	03712137
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Terra Expl. & Prod. Co. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	112.605
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Ellis	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191715		

O227
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207439**

District nun:	1	Api number:	03709758
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Walter H. Fisher Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
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:	CAOG11000207439		

Q228
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208869**

District nun:	1	Api number:	03711847
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	29
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208869		

Q229
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208276**

District nun:	1	Api number:	03710759
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Schilling	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208276		

S230
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207002**

District nun:	1	Api number:	03709243
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Burton Benwell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	27
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207002		

S231
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207130**

District nun:	1	Api number:	03709396
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	D. D. Dunlap		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wasser	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207130		

Map ID Direction Distance	Database	EDR ID Number

S232
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209246**

District nun:	1	Api number:	03712394
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Ellis	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209246		

O233
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000205289**

District nun:	1	Api number:	03706392
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	L. W. Babcock		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	L. & M.	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000205289		

N234
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190819**

District nun:	1	Api number:	03709700
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	154.424
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Hall-Webber	Wellnumber:	1A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190819		

T235
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191005**

District nun:	1	Api number:	03710762
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	124.45
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Schilling	Wellnumber:	4
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:	CAOG11000191005		

O236
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207136**

District nun:	1	Api number:	03709403
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Duplex Pet Corp.		
County name:	Los Angeles	Fieldname:	Any Field
Area name:	Any Area	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Lewis Mcmanus	Wellnumber:	1
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:	CAOG11000207136		

P237
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208099**

District nun:	1	Api number:	03710517
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shaffer-Wintz Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Irvine	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208099		

U238
NW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208828**

District nun:	1	Api number:	03711781
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Joseph K. Tobin		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dahlia	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:	CAOG11000208828		

Map ID Direction Distance	Database	EDR ID Number

R239
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190997**

District nun:	1	Api number:	03710746
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	179.241
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D61
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:	CAOG11000190997		

S240
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190824**

District nun:	1	Api number:	03709716
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	John Guzman Crane Serv., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	112.538
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Dunlap	Wellnumber:	6-B
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:	CAOG11000190824		

N242
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207388**

District nun:	1	Api number:	03709695
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Anderson-Hall-Webber	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207388		

N241
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207387**

District nun:	1	Api number:	03709695
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Anderson-Hall-Webber	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207387		

R243
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191296**

District nun:	1	Api number:	03711070
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	163.164
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D70
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:	CAOG11000191296		

N244
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190818**

District nun:	1	Api number:	03709699
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cree Oil Limited		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	155.836
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Hall-Webber	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:	CAOG11000190818		

S245
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208873**

District nun:	1	Api number:	03711851
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	U. S. Natural Gas Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jackpot	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208873		

Map ID Direction Distance	Database	EDR ID Number

R246
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208855**

District nun:	1	Api number:	03711820
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208855		

S247
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209119**

District nun:	1	Api number:	03712210
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker, Morton & Dolley		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mutual	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209119		

P248
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207984**

District nun:	1	Api number:	03710388
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Morton and Dolley		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Suydam	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207984		

T249
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209109**

District nun:	1	Api number:	03712198
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Donnie Boy	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209109		

V250
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000189628**

District nun:	1	Api number:	03706251
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	151.549
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Hall-Webber	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000189628		

N251
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190820**

District nun:	1	Api number:	03709701
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	163.654
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Hall-Webber	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190820		

N252
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190821**

District nun:	1	Api number:	03709701
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	163.654
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Hall-Webber	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190821		

Map ID Direction Distance	Database	EDR ID Number

O253
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207382**

District nun:	1	Api number:	03709688
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cox & Alexander		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Oceanic	Wellnumber:	10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207382		

P254
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206672**

District nun:	1	Api number:	03708781
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Bourke & Clark		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206672		

W257
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191383**

District nun:	1	Api number:	03711279
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	269.158
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	60-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191383		

W256
ENE **OIL_GAS** **CAOG11000191382**
1/4 - 1/2 Mile

District nun:	1	Api number:	03711279
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	269.158
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	60-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191382		

W255
ENE **OIL_GAS** **CAOG11000191381**
1/4 - 1/2 Mile

District nun:	1	Api number:	03711279
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	269.158
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	60-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191381		

T258
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209110**

District nun:	1	Api number:	03712199
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Donnie Boy	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209110		

Q259
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208135**

District nun:	1	Api number:	03710555
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	44
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208135		

Map ID Direction Distance	Database	EDR ID Number

Q260
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208212**

District nun:	1	Api number:	03710649
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	43
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208212		

T261
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208874**

District nun:	1	Api number:	03711852
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	U. S. Natural Gas Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mutual	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208874		

T262
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209111**

District nun:	1	Api number:	03712200
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Donnie Boy	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209111		

Q263
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208868**

District nun:	1	Api number:	03711842
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	23
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208868		

S264
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190945**

District nun:	1	Api number:	03710596
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	John Guzman Crane Serv., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	87.488
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212038.ssf		
Leasename:	Mc-Bo	Wellnumber:	7
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:	CAOG11000190945		

U265
NW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208476**

District nun:	1	Api number:	03711122
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Stevenson & Repp		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000208476		

T266
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209108**

District nun:	1	Api number:	03712197
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Donnie Boy	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209108		

Map ID Direction Distance	Database	EDR ID Number

S267
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207242**

District nun:	1	Api number:	03709525
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Davis Investment Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207242		

T268
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191734**

District nun:	1	Api number:	03712201
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	130.56
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Donnie Boy	Wellnumber:	5
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:	CAOG11000191734		

W269
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208392**

District nun:	1	Api number:	03710975
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wilbur Community	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208392		

R270
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208767**

District nun:	1	Api number:	03711509
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Croswell	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:	CAOG11000208767		

N271
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207049**

District nun:	1	Api number:	03709295
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Anderson, Lavering, Harriman & Piers		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207049		

N272
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191286**

District nun:	1	Api number:	03711052
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	223.172
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Babb & Tucker	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191286		

S273
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207892**

District nun:	1	Api number:	03710285
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wilshire-Brayton	Wellnumber:	3
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:	CAOG11000207892		

Map ID Direction Distance	Database	EDR ID Number

S274
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208462**

District nun:	1	Api number:	03711107
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Southern California Drilling Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208462		

S275
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191716**

District nun:	1	Api number:	03712138
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	John Guzman Crane Serv., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	112.058
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Evans	Wellnumber:	2
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:	CAOG11000191716		

W276
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208391**

District nun:	1	Api number:	03710973
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wilbur Community	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208391		

S277
NNW **OIL_GAS** **CAOG11000208029**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710439
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Royalty Service Corp., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	J.R.	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:	CAOG11000208029		

W278
ENE **OIL_GAS** **CAOG11000191170**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710974
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	283.577
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	60-A3
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:	CAOG11000191170		

W279
ENE **OIL_GAS** **CAOG11000191171**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710974
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	283.577
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	60-A3
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:	CAOG11000191171		

V280
East **OIL_GAS** **CAOG11000191094**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710891
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	175.957
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Nesa	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191094		

Map ID Direction Distance	Database	EDR ID Number

X281
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208416**

District nun:	1	Api number:	03711049
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Babb & Tucker	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208416		

O282
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208288**

District nun:	1	Api number:	03710774
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Three for One Special		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Lovelady	Wellnumber:	1
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:	CAOG11000208288		

W284
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191386**

District nun:	1	Api number:	03711281
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	293.121
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	60-8
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:	CAOG11000191386		

W283
ENE **OIL_GAS** **CAOG11000191385**
1/4 - 1/2 Mile

District nun:	1	Api number:	03711281
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	293.121
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	60-8
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:	CAOG11000191385		

O285
NNW **OIL_GAS** **CAOG11000207438**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709757
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Walter H. Fisher Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	5
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:	CAOG11000207438		

W287
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191141**

District nun:	1	Api number:	03710947
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	213.106
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	22-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191141		

W286
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191140**

District nun:	1	Api number:	03710947
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	213.106
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	22-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191140		

Map ID Direction Distance	Database	EDR ID Number

N288
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191289**

District nun:	1	Api number:	03711055
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	229.991
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	61-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191289		

Q289
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191591**

District nun:	1	Api number:	03711831
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	170.938
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Long Beach Community	Wellnumber:	12
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:	CAOG11000191591		

T290
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191735**

District nun:	1	Api number:	03712203
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	133.524
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Dunlap	Wellnumber:	2
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:	CAOG11000191735		

S291
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209117**

District nun:	1	Api number:	03712208
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker, Morton & Dolley		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mutual	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209117		

R292
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190949**

District nun:	1	Api number:	03710611
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	184.33
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D60
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:	CAOG11000190949		

S293
NNW **OIL_GAS** **CAOG11000207094**
1/4 - 1/2 Mile

District nun:	1	Api number:	03709352
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. J. Delaney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Leonard	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207094		

W294
NE **OIL_GAS** **CAOG11000208389**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710971
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	60-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208389		

Map ID Direction Distance	Database	EDR ID Number

S295
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207958**

District nun:	1	Api number:	03710360
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Boyle Perry	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207958		

Y296
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207441**

District nun:	1	Api number:	03709760
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Fletcher Oil Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207441		

S297
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207891**

District nun:	1	Api number:	03710284
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wilshire-Brayton	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207891		

X298
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208422**

District nun:	1	Api number:	03711058
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	61-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208422		

V299
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208064**

District nun:	1	Api number:	03710475
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Santa Cruz Island Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Nesa	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208064		

S300
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190811**

District nun:	1	Api number:	03709659
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	101.64
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Desoto	Wellnumber:	25
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:	CAOG11000190811		

Y301
ESE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207324**

District nun:	1	Api number:	03709621
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mckenzie	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207324		

Map ID Direction Distance	Database	EDR ID Number

T302
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209056**

District nun:	1	Api number:	03712123
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D75
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209056		

R303
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208863**

District nun:	1	Api number:	03711829
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208863		

S304
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207054**

District nun:	1	Api number:	03709301
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Apex Petroleum Corporation, Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Brayton	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207054		

T305
North **OIL_GAS** **CAOG11000207956**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710358
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Boyer-Kelly	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207956		

Z306
NNE **OIL_GAS** **CAOG11000208867**
1/4 - 1/2 Mile

District nun:	1	Api number:	03711841
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	22
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208867		

V307
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208348**

District nun:	1	Api number:	03710897
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	32-12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208348		

W308
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208503**

District nun:	1	Api number:	03711154
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	31-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208503		

Map ID Direction Distance	Database	EDR ID Number

Z309
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191597**

District nun:	1	Api number:	03711838
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	188.678
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Long Beach Community	Wellnumber:	19
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:	CAOG11000191597		

Z310
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191592**

District nun:	1	Api number:	03711832
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	188.736
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Long Beach Community	Wellnumber:	13
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:	CAOG11000191592		

T311
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208859**

District nun:	1	Api number:	03711824
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208859		

S312
NNW **OIL_GAS** **CAOG11000190858**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710004
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Axis Petroleum Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	94.992
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Allied	Wellnumber:	34
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:	CAOG11000190858		

R313
NE **OIL_GAS** **CAOG11000190595**
1/4 - 1/2 Mile

District nun:	1	Api number:	03708964
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	178.919
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D69
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:	CAOG11000190595		

R314
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000205280**

District nun:	1	Api number:	03706374
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	E & E Prod.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	13W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	61
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000205280		

S315
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207811**

District nun:	1	Api number:	03710177
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Oil Tool Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Boyle-Perry	Wellnumber:	8
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:	CAOG11000207811		

Map ID Direction Distance	Database	EDR ID Number

AA316
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207710**

District nun:	1	Api number:	03710065
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	M. & M. Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	M & M	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207710		

R317
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206831**

District nun:	1	Api number:	03708961
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Lekas Lease 1	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206831		

W319
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191133**

District nun:	1	Api number:	03710938
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	255.548
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29A10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191133		

W318
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191132**

District nun:	1	Api number:	03710938
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	255.548
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29A10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191132		

T320
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209055**

District nun:	1	Api number:	03712122
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Boyer-Kelly	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209055		

T321
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209118**

District nun:	1	Api number:	03712209
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker, Morton & Dolley		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mutual	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209118		

X322
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191287**

District nun:	1	Api number:	03711053
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	303.866
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	61-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000191287		

Map ID Direction Distance	Database	EDR ID Number

X323
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191288**

District nun:	1	Api number:	03711053
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	303.866
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	61-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000191288		

Y324
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207442**

District nun:	1	Api number:	03709761
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Fletcher Oil Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
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:	CAOG11000207442		

S325
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207180**

District nun:	1	Api number:	03709451
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	13
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207180		

Y326
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207756**

District nun:	1	Api number:	03710115
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Masco Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Masco	Wellnumber:	1
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:	CAOG11000207756		

T327
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191705**

District nun:	1	Api number:	03712121
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	164.215
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212038.ssf		
Leasename:	Not Reported	Wellnumber:	D74
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:	CAOG11000191705		

S328
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207055**

District nun:	1	Api number:	03709302
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Apex Petroleum Corporation, Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Brayton	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207055		

S329
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000189657**

District nun:	1	Api number:	03706419
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	97.961
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Boyle	Wellnumber:	5
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:	CAOG11000189657		

Map ID Direction Distance	Database	EDR ID Number

V330
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190868**

District nun:	1	Api number:	03710063
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	M and A Oil Co., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	151.656
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Masters & Daniels	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190868		

AA331
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207184**

District nun:	1	Api number:	03709455
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	19
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207184		

S332
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207890**

District nun:	1	Api number:	03710283
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wilshire-Brayton	Wellnumber:	1
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:	CAOG11000207890		

U333
NNW **OIL_GAS** **CAOG11000208188**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710615
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	W. W. Miller		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208188		

Z334
NNE **OIL_GAS** **CAOG11000208858**
1/4 - 1/2 Mile

District nun:	1	Api number:	03711823
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208858		

AB335
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191143**

District nun:	1	Api number:	03710950
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	206.652
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	22-5
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:	CAOG11000191143		

V336
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208349**

District nun:	1	Api number:	03710898
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	32-13
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208349		

Map ID Direction Distance	Database	EDR ID Number

U337
NW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207449**

District nun:	1	Api number:	03709768
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Fred B. Foster & Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	46
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:	CAOG11000207449		

Z338
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208857**

District nun:	1	Api number:	03711822
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208857		

X339
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208417**

District nun:	1	Api number:	03711050
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	61-A1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208417		

Z340
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209250**

District nun:	1	Api number:	03712398
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209250		

Z341
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190587**

District nun:	1	Api number:	03708947
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	188.231
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D42
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:	CAOG11000190587		

S342
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207831**

District nun:	1	Api number:	03710196
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Owens & Dunsmoor		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207831		

T343
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209107**

District nun:	1	Api number:	03712196
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	13W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bobbie Boy	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209107		

Map ID
Direction
Distance

Database | EDR ID Number

Z344
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190593**

District nun:	1	Api number:	03708962
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.424
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D54
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:	CAOG11000190593		

T345
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208137**

District nun:	1	Api number:	03710557
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	47
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208137		

AB346
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190594**

District nun:	1	Api number:	03708963
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	179.907
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D68
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:	CAOG11000190594		

Z347
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208864**

District nun:	1	Api number:	03711830
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208864		

AC348
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208117**

District nun:	1	Api number:	03710537
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208117		

AB349
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208377**

District nun:	1	Api number:	03710945
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	22-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208377		

S350
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207635**

District nun:	1	Api number:	03709977
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hobbs Petro.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bass & Goodknight	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207635		

Map ID
Direction
Distance

Database | EDR ID Number

W351
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208372**

District nun:	1	Api number:	03710932
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	29-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208372		

AC352
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208661**

District nun:	1	Api number:	03711369
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Crown Central Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	30
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208661		

T353
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208213**

District nun:	1	Api number:	03710650
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Combs	Wellnumber:	45
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208213		

AC354
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207221**

District nun:	1	Api number:	03709492
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Leonard	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207221		

T355
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208872**

District nun:	1	Api number:	03711850
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	U. S. Natural Gas Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Combs	Wellnumber:	2
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:	CAOG11000208872		

Y356
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206695**

District nun:	1	Api number:	03708809
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Russell A. Brown		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Feldman	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206695		

U357
NW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207536**

District nun:	1	Api number:	03709860
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Guy Powell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	5
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:	CAOG11000207536		

Map ID Direction Distance	Database	EDR ID Number

AC358
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190580**

District nun:	1	Api number:	03708930
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	G. Kahn Oper. Co. & R. W. Lee		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	95.835
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Hass	Wellnumber:	2
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:	CAOG11000190580		

AA359
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207175**

District nun:	1	Api number:	03709446
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207175		

AA360
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207287**

District nun:	1	Api number:	03709574
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Jean & Mary Casenave		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Couden	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:	CAOG11000207287		

T361
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207959**

District nun:	1	Api number:	03710361
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Clock	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207959		

W362
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208502**

District nun:	1	Api number:	03711153
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Superior Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Swaffield	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208502		

AC363
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206818**

District nun:	1	Api number:	03708938
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206818		

AA364
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207686**

District nun:	1	Api number:	03710040
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	La Rita Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207686		

Map ID
Direction
Distance

Database | EDR ID Number

AB365
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191142**

District nun:	1	Api number:	03710949
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	178.146
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	22-4
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:	CAOG11000191142		

AC366
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206820**

District nun:	1	Api number:	03708942
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	16
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206820		

V367
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208063**

District nun:	1	Api number:	03710474
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Santa Cruz Island Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Nesa	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208063		

AD368
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206340**

District nun:	1	Api number:	03708265
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Marcoux Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Clock	Wellnumber:	5-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206340		

T369
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208136**

District nun:	1	Api number:	03710556
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	46
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208136		

AE370
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000189647**

District nun:	1	Api number:	03706395
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	S & C Oil Co, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	113.964
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Pauley	Wellnumber:	3
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:	CAOG11000189647		

X371
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208346**

District nun:	1	Api number:	03710892
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	32A-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208346		

Map ID Direction Distance	Database	EDR ID Number

X372
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208347**

District nun:	1	Api number:	03710892
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	32A-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208347		

V373
East
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191101**

District nun:	1	Api number:	03710899
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	191.547
Locationde:	Almts TAL-M		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32-14
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:	CAOG11000191101		

Z374
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190764**

District nun:	1	Api number:	03709424
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	M & J Operator		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	182.467
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Ella	Wellnumber:	1
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:	CAOG11000190764		

AD375
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208185**

District nun:	1	Api number:	03710612
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D80
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208185		

AA376
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207990**

District nun:	1	Api number:	03710395
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mullins Oil, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	POG
Site id:	CAOG11000207990		

AA377
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207529**

District nun:	1	Api number:	03709853
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	J. D. Phalen		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
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:	CAOG11000207529		

AA378
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207948**

District nun:	1	Api number:	03710350
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	N. S. Mitchell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207948		

Map ID Direction Distance	Database	EDR ID Number

AA379
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190843**

District nun:	1	Api number:	03709939
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	E & B Natural Resources Management Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	87.391
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Del Mar	Wellnumber:	1
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:	CAOG11000190843		

AD380
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207640**

District nun:	1	Api number:	03709982
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George Hocking		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207640		

Z381
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190570**

District nun:	1	Api number:	03708794
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.758
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D48
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:	CAOG11000190570		

AC382
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190582**

District nun:	1	Api number:	03708941
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	G. Kahn Oper. Co. & R. W. Lee		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	97.199
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Hass	Wellnumber:	15
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:	CAOG11000190582		

AA383
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207855**

District nun:	1	Api number:	03710221
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Petroleum Consolidated, Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207855		

AF384
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190836**

District nun:	1	Api number:	03709899
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Cree Oil Limited		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	182.424
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Dormax	Wellnumber:	1
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:	CAOG11000190836		

AC385
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206811**

District nun:	1	Api number:	03708931
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206811		

Map ID Direction Distance	Database	EDR ID Number

Z386
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207936**

District nun:	1	Api number:	03710338
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. D. Mitchell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Ella	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207936		

AG387
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190596**

District nun:	1	Api number:	03708965
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	200.542
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D67
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:	CAOG11000190596		

AD388
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207645**

District nun:	1	Api number:	03709989
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D32
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207645		

Z389
NNE **OIL_GAS** **CAOG11000207752**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710109
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Douglas Marcell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	M And B	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207752		

Y390
East **OIL_GAS** **CAOG11000208452**
1/4 - 1/2 Mile

District nun:	1	Api number:	03711098
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Skepco Oil Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Skepco	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:	CAOG11000208452		

AD391
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191710**

District nun:	1	Api number:	03712128
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	179.057
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D17
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:	CAOG11000191710		

AA392
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207129**

District nun:	1	Api number:	03709395
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	D. D. Dunlap		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207129		

Map ID
Direction
Distance

Database | EDR ID Number

Z393
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190982**

District nun:	1	Api number:	03710718
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	173.768
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D53
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190982		

AF394
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207277**

District nun:	1	Api number:	03709560
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	E. B. Campbell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Campbell	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207277		

AF395
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207575**

District nun:	1	Api number:	03709900
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D31
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207575		

AD396
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207643**

District nun:	1	Api number:	03709986
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George Hocking		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hocking	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207643		

AE397
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190922**

District nun:	1	Api number:	03710384
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	S & C Oil Co, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	116.372
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212038.ssf		
Leasename:	Pauley	Wellnumber:	4
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:	CAOG11000190922		

Z398
NNE **OIL_GAS** **CAOG11000200811**
1/4 - 1/2 Mile

District nun:	1	Api number:	03700413
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Macdavid	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200811		

AH399
ENE **OIL_GAS** **CAOG11000208344**
1/4 - 1/2 Mile

District nun:	1	Api number:	03710890
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	32A-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208344		

Map ID Direction Distance	Database	EDR ID Number

AH400
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208345**

District nun:	1	Api number:	03710890
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	32A-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208345		

Z401
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190985**

District nun:	1	Api number:	03710721
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	174.68
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D59
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:	CAOG11000190985		

W402
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208373**

District nun:	1	Api number:	03710937
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	29-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208373		

AA403
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207520**

District nun:	1	Api number:	03709844
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Fannie L. Griffith et al		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Col. Roscoe	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207520		

AD404
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191593**

District nun:	1	Api number:	03711833
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	188.352
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212078.ssf		
Leasename:	Long Beach Community	Wellnumber:	14
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191593		

AE405
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000205290**

District nun:	1	Api number:	03706393
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Morton and Dolley		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Pauley	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000205290		

Z406
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206709**

District nun:	1	Api number:	03708823
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	C & C Expl. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Ella	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206709		

Map ID
Direction
Distance

Database | EDR ID Number

AE407
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000189646**

District nun:	1	Api number:	03706394
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	S & C Oil Co, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	103.964
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Pauley	Wellnumber:	2
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:	CAOG11000189646		

AG408
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190983**

District nun:	1	Api number:	03710719
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	177.388
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D66
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:	CAOG11000190983		

AA409
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207859**

District nun:	1	Api number:	03710225
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Phalen & Holford		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	8
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:	CAOG11000207859		

AG410
NE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208383**

District nun:	1	Api number:	03710961
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	21-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208383		

W411
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208497**

District nun:	1	Api number:	03711148
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Superior Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Harlan	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208497		

AD412
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000209057**

District nun:	1	Api number:	03712129
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D16
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209057		

AF413
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207646**

District nun:	1	Api number:	03709991
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hope Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	May Richards	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207646		

Map ID Direction Distance	Database	EDR ID Number

AD414
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207965**

District nun:	1	Api number:	03710367
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jonah	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207965		

AF415
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000190857**

District nun:	1	Api number:	03709990
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	182.766
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D30
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190857		

AA416
NW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208101**

District nun:	1	Api number:	03710519
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	C. Sharon		
County name:	Los Angeles	Fieldname:	Any Field
Area name:	Any Area	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
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:	CAOG11000208101		

AH417
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208341**

District nun:	1	Api number:	03710885
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Nesa	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208341		

Z418
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207460**

District nun:	1	Api number:	03709779
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Franwin Oil & Gas Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	7A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207460		

AF419
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207461**

District nun:	1	Api number:	03709780
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Franwin Oil & Gas Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Ryder	Wellnumber:	1-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207461		

AA420
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000206812**

District nun:	1	Api number:	03708932
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206812		

Map ID Direction Distance	Database	EDR ID Number

AA421
NNW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207336**

District nun:	1	Api number:	03709635
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	McBo Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207336		

AF422
NNE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208758**

District nun:	1	Api number:	03711498
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Buell-Ryder	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208758		

AE423
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207981**

District nun:	1	Api number:	03710385
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Morton and Dolley		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Pauley	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207981		

AI424
NW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000207548**

District nun:	1	Api number:	03709872
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Prouhet & Troupe		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Oliver	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:	CAOG11000207548		

AD425
North
1/4 - 1/2 Mile

OIL_GAS **CAOG11000191598**

District nun:	1	Api number:	03711840
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Independent Exploration Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	181.05
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212078.ssf		
Leasename:	Long Beach Community	Wellnumber:	21
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191598		

AJ426
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG11000208343**

District nun:	1	Api number:	03710888
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Nesa	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208343		

AA427
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207128**

District nun:	1	Api number:	03709394
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	D. D. Dunlap		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207128		

Map ID Direction Distance	Database	EDR ID Number

AJ429
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191092**

District nun:	1	Api number:	03710889
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	208.838
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32-A4
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:	CAOG11000191092		

AJ428
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191091**

District nun:	1	Api number:	03710889
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	208.838
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32-A4
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:	CAOG11000191091		

AJ430
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191093**

District nun:	1	Api number:	03710889
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	208.838
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32-A4
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:	CAOG11000191093		

AD431
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208856**

District nun:	1	Api number:	03711821
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Armstrong Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach Comm.	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208856		

AA432
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207335**

District nun:	1	Api number:	03709634
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	McBo Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207335		

AF433
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207807**

District nun:	1	Api number:	03710173
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Oilco Petroleum Development		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Buell	Wellnumber:	1-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207807		

AG434
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208252**

District nun:	1	Api number:	03710717
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Macdavid	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208252		

Map ID Direction Distance	Database	EDR ID Number

435
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000209099**

District nun:	1	Api number:	03712188
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Yale Signal Hill Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000209099		

AJ436
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191097**

District nun:	1	Api number:	03710894
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	206.766
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32-9
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:	CAOG11000191097		

AF437
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000188694**

District nun:	1	Api number:	03700337
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	178.882
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D29
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000188694		

AE438
North **OIL_GAS** **CAOG11000207966**
1/2 - 1 Mile

District nun:	1	Api number:	03710368
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jonah	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207966		

AA439
NNW **OIL_GAS** **CAOG11000207609**
1/2 - 1 Mile

District nun:	1	Api number:	03709938
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Harmony Taylor Oil Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207609		

AC440
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206815**

District nun:	1	Api number:	03708935
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206815		

AB441
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208378**

District nun:	1	Api number:	03710946
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	28-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208378		

Map ID Direction Distance	Database	EDR ID Number

AI442
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207403**

District nun:	1	Api number:	03709714
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Cunningham Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207403		

Z443
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208557**

District nun:	1	Api number:	03711213
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dobyns	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208557		

AE444
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190583**

District nun:	1	Api number:	03708943
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	G. Kahn Oper. Co. & R. W. Lee		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	99.193
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Hass	Wellnumber:	18
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:	CAOG11000190583		

AH446
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191100**

District nun:	1	Api number:	03710896
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	341.744
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32A-11
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:	CAOG11000191100		

AH445
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191099**

District nun:	1	Api number:	03710896
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	341.744
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32A-11
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:	CAOG11000191099		

AJ447
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208388**

District nun:	1	Api number:	03710970
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	72-B1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208388		

AJ448
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191114**

District nun:	1	Api number:	03710909
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	286.974
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	62-1
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:	CAOG11000191114		

Map ID Direction Distance	Database	EDR ID Number

AE449
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207964**

District nun:	1	Api number:	03710366
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jonah	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207964		

AF450
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208757**

District nun:	1	Api number:	03711497
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Buell	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208757		

AD451
North
1/2 - 1 Mile

OIL_GAS **CAOG11000200800**

District nun:	1	Api number:	03700398
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George Hocking		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hocking	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200800		

AD452
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207639**

District nun:	1	Api number:	03709981
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George Hocking		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207639		

AG453
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190984**

District nun:	1	Api number:	03710720
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	165.86
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D65
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190984		

AH454
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000205288**

District nun:	1	Api number:	03706388
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Stack	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000205288		

AI455
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208030**

District nun:	1	Api number:	03710442
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	S. S. & Mary E. Russell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
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:	CAOG11000208030		

Map ID
Direction
Distance

Database | EDR ID Number

AK456
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208371**

District nun:	1	Api number:	03710931
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	29-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208371		

AF457
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190855**

District nun:	1	Api number:	03709985
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	184.589
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Hocking	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190855		

AH458
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000205286**

District nun:	1	Api number:	03706386
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	38-S2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000205286		

AH459
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000205285**

District nun:	1	Api number:	03706385
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	38-I1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000205285		

AD460
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206333**

District nun:	1	Api number:	03708256
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Marcoux Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Clock	Wellnumber:	1-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206333		

AF461
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208275**

District nun:	1	Api number:	03710758
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Ryder	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208275		

AL462
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208382**

District nun:	1	Api number:	03710959
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Stakemiller	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208382		

Map ID
Direction
Distance

Database | EDR ID Number

AB463
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208385**

District nun:	1	Api number:	03710963
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	21-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208385		

AD464
North
1/2 - 1 Mile

OIL_GAS **CAOG11000200801**

District nun:	1	Api number:	03700399
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George Hocking		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Reidel	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200801		

AH465
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000205284**

District nun:	1	Api number:	03706384
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	38-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000205284		

AH466
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206719**

District nun:	1	Api number:	03708834
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	California Southern Crude Oil		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Groswold Star	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:	CAOG11000206719		

AJ467
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191115**

District nun:	1	Api number:	03710910
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	287.841
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	62-2
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:	CAOG11000191115		

AM468
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208554**

District nun:	1	Api number:	03711210
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dobyns	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208554		

AL469
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208380**

District nun:	1	Api number:	03710951
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Stakemiller	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208380		

Map ID Direction Distance	Database	EDR ID Number

AJ470
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208381**

District nun:	1	Api number:	03710956
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	72-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208381		

AH471
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190737**

District nun:	1	Api number:	03709326
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	353.562
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	37-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000190737		

AJ472
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191116**

District nun:	1	Api number:	03710911
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	286.658
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	62-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000191116		

AH473
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208374**

District nun:	1	Api number:	03710939
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	29-11
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:	CAOG11000208374		

AG475
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191369**

District nun:	1	Api number:	03711265
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	174.314
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	20-A1
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:	CAOG11000191369		

AG474
NE
1/2 - 1 Mile **OIL_GAS** **CAOG11000191368**

District nun:	1	Api number:	03711265
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	174.314
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	20-A1
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:	CAOG11000191368		

AG476
NE
1/2 - 1 Mile **OIL_GAS** **CAOG11000191370**

District nun:	1	Api number:	03711267
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	174.936
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	20-3
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:	CAOG11000191370		

Map ID Direction Distance	Database	EDR ID Number

AG477
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191371**

District nun:	1	Api number:	03711267
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	174.936
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	20-3
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:	CAOG11000191371		

AF478
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208552**

District nun:	1	Api number:	03711208
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dobyns	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208552		

AH479
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208826**

District nun:	1	Api number:	03711779
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	35-19
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208826		

AL480
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206963**

District nun:	1	Api number:	03709193
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Stone	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:	CAOG11000206963		

AF481
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000209053**

District nun:	1	Api number:	03712119
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D28
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209053		

AE482
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206822**

District nun:	1	Api number:	03708945
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	G. Kahn Oper. Co. & R. W. Lee		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	22
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206822		

AN483
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208384**

District nun:	1	Api number:	03710962
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	21-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208384		

Map ID Direction Distance	Database	EDR ID Number

AH484
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207301**

District nun:	1	Api number:	03709593
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cimarron Petro. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	19
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207301		

AE485
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190581**

District nun:	1	Api number:	03708940
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	G. Kahn Oper. Co. & R. W. Lee		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	106.852
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Hass	Wellnumber:	12
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:	CAOG11000190581		

AH486
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208355**

District nun:	1	Api number:	03710914
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	34-L1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208355		

AL487
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208386**

District nun:	1	Api number:	03710964
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	72-C1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208386		

AL488
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208387**

District nun:	1	Api number:	03710964
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	72-C1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208387		

AC489
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206813**

District nun:	1	Api number:	03708933
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206813		

AM490
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208555**

District nun:	1	Api number:	03711211
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dobyns	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208555		

Map ID Direction Distance	Database	EDR ID Number

AO491
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207527**

District nun:	1	Api number:	03709851
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Phalen & Holford		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Leonard	Wellnumber:	10
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:	CAOG11000207527		

AD492
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207954**

District nun:	1	Api number:	03710356
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Black & Drake	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207954		

AH493
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190738**

District nun:	1	Api number:	03709327
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	351.897
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	37-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190738		

AG494
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208587**

District nun:	1	Api number:	03711264
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Horsch	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208587		

AH495
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208453**

District nun:	1	Api number:	03711099
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	I. A. Skidmore		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Exchange	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208453		

AI496
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207900**

District nun:	1	Api number:	03710293
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Huntington & Northern Petro. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	6
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:	CAOG11000207900		

AP497
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206459**

District nun:	1	Api number:	03708466
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Chainey	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206459		

Map ID Direction Distance	Database	EDR ID Number

AL498
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207422**

District nun:	1	Api number:	03709739
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Family Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Booth	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207422		

AQ499
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206334**

District nun:	1	Api number:	03708257
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Marcoux Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Clock	Wellnumber:	3-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206334		

AD500
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191709**

District nun:	1	Api number:	03712127
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	171.837
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	D15
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:	CAOG11000191709		

AO501
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000191695**

District nun:	1	Api number:	03712088
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	61.468
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Virginia	Wellnumber:	1
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:	CAOG11000191695		

AD502
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208068**

District nun:	1	Api number:	03710479
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Scott Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Black	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208068		

AI503
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207282**

District nun:	1	Api number:	03709568
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cannon Day Oil Synd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207282		

AK504
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207082**

District nun:	1	Api number:	03709340
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	K. S. Deeds		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	L.B.	Wellnumber:	4-A
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:	CAOG11000207082		

Map ID Direction Distance	Database	EDR ID Number

AJ507
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191149**

District nun:	1	Api number:	03710953
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.281
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191149		

AJ506
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191148**

District nun:	1	Api number:	03710953
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.281
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191148		

AJ505
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191147**

District nun:	1	Api number:	03710953
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.281
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191147		

AM508
NNE **OIL_GAS** **CAOG11000208558**
1/2 - 1 Mile

District nun:	1	Api number:	03711214
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dobyns	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208558		

AF509
NNE **OIL_GAS** **CAOG11000190875**
1/2 - 1 Mile

District nun:	1	Api number:	03710125
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	176.638
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D40
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190875		

AH510
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208354**

District nun:	1	Api number:	03710913
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	34-B2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208354		

AR511
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207953**

District nun:	1	Api number:	03710355
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Black & Drake	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207953		

Map ID
Direction
Distance

	Database	EDR ID Number
AM512 **NNE** **1/2 - 1 Mile**	**OIL_GAS**	**CAOG11000190953**

District nun:	1	Api number:	03710624
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.26
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D76
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190953		

AE513 **North** **1/2 - 1 Mile**	**OIL_GAS**	**CAOG11000206817**

District nun:	1	Api number:	03708937
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206817		

AK514 **NE** **1/2 - 1 Mile**	**OIL_GAS**	**CAOG11000208379**

District nun:	1	Api number:	03710948
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	22-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208379		

AK515
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208191**

District nun:	1	Api number:	03710621
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	33-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208191		

AQ516
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191711**

District nun:	1	Api number:	03712130
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	163.329
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	D14
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:	CAOG11000191711		

AQ517
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191720**

District nun:	1	Api number:	03712149
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	148.708
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	D7
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:	CAOG11000191720		

AH518
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208776**

District nun:	1	Api number:	03711526
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Ellis	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208776		

Map ID
Direction
Distance

	Database	EDR ID Number

AM519
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208551**

District nun:	1	Api number:	03711207
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dobyns	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208551		

AF520
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207727**

District nun:	1	Api number:	03710083
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Macrate Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Davis	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207727		

AP521
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206819**

District nun:	1	Api number:	03708939
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	G. Kahn Oper. Co. & R. W. Lee		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206819		

AJ523
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190431**

District nun:	1	Api number:	03708418
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	312.815
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	63-A2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190431		

AJ522
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190430**

District nun:	1	Api number:	03708418
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	312.815
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	63-A2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190430		

AJ524
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191098**

District nun:	1	Api number:	03710895
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	287.026
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191098		

AJ526
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191089**

District nun:	1	Api number:	03710886
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	284.983
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191089		

Map ID Direction Distance	Database	EDR ID Number

AJ527
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191090**

District nun:	1	Api number:	03710886
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	284.983
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191090		

AJ525
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191088**

District nun:	1	Api number:	03710886
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	284.983
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191088		

AS528
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191387**

District nun:	1	Api number:	03711293
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	164.176
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Barham	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191387		

AT529
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207576**

District nun:	1	Api number:	03709901
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Richland Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bass & Goodknight	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207576		

AQ530
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207963**

District nun:	1	Api number:	03710365
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Jonah	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207963		

AR531
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191780**

District nun:	1	Api number:	03712380
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	164.468
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D36
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:	CAOG11000191780		

AL532
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207326**

District nun:	1	Api number:	03709623
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Painted Hills	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207326		

Map ID Direction Distance	Database	EDR ID Number

AI533
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207846**

District nun:	1	Api number:	03710212
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Helena C. & David E. Parker		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207846		

AR534
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207973**

District nun:	1	Api number:	03710375
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207973		

AQ535
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207955**

District nun:	1	Api number:	03710357
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Black & Drake	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207955		

AQ536
North
1/2 - 1 Mile

OIL_GAS **CAOG11000209072**

District nun:	1	Api number:	03712148
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jonah Jones	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209072		

AK537
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207081**

District nun:	1	Api number:	03709339
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	K. S. Deeds		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	L.B.	Wellnumber:	4
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:	CAOG11000207081		

AT538
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208775**

District nun:	1	Api number:	03711525
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Ellis	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208775		

AM539
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208608**

District nun:	1	Api number:	03711298
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Garrett-Maloy	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208608		

Map ID
Direction
Distance

Database | EDR ID Number

AJ540
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206429**

District nun:	1	Api number:	03708423
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	63-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206429		

AK541
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191103**

District nun:	1	Api number:	03710904
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	238.433
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-5
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:	CAOG11000191103		

AM542
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191392**

District nun:	1	Api number:	03711301
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	165.583
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Garrett-Maloy	Wellnumber:	14
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191392		

AM543
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208553**

District nun:	1	Api number:	03711209
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dobyns	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208553		

AU544
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207327**

District nun:	1	Api number:	03709624
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Painted Hills	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207327		

AP545
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206456**

District nun:	1	Api number:	03708463
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Chainey	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206456		

AV546
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190579**

District nun:	1	Api number:	03708929
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	124.726
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	D5
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:	CAOG11000190579		

Map ID Direction Distance	Database	EDR ID Number

AS547
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191391**

District nun:	1	Api number:	03711300
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	165.577
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Not Reported	Wellnumber:	D39
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191391		

AW548
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207928**

District nun:	1	Api number:	03710324
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Jeroil Corp. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207928		

AK550
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191713**

District nun:	1	Api number:	03712135
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	316.07
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	33-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191713		

AK551
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191714**

District nun:	1	Api number:	03712135
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	316.07
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	33-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191714		

AK549
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191712**

District nun:	1	Api number:	03712135
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	316.07
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	33-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191712		

AK552
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208370**

District nun:	1	Api number:	03710929
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	29-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208370		

AU553
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208161**

District nun:	1	Api number:	03710581
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Keystone Western Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
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:	CAOG11000208161		

Map ID
Direction
Distance

	Database	EDR ID Number

AK554
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208353**

District nun:	1	Api number:	03710912
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	34-B1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208353		

AM555
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208769**

District nun:	1	Api number:	03711512
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Daly-Gerard	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208769		

AO556
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207947**

District nun:	1	Api number:	03710349
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	L. H. Mitchel & Sons		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Lightburn	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207947		

AP557
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206458**

District nun:	1	Api number:	03708465
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Chainey	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206458		

AV558
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206816**

District nun:	1	Api number:	03708936
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	G. Kahn Oper. Co. & R. W. Lee		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206816		

AQ559
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207164**

District nun:	1	Api number:	03709434
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	DBM Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	95
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207164		

AR560
North
1/2 - 1 Mile

OIL_GAS **CAOG11000209054**

District nun:	1	Api number:	03712120
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D27
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209054		

Map ID
Direction
Distance

Database | EDR ID Number

AM561
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208556**

District nun:	1	Api number:	03711212
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dobyns	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208556		

AM562
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190954**

District nun:	1	Api number:	03710625
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	169.72
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D52
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:	CAOG11000190954		

AV563
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206821**

District nun:	1	Api number:	03708944
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	21
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206821		

AO564
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207899**

District nun:	1	Api number:	03710292
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Huntington & Northern Petro. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
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:	CAOG11000207899		

AK565
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191102**

District nun:	1	Api number:	03710901
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	253.822
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	3170		
Abandonedd:	Not Reported	Completion:	20-MAY-14
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191102		

AV566
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206787**

District nun:	1	Api number:	03708904
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	19
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206787		

AL567
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191158**

District nun:	1	Api number:	03710960
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	145.796
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-A1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191158		

Map ID Direction Distance	Database	EDR ID Number

AP568
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208154**

District nun:	1	Api number:	03710574
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	L. C. & M. V. Kelly Oil Prod		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	CB	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208154		

AX570
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191096**

District nun:	1	Api number:	03710893
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	229.278
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32-8
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:	CAOG11000191096		

AX569
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191095**

District nun:	1	Api number:	03710893
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	229.278
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	32-8
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:	CAOG11000191095		

AU571
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207338**

District nun:	1	Api number:	03709637
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cockriel Petroleum		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207338		

AO572
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206686**

District nun:	1	Api number:	03708798
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. W. Brooks Production		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Deatherage	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206686		

AL573
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207325**

District nun:	1	Api number:	03709622
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Painted Hills	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207325		

AL574
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191154**

District nun:	1	Api number:	03710957
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	145.528
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191154		

Map ID Direction Distance	Database	EDR ID Number

AL575
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191155**

District nun:	1	Api number:	03710957
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	145.528
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191155		

AO576
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000191731**

District nun:	1	Api number:	03712168
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Oxy Long Beach, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	81.097
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Not Reported	Wellnumber:	SPR-1
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:	CAOG11000191731		

AU577
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207064**

District nun:	1	Api number:	03709311
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Gilbert Applegate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207064		

AP578
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208071**

District nun:	1	Api number:	03710483
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Scott Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Chainey	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208071		

AN579
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208589**

District nun:	1	Api number:	03711268
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	20-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208589		

AY580
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208447**

District nun:	1	Api number:	03711093
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Signal Union Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000208447		

AS581
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208607**

District nun:	1	Api number:	03711297
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Garrett-Maloy	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208607		

Map ID
Direction
Distance

Database | EDR ID Number

AZ582
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191277**

District nun:	1	Api number:	03711041
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	158.337
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	17-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000191277		

AZ583
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191278**

District nun:	1	Api number:	03711041
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	158.337
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	17-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000191278		

AX584
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206432**

District nun:	1	Api number:	03708428
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	63-12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206432		

AS585
NNE **OIL_GAS** **CAOG11000207820**
1/2 - 1 Mile

District nun:	1	Api number:	03710186
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Olympic Refining Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207820		

AT586
ENE **OIL_GAS** **CAOG11000206426**
1/2 - 1 Mile

District nun:	1	Api number:	03708420
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Denni	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206426		

AT587
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206433**

District nun:	1	Api number:	03708429
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	63-13
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206433		

AM588
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207544**

District nun:	1	Api number:	03709868
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Progressive Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Yochem	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207544		

Map ID Direction Distance	Database	EDR ID Number

AO589
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000190571**

District nun:	1	Api number:	03708796
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	69.117
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Fee	Wellnumber:	2
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:	CAOG11000190571		

AU590
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207320**

District nun:	1	Api number:	03709616
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Keystone	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207320		

AX591
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191150**

District nun:	1	Api number:	03710954
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	144.467
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	365		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191150		

AM592
NNE **OIL_GAS** **CAOG11000190951**
1/2 - 1 Mile

District nun:	1	Api number:	03710618
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	169.904
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D73
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190951		

AN593
NE **OIL_GAS** **CAOG11000208588**
1/2 - 1 Mile

District nun:	1	Api number:	03711266
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	20-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208588		

AL594
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191156**

District nun:	1	Api number:	03710958
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	157.511
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	72-8
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:	CAOG11000191156		

AL595
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191157**

District nun:	1	Api number:	03710958
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	157.511
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	72-8
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:	CAOG11000191157		

Map ID
Direction
Distance

Database | EDR ID Number

AM596
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190952**

District nun:	1	Api number:	03710620
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	162.247
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D47
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190952		

AS597
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208606**

District nun:	1	Api number:	03711292
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Barham	Wellnumber:	1-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208606		

AP598
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206457**

District nun:	1	Api number:	03708464
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Chainey	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206457		

AM599
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190874**

District nun:	1	Api number:	03710124
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	170.922
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D64
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190874		

AM600
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207545**

District nun:	1	Api number:	03709869
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Progressive Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207545		

AY601
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000202099**

District nun:	1	Api number:	03701976
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A-1 Oil Well Service Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	POG
Site id:	CAOG11000202099		

AX602
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206430**

District nun:	1	Api number:	03708424
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Denni	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206430		

Map ID
Direction
Distance

Database | EDR ID Number

AT603
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206431**

District nun:	1	Api number:	03708427
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	39A-11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206431		

AP604
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206814**

District nun:	1	Api number:	03708934
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206814		

AR605
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207505**

District nun:	1	Api number:	03709828
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Golden Arrow Oil Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Golden Arrow	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207505		

BA606
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191129**

District nun:	1	Api number:	03710935
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	331.565
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191129		

AM607
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191704**

District nun:	1	Api number:	03712118
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	161.364
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D58
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:	CAOG11000191704		

AM608
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206698**

District nun:	1	Api number:	03708812
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	R. R. Bush Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206698		

AM609
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208768**

District nun:	1	Api number:	03711511
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Daly-Gerard	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208768		

Map ID
Direction
Distance

Database | EDR ID Number

AV610
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206785**

District nun:	1	Api number:	03708902
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	14
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206785		

AO611
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000209081**

District nun:	1	Api number:	03712170
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Western Avenue Properties		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	McKenzie Lc	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209081		

AT612
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206428**

District nun:	1	Api number:	03708422
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	39-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206428		

AQ613
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190598**

District nun:	1	Api number:	03708972
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	168.833
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D13
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:	CAOG11000190598		

AO614
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207278**

District nun:	1	Api number:	03709562
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	John Camphouse		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Lightburn	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:	CAOG11000207278		

AS615
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208610**

District nun:	1	Api number:	03711302
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Garrett-Maloy	Wellnumber:	15
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208610		

AM616
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207543**

District nun:	1	Api number:	03709867
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Progressive Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Yochem	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:	CAOG11000207543		

Map ID
Direction
Distance

Database | EDR ID Number

AP617
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207749**

District nun:	1	Api number:	03710106
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Felix Mallon		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Chainey	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207749		

AQ618
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208547**

District nun:	1	Api number:	03711203
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208547		

AQ619
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190599**

District nun:	1	Api number:	03708973
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	168.315
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D12
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:	CAOG11000190599		

AO620
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208041**

District nun:	1	Api number:	03710452
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	San Lucas Oil Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000208041		

AP621
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206786**

District nun:	1	Api number:	03708903
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Hass	Wellnumber:	17
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206786		

AR622
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207506**

District nun:	1	Api number:	03709829
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Golden Arrow Oil Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Golden Arrow	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207506		

AQ623
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206835**

District nun:	1	Api number:	03708969
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Malcom Davis	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206835		

Map ID
Direction
Distance

Database | EDR ID Number

AZ627
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191284**

District nun:	1	Api number:	03711045
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	154.008
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	17-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	2378		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191284		

AZ628
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191283**

District nun:	1	Api number:	03711045
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	154.008
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	17-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	2378		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191283		

AZ629
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191282**

District nun:	1	Api number:	03711045
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	154.008
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	17-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	2378		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191282		

AZ624
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191281**

District nun:	1	Api number:	03711045
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	154.008
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	17-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	2804		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191281		

AZ625
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191280**

District nun:	1	Api number:	03711045
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	154.008
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	17-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	2804		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191280		

AZ626
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191279**

District nun:	1	Api number:	03711045
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	154.008
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	17-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	2804		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191279		

AO630
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000190877**

District nun:	1	Api number:	03710135
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	76.703
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	McEvoy	Wellnumber:	1
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:	CAOG11000190877		

Map ID
Direction
Distance

	Database	EDR ID Number

AX631
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208342**

District nun:	1	Api number:	03710887
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	32-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208342		

AV632
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208545**

District nun:	1	Api number:	03711198
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cresson Community	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208545		

AP633
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207750**

District nun:	1	Api number:	03710107
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Felix Mallon		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Chainey	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207750		

AZ634
NNE **OIL_GAS** **CAOG11000207482**
1/2 - 1 Mile

District nun:	1	Api number:	03709804
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	L.B.	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207482		

AT638
ENE **OIL_GAS** **CAOG11000191083**
1/2 - 1 Mile

District nun:	1	Api number:	03710877
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	344.617
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	64-A1
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:	CAOG11000191083		

AT636
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191079**

District nun:	1	Api number:	03710877
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	344.617
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	64-A1
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:	CAOG11000191079		

AT637
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191081**

District nun:	1	Api number:	03710877
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	344.617
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	64-A1
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:	CAOG11000191081		

Map ID
Direction
Distance

Database | EDR ID Number

AT635
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191080**

District nun:	1	Api number:	03710877
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	344.617
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	64-A1
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:	CAOG11000191080		

AT639
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191082**

District nun:	1	Api number:	03710877
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	344.617
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	64-A1
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:	CAOG11000191082		

AO640
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000191577**

District nun:	1	Api number:	03711776
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	79.071
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Georgia	Wellnumber:	1
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:	CAOG11000191577		

AO641
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207072**

District nun:	1	Api number:	03709319
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207072		

AQ642
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190600**

District nun:	1	Api number:	03708975
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	161.635
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D11
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:	CAOG11000190600		

AR643
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207000**

District nun:	1	Api number:	03709241
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Ralph Bennett		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207000		

AS644
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207776**

District nun:	1	Api number:	03710140
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Kenneth Mills		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Yochem	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207776		

Map ID
Direction
Distance

Database | EDR ID Number

AS645
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000200803**

District nun:	1	Api number:	03700403
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Kenneth Mills		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Yochem	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200803		

AS646
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208609**

District nun:	1	Api number:	03711299
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Garrett-Maloy	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208609		

AU647
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207311**

District nun:	1	Api number:	03709605
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207311		

AX648
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190915**

District nun:	1	Api number:	03710325
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	320.261
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	65-1
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:	CAOG11000190915		

AU649
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207065**

District nun:	1	Api number:	03709312
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Gilbert Applegate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207065		

AX651
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191152**

District nun:	1	Api number:	03710955
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	173.987
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-5
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:	CAOG11000191152		

AX650
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191151**

District nun:	1	Api number:	03710955
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	173.987
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-5
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:	CAOG11000191151		

Map ID
Direction
Distance

Database | EDR ID Number

AX652
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191153**

District nun:	1	Api number:	03710955
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	173.987
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-5
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:	CAOG11000191153		

AV653
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208548**

District nun:	1	Api number:	03711204
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B78
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208548		

AU654
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000209262**

District nun:	1	Api number:	03712410
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Western States Drilling Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Orbit	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209262		

AO655
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000190880**

District nun:	1	Api number:	03710150
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	80.582
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	O'Donnell	Wellnumber:	44
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:	CAOG11000190880		

AP656
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208155**

District nun:	1	Api number:	03710575
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	L. C. & M. V. Kelly Oil Prod		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Donley-Barteaux	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208155		

AT657
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207731**

District nun:	1	Api number:	03710087
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Macrate Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jones	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207731		

AQ658
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191315**

District nun:	1	Api number:	03711191
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	154.143
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	D3
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:	CAOG11000191315		

Map ID
Direction
Distance

Database | EDR ID Number

AS659
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206999**

District nun:	1	Api number:	03709240
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Ralph Bennett		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206999		

BB660
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208352**

District nun:	1	Api number:	03710903
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	23-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208352		

BA661
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206427**

District nun:	1	Api number:	03708421
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	39-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206427		

AZ662
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191285**

District nun:	1	Api number:	03711046
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	161.239
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	17-8
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:	CAOG11000191285		

AS663
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190876**

District nun:	1	Api number:	03710126
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	163.163
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D71
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190876		

AR664
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191729**

District nun:	1	Api number:	03712160
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	159.466
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.cor		
Leasename:	Not Reported	Wellnumber:	D20
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:	CAOG11000191729		

AT665
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208336**

District nun:	1	Api number:	03710876
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Martin 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:	CAOG11000208336		

Map ID Direction Distance	Database	EDR ID Number

AV666
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191317**

District nun:	1	Api number:	03711195
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	150.668
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	B77
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:	CAOG11000191317		

AQ667
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190597**

District nun:	1	Api number:	03708971
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	163.438
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D10
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:	CAOG11000190597		

BC668
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207771**

District nun:	1	Api number:	03710134
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Kenneth Mills		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Maloy	Wellnumber:	27
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207771		

AR669
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191723**

District nun:	1	Api number:	03712153
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	155.903
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.cor		
Leasename:	Not Reported	Wellnumber:	D21
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:	CAOG11000191723		

AT670
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191085**

District nun:	1	Api number:	03710880
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	340.668
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	64-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191085		

AT671
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191086**

District nun:	1	Api number:	03710880
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	340.668
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	64-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191086		

AU672
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207316**

District nun:	1	Api number:	03709612
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Chief	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207316		

Map ID
Direction
Distance

Database | EDR ID Number

AT673
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206828**

District nun:	1	Api number:	03708958
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	52-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206828		

AQ674
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206836**

District nun:	1	Api number:	03708970
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Malcom Davis	Wellnumber:	8
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:	CAOG11000206836		

BD675
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207397**

District nun:	1	Api number:	03709707
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cree Oil Limited		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Coastal	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207397		

AP676
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208156**

District nun:	1	Api number:	03710576
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	L. C. & M. V. Kelly Oil Prod		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Kelly	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208156		

AO677
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207805**

District nun:	1	Api number:	03710171
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of J. E. O'Donnell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Deco	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207805		

BB678
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000280214**

District nun:	1	Api number:	03727467
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	N
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	KB 184
Locationde:	Not Reported		
Gissourcec:	sum		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	23-25
Epawell:	N	Hydraulica:	Not Reported
Confidenti:	Y	Spuddate:	29-NOV-12
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	12-APR-13
Directiona:	Not Reported	Gissymbol:	AOG
Site id:	CAOG11000280214		

BB679
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193310**

District nun:	1	Api number:	03721191
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	183.386
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	3524		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000193310		

Map ID
Direction
Distance

	Database	EDR ID Number
AV680 **North** **1/2 - 1 Mile**	**OIL_GAS**	**CAOG11000207908**

District nun:	1	Api number:	03710301
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Freeman-Ball	Wellnumber:	10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207908		

AV681 **NNW** **1/2 - 1 Mile**	**OIL_GAS**	**CAOG11000207911**

District nun:	1	Api number:	03710306
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Oryx Energy Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Morris	Wellnumber:	15
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207911		

AU682 **East** **1/2 - 1 Mile**	**OIL_GAS**	**CAOG11000208267**

District nun:	1	Api number:	03710742
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	74-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208267		

AY683
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207598**

District nun:	1	Api number:	03709926
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hagar & Deniston		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
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:	CAOG11000207598		

BB688
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191107**

District nun:	1	Api number:	03710905
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	173.476
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	5620		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191107		

BB687
NE
1/2 - 1 Mile **OIL_GAS** **CAOG11000191108**

District nun:	1	Api number:	03710905
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	173.476
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	5620		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191108		

BB684
NE
1/2 - 1 Mile **OIL_GAS** **CAOG11000191105**

District nun:	1	Api number:	03710905
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	173.476
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	5620		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191105		

Map ID Direction Distance	Database	EDR ID Number

BB685
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191104**

District nun:	1	Api number:	03710905
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	173.476
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	5620		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191104		

BB686
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191106**

District nun:	1	Api number:	03710905
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	173.476
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	5620		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191106		

BB690
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193399**

District nun:	1	Api number:	03721489
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	171.953
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-15
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000193399		

BB689
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193398**

District nun:	1	Api number:	03721489
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	171.953
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-15
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000193398		

AR691
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191727**

District nun:	1	Api number:	03712158
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	157.42
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D26
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:	CAOG11000191727		

AU692
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207700**

District nun:	1	Api number:	03710054
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	S & C Oil Co, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Gold Seal	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207700		

AY693
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000191603**

District nun:	1	Api number:	03711862
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Old-field Associates		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	75.845
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Lion	Wellnumber:	1
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:	CAOG11000191603		

Map ID
Direction
Distance

Database | EDR ID Number

AX694
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208339**

District nun:	1	Api number:	03710883
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Martin Community	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208339		

BE695
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208153**

District nun:	1	Api number:	03710573
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	L. C. & M. V. Kelly Oil Prod		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	CB	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208153		

BF696
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208546**

District nun:	1	Api number:	03711202
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cresson Community	Wellnumber:	13
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208546		

BB698
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193519**

District nun:	1	Api number:	03721673
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	177.46
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-14
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000193519		

BB697
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193518**

District nun:	1	Api number:	03721673
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	177.46
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-14
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000193518		

BG700
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190995**

District nun:	1	Api number:	03710743
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	219.339
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	74-4
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:	CAOG11000190995		

BG699
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190994**

District nun:	1	Api number:	03710743
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	219.339
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	74-4
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:	CAOG11000190994		

Map ID
Direction
Distance

Database | EDR ID Number

BG701
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190996**

District nun:	1	Api number:	03710743
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	219.339
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	74-4
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:	CAOG11000190996		

AT702
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190834**

District nun:	1	Api number:	03709814
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	346.174
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	53A-25
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:	CAOG11000190834		

BB703
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000303265**

District nun:	1	Api number:	03730295
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	N
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	198kb
Locationde:	843 ft East along section line and 817 ft South at right angles to said line from the Centerline corner of section Willow & Cherr		
Gissourcec:	noi		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	23-27
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	NOG
Site id:	CAOG11000303265		

AU704
ESE **OIL_GAS** **CAOG11000207315**
1/2 - 1 Mile

District nun:	1	Api number:	03709611
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Chief	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207315		

BE705
NNW **OIL_GAS** **CAOG11000208157**
1/2 - 1 Mile

District nun:	1	Api number:	03710577
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	L. C. & M. V. Kelly Oil Prod		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Kelly	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208157		

BF706
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206400**

District nun:	1	Api number:	03708383
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Malcom Davis Lease 2	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206400		

BB707
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193311**

District nun:	1	Api number:	03721203
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	176.426
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000193311		

Map ID
Direction
Distance

Database | EDR ID Number

BB708
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193312**

District nun:	1	Api number:	03721203
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	176.426
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000193312		

BB710
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193397**

District nun:	1	Api number:	03721488
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	167.041
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-16
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:	CAOG11000193397		

BB709
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193396**

District nun:	1	Api number:	03721488
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	167.041
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-16
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:	CAOG11000193396		

BE711
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000191305**

District nun:	1	Api number:	03711131
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	S & C Oil Co, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	108.505
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Whitney	Wellnumber:	1-A
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:	CAOG11000191305		

BH712
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191721**

District nun:	1	Api number:	03712150
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	152.638
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D35
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:	CAOG11000191721		

BC713
NNE **OIL_GAS** **CAOG11000190950**
1/2 - 1 Mile

District nun:	1	Api number:	03710617
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	156.578
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D72
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190950		

BA714
ENE **OIL_GAS** **CAOG11000206425**
1/2 - 1 Mile

District nun:	1	Api number:	03708419
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	39-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206425		

Map ID Direction Distance	Database	EDR ID Number

BE715
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000191306**

District nun:	1	Api number:	03711132
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	S & C Oil Co, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	100.79
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Whitney	Wellnumber:	2
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:	CAOG11000191306		

BB716
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193440**

District nun:	1	Api number:	03721598
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	175.636
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-17
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000193440		

AZ717
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208411**

District nun:	1	Api number:	03711042
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	17-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208411		

AW718
ESE **OIL_GAS** **CAOG11000209258**
1/2 - 1 Mile

District nun:	1	Api number:	03712406
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Western States Drilling Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Eskagee	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209258		

BE719
NNW **OIL_GAS** **CAOG11000191411**
1/2 - 1 Mile

District nun:	1	Api number:	03711363
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	S & C Oil Co, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	105.753
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212038.ssf		
Leasename:	Marine	Wellnumber:	18
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000191411		

BI720
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000200802**

District nun:	1	Api number:	03700401
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B69
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200802		

BG721
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208375**

District nun:	1	Api number:	03710942
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	73-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208375		

Map ID Direction Distance	Database	EDR ID Number

BD722
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000190920**

District nun:	1	Api number:	03710335
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	64.868
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Ruchti	Wellnumber:	3
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:	CAOG11000190920		

AS723
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208594**

District nun:	1	Api number:	03711276
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D46
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208594		

BA725
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190433**

District nun:	1	Api number:	03708425
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	327.627
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	39-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190433		

BA724
ENE **OIL_GAS** **CAOG11000190432**
1/2 - 1 Mile

District nun:	1	Api number:	03708425
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	327.627
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	39-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190432		

AV726
NNW **OIL_GAS** **CAOG11000207056**
1/2 - 1 Mile

District nun:	1	Api number:	03709303
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Apex Petroleum Corporation, Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Freeman-Ball	Wellnumber:	11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207056		

BB728
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193517**

District nun:	1	Api number:	03721672
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	177.985
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000193517		

BB727
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000193516**

District nun:	1	Api number:	03721672
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	177.985
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000193516		

Map ID
Direction
Distance

Database | EDR ID Number

AZ729
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208415**

District nun:	1	Api number:	03711048
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	17-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208415		

AZ730
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208412**

District nun:	1	Api number:	03711043
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Andrews	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208412		

BD731
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190592**

District nun:	1	Api number:	03708955
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	81.731
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Hoyt	Wellnumber:	10
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:	CAOG11000190592		

BB732
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191113**

District nun:	1	Api number:	03710908
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	211.335
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-9
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:	CAOG11000191113		

BA733
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191109**

District nun:	1	Api number:	03710906
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	284.25
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191109		

BA734
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191110**

District nun:	1	Api number:	03710906
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	284.25
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191110		

BH735
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191726**

District nun:	1	Api number:	03712157
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	160.467
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.cor		
Leasename:	Not Reported	Wellnumber:	D19
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:	CAOG11000191726		

Map ID Direction Distance	Database	EDR ID Number

BE736
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000209248**

District nun:	1	Api number:	03712396
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Lightburn	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209248		

BG737
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190990**

District nun:	1	Api number:	03710740
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	207.026
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	74-A1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190990		

BA739
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190435**

District nun:	1	Api number:	03708426
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	363.628
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	39-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190435		

BA738
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190434**

District nun:	1	Api number:	03708426
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	363.628
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	39-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190434		

AV740
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207909**

District nun:	1	Api number:	03710302
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B68
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207909		

BB741
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000300039**

District nun:	1	Api number:	03730178
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	N
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	KB 184
Locationde:	Well 805’ east along section and 810’ south at right angles to said line from the centerline corner of section Willow and Cherry		
Gissourcec:	noi		
Comments:	Directionally drilled, show proposed coordiantes from surface location and true vertical depth at total depth: 712’ north and 59		
Leasename:	Not Reported	Wellnumber:	23-26
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	10-MAY-14
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	NOG
Site id:	CAOG11000300039		

BG742
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208266**

District nun:	1	Api number:	03710739
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Perrin	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208266		

Map ID Direction Distance	Database	EDR ID Number

BC743
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207770**

District nun:	1	Api number:	03710133
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Kenneth Mills		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Maloy	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207770		

AU744
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207118**

District nun:	1	Api number:	03709383
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	District Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Shelton	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207118		

AT745
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207491**

District nun:	1	Api number:	03709813
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	53-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207491		

AU746
East
1/2 - 1 Mile

OIL_GAS **CAOG11000209032**

District nun:	1	Api number:	03712092
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Vi-Roi Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	T. C.	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209032		

BE747
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000209080**

District nun:	1	Api number:	03712167
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Oryx Energy Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Lightburn	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209080		

BG748
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191138**

District nun:	1	Api number:	03710943
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	232.627
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	73-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191138		

BG749
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191139**

District nun:	1	Api number:	03710943
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	232.627
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	73-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191139		

Map ID Direction Distance	Database	EDR ID Number

AX752
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191146**

District nun:	1	Api number:	03710952
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	258.063
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-2
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:	CAOG11000191146		

AX750
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191144**

District nun:	1	Api number:	03710952
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	258.063
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-2
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:	CAOG11000191144		

AX751
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191145**

District nun:	1	Api number:	03710952
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	258.063
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	72-2
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:	CAOG11000191145		

BH753
NNE **OIL_GAS** **CAOG11000208578**
1/2 - 1 Mile

District nun:	1	Api number:	03711246
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D45
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208578		

BG754
East **OIL_GAS** **CAOG11000208573**
1/2 - 1 Mile

District nun:	1	Api number:	03711240
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	76-12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208573		

BJ755
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207410**

District nun:	1	Api number:	03709726
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Theodore M. Esser		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	San Lorenzo	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207410		

AV756
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191322**

District nun:	1	Api number:	03711201
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	156.135
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	B76
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:	CAOG11000191322		

Map ID Direction Distance	Database	EDR ID Number

BK757
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208564**

District nun:	1	Api number:	03711220
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	48-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208564		

BD758
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207933**

District nun:	1	Api number:	03710333
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Nedal	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207933		

BA759
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208351**

District nun:	1	Api number:	03710902
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	23-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208351		

BE760
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000209079**

District nun:	1	Api number:	03712166
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Lightburn	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209079		

AY761
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000189637**

District nun:	1	Api number:	03706377
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Oxy Long Beach, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	74.407
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212038.ssf		
Leasename:	Not Reported	Wellnumber:	SL-01
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:	CAOG11000189637		

AZ762
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208409**

District nun:	1	Api number:	03711039
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Andrews	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208409		

BD763
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000190919**

District nun:	1	Api number:	03710334
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	74.94
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Ruchti	Wellnumber:	2
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:	CAOG11000190919		

Map ID Direction Distance	Database	EDR ID Number

AX764
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191084**

District nun:	1	Api number:	03710878
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	289.314
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	64-2
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:	CAOG11000191084		

BH765
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191724**

District nun:	1	Api number:	03712155
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	151.942
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D34
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:	CAOG11000191724		

BF766
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208550**

District nun:	1	Api number:	03711206
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cresson Community	Wellnumber:	17
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208550		

BG767
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190991**

District nun:	1	Api number:	03710741
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	216.934
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	74-2
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:	CAOG11000190991		

BG768
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190992**

District nun:	1	Api number:	03710741
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	216.934
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	74-2
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:	CAOG11000190992		

BG769
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190993**

District nun:	1	Api number:	03710741
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	216.934
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	74-2
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:	CAOG11000190993		

AX770
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191087**

District nun:	1	Api number:	03710881
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	289.138
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	64-5
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:	CAOG11000191087		

Map ID
Direction
Distance

Database | EDR ID Number

BJ771
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207844**

District nun:	1	Api number:	03710210
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Painted Hills Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Painted Hills	Wellnumber:	1
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:	CAOG11000207844		

BD772
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207048**

District nun:	1	Api number:	03709294
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	D. M. Anderson		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207048		

BA773
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206775**

District nun:	1	Api number:	03708891
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	39-A1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206775		

BL774
ENE **OIL_GAS** **CAOG11000208627**
1/2 - 1 Mile

District nun:	1	Api number:	03711322
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	D & E Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	16
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208627		

BL775
ENE **OIL_GAS** **CAOG11000208628**
1/2 - 1 Mile

District nun:	1	Api number:	03711323
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	66-A16
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208628		

BA776
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206424**

District nun:	1	Api number:	03708417
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Denni	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206424		

BD777
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207898**

District nun:	1	Api number:	03710291
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Huntington & Northern Petro. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207898		

Map ID Direction Distance	Database	EDR ID Number

BC779
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191380**

District nun:	1	Api number:	03711277
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	153.303
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D51
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:	CAOG11000191380		

BC778
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191379**

District nun:	1	Api number:	03711277
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	153.303
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D51
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:	CAOG11000191379		

BD780
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208147**

District nun:	1	Api number:	03710567
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	K. & G. Oil Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Brooks	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:	CAOG11000208147		

BK781
ENE **OIL_GAS** **CAOG11000208563**
1/2 - 1 Mile

District nun:	1	Api number:	03711219
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Foster Comm.	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208563		

BA782
ENE **OIL_GAS** **CAOG11000191134**
1/2 - 1 Mile

District nun:	1	Api number:	03710940
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	339.746
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191134		

BA783
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191135**

District nun:	1	Api number:	03710940
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	339.746
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191135		

BK784
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000211724**

District nun:	1	Api number:	03716553
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Raymond L. Sarna		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Blue Skies	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000211724		

Map ID Direction Distance	Database	EDR ID Number

BE785
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000209247**

District nun:	1	Api number:	03712395
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Lightburn	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209247		

BI786
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208543**

District nun:	1	Api number:	03711194
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cresson Community	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208543		

BD787
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207697**

District nun:	1	Api number:	03710051
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Lomita Operating Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Beauchamp	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207697		

BC788
NNE **OIL_GAS** **CAOG11000191351**
1/2 - 1 Mile

District nun:	1	Api number:	03711250
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	159.395
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D57
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:	CAOG11000191351		

BD789
NW **OIL_GAS** **CAOG11000189640**
1/2 - 1 Mile

District nun:	1	Api number:	03706379
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Oxy Long Beach, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	76.165
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212038.ssf		
Leasename:	Not Reported	Wellnumber:	SCM-4
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:	CAOG11000189640		

BC790
NNE **OIL_GAS** **CAOG11000208413**
1/2 - 1 Mile

District nun:	1	Api number:	03711044
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Andrews	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208413		

BL791
ENE **OIL_GAS** **CAOG11000208624**
1/2 - 1 Mile

District nun:	1	Api number:	03711316
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	D & E Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	9-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208624		

Map ID
Direction
Distance

Database | EDR ID Number

BA793
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191131**

District nun:	1	Api number:	03710936
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	344.401
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-9
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:	CAOG11000191131		

BA792
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191130**

District nun:	1	Api number:	03710936
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	344.401
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-9
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:	CAOG11000191130		

BD794
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000193295**

District nun:	1	Api number:	03721164
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	John O. Richardson		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	84.21
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Sunnyside	Wellnumber:	3
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:	CAOG11000193295		

BI795
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000191410**

District nun:	1	Api number:	03711362
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	S & C Oil Co, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	112.487
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Marine	Wellnumber:	17-A
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:	CAOG11000191410		

BD796
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207930**

District nun:	1	Api number:	03710327
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Wayne Mills		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Cochran	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207930		

BL797
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208623**

District nun:	1	Api number:	03711315
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	D & E Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208623		

BD798
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000193212**

District nun:	1	Api number:	03721014
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	John O. Richardson		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	81.09
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Sunnyside	Wellnumber:	2
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:	CAOG11000193212		

Map ID
Direction
Distance

Database | EDR ID Number

BK799
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207601**

District nun:	1	Api number:	03709929
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	54-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207601		

BD800
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207345**

District nun:	1	Api number:	03709645
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cockriel Petroleum		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mckee	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207345		

BH801
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191725**

District nun:	1	Api number:	03712156
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	151.082
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D25
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:	CAOG11000191725		

BF802
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191321**

District nun:	1	Api number:	03711200
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	147.714
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41207069.ssf		
Leasename:	Not Reported	Wellnumber:	D9
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:	CAOG11000191321		

BG803
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208626**

District nun:	1	Api number:	03711321
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	75-14
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208626		

BG804
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208567**

District nun:	1	Api number:	03711229
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	76-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208567		

BD805
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000193211**

District nun:	1	Api number:	03721013
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	John O. Richardson		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	75.105
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Sunnyside	Wellnumber:	1
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:	CAOG11000193211		

Map ID
Direction
Distance

Database | EDR ID Number

BI806
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190914**

District nun:	1	Api number:	03710305
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	153.752
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Not Reported	Wellnumber:	B54
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:	CAOG11000190914		

BJ807
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207296**

District nun:	1	Api number:	03709588
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chief Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Chief	Wellnumber:	5
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:	CAOG11000207296		

BI808
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207912**

District nun:	1	Api number:	03710307
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Oryx Energy Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Morris	Wellnumber:	16
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207912		

BM809
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208072**

District nun:	1	Api number:	03710484
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Scott Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Davis	Wellnumber:	14
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208072		

BD810
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000189638**

District nun:	1	Api number:	03706378
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Oxy Long Beach, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	77.237
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212038.ssf		
Leasename:	Not Reported	Wellnumber:	SCM-3
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:	CAOG11000189638		

BD811
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000189639**

District nun:	1	Api number:	03706378
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Oxy Long Beach, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	77.237
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Not Reported	Wellnumber:	SCM-3
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:	CAOG11000189639		

BL812
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208337**

District nun:	1	Api number:	03710879
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Martin Community	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208337		

Map ID Direction Distance	Database	EDR ID Number

BA813
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208369**

District nun:	1	Api number:	03710928
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	29-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208369		

BD814
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208459**

District nun:	1	Api number:	03711105
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	South Slope Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Leonard	Wellnumber:	6
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:	CAOG11000208459		

BD815
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207825**

District nun:	1	Api number:	03710191
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Optic Oil Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207825		

BK816
ENE **OIL_GAS** **CAOG11000208289**
1/2 - 1 Mile

District nun:	1	Api number:	03710775
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Raymond L. Sarna		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Blue Skies	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208289		

BI817
North **OIL_GAS** **CAOG11000208544**
1/2 - 1 Mile

District nun:	1	Api number:	03711197
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Cresson Community	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208544		

BJ818
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207858**

District nun:	1	Api number:	03710224
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Petroleum Securities Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Painted Hills	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207858		

BJ819
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207842**

District nun:	1	Api number:	03710208
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Painted Hills Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207842		

Map ID
Direction
Distance

Database | EDR ID Number

BD820
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000190573**

District nun:	1	Api number:	03708807
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	77.32
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41207069.ssf		
Leasename:	Rosemond	Wellnumber:	1
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:	CAOG11000190573		

BJ821
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190746**

District nun:	1	Api number:	03709333
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	167.263
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	86-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000190746		

BJ822
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190747**

District nun:	1	Api number:	03709333
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	167.263
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	86-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000190747		

BH823
NNE **OIL_GAS** **CAOG11000193495**
1/2 - 1 Mile

District nun:	1	Api number:	03721643
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	142.364
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000193495		

BB825
NE **OIL_GAS** **CAOG11000191112**
1/2 - 1 Mile

District nun:	1	Api number:	03710907
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	214.501
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	3374		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191112		

BB824
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191111**

District nun:	1	Api number:	03710907
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	214.501
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	23-8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	3374		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191111		

BM826
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206684**

District nun:	1	Api number:	03708795
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. W. Brooks Production		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Davis	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206684		

Map ID
Direction
Distance

Database | EDR ID Number

BL827
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208081**

District nun:	1	Api number:	03710497
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	67-T1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208081		

BD828
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207696**

District nun:	1	Api number:	03710050
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Lomita Operating Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Beauchamp	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207696		

BM829
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208070**

District nun:	1	Api number:	03710482
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Scott Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Century H. & N.	Wellnumber:	13
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208070		

BH830
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000193494**

District nun:	1	Api number:	03721642
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.975
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000193494		

BC831
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191348**

District nun:	1	Api number:	03711247
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	147.835
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D63
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191348		

BD832
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000190572**

District nun:	1	Api number:	03708806
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	72.315
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Old Biddy	Wellnumber:	1
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:	CAOG11000190572		

BK833
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207108**

District nun:	1	Api number:	03709370
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Delaney Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mickelson	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:	CAOG11000207108		

Map ID Direction Distance	Database	EDR ID Number

BD834
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208838**

District nun:	1	Api number:	03711791
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Turner Petro. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Merco	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208838		

BC835
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206956**

District nun:	1	Api number:	03709186
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206956		

BI836
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000191409**

District nun:	1	Api number:	03711361
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	S & C Oil Co, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	123.948
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Marine	Wellnumber:	17
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:	CAOG11000191409		

BD837
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190918**

District nun:	1	Api number:	03710332
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	78.852
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Munn	Wellnumber:	1
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:	CAOG11000190918		

BL838
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208076**

District nun:	1	Api number:	03710492
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	67-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208076		

BJ839
ESE **OIL_GAS** **CAOG11000207420**
1/2 - 1 Mile

District nun:	1	Api number:	03709737
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Margaret H. Fairchild		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Painted Hills	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207420		

BN840
NE **OIL_GAS** **CAOG11000208414**
1/2 - 1 Mile

District nun:	1	Api number:	03711047
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	17-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208414		

Map ID
Direction
Distance

Database | EDR ID Number

BH841
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000193493**

District nun:	1	Api number:	03721641
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.267
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000193493		

BK842
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000211725**

District nun:	1	Api number:	03716554
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Streiff	Wellnumber:	2A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000211725		

BO843
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208540**

District nun:	1	Api number:	03711188
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	18-8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208540		

BB844
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208532**

District nun:	1	Api number:	03711181
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	18-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208532		

BB845
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208350**

District nun:	1	Api number:	03710900
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	23-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208350		

BJ846
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207034**

District nun:	1	Api number:	03709280
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Altco Oil Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Altco	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:	CAOG11000207034		

BK847
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206993**

District nun:	1	Api number:	03709230
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Bartholomae Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206993		

Map ID Direction Distance	Database	EDR ID Number

BP848
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191343**

District nun:	1	Api number:	03711237
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	238.688
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191343		

BP849
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191344**

District nun:	1	Api number:	03711237
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	238.688
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191344		

BD850
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206986**

District nun:	1	Api number:	03709223
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	George B. Barnes		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
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:	CAOG11000206986		

BQ852
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191328**

District nun:	1	Api number:	03711224
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	287.906
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-4
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:	CAOG11000191328		

BQ851
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191327**

District nun:	1	Api number:	03711224
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	287.906
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-4
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:	CAOG11000191327		

BH853
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000193491**

District nun:	1	Api number:	03721640
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.51
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-7
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:	CAOG11000193491		

BH854
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000193492**

District nun:	1	Api number:	03721640
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.51
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-7
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:	CAOG11000193492		

Map ID
Direction
Distance

Database | EDR ID Number

BM855
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208074**

District nun:	1	Api number:	03710489
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Scott Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Reggio	Wellnumber:	11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208074		

BG856
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208572**

District nun:	1	Api number:	03711239
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	76-11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208572		

BD857
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207379**

District nun:	1	Api number:	03709685
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Oliver H. Covall		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Oil Exchange	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207379		

BF859
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191320**

District nun:	1	Api number:	03711199
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	152.052
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D2
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:	CAOG11000191320		

BF858
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191319**

District nun:	1	Api number:	03711199
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	152.052
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D2
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:	CAOG11000191319		

BJ861
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190749**

District nun:	1	Api number:	03709334
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	179.43
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	86-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000190749		

BJ860
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190748**

District nun:	1	Api number:	03709334
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	179.43
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	86-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000190748		

Map ID
Direction
Distance

Database | EDR ID Number

BH862
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000193851**

District nun:	1	Api number:	03722461
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	142.078
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	D79
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:	CAOG11000193851		

BL863
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190938**

District nun:	1	Api number:	03710491
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	287.995
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	67-A1
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:	CAOG11000190938		

BD864
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000190916**

District nun:	1	Api number:	03710328
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	70.156
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Kentucky	Wellnumber:	1
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:	CAOG11000190916		

BF865
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191314**

District nun:	1	Api number:	03711190
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	152.628
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D8
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:	CAOG11000191314		

BR866
North
1/2 - 1 Mile

OIL_GAS **CAOG11000209073**

District nun:	1	Api number:	03712151
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	K. & H.	Wellnumber:	2
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:	CAOG11000209073		

BG867
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208625**

District nun:	1	Api number:	03711320
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	13
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208625		

BK868
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190837**

District nun:	1	Api number:	03709913
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	348.515
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	44-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000190837		

Map ID
Direction
Distance

Database | EDR ID Number

BK869
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190838**

District nun:	1	Api number:	03709913
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	348.515
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	44-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000190838		

BK870
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207600**

District nun:	1	Api number:	03709928
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	54-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207600		

BL871
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208338**

District nun:	1	Api number:	03710882
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	64-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208338		

BH872
NNE **OIL_GAS** **CAOG11000243497**
1/2 - 1 Mile

District nun:	1	Api number:	03727384
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	142’
Locationde:	Not Reported		
Gissourcec:	sum		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D-81
Epawell:	N	Hydraulica:	Not Reported
Confidenti:	Y	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	22-OCT-12
Directiona:	Not Reported	Gissymbol:	AOG
Site id:	CAOG11000243497		

BL873
ENE **OIL_GAS** **CAOG11000208078**
1/2 - 1 Mile

District nun:	1	Api number:	03710494
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	67-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208078		

BM874
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208080**

District nun:	1	Api number:	03710496
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Scott Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Sigmar	Wellnumber:	12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208080		

BN875
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207495**

District nun:	1	Api number:	03709818
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Industrial Fuel	Wellnumber:	24
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207495		

Map ID
Direction
Distance

Database | EDR ID Number

BP876
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208570**

District nun:	1	Api number:	03711233
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	76-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208570		

BS877
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207051**

District nun:	1	Api number:	03709297
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	W. J. Anson		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207051		

BG879
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191346**

District nun:	1	Api number:	03711238
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	206.636
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191346		

BG878
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191345**

District nun:	1	Api number:	03711238
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	206.636
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191345		

BT880
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208542**

District nun:	1	Api number:	03711193
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Cresson Community	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208542		

BM881
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207373**

District nun:	1	Api number:	03709679
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Cordary-Thorpe Trust		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207373		

BI882
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000191304**

District nun:	1	Api number:	03711130
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	153.174
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Not Reported	Wellnumber:	B49
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:	CAOG11000191304		

Map ID Direction Distance	Database	EDR ID Number

BD883
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206763**

District nun:	1	Api number:	03708879
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dye	Wellnumber:	12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206763		

BN884
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207566**

District nun:	1	Api number:	03709890
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Republic Producing Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207566		

BU885
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207047**

District nun:	1	Api number:	03709293
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	W. B. Albright		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207047		

BD886
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207380**

District nun:	1	Api number:	03709686
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Oliver H. Covall		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Oil Exchange	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207380		

BK887
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207980**

District nun:	1	Api number:	03710383
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Morton and Dolley		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207980		

BH888
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000193786**

District nun:	1	Api number:	03722284
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	142.044
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	D77
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:	CAOG11000193786		

BV889
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206959**

District nun:	1	Api number:	03709189
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	South Coast	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206959		

Map ID
Direction
Distance

Database | EDR ID Number

BK890
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191128**

District nun:	1	Api number:	03710934
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	348.203
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-7
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:	CAOG11000191128		

BK891
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207767**

District nun:	1	Api number:	03710130
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	49-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207767		

BM892
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207124**

District nun:	1	Api number:	03709390
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Downs-Fleming		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207124		

BH894
NNE **OIL_GAS** **CAOG11000193489**
1/2 - 1 Mile

District nun:	1	Api number:	03721639
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.165
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-6
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:	CAOG11000193489		

BH893
NNE **OIL_GAS** **CAOG11000193488**
1/2 - 1 Mile

District nun:	1	Api number:	03721639
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.165
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-6
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:	CAOG11000193488		

BH895
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000193490**

District nun:	1	Api number:	03721639
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.165
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-6
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:	CAOG11000193490		

BN896
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207526**

District nun:	1	Api number:	03709850
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hagar & Deniston		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207526		

Map ID
Direction
Distance

Database | EDR ID Number

BG897
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191393**

District nun:	1	Api number:	03711317
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	202.353
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	75A-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191393		

BG899
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191395**

District nun:	1	Api number:	03711317
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	202.353
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	75A-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191395		

BG898
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191394**

District nun:	1	Api number:	03711317
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	202.353
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	75A-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191394		

BK900
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207766**

District nun:	1	Api number:	03710129
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	49-8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207766		

BR901
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191722**

District nun:	1	Api number:	03712152
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	148.594
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D18
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:	CAOG11000191722		

BN902
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208410**

District nun:	1	Api number:	03711040
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Andrews	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208410		

BR903
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191728**

District nun:	1	Api number:	03712159
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	145.814
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D24
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:	CAOG11000191728		

Map ID
Direction
Distance

Database | EDR ID Number

BU904
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207843**

District nun:	1	Api number:	03710209
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Painted Hills Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207843		

BV905
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207803**

District nun:	1	Api number:	03710169
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	J. E. O'Donnell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Scoco	Wellnumber:	2-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207803		

BV906
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000209044**

District nun:	1	Api number:	03712105
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	11-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209044		

BJ907
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207079**

District nun:	1	Api number:	03709332
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Davis Investment Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Painted Hills	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207079		

BH908
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000304041**

District nun:	1	Api number:	03730340
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	N
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	157kb
Locationde:	794 ft West along section line and 522 ft North at right angles to said line from Centerline corner of section Willow & Cherry		
Gissourcec:	noi		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	D-82
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	05-JUL-14
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	NOG
Site id:	CAOG11000304041		

BF909
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191316**

District nun:	1	Api number:	03711192
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	153.006
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	D1
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:	CAOG11000191316		

BH910
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000209074**

District nun:	1	Api number:	03712154
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	K. & H.	Wellnumber:	4
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:	CAOG11000209074		

Map ID
Direction
Distance

Database | EDR ID Number

BN911
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000209045**

District nun:	1	Api number:	03712106
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	11-12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209045		

BJ912
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208004**

District nun:	1	Api number:	03710408
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Neva Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Neva	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:	CAOG11000208004		

BH913
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000193485**

District nun:	1	Api number:	03721638
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.498
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000193485		

BH915
NNE **OIL_GAS** **CAOG11000193487**
1/2 - 1 Mile

District nun:	1	Api number:	03721638
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.498
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000193487		

BH914
NNE **OIL_GAS** **CAOG11000193486**
1/2 - 1 Mile

District nun:	1	Api number:	03721638
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.498
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000193486		

BG916
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208571**

District nun:	1	Api number:	03711234
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	76-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208571		

BK917
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207596**

District nun:	1	Api number:	03709924
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Rothschild Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jumbo	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207596		

Map ID
Direction
Distance

Database | EDR ID Number

BQ920
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191354**

District nun:	1	Api number:	03711251
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	267.966
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-6
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:	CAOG11000191354		

BQ919
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191353**

District nun:	1	Api number:	03711251
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	267.966
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-6
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:	CAOG11000191353		

BQ918
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191352**

District nun:	1	Api number:	03711251
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	267.966
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-6
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:	CAOG11000191352		

BJ921
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207832**

District nun:	1	Api number:	03710198
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Pacific Coast Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207832		

BU922
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208059**

District nun:	1	Api number:	03710470
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Santa Cruz Island Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Hoyt	Wellnumber:	13
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208059		

BM923
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207934**

District nun:	1	Api number:	03710336
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mines Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207934		

BV924
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207931**

District nun:	1	Api number:	03710329
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	7-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207931		

Map ID Direction Distance	Database	EDR ID Number

BI925
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000191408**

District nun:	1	Api number:	03711360
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	S & C Oil Co, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	148.989
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Marine	Wellnumber:	16-A
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:	CAOG11000191408		

BT926
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191318**

District nun:	1	Api number:	03711196
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	156.158
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	B75
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:	CAOG11000191318		

BN927
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208644**

District nun:	1	Api number:	03711339
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	32
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208644		

BK928
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207730**

District nun:	1	Api number:	03710086
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Macrate Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jones	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207730		

BL929
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208077**

District nun:	1	Api number:	03710493
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	67-A2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208077		

BV931
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190924**

District nun:	1	Api number:	03710391
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	137.95
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	6-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000190924		

BV930
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190923**

District nun:	1	Api number:	03710391
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	137.95
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	6-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000190923		

Map ID Direction Distance	Database	EDR ID Number

BI932
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207913**

District nun:	1	Api number:	03710308
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Oryx Energy Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Morris	Wellnumber:	17
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207913		

BH933
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000193502**

District nun:	1	Api number:	03721663
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	142.863
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000193502		

BP934
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190867**

District nun:	1	Api number:	03710028
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	221.364
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	78-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190867		

BK937
ENE **OIL_GAS** **CAOG11000191125**
1/2 - 1 Mile

District nun:	1	Api number:	03710930
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	341.376
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-3
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:	CAOG11000191125		

BK935
ENE **OIL_GAS** **CAOG11000191123**
1/2 - 1 Mile

District nun:	1	Api number:	03710930
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	341.376
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-3
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:	CAOG11000191123		

BK936
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191124**

District nun:	1	Api number:	03710930
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	341.376
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-3
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:	CAOG11000191124		

BW938
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207658**

District nun:	1	Api number:	03710003
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Axis Petroleum Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	13W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Allied	Wellnumber:	13
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207658		

Map ID
Direction
Distance

Database | EDR ID Number

BN939
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207893**

District nun:	1	Api number:	03710286
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wilshire Long Beach	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:	CAOG11000207893		

BL940
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191374**

District nun:	1	Api number:	03711270
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	269.977
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	69-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191374		

BL941
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191375**

District nun:	1	Api number:	03711270
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	269.977
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	69-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191375		

BK942
ENE **OIL_GAS** **CAOG11000190759**
1/2 - 1 Mile

District nun:	1	Api number:	03709381
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	332.837
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	47-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190759		

BK944
ENE **OIL_GAS** **CAOG11000190761**
1/2 - 1 Mile

District nun:	1	Api number:	03709381
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	332.837
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	47-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190761		

BK943
ENE **OIL_GAS** **CAOG11000190760**
1/2 - 1 Mile

District nun:	1	Api number:	03709381
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	332.837
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	47-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190760		

BK945
ENE **OIL_GAS** **CAOG11000207416**
1/2 - 1 Mile

District nun:	1	Api number:	03709732
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Exeter Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jones	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207416		

Map ID Direction Distance	Database	EDR ID Number

BL946
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207415**

District nun:	1	Api number:	03709731
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Exeter Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jones	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207415		

BS947
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207608**

District nun:	1	Api number:	03709937
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Harmony Rose Oil Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207608		

BJ948
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000209030**

District nun:	1	Api number:	03712087
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Victory Oil Company LLC		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wilson	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209030		

BR950
NNE **OIL_GAS** **CAOG11000193483**
1/2 - 1 Mile

District nun:	1	Api number:	03721636
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	141.626
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000193483		

BR949
NNE **OIL_GAS** **CAOG11000193482**
1/2 - 1 Mile

District nun:	1	Api number:	03721636
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	141.626
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000193482		

BI951
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000191407**

District nun:	1	Api number:	03711359
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	151.072
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Not Reported	Wellnumber:	B48
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:	CAOG11000191407		

BT952
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208549**

District nun:	1	Api number:	03711205
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Cresson Community	Wellnumber:	16
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208549		

Map ID
Direction
Distance

Database | EDR ID Number

BL953
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207602**

District nun:	1	Api number:	03709930
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	55-A1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207602		

BR954
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000193484**

District nun:	1	Api number:	03721637
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	140.75
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000193484		

BQ956
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191324**

District nun:	1	Api number:	03711221
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	244.833
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-1
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:	CAOG11000191324		

BQ955
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191323**

District nun:	1	Api number:	03711221
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	244.833
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-1
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:	CAOG11000191323		

BN957
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206437**

District nun:	1	Api number:	03708433
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Dodge	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206437		

BN958
NNE **OIL_GAS** **CAOG11000208642**
1/2 - 1 Mile

District nun:	1	Api number:	03711337
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	30
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208642		

BR959
NNE **OIL_GAS** **CAOG11000193480**
1/2 - 1 Mile

District nun:	1	Api number:	03721634
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	142.837
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-1
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:	CAOG11000193480		

Map ID
Direction
Distance

Database | EDR ID Number

BR960
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000193481**

District nun:	1	Api number:	03721634
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	142.837
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	DW-1
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:	CAOG11000193481		

BW961
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207707**

District nun:	1	Api number:	03710061
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Arthur W. Lyddon		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207707		

BL962
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208217**

District nun:	1	Api number:	03710659
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Rogers	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208217		

BK963
ENE **OIL_GAS** **CAOG11000207319**
1/2 - 1 Mile

District nun:	1	Api number:	03709615
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	51-8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207319		

BL965
ENE **OIL_GAS** **CAOG11000191378**
1/2 - 1 Mile

District nun:	1	Api number:	03711272
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	300.075
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	69-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191378		

BL964
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191377**

District nun:	1	Api number:	03711272
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	300.075
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	69-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191377		

BQ967
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191359**

District nun:	1	Api number:	03711253
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	224.755
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-8
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:	CAOG11000191359		

Map ID Direction Distance	Database	EDR ID Number

BQ966
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191358**

District nun:	1	Api number:	03711253
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	224.755
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-8
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:	CAOG11000191358		

BJ968
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208441**

District nun:	1	Api number:	03711086
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal Goodyear	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208441		

BN969
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207139**

District nun:	1	Api number:	03709406
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George Duty		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	South Coast	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207139		

BW970
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000209082**

District nun:	1	Api number:	03712171
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mines	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209082		

BS971
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000200804**

District nun:	1	Api number:	03700404
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George W. Owens		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	30
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Commercial	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200804		

BU972
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190789**

District nun:	1	Api number:	03709520
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	190.369
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	89-22
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:	CAOG11000190789		

BR973
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207110**

District nun:	1	Api number:	03709373
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Delaney Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	W.A.	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207110		

Map ID
Direction
Distance

Database | EDR ID Number

BN975
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208537**

District nun:	1	Api number:	03711185
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	18-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208537		

BN974
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208536**

District nun:	1	Api number:	03711185
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	18-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208536		

BT976
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207052**

District nun:	1	Api number:	03709299
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Apex Petroleum Corporation, Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	13
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:	CAOG11000207052		

BR977
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190763**

District nun:	1	Api number:	03709398
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Estate of Harold C Morton		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.73
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.cor		
Leasename:	Not Reported	Wellnumber:	5
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:	CAOG11000190763		

BW978
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208149**

District nun:	1	Api number:	03710569
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Keck Syndicate #3		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208149		

BJ979
East
1/2 - 1 Mile

OIL_GAS **CAOG11000209029**

District nun:	1	Api number:	03712086
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	88-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209029		

BU980
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190788**

District nun:	1	Api number:	03709519
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	182.214
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Not Reported	Wellnumber:	89-21
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:	CAOG11000190788		

Map ID Direction Distance	Database	EDR ID Number

BX981
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000206998**

District nun:	1	Api number:	03709239
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Benito-Huntington Oil Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Benito-Huntington	Wellnumber:	2
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:	CAOG11000206998		

BR982
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207841**

District nun:	1	Api number:	03710207
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Painted Hills Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207841		

BL983
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208079**

District nun:	1	Api number:	03710495
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	71-S1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208079		

BN984
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000209271**

District nun:	1	Api number:	03712419
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Wil-Daw Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wil-Daw	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209271		

BP985
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208488**

District nun:	1	Api number:	03711138
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Sunwell Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Jackson 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:	POG
Site id:	CAOG11000208488		

BO986
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208541**

District nun:	1	Api number:	03711189
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	18-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208541		

BP987
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207321**

District nun:	1	Api number:	03709617
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Lacal	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207321		

Map ID Direction Distance	Database	EDR ID Number

BT988
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190913**

District nun:	1	Api number:	03710304
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	150.677
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	B58
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:	CAOG11000190913		

BQ989
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191136**

District nun:	1	Api number:	03710941
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	328.098
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-13
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191136		

BQ990
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191137**

District nun:	1	Api number:	03710941
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	328.098
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-13
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191137		

BT991
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207910**

District nun:	1	Api number:	03710303
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Oryx Energy Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Morris	Wellnumber:	12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207910		

BT992
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208249**

District nun:	1	Api number:	03710713
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Lewis	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208249		

BS993
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207061**

District nun:	1	Api number:	03709308
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Apex Petroleum Corporation, Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Seegar	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207061		

BR994
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191460**

District nun:	1	Api number:	03711523
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	146.698
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	C25
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:	CAOG11000191460		

Map ID
Direction
Distance

Database | EDR ID Number

BN995
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207127**

District nun:	1	Api number:	03709393
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	10-A2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207127		

BR996
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191718**

District nun:	1	Api number:	03712142
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	148.217
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.cor		
Leasename:	Not Reported	Wellnumber:	C33
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:	CAOG11000191718		

BP997
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206826**

District nun:	1	Api number:	03708956
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Irene	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206826		

BX998
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208458**

District nun:	1	Api number:	03711104
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George N. Snyder		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
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:	CAOG11000208458		

BW999
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206761**

District nun:	1	Api number:	03708877
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	25
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206761		

BN1000
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207985**

District nun:	1	Api number:	03710389
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	14-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207985		

BT1001
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208250**

District nun:	1	Api number:	03710715
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Lewis	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208250		

Map ID Direction Distance	Database	EDR ID Number

BY1003
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191350**

District nun:	1	Api number:	03711248
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	141.673
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	D44
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191350		

BY1002
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191349**

District nun:	1	Api number:	03711248
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	141.673
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	D44
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191349		

BR1004
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190718**

District nun:	1	Api number:	03709196
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	133.711
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	C41
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:	CAOG11000190718		

BN1005
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207537**

District nun:	1	Api number:	03709861
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Power Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Tehmescal	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207537		

BN1006
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207986**

District nun:	1	Api number:	03710390
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Harold C. Morton		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Power	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207986		

BN1007
NNE **OIL_GAS** **CAOG11000208031**
1/2 - 1 Mile

District nun:	1	Api number:	03710443
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Safeway Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208031		

BN1008
NNE **OIL_GAS** **CAOG11000207138**
1/2 - 1 Mile

District nun:	1	Api number:	03709405
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	George Duty		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	South Coast	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207138		

Map ID
Direction
Distance

Database | EDR ID Number

BP1009
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190866**

District nun:	1	Api number:	03710027
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	232.109
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	78-1
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:	CAOG11000190866		

BZ1010
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207146**

District nun:	1	Api number:	03709413
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	E & E Prod.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207146		

BP1011
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191308**

District nun:	1	Api number:	03711139
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	234.098
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	77-A1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191308		

BP1012
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191309**

District nun:	1	Api number:	03711139
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	234.098
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	77-A1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191309		

BU1013
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190785**

District nun:	1	Api number:	03709517
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Davis Investment Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	179.757
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212098.ssf		
Leasename:	Not Reported	Wellnumber:	19
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190785		

BT1014
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190981**

District nun:	1	Api number:	03710714
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	139.638
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212038.ssf		
Leasename:	Not Reported	Wellnumber:	B47
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:	CAOG11000190981		

BR1015
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207313**

District nun:	1	Api number:	03709609
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	B & H	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207313		

Map ID Direction Distance	Database	EDR ID Number

BU1016
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208486**

District nun:	1	Api number:	03711135
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Sunshine Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Burkhard	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208486		

BR1017
North
1/2 - 1 Mile

OIL_GAS **CAOG11000209067**

District nun:	1	Api number:	03712140
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Graham-Bush	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209067		

BN1018
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207987**

District nun:	1	Api number:	03710392
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Harold C. Morton		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Power	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207987		

BT1019
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190969**

District nun:	1	Api number:	03710698
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	146.472
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	B67
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:	CAOG11000190969		

BT1020
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190970**

District nun:	1	Api number:	03710698
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	146.472
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	B67
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:	CAOG11000190970		

CA1021
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208533**

District nun:	1	Api number:	03711182
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	18-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208533		

BP1022
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208566**

District nun:	1	Api number:	03711227
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	69-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208566		

Map ID Direction Distance	Database	EDR ID Number

BY1023
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208664**

District nun:	1	Api number:	03711372
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Crown Central Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	62
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208664		

BY1024
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208579**

District nun:	1	Api number:	03711249
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marcellus	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208579		

CB1025
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000206710**

District nun:	1	Api number:	03708824
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	C & F Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hickey	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206710		

BR1026
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207314**

District nun:	1	Api number:	03709610
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	B & H	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207314		

BX1027
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208612**

District nun:	1	Api number:	03711304
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Goodyear	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208612		

BT1028
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208244**

District nun:	1	Api number:	03710706
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B62
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208244		

CC1029
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208569**

District nun:	1	Api number:	03711231
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	76-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208569		

Map ID
Direction
Distance

Database | EDR ID Number

BN1030
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000209234**

District nun:	1	Api number:	03712376
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Shaver	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209234		

BR1031
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191717**

District nun:	1	Api number:	03712141
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	136.365
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	C40
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:	CAOG11000191717		

BU1032
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207109**

District nun:	1	Api number:	03709371
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Delaney Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207109		

BY1033
NNE **OIL_GAS** **CAOG11000208485**
1/2 - 1 Mile

District nun:	1	Api number:	03711134
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Sunset Oil Co.-Westates Petr. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	5
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:	CAOG11000208485		

BZ1034
ENE **OIL_GAS** **CAOG11000191126**
1/2 - 1 Mile

District nun:	1	Api number:	03710933
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	333.988
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191126		

BZ1035
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191127**

District nun:	1	Api number:	03710933
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	333.988
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	29-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191127		

CD1036
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191456**

District nun:	1	Api number:	03711517
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	144.751
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	C9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191456		

Map ID
Direction
Distance

Database | EDR ID Number

BW1037
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207062**

District nun:	1	Api number:	03709309
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Apex Petroleum Corporation, Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Stephens	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207062		

BZ1038
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208649**

District nun:	1	Api number:	03711352
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Capitol	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208649		

BZ1039
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208650**

District nun:	1	Api number:	03711352
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Capitol	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208650		

BY1040
NNE **OIL_GAS** **CAOG11000191698**
1/2 - 1 Mile

District nun:	1	Api number:	03712090
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	137.652
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C51
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:	CAOG11000191698		

BY1041
NNE **OIL_GAS** **CAOG11000207229**
1/2 - 1 Mile

District nun:	1	Api number:	03709500
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Dabney Oil Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	14-A
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:	CAOG11000207229		

BX1042
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000200799**

District nun:	1	Api number:	03700391
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	DBM Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	53
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200799		

BY1043
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207228**

District nun:	1	Api number:	03709499
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Dabney Oil Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	14
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:	CAOG11000207228		

Map ID
Direction
Distance

Database | EDR ID Number

BW1044
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208877**

District nun:	1	Api number:	03711855
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Utah Oil & Drilling Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Clark	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208877		

BT1045
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208240**

District nun:	1	Api number:	03710690
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B66
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208240		

BY1046
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208847**

District nun:	1	Api number:	03711803
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hondo Oil & Gas Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Calmont	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208847		

CE1047
ENE **OIL_GAS** **CAOG11000191331**
1/2 - 1 Mile

District nun:	1	Api number:	03711226
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	292.106
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	69-8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191331		

BZ1048
ENE **OIL_GAS** **CAOG11000206978**
1/2 - 1 Mile

District nun:	1	Api number:	03709213
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	25-A1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206978		

BZ1049
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206979**

District nun:	1	Api number:	03709214
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	25-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206979		

BT1050
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190974**

District nun:	1	Api number:	03710702
Blm well:	N	Redrill can:	CL
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	148.357
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	B61
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	IOG
Site id:	CAOG11000190974		

Map ID
Direction
Distance

Database | EDR ID Number

BT1051
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190980**

District nun:	1	Api number:	03710709
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	145.277
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	B57
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:	CAOG11000190980		

BT1052
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208243**

District nun:	1	Api number:	03710697
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B53
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208243		

BT1053
North
1/2 - 1 Mile

OIL_GAS **CAOG11000200796**

District nun:	1	Api number:	03700387
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Davidson	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200796		

BW1054
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000205298**

District nun:	1	Api number:	03706417
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Robert W. Lee Investments		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	24
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000205298		

BR1055
North
1/2 - 1 Mile

OIL_GAS **CAOG11000209068**

District nun:	1	Api number:	03712143
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C32
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209068		

BX1056
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208611**

District nun:	1	Api number:	03711303
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Goodyear	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208611		

CF1057
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000191587**

District nun:	1	Api number:	03711812
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	109.665
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B40
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:	CAOG11000191587		

Map ID
Direction
Distance

Database | EDR ID Number

BR1058
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206976**

District nun:	1	Api number:	03709210
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Axis Petroleum Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Thompson	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:	CAOG11000206976		

BN1059
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000209236**

District nun:	1	Api number:	03712378
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	15-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209236		

BZ1060
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206975**

District nun:	1	Api number:	03709209
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Axis Petroleum Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Axis Noll	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:	CAOG11000206975		

BR1061
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207068**

District nun:	1	Api number:	03709315
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Applegate & Herwick		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207068		

BZ1063
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191163**

District nun:	1	Api number:	03710966
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	284.163
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	56-2
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:	CAOG11000191163		

BZ1062
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191162**

District nun:	1	Api number:	03710966
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	284.163
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	56-2
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:	CAOG11000191162		

CG1064
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000209235**

District nun:	1	Api number:	03712377
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Shaver	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209235		

Map ID Direction Distance	Database	EDR ID Number

BQ1067
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191362**

District nun:	1	Api number:	03711254
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	238.436
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41207069.ssf		
Leasename:	Not Reported	Wellnumber:	24-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191362		

BQ1066
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191361**

District nun:	1	Api number:	03711254
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	238.436
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41207069.ssf		
Leasename:	Not Reported	Wellnumber:	24-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191361		

BQ1065
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191360**

District nun:	1	Api number:	03711254
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	238.436
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41207069.ssf		
Leasename:	Not Reported	Wellnumber:	24-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191360		

BY1068
NNE **OIL_GAS** **CAOG11000208850**
1/2 - 1 Mile

District nun:	1	Api number:	03711815
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hondo Oil & Gas Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	U.S.R.	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208850		

CG1069
NE **OIL_GAS** **CAOG11000206706**
1/2 - 1 Mile

District nun:	1	Api number:	03708820
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	R. R. Bush Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Fee	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206706		

BY1070
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208848**

District nun:	1	Api number:	03711804
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Hondo Oil & Gas Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Calmont	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208848		

BZ1071
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208525**

District nun:	1	Api number:	03711179
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	57-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208525		

Map ID Direction Distance	Database	EDR ID Number

BZ1073
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208527**

District nun:	1	Api number:	03711179
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	57-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208527		

BZ1072
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208526**

District nun:	1	Api number:	03711179
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	57-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208526		

CA1074
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191329**

District nun:	1	Api number:	03711225
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	224.83
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000191329		

CA1075
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000191330**

District nun:	1	Api number:	03711225
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	224.83
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000191330		

CH1078
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191357**

District nun:	1	Api number:	03711252
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	266.367
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-7
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:	CAOG11000191357		

CH1077
ENE **OIL_GAS** **CAOG11000191356**
1/2 - 1 Mile

District nun:	1	Api number:	03711252
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	266.367
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-7
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:	CAOG11000191356		

CH1076
ENE **OIL_GAS** **CAOG11000191355**
1/2 - 1 Mile

District nun:	1	Api number:	03711252
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	266.367
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-7
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:	CAOG11000191355		

Map ID Direction Distance	Database	EDR ID Number

CG1079
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208376**

District nun:	1	Api number:	03710944
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Shaver	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208376		

BW1080
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208100**

District nun:	1	Api number:	03710518
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Shallow Field Oil Co.		
County name:	Los Angeles	Fieldname:	Any Field
Area name:	Any Area	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000208100		

BW1081
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207063**

District nun:	1	Api number:	03709310
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Apex Petroleum Corporation, Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Stratton	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207063		

CH1082
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191325**

District nun:	1	Api number:	03711223
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	282.374
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-3
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:	CAOG11000191325		

CH1083
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191326**

District nun:	1	Api number:	03711223
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	282.374
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	24-3
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:	CAOG11000191326		

BU1084
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207235**

District nun:	1	Api number:	03709509
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	89-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207235		

CF1085
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207662**

District nun:	1	Api number:	03710010
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	City	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207662		

Map ID Direction Distance	Database	EDR ID Number

BW1086
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206760**

District nun:	1	Api number:	03708876
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	23
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206760		

BU1087
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190791**

District nun:	1	Api number:	03709522
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	190.969
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	89-24
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190791		

BV1088
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206960**

District nun:	1	Api number:	03709190
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	South Coast	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206960		

BW1089
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206970**

District nun:	1	Api number:	03709203
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wallow	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:	CAOG11000206970		

CI1090
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207657**

District nun:	1	Api number:	03710002
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Hull Brennan Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207657		

BZ1094
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208530**

District nun:	1	Api number:	03711180
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	57-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208530		

BZ1093
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208531**

District nun:	1	Api number:	03711180
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	57-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208531		

Map ID Direction Distance	Database	EDR ID Number

BZ1092
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208528**

District nun:	1	Api number:	03711180
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	57-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208528		

BZ1091
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208529**

District nun:	1	Api number:	03711180
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	57-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208529		

BU1095
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207239**

District nun:	1	Api number:	03709514
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Davis Investment Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	16
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207239		

BY1096
NNE **OIL_GAS** **CAOG11000208484**
1/2 - 1 Mile

District nun:	1	Api number:	03711133
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Sunset Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208484		

CD1097
North **OIL_GAS** **CAOG11000191459**
1/2 - 1 Mile

District nun:	1	Api number:	03711522
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	138.67
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	C8
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:	CAOG11000191459		

CG1098
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000209237**

District nun:	1	Api number:	03712379
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	15-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000209237		

CJ1099
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191332**

District nun:	1	Api number:	03711228
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	250.251
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	69-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191332		

Map ID
Direction
Distance

Database | EDR ID Number

CJ1100
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191333**

District nun:	1	Api number:	03711228
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	250.251
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	69-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191333		

CJ1101
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191334**

District nun:	1	Api number:	03711228
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	250.251
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	69-10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191334		

CC1102
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191338**

District nun:	1	Api number:	03711235
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	210.472
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000191338		

CC1103
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191339**

District nun:	1	Api number:	03711235
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	210.472
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000191339		

BY1104
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207937**

District nun:	1	Api number:	03710339
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. D. Mitchell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Fairchild	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207937		

CB1107
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000190841**

District nun:	1	Api number:	03709919
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	159.626
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Not Reported	Wellnumber:	94-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000190841		

CB1106
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000190840**

District nun:	1	Api number:	03709919
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	159.626
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Not Reported	Wellnumber:	94-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000190840		

Map ID Direction Distance	Database	EDR ID Number

CB1105
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000190839**

District nun:	1	Api number:	03709919
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	159.626
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Not Reported	Wellnumber:	94-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000190839		

CC1108
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191340**

District nun:	1	Api number:	03711236
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	230.471
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-8
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:	CAOG11000191340		

CC1110
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191342**

District nun:	1	Api number:	03711236
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	230.471
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-8
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:	CAOG11000191342		

CC1109
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191341**

District nun:	1	Api number:	03711236
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	230.471
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-8
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:	CAOG11000191341		

CB1111
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207101**

District nun:	1	Api number:	03709359
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Delaney Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Andrews	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207101		

CG1112
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208535**

District nun:	1	Api number:	03711184
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Coseboom	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208535		

CK1113
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190567**

District nun:	1	Api number:	03708777
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	132.338
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	C39
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:	CAOG11000190567		

Map ID Direction Distance	Database	EDR ID Number

CL1114
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190757**

District nun:	1	Api number:	03709368
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	198.488
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	95-1
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:	CAOG11000190757		

BU1115
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190755**

District nun:	1	Api number:	03709363
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	185.883
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	96-1
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:	CAOG11000190755		

CK1116
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207027**

District nun:	1	Api number:	03709271
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Oryx Energy Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
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:	CAOG11000207027		

BW1117
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207272**

District nun:	1	Api number:	03709555
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Calfield Oil Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Western Empire	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207272		

CH1118
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208565**

District nun:	1	Api number:	03711222
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Goddard	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208565		

BZ1119
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191164**

District nun:	1	Api number:	03710967
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	262.001
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	56-3
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:	CAOG11000191164		

BZ1120
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191165**

District nun:	1	Api number:	03710967
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	262.001
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	56-3
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:	CAOG11000191165		

Map ID Direction Distance	Database	EDR ID Number

CM1121
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207008**

District nun:	1	Api number:	03709249
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Besco Oil Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207008		

CK1122
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208258**

District nun:	1	Api number:	03710728
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Neece	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208258		

CJ1123
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191376**

District nun:	1	Api number:	03711271
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	254.847
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41207069.ssf		
Leasename:	Not Reported	Wellnumber:	69-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191376		

CL1124
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207356**

District nun:	1	Api number:	03709657
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cecille M. Colvin		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	David	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207356		

CM1125
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000209065**

District nun:	1	Api number:	03712136
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209065		

CF1126
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190886**

District nun:	1	Api number:	03710233
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	130.881
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B39
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:	CAOG11000190886		

CF1127
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208241**

District nun:	1	Api number:	03710691
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B52
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208241		

Map ID
Direction
Distance

Database | EDR ID Number

CL1128
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190756**

District nun:	1	Api number:	03709364
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	197.076
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	90-2
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:	CAOG11000190756		

CL1129
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207830**

District nun:	1	Api number:	03710195
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	B. D. Owens		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Keyes	Wellnumber:	1
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:	CAOG11000207830		

CC1130
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206971**

District nun:	1	Api number:	03709204
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Warren	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206971		

BW1131
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208833**

District nun:	1	Api number:	03711786
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Trojan Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208833		

CC1133
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191336**

District nun:	1	Api number:	03711232
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	234.363
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-4
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:	CAOG11000191336		

CC1132
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191335**

District nun:	1	Api number:	03711232
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	234.363
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-4
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:	CAOG11000191335		

CC1134
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191337**

District nun:	1	Api number:	03711232
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	234.363
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	76-4
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:	CAOG11000191337		

Map ID Direction Distance	Database	EDR ID Number

CG1135
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207069**

District nun:	1	Api number:	03709316
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atascadero Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Willett	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207069		

CE1136
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191372**

District nun:	1	Api number:	03711269
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	274.881
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	69-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191372		

CE1137
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191373**

District nun:	1	Api number:	03711269
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	274.881
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	69-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191373		

CE1138
ENE **OIL_GAS** **CAOG11000207550**
1/2 - 1 Mile

District nun:	1	Api number:	03709874
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Prudential Pet. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207550		

CF1139
NNW **OIL_GAS** **CAOG11000190888**
1/2 - 1 Mile

District nun:	1	Api number:	03710239
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	129.439
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B34
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:	CAOG11000190888		

CB1140
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190782**

District nun:	1	Api number:	03709515
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	163.403
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Blum	Wellnumber:	17
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:	CAOG11000190782		

CC1141
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208568**

District nun:	1	Api number:	03711230
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	76-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208568		

Map ID Direction Distance	Database	EDR ID Number

CE1142
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206336**

District nun:	1	Api number:	03708259
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	59-A2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206336		

CF1143
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207669**

District nun:	1	Api number:	03710020
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	City	Wellnumber:	12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207669		

CI1144
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207559**

District nun:	1	Api number:	03709883
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Queen City Oil Syndicate #1		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207559		

CM1145
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206789**

District nun:	1	Api number:	03708906
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Barry	Wellnumber:	1
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:	CAOG11000206789		

CF1146
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207232**

District nun:	1	Api number:	03709503
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cooper & Brain Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Lbca	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207232		

BY1147
NNE **OIL_GAS** **CAOG11000208233**
1/2 - 1 Mile

District nun:	1	Api number:	03710682
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Gray	Wellnumber:	1-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208233		

CG1148
NE **OIL_GAS** **CAOG11000207982**
1/2 - 1 Mile

District nun:	1	Api number:	03710386
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Morton and Dolley		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Young	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207982		

Map ID Direction Distance	Database	EDR ID Number

BX1149
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207100**

District nun:	1	Api number:	03709358
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Delaney Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Aberdeen	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207100		

CB1150
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207768**

District nun:	1	Api number:	03710131
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Kenneth Mills		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hoyt	Wellnumber:	11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207768		

CG1151
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207375**

District nun:	1	Api number:	03709681
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cordova Oil Co., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207375		

CM1152
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206438**

District nun:	1	Api number:	03708434
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dodge	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206438		

CK1153
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190566**

District nun:	1	Api number:	03708776
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	128.686
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	C38
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:	CAOG11000190566		

BY1154
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191581**

District nun:	1	Api number:	03711805
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	132.194
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C50
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:	CAOG11000191581		

CL1155
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190758**

District nun:	1	Api number:	03709372
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	186.348
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	97-1
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:	CAOG11000190758		

Map ID Direction Distance	Database	EDR ID Number

CC1156
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207738**

District nun:	1	Api number:	03710095
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	80A-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207738		

CM1157
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206790**

District nun:	1	Api number:	03708907
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Barry	Wellnumber:	1-A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206790		

CG1158
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207070**

District nun:	1	Api number:	03709317
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atascadero Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Willett	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207070		

BY1159
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208232**

District nun:	1	Api number:	03710681
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Gray	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:	CAOG11000208232		

CL1160
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190722**

District nun:	1	Api number:	03709211
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Axis Petroleum Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	178.295
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212098.ssf		
Leasename:	W.C.	Wellnumber:	6
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:	CAOG11000190722		

CK1161
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207029**

District nun:	1	Api number:	03709274
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hillseth	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207029		

CG1162
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208160**

District nun:	1	Api number:	03710580
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Lyle E. Kesselman		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Flamingo	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208160		

Map ID
Direction
Distance

Database | EDR ID Number

CE1163
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208590**

District nun:	1	Api number:	03711273
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	69-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208590		

CK1164
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190735**

District nun:	1	Api number:	03709275
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	126.04
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C44
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:	CAOG11000190735		

CA1165
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208539**

District nun:	1	Api number:	03711187
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Coseboom	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208539		

CC1166
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190871**

District nun:	1	Api number:	03710094
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	228.602
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	80-1
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:	CAOG11000190871		

CE1167
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206338**

District nun:	1	Api number:	03708261
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	59-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206338		

CN1169
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190976**

District nun:	1	Api number:	03710703
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	136.141
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B60
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:	CAOG11000190976		

CN1168
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190975**

District nun:	1	Api number:	03710703
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	136.141
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B60
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:	CAOG11000190975		

Map ID
Direction
Distance

Database | EDR ID Number

CC1170
East
1/2 - 1 Mile

OIL_GAS **CAOG11000209120**

District nun:	1	Api number:	03712211
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	81-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209120		

CO1171
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207670**

District nun:	1	Api number:	03710023
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	City	Wellnumber:	15
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207670		

CC1173
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190779**

District nun:	1	Api number:	03709508
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	206.405
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	82-6A
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:	CAOG11000190779		

CC1174
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190780**

District nun:	1	Api number:	03709508
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	206.405
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	82-6A
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:	CAOG11000190780		

CC1172
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190778**

District nun:	1	Api number:	03709508
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	206.405
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	82-6A
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:	CAOG11000190778		

CH1175
ENE **OIL_GAS** **CAOG11000208577**
1/2 - 1 Mile

District nun:	1	Api number:	03711244
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	26-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208577		

CJ1176
East **OIL_GAS** **CAOG11000208591**
1/2 - 1 Mile

District nun:	1	Api number:	03711274
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	69-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208591		

Map ID Direction Distance	Database	EDR ID Number

CF1177
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190971**

District nun:	1	Api number:	03710699
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	125.149
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	B46
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:	CAOG11000190971		

CH1178
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208575**

District nun:	1	Api number:	03711242
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	26-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208575		

CB1179
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207436**

District nun:	1	Api number:	03709755
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Fishcer Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207436		

CM1180
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208449**

District nun:	1	Api number:	03711095
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Silver Bullion Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dodge	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:	CAOG11000208449		

CM1181
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207045**

District nun:	1	Api number:	03709291
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207045		

CL1182
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190777**

District nun:	1	Api number:	03709507
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	204.999
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212318.ssf		
Leasename:	Not Reported	Wellnumber:	82-6
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:	CAOG11000190777		

CP1183
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207280**

District nun:	1	Api number:	03709566
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Frank C. Cann		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Moyle	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207280		

Map ID
Direction
Distance

Database | EDR ID Number

CK1184
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208260**

District nun:	1	Api number:	03710730
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Neece	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208260		

CB1185
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207208**

District nun:	1	Api number:	03709479
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	84
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207208		

CL1186
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190781**

District nun:	1	Api number:	03709510
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	179.04
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Blum	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190781		

CM1187
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207972**

District nun:	1	Api number:	03710374
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Scoco	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207972		

CQ1188
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208515**

District nun:	1	Api number:	03711167
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Butler	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208515		

CE1189
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206335**

District nun:	1	Api number:	03708258
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	59-A1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206335		

CG1190
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207212**

District nun:	1	Api number:	03709483
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	90
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207212		

Map ID Direction Distance	Database	EDR ID Number

CQ1191
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207435**

District nun:	1	Api number:	03709753
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Federal Drilling Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Butler	Wellnumber:	2
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:	CAOG11000207435		

CI1192
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208520**

District nun:	1	Api number:	03711172
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Woolner Fee	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208520		

CL1193
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190786**

District nun:	1	Api number:	03709518
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	174.886
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Not Reported	Wellnumber:	101-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000190786		

CL1194
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190787**

District nun:	1	Api number:	03709518
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	174.886
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Not Reported	Wellnumber:	101-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000190787		

CE1195
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000206337**

District nun:	1	Api number:	03708260
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	59-A3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206337		

CL1196
East
1/2 - 1 Mile

OIL_GAS **CAOG11000209116**

District nun:	1	Api number:	03712207
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jackson	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209116		

BY1197
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190806**

District nun:	1	Api number:	03709630
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	122.74
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C56
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:	CAOG11000190806		

Map ID Direction Distance	Database	EDR ID Number

CE1198
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208500**

District nun:	1	Api number:	03711151
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	70-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208500		

CL1199
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190790**

District nun:	1	Api number:	03709521
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	169.806
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Blum	Wellnumber:	23
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:	CAOG11000190790		

CR1200
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191461**

District nun:	1	Api number:	03711524
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	126.263
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212288.ssf		
Leasename:	Not Reported	Wellnumber:	C24
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:	CAOG11000191461		

CJ1201
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208592**

District nun:	1	Api number:	03711275
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	69-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208592		

CJ1202
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208593**

District nun:	1	Api number:	03711275
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	69-7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208593		

CG1203
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207402**

District nun:	1	Api number:	03709713
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	P. G. Cumming		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Shaver	Wellnumber:	8
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:	CAOG11000207402		

CL1204
East
1/2 - 1 Mile

OIL_GAS **CAOG11000209102**

District nun:	1	Api number:	03712191
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	91-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209102		

Map ID Direction Distance	Database	EDR ID Number

CG1205
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207374**

District nun:	1	Api number:	03709680
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cordova Oil Co., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207374		

CE1206
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208501**

District nun:	1	Api number:	03711152
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	70-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208501		

CN1207
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190972**

District nun:	1	Api number:	03710700
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	128.642
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B65
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:	CAOG11000190972		

BZ1208
ENE **OIL_GAS** **CAOG11000208582**
1/2 - 1 Mile

District nun:	1	Api number:	03711257
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	27-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208582		

CF1209
NNW **OIL_GAS** **CAOG11000207661**
1/2 - 1 Mile

District nun:	1	Api number:	03710009
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	City	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207661		

CL1210
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206974**

District nun:	1	Api number:	03709208
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Axis Petroleum Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206974		

CO1211
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207668**

District nun:	1	Api number:	03710019
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	City	Wellnumber:	11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207668		

Map ID Direction Distance	Database	EDR ID Number

CK1212
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207726**

District nun:	1	Api number:	03710082
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Macrate Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Capitol	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207726		

CS1213
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208538**

District nun:	1	Api number:	03711186
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	18-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208538		

CT1215
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190784**

District nun:	1	Api number:	03709516
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	162.529
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Blum	Wellnumber:	18
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:	CAOG11000190784		

CT1214
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190783**

District nun:	1	Api number:	03709516
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	162.529
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Blum	Wellnumber:	18
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:	CAOG11000190783		

CQ1216
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000190860**

District nun:	1	Api number:	03710008
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Oil Operators Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	74.732
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212078.ssf		
Leasename:	Butler	Wellnumber:	1
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:	CAOG11000190860		

CU1217
ENE **OIL_GAS** **CAOG11000191366**
1/2 - 1 Mile

District nun:	1	Api number:	03711260
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	226.715
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-A5
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:	CAOG11000191366		

CU1218
ENE **OIL_GAS** **CAOG11000191367**
1/2 - 1 Mile

District nun:	1	Api number:	03711260
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	226.715
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-A5
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:	CAOG11000191367		

Map ID
Direction
Distance

	Database	EDR ID Number

CI1219
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208287**

District nun:	1	Api number:	03710773
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Three for One Oil Royalties		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
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:	CAOG11000208287		

CU1220
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208580**

District nun:	1	Api number:	03711255
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hamilton	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208580		

CM1221
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207044**

District nun:	1	Api number:	03709290
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Affiliated Petro. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207044		

CP1222
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208114**

District nun:	1	Api number:	03710534
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208114		

CG1224
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207992**

District nun:	1	Api number:	03710396
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Myrwane Oil Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207992		

CG1223
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207991**

District nun:	1	Api number:	03710396
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Myrwane Oil Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207991		

CP1225
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207853**

District nun:	1	Api number:	03710219
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Christian Petersen		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207853		

Map ID Direction Distance	Database	EDR ID Number

CD1226
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208773**

District nun:	1	Api number:	03711518
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Davidson	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208773		

CL1227
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208495**

District nun:	1	Api number:	03711146
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	142
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208495		

CH1228
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208576**

District nun:	1	Api number:	03711243
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	26-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208576		

CK1229
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208259**

District nun:	1	Api number:	03710729
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Neece	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208259		

CK1230
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206670**

District nun:	1	Api number:	03708778
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C49
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:	CAOG11000206670		

CM1231
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207838**

District nun:	1	Api number:	03710204
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Painted Hills Oil Ass'n		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
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:	CAOG11000207838		

CV1232
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000209101**

District nun:	1	Api number:	03712190
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Yunker, Morton & Dolley		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Associates	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209101		

Map ID
Direction
Distance

Database | EDR ID Number

CO1233
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190889**

District nun:	1	Api number:	03710240
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	130.971
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B32
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:	CAOG11000190889		

CU1234
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208583**

District nun:	1	Api number:	03711259
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hamilton	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208583		

CJ1235
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190941**

District nun:	1	Api number:	03710524
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	229.476
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	149
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:	CAOG11000190941		

CV1236
NNE **OIL_GAS** **CAOG11000208175**
1/2 - 1 Mile

District nun:	1	Api number:	03710599
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C55
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208175		

CP1237
ESE **OIL_GAS** **CAOG11000208113**
1/2 - 1 Mile

District nun:	1	Api number:	03710533
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208113		

CV1238
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207071**

District nun:	1	Api number:	03709318
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207071		

CJ1239
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206779**

District nun:	1	Api number:	03708894
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	A1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206779		

Map ID Direction Distance	Database	EDR ID Number

CG1240
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000190844**

District nun:	1	Api number:	03709941
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Pacific Energy Resources Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	123.298
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Harrison	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190844		

CR1241
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208771**

District nun:	1	Api number:	03711515
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Davidson	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208771		

CQ1242
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207078**

District nun:	1	Api number:	03709325
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	14
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207078		

CW1243
NNE **OIL_GAS** **CAOG11000207444**
1/2 - 1 Mile

District nun:	1	Api number:	03709763
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Ford & Eves Synd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000207444		

CQ1244
NNW **OIL_GAS** **CAOG11000207077**
1/2 - 1 Mile

District nun:	1	Api number:	03709324
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207077		

CR1245
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208770**

District nun:	1	Api number:	03711513
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Davidson	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208770		

CX1246
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206410**

District nun:	1	Api number:	03708397
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Raleigh Mckeon	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206410		

Map ID Direction Distance	Database	EDR ID Number

CY1249
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191161**

District nun:	1	Api number:	03710965
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	251.49
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	56-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	6234		
Abandonedd:	Not Reported	Completion:	03-DEC-13
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000191161		

CY1247
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191159**

District nun:	1	Api number:	03710965
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	251.49
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	56-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	6234		
Abandonedd:	Not Reported	Completion:	03-DEC-13
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000191159		

CY1248
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191160**

District nun:	1	Api number:	03710965
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	251.49
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	56-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	6234		
Abandonedd:	Not Reported	Completion:	03-DEC-13
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000191160		

CT1250
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191119**

District nun:	1	Api number:	03710919
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	160.514
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	125
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:	CAOG11000191119		

CM1251
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207833**

District nun:	1	Api number:	03710199
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Pacific Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	8
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:	CAOG11000207833		

CO1252
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207863**

District nun:	1	Api number:	03710235
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	City	Wellnumber:	24
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207863		

CT1253
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208366**

District nun:	1	Api number:	03710925
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	121
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208366		

Map ID
Direction
Distance

Database | EDR ID Number

CJ1254
East
1/2 - 1 Mile

OIL_GAS **CAOG11000200805**

District nun:	1	Api number:	03700406
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Lacal Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Drake	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200805		

CV1255
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208236**

District nun:	1	Api number:	03710685
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Gray	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208236		

CN1256
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190966**

District nun:	1	Api number:	03710693
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	122.03
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B64
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:	CAOG11000190966		

CP1257
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208112**

District nun:	1	Api number:	03710532
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208112		

CV1258
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208174**

District nun:	1	Api number:	03710597
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	McBo Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208174		

CQ1259
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000209091**

District nun:	1	Api number:	03712180
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Woolner Oil Corp., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal Hill	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209091		

CK1260
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208842**

District nun:	1	Api number:	03711796
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Twin Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Coastal	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208842		

Map ID
Direction
Distance

Database | EDR ID Number

CQ1261
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208518**

District nun:	1	Api number:	03711170
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal Hill	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208518		

CY1263
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191167**

District nun:	1	Api number:	03710968
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	249.512
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	56-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191167		

CY1262
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191166**

District nun:	1	Api number:	03710968
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	249.512
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	56-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191166		

CQ1264
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208517**

District nun:	1	Api number:	03711169
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal Hill	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208517		

CN1265
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208245**

District nun:	1	Api number:	03710707
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Harlow Kent	Wellnumber:	17
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208245		

CZ1266
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208492**

District nun:	1	Api number:	03711143
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	141
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208492		

CM1267
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206955**

District nun:	1	Api number:	03709185
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Schaeffer	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:	CAOG11000206955		

Map ID Direction Distance	Database	EDR ID Number

CV1268
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207589**

District nun:	1	Api number:	03709915
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Harry S. Rothschild		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Yunker	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207589		

CO1269
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190908**

District nun:	1	Api number:	03710263
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	132.981
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B28
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:	CAOG11000190908		

CK1270
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207607**

District nun:	1	Api number:	03709936
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Harmony Lorraine Oil Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207607		

CQ1271
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000200806**

District nun:	1	Api number:	03700407
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Butler	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200806		

CJ1273
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191216**

District nun:	1	Api number:	03711004
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	223.19
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	145
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:	CAOG11000191216		

CJ1274
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191217**

District nun:	1	Api number:	03711004
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	223.19
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	145
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:	CAOG11000191217		

CJ1272
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191215**

District nun:	1	Api number:	03711004
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	223.19
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	145
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:	CAOG11000191215		

Map ID Direction Distance	Database	EDR ID Number

CP1275
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208368**

District nun:	1	Api number:	03710927
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Patton-Wilson	Wellnumber:	12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208368		

CO1276
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190912**

District nun:	1	Api number:	03710267
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	127.582
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B27
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:	CAOG11000190912		

DA1277
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207663**

District nun:	1	Api number:	03710011
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	City	Wellnumber:	3
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:	CAOG11000207663		

CL1278
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208493**

District nun:	1	Api number:	03711144
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	134
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208493		

CY1279
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191176**

District nun:	1	Api number:	03710979
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	241.696
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Alamitos	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191176		

DB1280
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000209279**

District nun:	1	Api number:	03712427
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Wood-Callahan Oil Co., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	14
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209279		

CU1281
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191168**

District nun:	1	Api number:	03710969
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	192.673
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	56-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000191168		

Map ID
Direction
Distance

Database | EDR ID Number

CU1282
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191169**

District nun:	1	Api number:	03710969
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	192.673
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	56-5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000191169		

CL1283
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208356**

District nun:	1	Api number:	03710915
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Patton-Wilson	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208356		

DC1284
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207117**

District nun:	1	Api number:	03709382
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	2H Property 4101, LLC		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Garner-Kelly	Wellnumber:	4
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:	CAOG11000207117		

DD1285
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190887**

District nun:	1	Api number:	03710234
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	120.315
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B38
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:	CAOG11000190887		

DB1286
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207962**

District nun:	1	Api number:	03710364
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Jasper	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:	CAOG11000207962		

CU1287
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191347**

District nun:	1	Api number:	03711245
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	183.06
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	26-6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191347		

CP1288
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207205**

District nun:	1	Api number:	03709476
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	79
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207205		

Map ID Direction Distance	Database	EDR ID Number

CW1290
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207828**

District nun:	1	Api number:	03710193
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Oro Negro Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Spath	Wellnumber:	1
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:	CAOG11000207828		

CW1289
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207827**

District nun:	1	Api number:	03710193
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Oro Negro Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Spath	Wellnumber:	1
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:	CAOG11000207827		

CO1291
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190909**

District nun:	1	Api number:	03710264
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	133.644
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B26
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:	CAOG11000190909		

CQ1292
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206455**

District nun:	1	Api number:	03708462
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Butler	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206455		

CQ1293
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000209269**

District nun:	1	Api number:	03712417
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	V. R. G. Wilbur Oil		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	D'Angelo	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209269		

CV1294
NNE **OIL_GAS** **CAOG11000190568**
1/2 - 1 Mile

District nun:	1	Api number:	03708779
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	108.621
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C48
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:	CAOG11000190568		

CV1295
NNE **OIL_GAS** **CAOG11000208234**
1/2 - 1 Mile

District nun:	1	Api number:	03710683
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Gray	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208234		

Map ID
Direction
Distance

Database | EDR ID Number

CR1296
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206824**

District nun:	1	Api number:	03708953
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C23
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206824		

DD1297
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190906**

District nun:	1	Api number:	03710262
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	125.054
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B37
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:	CAOG11000190906		

DD1298
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190907**

District nun:	1	Api number:	03710262
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	125.054
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B37
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:	CAOG11000190907		

CR1299
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206825**

District nun:	1	Api number:	03708954
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C17
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206825		

CZ1300
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206780**

District nun:	1	Api number:	03708895
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	A2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206780		

CV1301
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207593**

District nun:	1	Api number:	03709921
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dye	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207593		

CT1302
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208365**

District nun:	1	Api number:	03710924
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	159
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208365		

Map ID Direction Distance	Database	EDR ID Number

CW1303
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207945**

District nun:	1	Api number:	03710347
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Alfred D. Mitchell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Koeberle	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207945		

CR1304
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206784**

District nun:	1	Api number:	03708901
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C31
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206784		

CQ1305
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207988**

District nun:	1	Api number:	03710393
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Harold C. Morton		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Power	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207988		

CV1306
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208235**

District nun:	1	Api number:	03710684
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Gray	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208235		

CV1307
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190842**

District nun:	1	Api number:	03709920
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	107.7
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C54
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:	CAOG11000190842		

DE1308
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208489**

District nun:	1	Api number:	03711140
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Superior Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Britton	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208489		

DE1309
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207028**

District nun:	1	Api number:	03709273
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Boswell Perforating Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Britton	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207028		

Map ID Direction Distance	Database	EDR ID Number

CQ1310
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206699**

District nun:	1	Api number:	03708813
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	R. R. Bush Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	5
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:	CAOG11000206699		

CU1312
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193376**

District nun:	1	Api number:	03721446
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	178.251
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-10
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:	CAOG11000193376		

CU1313
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193377**

District nun:	1	Api number:	03721446
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	178.251
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-10
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:	CAOG11000193377		

CU1311
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193375**

District nun:	1	Api number:	03721446
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	178.251
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-10
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:	CAOG11000193375		

DF1315
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191244**

District nun:	1	Api number:	03711016
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	185.615
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	148
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	2620		
Abandonedd:	Not Reported	Completion:	26-APR-12
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191244		

DF1316
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191245**

District nun:	1	Api number:	03711016
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	185.615
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	148
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	2620		
Abandonedd:	Not Reported	Completion:	26-APR-12
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191245		

DF1314
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191243**

District nun:	1	Api number:	03711016
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	185.615
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	148
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	2620		
Abandonedd:	Not Reported	Completion:	26-APR-12
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000191243		

Map ID
Direction
Distance

Database | EDR ID Number

CU1317
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193378**

District nun:	1	Api number:	03721447
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.3
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-11
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:	CAOG11000193378		

CU1318
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193379**

District nun:	1	Api number:	03721447
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.3
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-11
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:	CAOG11000193379		

DG1319
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207942**

District nun:	1	Api number:	03710344
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Alfred D. Mitchell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207942		

CU1320
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193382**

District nun:	1	Api number:	03721481
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	182.014
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-12
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:	CAOG11000193382		

DD1321
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190910**

District nun:	1	Api number:	03710265
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	115.693
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B36
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:	CAOG11000190910		

CQ1322
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000209092**

District nun:	1	Api number:	03712181
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Woolner Oil Corp., Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal Hill	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209092		

CU1323
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193441**

District nun:	1	Api number:	03721599
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	186.081
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-7
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:	CAOG11000193441		

Map ID
Direction
Distance

Database | EDR ID Number

CU1324
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193442**

District nun:	1	Api number:	03721599
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	186.081
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-7
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:	CAOG11000193442		

DH1325
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207288**

District nun:	1	Api number:	03709580
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cavalier Petro. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Delta	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207288		

CU1326
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193401**

District nun:	1	Api number:	03721507
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	183.069
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-6
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:	CAOG11000193401		

CU1327
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193443**

District nun:	1	Api number:	03721600
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	182.886
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000193443		

CU1328
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193444**

District nun:	1	Api number:	03721600
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	182.886
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000193444		

DE1329
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207659**

District nun:	1	Api number:	03710005
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bergstrom	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207659		

CX1330
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207914**

District nun:	1	Api number:	03710309
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Industrial Oil Synd. #3		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	31
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:	CAOG11000207914		

Map ID Direction Distance	Database	EDR ID Number

CU1332
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191364**

District nun:	1	Api number:	03711258
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.697
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000191364		

CU1333
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191365**

District nun:	1	Api number:	03711258
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.697
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000191365		

CU1331
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191363**

District nun:	1	Api number:	03711258
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.697
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000191363		

CO1334
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190905**

District nun:	1	Api number:	03710261
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	121.687
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	B25
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:	CAOG11000190905		

CQ1335
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208516**

District nun:	1	Api number:	03711168
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Signal Hill	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208516		

DA1336
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207865**

District nun:	1	Api number:	03710237
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	City	Wellnumber:	26
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207865		

CQ1337
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208519**

District nun:	1	Api number:	03711171
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal Hill	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208519		

Map ID
Direction
Distance

Database | EDR ID Number

CP1338
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208885**

District nun:	1	Api number:	03711864
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Davis Investment Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Severns	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208885		

CV1339
North
1/2 - 1 Mile

OIL_GAS **CAOG11000215141**

District nun:	1	Api number:	03723844
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bergstrom	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000215141		

CS1340
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208534**

District nun:	1	Api number:	03711183
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Coseboom	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208534		

CV1341
NNE **OIL_GAS** **CAOG11000207496**
1/2 - 1 Mile

District nun:	1	Api number:	03709819
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	L.B.	Wellnumber:	23
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:	CAOG11000207496		

DI1342
East **OIL_GAS** **CAOG11000208360**
1/2 - 1 Mile

District nun:	1	Api number:	03710920
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	124
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208360		

CT1343
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191120**

District nun:	1	Api number:	03710921
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	158.892
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	120
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:	CAOG11000191120		

CT1344
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191121**

District nun:	1	Api number:	03710921
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	158.892
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	120
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:	CAOG11000191121		

Map ID Direction Distance	Database	EDR ID Number

CT1345
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191122**

District nun:	1	Api number:	03710921
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	158.892
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	120
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:	CAOG11000191122		

DG1346
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207437**

District nun:	1	Api number:	03709756
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Herman Fisher		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Perry	Wellnumber:	1
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:	CAOG11000207437		

CR1347
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208660**

District nun:	1	Api number:	03711368
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Crown Central Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	28
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208660		

CQ1348
NNW **OIL_GAS** **CAOG11000207878**
1/2 - 1 Mile

District nun:	1	Api number:	03710271
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Garrison	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207878		

DF1349
ENE **OIL_GAS** **CAOG11000191223**
1/2 - 1 Mile

District nun:	1	Api number:	03711007
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	181.362
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	151
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:	CAOG11000191223		

DF1350
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191224**

District nun:	1	Api number:	03711007
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	181.362
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	151
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:	CAOG11000191224		

CZ1351
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206781**

District nun:	1	Api number:	03708896
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	A-3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206781		

Map ID Direction Distance	Database	EDR ID Number

CV1352
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207500**

District nun:	1	Api number:	03709823
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wyatt	Wellnumber:	23A
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207500		

CX1353
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207916**

District nun:	1	Api number:	03710311
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Industrial Oil Syndicate #4		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	41A
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:	CAOG11000207916		

CX1354
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207448**

District nun:	1	Api number:	03709767
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Fred B. Foster & Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	41
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:	CAOG11000207448		

CU1356
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193600**

District nun:	1	Api number:	03721938
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.83
Locationde:	DeSoto		
Gissourcec:	gps		
Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-8
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:	CAOG11000193600		

CU1355
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000193599**

District nun:	1	Api number:	03721938
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.83
Locationde:	DeSoto		
Gissourcec:	gps		

Comments:	41212298.ssf		
Leasename:	Not Reported	Wellnumber:	27-8
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:	CAOG11000193599		

CR1357
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190925**

District nun:	1	Api number:	03710411
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	112.722
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C16
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:	CAOG11000190925		

CV1358
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207881**

District nun:	1	Api number:	03710274
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Pan Hellenic	Wellnumber:	1
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:	CAOG11000207881		

Map ID Direction Distance	Database	EDR ID Number

CY1361
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191242**

District nun:	1	Api number:	03711015
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	188.077
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	152
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:	CAOG11000191242		

CY1360
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191241**

District nun:	1	Api number:	03711015
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	188.077
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	152
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:	CAOG11000191241		

CY1359
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191240**

District nun:	1	Api number:	03711015
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	188.077
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	152
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:	CAOG11000191240		

CP1362
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208884**

District nun:	1	Api number:	03711863
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Victory Oil Company LLC		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208884		

CQ1363
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208093**

District nun:	1	Api number:	03710511
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Selbar Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Pooler 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:	POG
Site id:	CAOG11000208093		

CU1364
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208581**

District nun:	1	Api number:	03711256
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	27-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208581		

DD1365
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190965**

District nun:	1	Api number:	03710692
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	113.578
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	B45
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:	CAOG11000190965		

Map ID
Direction
Distance

Database | EDR ID Number

CZ1366
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208494**

District nun:	1	Api number:	03711145
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Superior Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Crew	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208494		

DA1367
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207451**

District nun:	1	Api number:	03709770
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Fred B. Foster & Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	70
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:	CAOG11000207451		

CO1368
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190883**

District nun:	1	Api number:	03710229
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	116.804
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B23
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:	CAOG11000190883		

CR1369
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208007**

District nun:	1	Api number:	03710412
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	W. E. Nicolai & Son		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	29
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208007		

DJ1370
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190973**

District nun:	1	Api number:	03710701
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	127.351
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B74
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:	CAOG11000190973		

1371
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208182**

District nun:	1	Api number:	03710608
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Louis Melczer		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	4
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:	CAOG11000208182		

DE1372
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208491**

District nun:	1	Api number:	03711142
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Superior Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Britton	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208491		

Map ID
Direction
Distance

Database | EDR ID Number

DJ1373
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191457**

District nun:	1	Api number:	03711519
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	120.239
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C7
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:	CAOG11000191457		

CV1374
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207532**

District nun:	1	Api number:	03709856
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Pierce Petroleum Corp. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207532		

DA1375
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207875**

District nun:	1	Api number:	03710268
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Garrison	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207875		

DD1376
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207862**

District nun:	1	Api number:	03710230
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B31
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207862		

CZ1377
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206423**

District nun:	1	Api number:	03708416
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	133
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000206423		

CZ1378
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190736**

District nun:	1	Api number:	03709298
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	E. S. Arnn		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	210.185
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Drake	Wellnumber:	1
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:	CAOG11000190736		

CQ1379
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207312**

District nun:	1	Api number:	03709607
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207312		

Map ID Direction Distance	Database	EDR ID Number

DA1380
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207876**

District nun:	1	Api number:	03710269
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Garrison	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207876		

DA1381
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207864**

District nun:	1	Api number:	03710236
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	City	Wellnumber:	25
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207864		

DI1382
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206445**

District nun:	1	Api number:	03708442
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Freeman	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206445		

CY1383
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191262**

District nun:	1	Api number:	03711030
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	162.543
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	155
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191262		

CY1384
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191263**

District nun:	1	Api number:	03711030
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	162.543
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	155
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191263		

DA1385
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208631**

District nun:	1	Api number:	03711326
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	19
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208631		

CZ1386
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191449**

District nun:	1	Api number:	03711506
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	211.658
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	140
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:	CAOG11000191449		

Map ID Direction Distance	Database	EDR ID Number

CZ1387
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191450**

District nun:	1	Api number:	03711506
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	211.658
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	140
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:	CAOG11000191450		

CZ1388
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191451**

District nun:	1	Api number:	03711506
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	211.658
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	140
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:	CAOG11000191451		

DI1389
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207644**

District nun:	1	Api number:	03709987
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Lacal Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hocking	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207644		

DD1390
NNW **OIL_GAS** **CAOG11000207664**
1/2 - 1 Mile

District nun:	1	Api number:	03710012
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	City	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207664		

DH1391
ESE **OIL_GAS** **CAOG11000207022**
1/2 - 1 Mile

District nun:	1	Api number:	03709266
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	R. E. Bletcher		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Stockwell	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207022		

DE1392
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190803**

District nun:	1	Api number:	03709606
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	114.168
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C29
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	7025		
Abandonedd:	Not Reported	Completion:	20-AUG-13
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000190803		

DJ1393
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208772**

District nun:	1	Api number:	03711516
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Davidson	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208772		

Map ID Direction Distance	Database	EDR ID Number

DI1394
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190856**

District nun:	1	Api number:	03709988
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	166.796
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	119
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:	CAOG11000190856		

DD1395
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000200810**

District nun:	1	Api number:	03700412
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Harlow Kent	Wellnumber:	18
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200810		

DK1396
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208367**

District nun:	1	Api number:	03710926
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Patton-Wilson	Wellnumber:	11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208367		

CV1397
NNE **OIL_GAS** **CAOG11000207979**
1/2 - 1 Mile

District nun:	1	Api number:	03710382
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Morton and Dolley		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Dye	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207979		

DI1398
East **OIL_GAS** **CAOG11000206446**
1/2 - 1 Mile

District nun:	1	Api number:	03708443
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	118
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206446		

DD1399
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190978**

District nun:	1	Api number:	03710705
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	115.861
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	B51
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	3318		
Abandonedd:	Not Reported	Completion:	24-OCT-11
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000190978		

DA1400
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207877**

District nun:	1	Api number:	03710270
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Garrison	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207877		

Map ID
Direction
Distance

Database | EDR ID Number

DE1401
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190804**

District nun:	1	Api number:	03709608
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	112.031
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C30
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190804		

CZ1402
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208764**

District nun:	1	Api number:	03711507
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	139
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208764		

CZ1404
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208766**

District nun:	1	Api number:	03711507
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	139
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208766		

CZ1403
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208765**

District nun:	1	Api number:	03711507
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	139
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208765		

DL1405
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190588**

District nun:	1	Api number:	03708948
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	171.145
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	157
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:	CAOG11000190588		

DH1406
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208142**

District nun:	1	Api number:	03710562
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Jotec Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000208142		

DM1407
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000209069**

District nun:	1	Api number:	03712144
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	19-I1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209069		

Map ID Direction Distance	Database	EDR ID Number

DJ1408
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190979**

District nun:	1	Api number:	03710708
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	114.322
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	B56
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:	CAOG11000190979		

CV1409
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000190808**

District nun:	1	Api number:	03709650
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	103.139
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C53
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:	CAOG11000190808		

DC1410
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207748**

District nun:	1	Api number:	03710105
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Felix Mallon		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Butler-Holcombe	Wellnumber:	1
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:	CAOG11000207748		

DN1411
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190590**

District nun:	1	Api number:	03708951
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	114.028
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C15
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:	CAOG11000190590		

DN1412
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190591**

District nun:	1	Api number:	03708952
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	117.868
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C22
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190591		

DG1413
NE **OIL_GAS** **CAOG11000208498**
1/2 - 1 Mile

District nun:	1	Api number:	03711149
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Superior Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Kent & Garth	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:	CAOG11000208498		

DC1414
NW **OIL_GAS** **CAOG11000208468**
1/2 - 1 Mile

District nun:	1	Api number:	03711113
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Stabler Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000208468		

Map ID Direction Distance	Database	EDR ID Number

DF1416
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191249**

District nun:	1	Api number:	03711020
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.188
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	147
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191249		

DF1415
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191248**

District nun:	1	Api number:	03711020
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	180.188
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	147
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191248		

DI1417
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207167**

District nun:	1	Api number:	03709439
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	114
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207167		

DI1418
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207168**

District nun:	1	Api number:	03709439
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	114
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207168		

CY1419
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191185**

District nun:	1	Api number:	03710983
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	150.514
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	154
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191185		

CY1420
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191186**

District nun:	1	Api number:	03710983
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	150.514
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	154
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191186		

DL1421
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208052**

District nun:	1	Api number:	03710463
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Santa Cruz Island Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hilton	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208052		

Map ID
Direction
Distance

Database | EDR ID Number

DE1422
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190859**

District nun:	1	Api number:	03710006
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	104.642
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212308.ssf		
Leasename:	Not Reported	Wellnumber:	C43
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190859		

DA1423
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000214794**

District nun:	1	Api number:	03721991
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	City Of Long Beach	Wellnumber:	58
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	POG
Site id:	CAOG11000214794		

DM1424
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208574**

District nun:	1	Api number:	03711241
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Kent-Garth	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208574		

CV1425
NNE **OIL_GAS** **CAOG11000209071**
1/2 - 1 Mile

District nun:	1	Api number:	03712146
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Ideal	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209071		

DA1426
NNW **OIL_GAS** **CAOG11000191699**
1/2 - 1 Mile

District nun:	1	Api number:	03712104
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Imperial Occidental		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	70.687
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212078.ssf		
Leasename:	West American	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191699		

DO1427
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207378**

District nun:	1	Api number:	03709684
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Courtney Petro. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
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:	CAOG11000207378		

CZ1428
East
1/2 - 1 Mile

OIL_GAS **CAOG11000209061**

District nun:	1	Api number:	03712133
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	132
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209061		

Map ID
Direction
Distance

Database | EDR ID Number

DA1429
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208638**

District nun:	1	Api number:	03711333
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	26
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208638		

DM1430
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000209066**

District nun:	1	Api number:	03712139
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	19-F1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209066		

DO1431
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207317**

District nun:	1	Api number:	03709613
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	D'Angelo	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207317		

DL1432
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208050**

District nun:	1	Api number:	03710461
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Santa Cruz Island Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hilton	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:	CAOG11000208050		

DE1433
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190805**

District nun:	1	Api number:	03709620
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	108.771
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C28
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:	CAOG11000190805		

DP1434
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207660**

District nun:	1	Api number:	03710007
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bergstrom	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207660		

DE1435
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208490**

District nun:	1	Api number:	03711141
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Superior Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Britton	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208490		

Map ID Direction Distance	Database	EDR ID Number

DA1436
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000209046**

District nun:	1	Api number:	03712107
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	West American Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	De Augustine	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209046		

DP1437
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000191719**

District nun:	1	Api number:	03712147
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	109.592
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C47
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:	CAOG11000191719		

DJ1438
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190977**

District nun:	1	Api number:	03710704
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	113.064
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	B59
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:	CAOG11000190977		

CZ1439
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206671**

District nun:	1	Api number:	03708780
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Boswell Petroleum Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Crest	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206671		

DA1440
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206957**

District nun:	1	Api number:	03709187
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cockriel Petroleum		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Simplex	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206957		

CZ1441
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208282**

District nun:	1	Api number:	03710768
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Wilson Fee	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208282		

DO1442
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208455**

District nun:	1	Api number:	03711101
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Geo. W. Smith		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mack	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208455		

Map ID Direction Distance	Database	EDR ID Number

DH1443
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000209021**

District nun:	1	Api number:	03712076
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Long Beach	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209021		

DF1445
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191201**

District nun:	1	Api number:	03710997
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	191.638
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	143
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:	CAOG11000191201		

DF1444
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191200**

District nun:	1	Api number:	03710997
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	191.638
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	143
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:	CAOG11000191200		

DF1446
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191202**

District nun:	1	Api number:	03710997
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	191.638
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	143
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:	CAOG11000191202		

CY1449
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191261**

District nun:	1	Api number:	03711029
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	153.838
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	153
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191261		

CY1450
ENE **OIL_GAS** **CAOG11000191260**
1/2 - 1 Mile

District nun:	1	Api number:	03711029
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	153.838
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	153
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191260		

CY1447
ENE **OIL_GAS** **CAOG11000191259**
1/2 - 1 Mile

District nun:	1	Api number:	03711029
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	153.838
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	153
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191259		

Map ID Direction Distance	Database	EDR ID Number

CY1448
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191258**

District nun:	1	Api number:	03711029
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	153.838
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	153
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191258		

CZ1451
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206422**

District nun:	1	Api number:	03708415
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Delaney-Freeman	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206422		

DQ1452
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208105**

District nun:	1	Api number:	03710525
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	136
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208105		

CZ1453
East
1/2 - 1 Mile

OIL_GAS **CAOG11000209060**

District nun:	1	Api number:	03712132
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Crown City	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209060		

DR1454
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191117**

District nun:	1	Api number:	03710917
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	136.865
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	103
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191117		

DR1455
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191118**

District nun:	1	Api number:	03710917
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	136.865
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	103
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191118		

DN1456
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206809**

District nun:	1	Api number:	03708927
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Harlow	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206809		

Map ID
Direction
Distance

Database | EDR ID Number

DN1457
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190724**

District nun:	1	Api number:	03709234
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	114.742
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C14
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:	CAOG11000190724		

DO1458
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207309**

District nun:	1	Api number:	03709603
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207309		

DN1459
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190726**

District nun:	1	Api number:	03709236
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	111.745
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C21
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190726		

DR1460
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208357**

District nun:	1	Api number:	03710916
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Patton-Wilson	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208357		

DQ1463
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191220**

District nun:	1	Api number:	03711005
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	188.434
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	135
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:	CAOG11000191220		

DQ1462
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191219**

District nun:	1	Api number:	03711005
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	188.434
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	135
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:	CAOG11000191219		

DQ1461
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191218**

District nun:	1	Api number:	03711005
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	188.434
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	135
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:	CAOG11000191218		

Map ID Direction Distance	Database	EDR ID Number

DH1464
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000206980**

District nun:	1	Api number:	03709215
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Aztec Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Aztec	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206980		

DL1465
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208053**

District nun:	1	Api number:	03710464
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Santa Cruz Island Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hilton Lease	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208053		

DN1466
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208655**

District nun:	1	Api number:	03711357
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Crown Central Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208655		

CZ1468
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191453**

District nun:	1	Api number:	03711508
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	193.653
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	130
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:	CAOG11000191453		

CZ1467
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191452**

District nun:	1	Api number:	03711508
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	193.653
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	130
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:	CAOG11000191452		

CZ1471
East
1/2 - 1 Mile

OIL_GAS **CAOG11000209064**

District nun:	1	Api number:	03712134
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	131
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209064		

CZ1469
East
1/2 - 1 Mile

OIL_GAS **CAOG11000209062**

District nun:	1	Api number:	03712134
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	131
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209062		

Map ID Direction Distance	Database	EDR ID Number

CZ1470
East
1/2 - 1 Mile

OIL_GAS **CAOG11000209063**

District nun:	1	Api number:	03712134
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	131
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209063		

DM1472
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207372**

District nun:	1	Api number:	03709678
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cooper Petro. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000207372		

DI1473
East
1/2 - 1 Mile

OIL_GAS **CAOG11000193567**

District nun:	1	Api number:	03721831
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	189.412
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	304
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000193567		

DI1474
East
1/2 - 1 Mile

OIL_GAS **CAOG11000193568**

District nun:	1	Api number:	03721831
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	189.412
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	304
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AOG
Site id:	CAOG11000193568		

DA1475
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207666**

District nun:	1	Api number:	03710014
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	ExxonMobil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	City	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207666		

DO1476
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206958**

District nun:	1	Api number:	03709188
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Imperial Occidental		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Simplex	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206958		

DQ1477
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208522**

District nun:	1	Api number:	03711174
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Babcock	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208522		

Map ID Direction Distance	Database	EDR ID Number

DM1478
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000209070**

District nun:	1	Api number:	03712145
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	19-I2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209070		

DO1479
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206794**

District nun:	1	Api number:	03708911
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bernstein	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206794		

DF1481
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191268**

District nun:	1	Api number:	03711033
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	158.142
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	144
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000191268		

DF1480
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191267**

District nun:	1	Api number:	03711033
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	158.142
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	144
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000191267		

DI1482
East
1/2 - 1 Mile

OIL_GAS **CAOG11000193565**

District nun:	1	Api number:	03721826
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	189.942
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	300
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000193565		

DI1483
East
1/2 - 1 Mile

OIL_GAS **CAOG11000193566**

District nun:	1	Api number:	03721826
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	189.942
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	300
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000193566		

DI1484
East
1/2 - 1 Mile

OIL_GAS **CAOG11000200809**

District nun:	1	Api number:	03700411
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Griswold	Wellnumber:	1-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000200809		

Map ID Direction Distance	Database	EDR ID Number

DJ1485
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191455**

District nun:	1	Api number:	03711514
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	114.817
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C6
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:	CAOG11000191455		

DA1486
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206950**

District nun:	1	Api number:	03709177
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	R.C.	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206950		

DL1487
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208853**

District nun:	1	Api number:	03711818
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Union Oil Company of California		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hart	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208853		

DP1488
NNE **OIL_GAS** **CAOG11000208166**
1/2 - 1 Mile

District nun:	1	Api number:	03710587
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	L. T. Mayo		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Baird	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208166		

DL1489
ENE **OIL_GAS** **CAOG11000190589**
1/2 - 1 Mile

District nun:	1	Api number:	03708949
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	148.421
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	156
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190589		

DH1490
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208602**

District nun:	1	Api number:	03711288
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Dev. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Rinebarger	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:	CAOG11000208602		

DO1491
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207310**

District nun:	1	Api number:	03709604
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Coast Supply Co. Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207310		

Map ID
Direction
Distance

Database | EDR ID Number

DI1493
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190775**

District nun:	1	Api number:	03709504
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	155.194
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	113
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:	CAOG11000190775		

DI1492
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190774**

District nun:	1	Api number:	03709504
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	155.194
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	113
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:	CAOG11000190774		

DI1494
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190776**

District nun:	1	Api number:	03709504
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	155.194
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	113
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:	CAOG11000190776		

DM1495
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208139**

District nun:	1	Api number:	03710559
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	A. S. Johnston Drilling Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Fee	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:	CAOG11000208139		

DO1496
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206791**

District nun:	1	Api number:	03708908
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Bernstein	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206791		

DJ1497
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208242**

District nun:	1	Api number:	03710694
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Harlow Kent	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208242		

DK1499
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208364**

District nun:	1	Api number:	03710923
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	91
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208364		

Map ID Direction Distance	Database	EDR ID Number

DK1498
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208363**

District nun:	1	Api number:	03710923
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	91
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208363		

DO1500
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000214877**

District nun:	1	Api number:	03722398
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Oro Negro/McKenzie		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Morgen	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:	CAOG11000214877		

DS1501
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190903**

District nun:	1	Api number:	03710260
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	38.023
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B21
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:	CAOG11000190903		

DS1502
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190904**

District nun:	1	Api number:	03710260
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	38.023
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B21
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:	CAOG11000190904		

DI1503
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190437**

District nun:	1	Api number:	03708444
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	175.405
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	117
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:	CAOG11000190437		

DI1504
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190438**

District nun:	1	Api number:	03708444
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	175.405
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	117
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:	CAOG11000190438		

DI1505
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190439**

District nun:	1	Api number:	03708444
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	175.405
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	117
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:	CAOG11000190439		

Map ID Direction Distance	Database	EDR ID Number

DJ1506
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208774**

District nun:	1	Api number:	03711520
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Davidson	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208774		

DP1507
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000209270**

District nun:	1	Api number:	03712418
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	V. R. G. Wilbur Oil		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	National	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209270		

DO1508
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206776**

District nun:	1	Api number:	03708892
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cockriel Petroleum		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	902
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206776		

DQ1510
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191311**

District nun:	1	Api number:	03711175
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	189.625
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	129
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:	CAOG11000191311		

DQ1511
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191312**

District nun:	1	Api number:	03711175
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	189.625
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	129
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:	CAOG11000191312		

DQ1509
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191310**

District nun:	1	Api number:	03711175
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	189.625
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	129
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:	CAOG11000191310		

DT1512
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207751**

District nun:	1	Api number:	03710108
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Felix Mallon		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Harvey	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:	CAOG11000207751		

Map ID
Direction
Distance

Database | EDR ID Number

DU1513
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191266**

District nun:	1	Api number:	03711032
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	136.558
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	150
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191266		

DF1514
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191195**

District nun:	1	Api number:	03710992
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	136.141
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	946
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191195		

DO1515
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206792**

District nun:	1	Api number:	03708909
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bernstein	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206792		

DM1516
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000207622**

District nun:	1	Api number:	03709958
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Henderson Petro. Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mills	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207622		

DI1517
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190768**

District nun:	1	Api number:	03709436
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	152.841
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	112
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000190768		

DI1519
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190770**

District nun:	1	Api number:	03709436
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	152.841
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	112
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000190770		

DI1518
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190769**

District nun:	1	Api number:	03709436
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	152.841
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	112
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000190769		

Map ID Direction Distance	Database	EDR ID Number

DN1520
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208665**

District nun:	1	Api number:	03711373
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Crown Central Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	63
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208665		

DT1521
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208286**

District nun:	1	Api number:	03710772
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Three for One Oil Royalties		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	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:	CAOG11000208286		

1522
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000208499**

District nun:	1	Api number:	03711150
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	The Superior Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Klein A	Wellnumber:	1
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:	CAOG11000208499		

DO1523
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190415**

District nun:	1	Api number:	03708399
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	C. E. Allen Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	61.067
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	R.C.	Wellnumber:	3
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:	CAOG11000190415		

DN1524
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206808**

District nun:	1	Api number:	03708926
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Harlow	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206808		

DV1525
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207867**

District nun:	1	Api number:	03710249
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B33
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207867		

DL1526
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208051**

District nun:	1	Api number:	03710462
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Santa Cruz Island Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hilton	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208051		

Map ID Direction Distance	Database	EDR ID Number

DK1527
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207790**

District nun:	1	Api number:	03710157
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	J. E. O'Donnell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Graham	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207790		

DO1528
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206795**

District nun:	1	Api number:	03708912
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bernstein	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206795		

DT1529
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207571**

District nun:	1	Api number:	03709895
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Rex Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Jarrel	Wellnumber:	1
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:	CAOG11000207571		

DR1530
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208361**

District nun:	1	Api number:	03710922
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	98
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208361		

DR1531
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208362**

District nun:	1	Api number:	03710922
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	98
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208362		

DL1533
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190728**

District nun:	1	Api number:	03709237
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.878
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41207069.ssf		
Leasename:	Not Reported	Wellnumber:	160
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190728		

DL1532
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190727**

District nun:	1	Api number:	03709237
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	143.878
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41207069.ssf		
Leasename:	Not Reported	Wellnumber:	160
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190727		

Map ID
Direction
Distance

Database | EDR ID Number

DP1534
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000206680**

District nun:	1	Api number:	03708790
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Bright Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Empire	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206680		

DN1535
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190725**

District nun:	1	Api number:	03709235
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	112.484
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C13
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:	CAOG11000190725		

DO1536
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000208636**

District nun:	1	Api number:	03711331
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	24
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208636		

DJ1537
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190967**

District nun:	1	Api number:	03710695
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	117.361
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B73
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:	CAOG11000190967		

DW1538
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191447**

District nun:	1	Api number:	03711500
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	106.822
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C27
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:	CAOG11000191447		

DP1539
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191448**

District nun:	1	Api number:	03711501
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	101.62
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C42
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:	CAOG11000191448		

DR1542
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190773**

District nun:	1	Api number:	03709437
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	140.913
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	97
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:	CAOG11000190773		

Map ID Direction Distance	Database	EDR ID Number

DR1541
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190772**

District nun:	1	Api number:	03709437
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	140.913
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	97
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:	CAOG11000190772		

DR1540
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190771**

District nun:	1	Api number:	03709437
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	140.913
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	97
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:	CAOG11000190771		

DQ1543
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191255**

District nun:	1	Api number:	03711026
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	152.03
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Alamitos	Wellnumber:	50
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:	CAOG11000191255		

DO1544
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207231**

District nun:	1	Api number:	03709502
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	D'Angelo Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207231		

DX1545
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207227**

District nun:	1	Api number:	03709498
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Dabney Oil Syndicate		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	2
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:	CAOG11000207227		

DO1546
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207514**

District nun:	1	Api number:	03709837
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Graham-Loftus Oil Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	D'Angelo	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207514		

DL1548
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190741**

District nun:	1	Api number:	03709329
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	130.884
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Not Reported	Wellnumber:	158
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000190741		

Map ID Direction Distance	Database	EDR ID Number

DL1547
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000190740**

District nun:	1	Api number:	03709329
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	130.884
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212098.ssf		
Leasename:	Not Reported	Wellnumber:	158
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000190740		

1549
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207533**

District nun:	1	Api number:	03709857
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C52
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207533		

DP1550
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000209086**

District nun:	1	Api number:	03712175
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C46
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209086		

DN1551
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208656**

District nun:	1	Api number:	03711358
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Crown Central Petroleum Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Marine	Wellnumber:	10
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208656		

DY1552
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207813**

District nun:	1	Api number:	03710179
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	The Oil Tool Corp.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	McCallen Realty	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207813		

DZ1553
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190408**

District nun:	1	Api number:	03708381
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	170.51
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	110
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:	CAOG11000190408		

DM1554
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000207961**

District nun:	1	Api number:	03710363
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Mobil Oil Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	I.P.C.	Wellnumber:	4
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:	CAOG11000207961		

Map ID
Direction
Distance

	Database	EDR ID Number

DO1555
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000191398**

District nun:	1	Api number:	03711340
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	The Termo Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	63.466
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Bernstein	Wellnumber:	33
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:	CAOG11000191398		

DO1556
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206796**

District nun:	1	Api number:	03708913
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bernstein	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206796		

DK1557
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208358**

District nun:	1	Api number:	03710918
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	90
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208358		

DK1558
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208359**

District nun:	1	Api number:	03710918
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	90
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000208359		

EA1559
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190968**

District nun:	1	Api number:	03710696
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	117.797
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	B50
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190968		

DN1560
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191458**

District nun:	1	Api number:	03711521
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	110.712
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C5
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:	CAOG11000191458		

DK1561
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000190338**

District nun:	1	Api number:	03708262
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Davis Investment Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	121.816
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212108.ssf		
Leasename:	Britsch	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190338		

Map ID
Direction
Distance

Database | EDR ID Number

DU1562
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191253**

District nun:	1	Api number:	03711024
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	128.877
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41211067.ssf		
Leasename:	Alamitos	Wellnumber:	49
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:	CAOG11000191253		

DL1563
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191187**

District nun:	1	Api number:	03710987
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	132.334
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Alamitos	Wellnumber:	12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191187		

DO1564
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206793**

District nun:	1	Api number:	03708910
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cockriel Petroleum		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Bernstein	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206793		

DO1565
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207377**

District nun:	1	Api number:	03709683
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Courtney Petro. Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207377		

EB1566
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206411**

District nun:	1	Api number:	03708398
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	R.C.	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206411		

DY1567
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000208827**

District nun:	1	Api number:	03711780
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Joseph K. Tobin		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000208827		

DZ1568
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191221**

District nun:	1	Api number:	03711006
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	172.347
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	116
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191221		

Map ID
Direction
Distance

Database | EDR ID Number

DZ1569
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191222**

District nun:	1	Api number:	03711006
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	172.347
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	116
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191222		

DO1570
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207450**

District nun:	1	Api number:	03709769
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Fred B. Foster & Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	48
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207450		

DK1571
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000190870**

District nun:	1	Api number:	03710081
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Macrate Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	114.069
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212108.ssf		
Leasename:	Britsch	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190870		

EB1572
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206949**

District nun:	1	Api number:	03709176
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	R.C.	Wellnumber:	6
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206949		

DR1573
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190339**

District nun:	1	Api number:	03708264
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	154.163
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	102
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:	CAOG11000190339		

DO1574
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206951**

District nun:	1	Api number:	03709178
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Cockriel Petroleum		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	R.C.	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206951		

DR1575
East
1/2 - 1 Mile

OIL_GAS **CAOG11000206339**

District nun:	1	Api number:	03708263
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Marcoux Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Crescent	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206339		

Map ID
Direction
Distance

Database | EDR ID Number

DZ1576
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190962**

District nun:	1	Api number:	03710688
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	158.403
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	111
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:	CAOG11000190962		

DZ1577
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190963**

District nun:	1	Api number:	03710688
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	158.403
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	111
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:	CAOG11000190963		

DZ1578
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190964**

District nun:	1	Api number:	03710688
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	158.403
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	111
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:	CAOG11000190964		

DN1579
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206810**

District nun:	1	Api number:	03708928
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Harlow-Wiley	Wellnumber:	2
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:	CAOG11000206810		

DO1580
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208621**

District nun:	1	Api number:	03711313
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	7
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208621		

DS1581
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190885**

District nun:	1	Api number:	03710232
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	68.595
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B22
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:	CAOG11000190885		

DV1582
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000304234**

District nun:	1	Api number:	03730409
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	N
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	115.26
Locationde:	124.4 ft West along section line and 858 ft South at right angles to said line form the Centerline corner of section Orange & S		
Gissourcec:	noi		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B-302
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	NOG
Site id:	CAOG11000304234		

Map ID Direction Distance	Database	EDR ID Number

EB1583
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190713**

District nun:	1	Api number:	03709179
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	C. E. Allen Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	60.025
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	R.C.	Wellnumber:	9
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:	CAOG11000190713		

DV1584
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190863**

District nun:	1	Api number:	03710018
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	105.992
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B35
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	3065		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000190863		

DK1585
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000190829**

District nun:	1	Api number:	03709747
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	C. A. Fear, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	118.419
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212108.ssf		
Leasename:	Britsch	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190829		

DN1586
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190721**

District nun:	1	Api number:	03709205
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	108.401
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C12
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190721		

DZ1587
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191174**

District nun:	1	Api number:	03710978
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	157.759
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	108
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191174		

DZ1588
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191175**

District nun:	1	Api number:	03710978
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	157.759
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	108
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191175		

EC1589
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191208**

District nun:	1	Api number:	03711001
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	172.398
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	123
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191208		

Map ID Direction Distance	Database	EDR ID Number

DZ1590
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191173**

District nun:	1	Api number:	03710977
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	160.137
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Alamitos	Wellnumber:	4
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:	CAOG11000191173		

DQ1591
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191172**

District nun:	1	Api number:	03710976
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	168.353
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	122
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191172		

DO1592
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208446**

District nun:	1	Api number:	03711092
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Syndicate No. 4		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208446		

ED1593
ESE **OIL_GAS** **CAOG11000207789**
1/2 - 1 Mile

District nun:	1	Api number:	03710156
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	J. E. O'Donnell		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Graham	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207789		

DU1594
ENE **OIL_GAS** **CAOG11000191254**
1/2 - 1 Mile

District nun:	1	Api number:	03711025
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	118.726
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Alamitos	Wellnumber:	49-A
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:	CAOG11000191254		

DQ1597
East
1/2 - 1 Mile

OIL_GAS **CAOG11000188743**

District nun:	1	Api number:	03700405
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	135.007
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	128
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000188743		

DQ1596
East
1/2 - 1 Mile

OIL_GAS **CAOG11000188742**

District nun:	1	Api number:	03700405
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	135.007
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	128
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000188742		

Map ID
Direction
Distance

Database | EDR ID Number

DQ1595
East
1/2 - 1 Mile

OIL_GAS **CAOG11000188741**

District nun:	1	Api number:	03700405
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	135.007
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	128
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Not Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000188741		

DO1598
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208629**

District nun:	1	Api number:	03711324
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Phillips Petroleum Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Signal	Wellnumber:	17
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208629		

DT1599
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206700**

District nun:	1	Api number:	03708814
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	R. R. Bush Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	7
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:	CAOG11000206700		

EA1600
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208246**

District nun:	1	Api number:	03710710
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B44
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208246		

EB1601
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207053**

District nun:	1	Api number:	03709300
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Apex Petroleum Corporation, Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	20
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207053		

DV1602
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000300289**

District nun:	1	Api number:	03730181
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	N
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	KB 94
Locationde:	Well 520’ west along section line and 910’ south at right angles to said line from the centerline corner of section Spring & Ora		
Gissourcec:	noi		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	B-301
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:	CAOG11000300289		

DO1603
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207989**

District nun:	1	Api number:	03710394
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Harold C. Morton		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Power	Wellnumber:	15
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207989		

Map ID Direction Distance	Database	EDR ID Number

1604
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208049**

District nun:	1	Api number:	03710460
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Santa Cruz Island Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	Hart Lease	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208049		

DX1605
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207023**

District nun:	1	Api number:	03709267
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	S. Block & Max Rouse		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Mun	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207023		

DO1606
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206946**

District nun:	1	Api number:	03709173
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Acme Petroleum Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Damron	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206946		

EB1607
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206412**

District nun:	1	Api number:	03708400
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	R.C.	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206412		

DN1608
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207762**

District nun:	1	Api number:	03710122
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C11
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207762		

DW1609
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207757**

District nun:	1	Api number:	03710116
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C20
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207757		

DV1610
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190884**

District nun:	1	Api number:	03710231
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	83.577
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B30
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:	CAOG11000190884		

Map ID
Direction
Distance

Database | EDR ID Number

DR1611
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000190442**

District nun:	1	Api number:	03708447
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	133.983
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212108.ssf		
Leasename:	Not Reported	Wellnumber:	81
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	4358		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000190442		

DZ1612
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190822**

District nun:	1	Api number:	03709711
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	156.154
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	109
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000190822		

DR1613
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000190444**

District nun:	1	Api number:	03708449
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	137.243
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212108.ssf		
Leasename:	Not Reported	Wellnumber:	89
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:	CAOG11000190444		

DO1614
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000191700**

District nun:	1	Api number:	03712111
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	C. E. Allen Co., Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	63.019
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Acme	Wellnumber:	2
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:	CAOG11000191700		

DT1615
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000207574**

District nun:	1	Api number:	03709898
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Rice Ranch Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Meader	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207574		

DT1616
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000190413**

District nun:	1	Api number:	03708390
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Graner Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	62.898
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Meader	Wellnumber:	1
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:	CAOG11000190413		

ED1617
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000216627**

District nun:	1	Api number:	03726492
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Ken Pac		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000216627		

Map ID Direction Distance	Database	EDR ID Number

ED1618
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000206973**

District nun:	1	Api number:	03709207
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Axis Petroleum Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206973		

EE1619
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190873**

District nun:	1	Api number:	03710117
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	99.645
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	C4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	2927		
Abandonedd:	Not Reported	Completion:	02-MAR-13
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000190873		

DZ1620
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208238**

District nun:	1	Api number:	03710687
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Griswold	Wellnumber:	1-2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208238		

EF1621
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000209243**

District nun:	1	Api number:	03712391
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Acme	Wellnumber:	4
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:	CAOG11000209243		

EB1622
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000209050**

District nun:	1	Api number:	03712112
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Oryx Energy Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		

Comments:	Not Reported		
Leasename:	Acme	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209050		

DU1623
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000191196**

District nun:	1	Api number:	03710994
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	108.067
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41211067.ssf		
Leasename:	Alamitos	Wellnumber:	20
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191196		

DW1624
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190828**

District nun:	1	Api number:	03709735
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	96.713
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C26
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:	CAOG11000190828		

Map ID
Direction
Distance

Database | EDR ID Number

EB1625
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190814**

District nun:	1	Api number:	03709670
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	P & M Oil Company, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	38.443
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212078.ssf		
Leasename:	Kirkpatrick	Wellnumber:	27
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:	CAOG11000190814		

DW1626
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207761**

District nun:	1	Api number:	03710121
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C19
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207761		

DW1627
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190942**

District nun:	1	Api number:	03710591
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach Airport
Area name:	Any Area	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	96.443
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C37
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:	CAOG11000190942		

DW1628
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190943**

District nun:	1	Api number:	03710591
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach Airport
Area name:	Any Area	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	96.443
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C37
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:	CAOG11000190943		

DW1629
North
1/2 - 1 Mile

OIL_GAS **CAOG11000190944**

District nun:	1	Api number:	03710591
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach Airport
Area name:	Any Area	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	96.443
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C37
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:	CAOG11000190944		

DS1630
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190861**

District nun:	1	Api number:	03710016
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	50.285
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B18
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:	CAOG11000190861		

ED1631
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207694**

District nun:	1	Api number:	03710048
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	R. H. Lockbaum		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Pan Cal	Wellnumber:	8
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207694		

Map ID Direction Distance	Database	EDR ID Number

EE1632
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207758**

District nun:	1	Api number:	03710118
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	C3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207758		

DZ1633
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208423**

District nun:	1	Api number:	03711059
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	96
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208423		

DS1634
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190911**

District nun:	1	Api number:	03710266
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	79
Locationde:	SW of Orange and Spring		
Gissourcec:	sum		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B24
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	2204		
Abandonedd:	Not Reported	Completion:	23-JUN-11
Directiona:	Unknown	Gissymbol:	AOG
Site id:	CAOG11000190911		

EC1636
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191271**

District nun:	1	Api number:	03711035
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	109.412
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	127
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191271		

EC1635
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191270**

District nun:	1	Api number:	03711035
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	109.412
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	127
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191270		

DZ1638
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207391**

District nun:	1	Api number:	03709698
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	101
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207391		

DZ1637
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207390**

District nun:	1	Api number:	03709698
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	101
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207390		

Map ID
Direction
Distance

Database | EDR ID Number

EB1639
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000206947**

District nun:	1	Api number:	03709174
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Acme Petroleum Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Damron	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206947		

DW1640
North
1/2 - 1 Mile

OIL_GAS **CAOG11000207417**

District nun:	1	Api number:	03709733
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Oryx Energy Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Olson	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207417		

EB1641
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207366**

District nun:	1	Api number:	03709671
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	El Cam Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Kirkpatrick	Wellnumber:	29
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	POG
Site id:	CAOG11000207366		

DZ1643
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191204**

District nun:	1	Api number:	03710999
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	151.694
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	107
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191204		

DZ1644
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191205**

District nun:	1	Api number:	03710999
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	151.694
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	107
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191205		

DZ1642
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191203**

District nun:	1	Api number:	03710999
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	151.694
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	107
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000191203		

ED1645
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000208239**

District nun:	1	Api number:	03710689
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Griswold	Wellnumber:	2-1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208239		

Map ID Direction Distance	Database	EDR ID Number

EG1646
North
1/2 - 1 Mile

OIL_GAS **CAOG11000206982**

District nun:	1	Api number:	03709217
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Baash-Ross Tool Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206982		

ED1647
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207214**

District nun:	1	Api number:	03709485
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	92
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207214		

DZ1650
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191293**

District nun:	1	Api number:	03711061
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	141.877
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	95
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191293		

DZ1649
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191290**

District nun:	1	Api number:	03711061
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	141.877
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	95
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191290		

DZ1648
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191291**

District nun:	1	Api number:	03711061
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	141.877
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	95
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191291		

DZ1651
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191292**

District nun:	1	Api number:	03711061
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	141.877
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212168.ssf		
Leasename:	Not Reported	Wellnumber:	95
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191292		

DZ1652
East
1/2 - 1 Mile

OIL_GAS **CAOG11000207401**

District nun:	1	Api number:	03709712
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Crown & Cree Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Crown & Cree	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207401		

Map ID
Direction
Distance

Database | EDR ID Number

EH1653
East
1/2 - 1 Mile

OIL_GAS **CAOG11000208424**

District nun:	1	Api number:	03711060
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Binkley	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208424		

ED1654
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207177**

District nun:	1	Api number:	03709448
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Estate of Louise E. Dabney		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207177		

EE1655
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191442**

District nun:	1	Api number:	03711482
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	102.318
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B72
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:	CAOG11000191442		

DY1656
NNE
1/2 - 1 Mile

OIL_GAS **CAOG11000207850**

District nun:	1	Api number:	03710216
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Paulin Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	20
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	3
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:	CAOG11000207850		

EB1657
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000190812**

District nun:	1	Api number:	03709668
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	P & M Oil Company, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	40.763
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212078.ssf		
Leasename:	Kirkpatrick	Wellnumber:	25
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:	CAOG11000190812		

DX1658
ESE **OIL_GAS** **CAOG11000208450**
1/2 - 1 Mile

District nun:	1	Api number:	03711096
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	David W. Silvers		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208450		

EF1659
NW **OIL_GAS** **CAOG11000207618**
1/2 - 1 Mile

District nun:	1	Api number:	03709953
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Havenstrite Oil Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Darby	Wellnumber:	4
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207618		

Map ID
Direction
Distance

Database | EDR ID Number

EI1660
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191193**

District nun:	1	Api number:	03710991
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	108.456
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	126
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191193		

EI1661
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191194**

District nun:	1	Api number:	03710991
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	108.456
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	126
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191194		

ED1662
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000190823**

District nun:	1	Api number:	03709715
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	117.193
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212108.ssf		
Leasename:	Not Reported	Wellnumber:	72
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	AWF
Site id:	CAOG11000190823		

EG1664
NNE **OIL_GAS** **CAOG11000191697**
1/2 - 1 Mile

District nun:	1	Api number:	03712089
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	104.879
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C45
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191697		

EG1663
NNE **OIL_GAS** **CAOG11000191696**
1/2 - 1 Mile

District nun:	1	Api number:	03712089
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	104.879
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212178.ssf		
Leasename:	Not Reported	Wellnumber:	C45
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Directionally drilled	Gissymbol:	AWF
Site id:	CAOG11000191696		

1665
ENE
1/2 - 1 Mile

OIL_GAS **CAOG11000208854**

District nun:	1	Api number:	03711819
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Union Oil Company of California		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Hart	Wellnumber:	3
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208854		

EE1666
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191440**

District nun:	1	Api number:	03711479
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	95.882
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B63
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:	CAOG11000191440		

Map ID
Direction
Distance

Database | EDR ID Number

ED1667
ESE
1/2 - 1 Mile

OIL_GAS **CAOG11000207159**

District nun:	1	Api number:	03709426
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	DBM Oil Co.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	48
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207159		

1668
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000208511**

District nun:	1	Api number:	03711163
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	E. D. Taylor Oil Syndicate #1		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Not Reported	Wellnumber:	1
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:	CAOG11000208511		

EA1669
North
1/2 - 1 Mile

OIL_GAS **CAOG11000191444**

District nun:	1	Api number:	03711484
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	I
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	96.507
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41212148.ssf		
Leasename:	Not Reported	Wellnumber:	B43
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:	CAOG11000191444		

EF1670
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000209242**

District nun:	1	Api number:	03712390
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Westates Petroleum Corporation		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Acme	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000209242		

EH1671
East
1/2 - 1 Mile

OIL_GAS **CAOG11000190441**

District nun:	1	Api number:	03708446
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	A
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	136.455
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41212108.ssf		
Leasename:	Not Reported	Wellnumber:	80
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:	CAOG11000190441		

EA1672
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208743**

District nun:	1	Api number:	03711477
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Baumann	Wellnumber:	1-A
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:	CAOG11000208743		

EA1673
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208744**

District nun:	1	Api number:	03711478
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Baumann	Wellnumber:	1-B
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000208744		

Map ID Direction Distance	Database	EDR ID Number

1674
NW
1/2 - 1 Mile

OIL_GAS **CAOG11000206405**

District nun:	1	Api number:	03708391
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Atlantic Richfield Company		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Meader	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000206405		

EB1675
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000207057**

District nun:	1	Api number:	03709304
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Apex Petroleum Corporation, Ltd.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Kirkpatrick	Wellnumber:	28
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	POG
Site id:	CAOG11000207057		

EC1678
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191229**

District nun:	1	Api number:	03711009
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	109.886
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	106
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191229		

EC1676
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191227**

District nun:	1	Api number:	03711009
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	109.886
Locationde:	Not Reported		
Gissourcec:	gps		
Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	106
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191227		

EC1677
East
1/2 - 1 Mile

OIL_GAS **CAOG11000191228**

District nun:	1	Api number:	03711009
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	P
Operator name:	Signal Hill Petroleum, Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Old	Section:	29
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	109.886
Locationde:	Not Reported		
Gissourcec:	gps		

Comments:	41203128.ssf		
Leasename:	Not Reported	Wellnumber:	106
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PWF
Site id:	CAOG11000191228		

EA1679
North
1/2 - 1 Mile

OIL_GAS **CAOG11000208742**

District nun:	1	Api number:	03711476
Blm well:	N	Redrill can:	Not Reported
Dryhole:	N	Well status:	B
Operator name:	Chevron U.S.A. Inc.		
County name:	Los Angeles	Fieldname:	Long Beach
Area name:	Northwest Extension	Section:	19
Township:	04S	Range:	12W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Baumann	Wellnumber:	1
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:	CAOG11000208742		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
90755	5	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 & Game
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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Former Chemoil Refinery

2020 Walnut Avenue

Signal Hill, CA 90755

Inquiry Number: 5042323.9

September 07, 2017

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

09/07/17

Site Name:

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, CA 90755
EDR Inquiry # 5042323.9

Client Name:

Hazard Management Consulting
211 W. Avenida Cordoba
San Clemente, CA 92672
Contact: Mark Cousineau

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***
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
2002	1"=500'	Flight Date: June 10, 2002	USDA
1994	1"=500'	Acquisition Date: May 31, 1994	USGS/DOQQ
1989	1"=500'	Flight Date: August 22, 1989	USDA
1981	1"=500'	Flight Date: February 21, 1981	EDR Proprietary Brewster Pacific
1977	1"=500'	Flight Date: January 18, 1977	EDR Proprietary Brewster Pacific
1972	1"=500'	Flight Date: November 24, 1972	EDR Proprietary Brewster Pacific
1963	1"=500'	Flight Date: February 28, 1963	USGS
1953	1"=500'	Flight Date: November 19, 1953	USDA
1947	1"=500'	Flight Date: June 17, 1947	USGS
1928	1"=500'	Flight Date: January 01, 1928	USGS

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r - C r d Tr d r N

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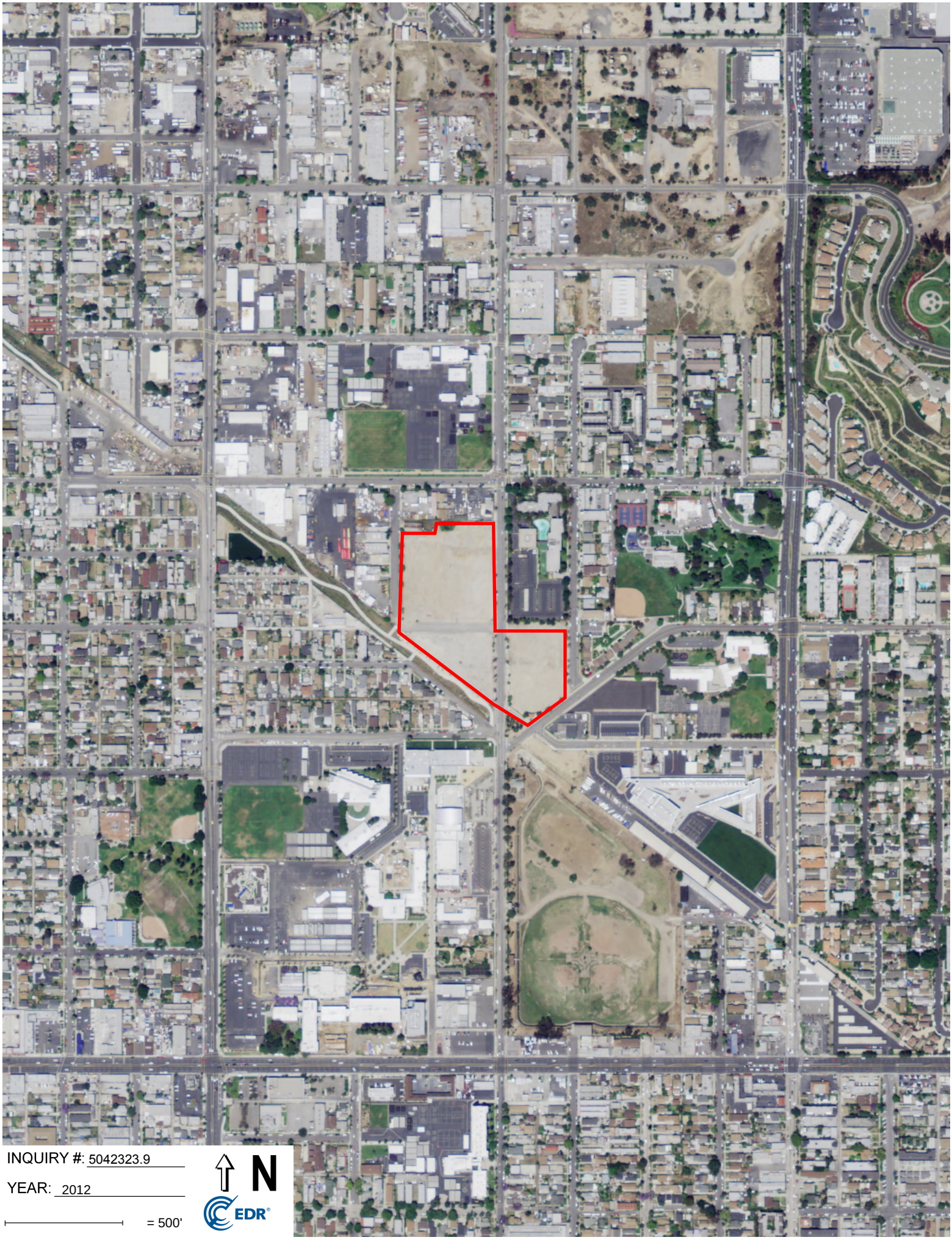


INQUIRY #: 5042323.9

YEAR: 2012

= 500'

N

EDR

INQUIRY #: 5042323.9

YEAR: 2010

= 500'

N

EDR

INQUIRY #: 5042323.9
YEAR: 2009
= 500'
N
EDR

INQUIRY #: 5042323.9
YEAR: 2005
= 500'
N
EDR

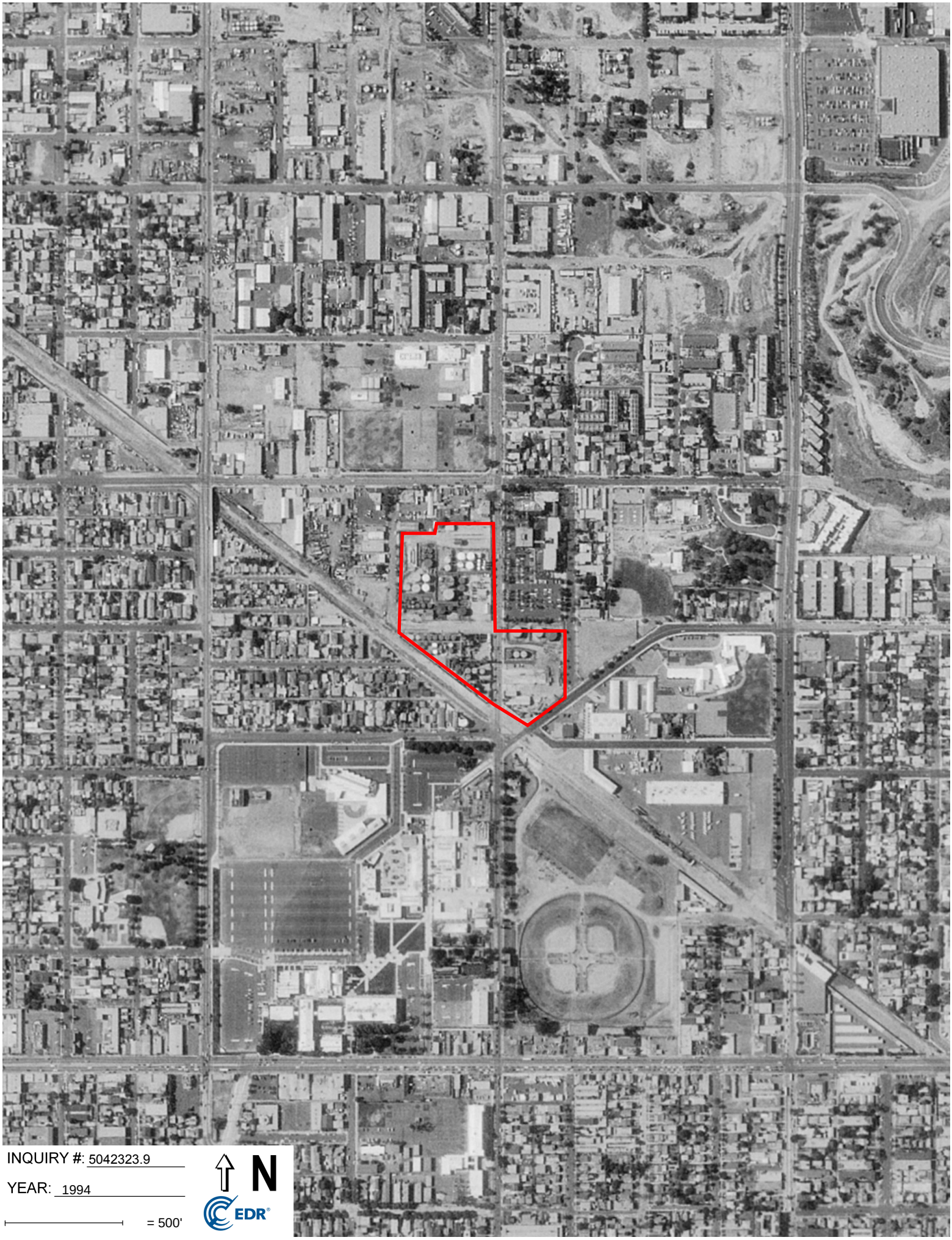
INQUIRY #: 5042323.9

YEAR: 2002

= 500'

N

EDR



INQUIRY #: 5042323.9

YEAR: 1994

= 500'

N

EDR

INQUIRY #: 5042323.9
YEAR: 1989
= 500'
N
EDR

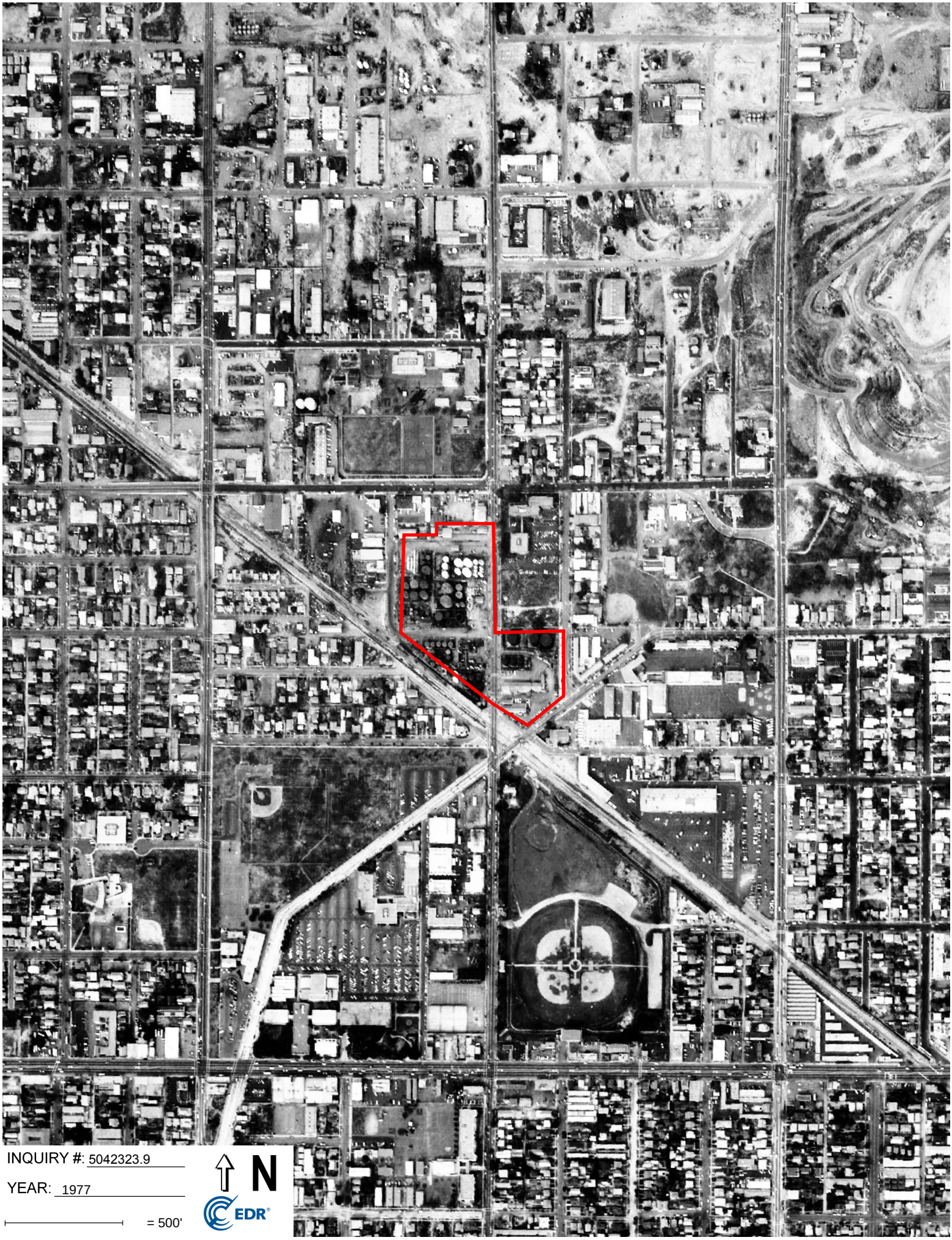
INQUIRY #: 5042323.9

YEAR: 1981

= 500'

N

EDR



INQUIRY #: 5042323.9

YEAR: 1977

= 500'

N

EDR

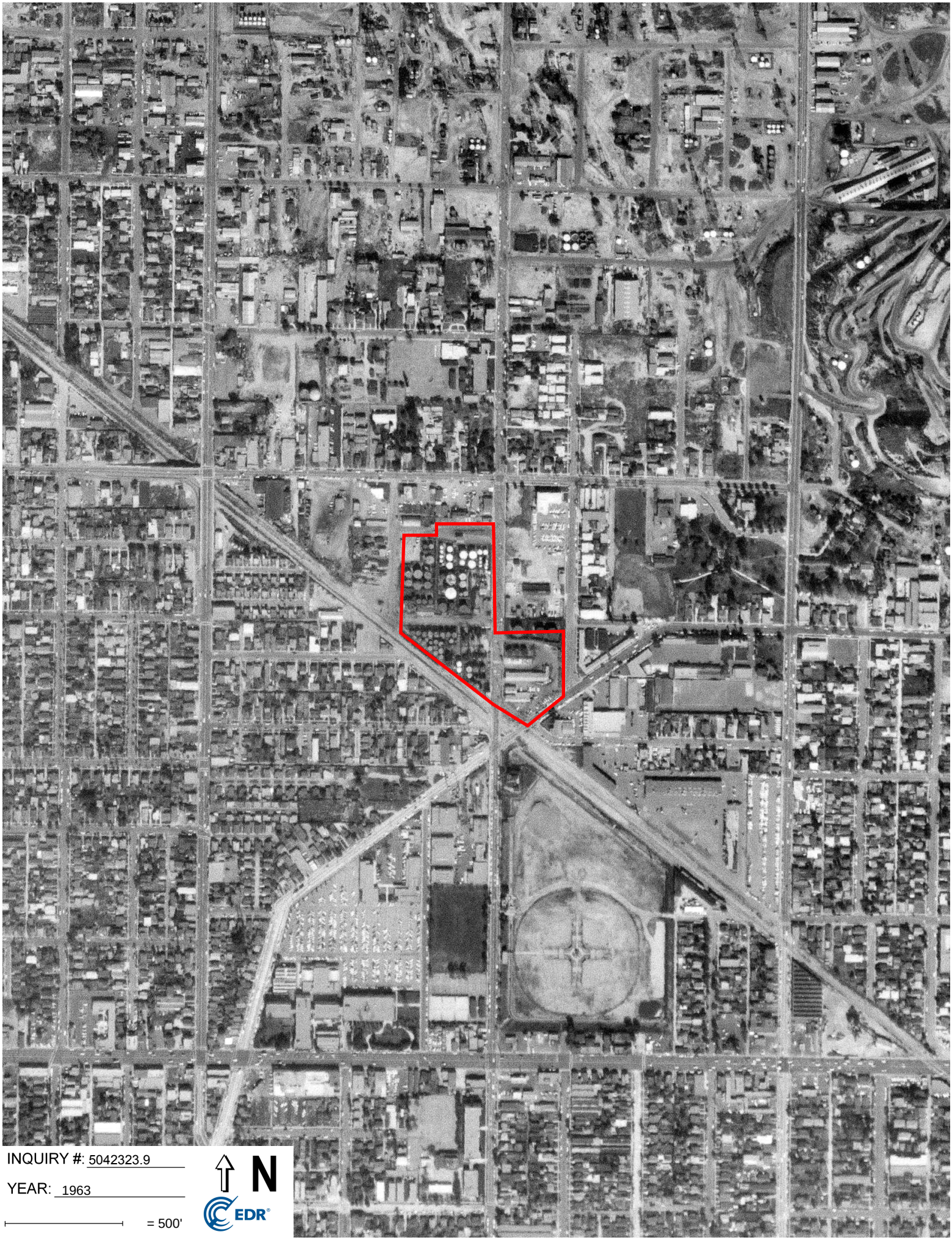
INQUIRY #: 5042323.9

YEAR: 1972

= 500'

N

EDR



INQUIRY #: 5042323.9

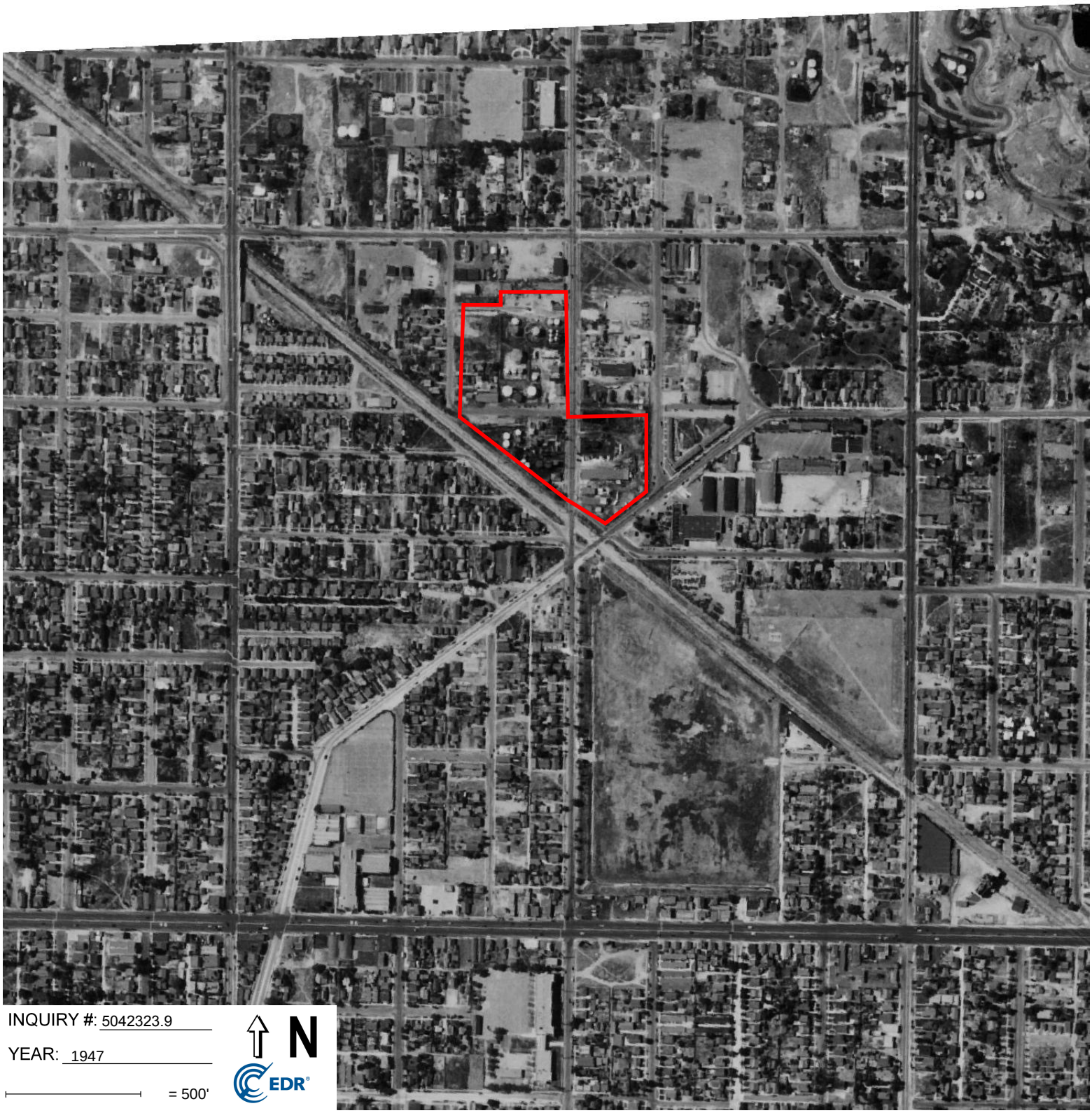
YEAR: 1963

= 500'

N

EDR

INQUIRY #: 5042323.9
YEAR: 1953
= 500'
N
EDR



INQUIRY #: 5042323.9

YEAR: 1947

= 500'

N

EDR

INQUIRY #: 5042323.9

YEAR: 1928

= 500'

N

EDR

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, CA 90755

Inquiry Number: 5042323.5
September 06, 2017

The EDR-City Directory Abstract

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

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 Abstract 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 Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1920 through 2014. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

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. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2014	EDR Digital Archive	-	X	X	-
2010	EDR Digital Archive	-	X	X	-
2006	Haines Company, Inc.	-	X	X	-
2004	Haines Company	-	-	-	-
2003	Haines & Company	-	-	-	-
2001	Haines Company, Inc.	-	-	-	-
2000	Haines	-	X	X	-
	Haines	X	X	X	-
1999	Haines Company	-	-	-	-
1996	GTE	-	-	-	-
1995	Pacific Bell	-	-	-	-
1992	PACIFIC BELL WHITE PAGES	-	-	-	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1991	Pacific Bell	-	X	X	-
	Pacific Bell	X	X	X	-
1990	Pacific Bell	-	X	X	-
1986	Pacific Bell	-	X	X	-
1985	Pacific Bell	-	X	X	-
	Pacific Bell	X	X	X	-
1981	Pacific Telephone	-	X	X	-
	Pacific Telephone	X	X	X	-
1980	Pacific Telephone	-	X	X	-
	Pacific Telephone	X	X	X	-
1975	Pacific Telephone	-	X	X	-
	Pacific Telephone	X	X	X	-
1972	R. L. Polk & Co.	-	-	-	-
1971	Pacific Telephone	-	X	X	-
1970	Pacific Telephone	-	-	-	-
1969	Pacific Telephone	-	X	X	-
	Pacific Telephone	X	X	X	-
1967	Pacific Telephone	-	X	X	-
1966	Pacific Telephone	-	-	-	-
1965	GTE	-	-	-	-
1964	Pacific Telephone	-	X	X	-
1963	Pacific Telephone	-	X	X	-
	Pacific Telephone	X	X	X	-
1962	Pacific Telephone	-	X	X	-
1961	R. L. Polk & Co.	-	-	-	-
1960	Pacific Telephone	-	X	X	-
1958	Pacific Telephone	-	X	X	-
1957	Pacific Telephone	-	X	X	-
	Pacific Telephone	X	X	X	-
1956	Pacific Telephone	-	-	-	-
1955	R. L. Polk & Co.	-	-	-	-
1954	R. L. Polk & Co.	-	X	X	-
1952	Los Angeles Directory Co.	-	X	X	-
	Los Angeles Directory Co.	X	X	X	-
1951	Los Angeles Directory Co.	-	-	-	-
1950	Pacific Telephone	-	X	X	-
1949	Los Angeles Directory Co.	-	-	-	-
1948	Los Angeles Directory Co.	-	X	X	-
	Los Angeles Directory Co.	X	X	X	-
1947	Pacific Directory Co.	-	-	-	-
1946	Southern California Telephone Co	-	-	-	-
1945	R. L. Polk & Co.	-	-	-	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1944	R. L. Polk & Co.	-	X	X	-
1942	Los Angeles Directory Co.	-	-	-	-
1940	Los Angeles Directory Co.	-	-	-	-
1939	Los Angeles Directory Co.	-	X	X	-
	Los Angeles Directory Co.	X	X	X	-
1938	Los Angeles Directory Company Publishers	-	-	-	-
1937	Los Angeles Directory Co.	-	-	-	-
1936	Los Angeles Directory Co.	-	-	-	-
1935	Los Angeles Directory Co.	-	X	X	-
	Los Angeles Directory Co.	X	X	X	-
1934	Los Angeles Directory Co.	-	-	-	-
1933	Los Angeles Directory Co.	-	-	-	-
1932	Los Angeles Directory Co.	-	-	-	-
1931	Los Angeles Directory Co.	-	X	X	-
1930	Los Angeles Directory Co.	-	-	-	-
1929	Los Angeles Directory Co.	-	-	-	-
1928	Los Angeles Directory Co.	-	-	-	-
1927	Los Angeles Directory Co.	-	-	-	-
1926	Los Angeles Directory Co.	-	-	-	-
1925	Los Angeles Directory Co.	-	-	-	-
1924	Los Angeles Directory Co.	-	-	-	-
1923	Los Angeles Directory Co.	-	-	-	-
1921	Los Angeles Directory Co.	-	-	-	-
1920	Los Angeles Directory Co.	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

2020 Walnut Avenue
Signal Hill, CA 90755

FINDINGS DETAIL

Target Property research detail.

WALNUT AVE

2020 WALNUT AVE

Year	*Uses*	*Source*
2000	XXXX	Haines
1991	Carson Tank Farm	Pacific Bell
	Gasoline Loading Rack	Pacific Bell
	Refinery Ofc	Pacific Bell
	Southern California Refining Co Inc	Pacific Bell
1985	Refinery Ofc	Pacific Bell
1981	MACMILLAN RING FREE OIL CO INC	Pacific Telephone
1980	Refinery Ofc	Pacific Telephone
1976	Main Ofc One Wilshire Bldg	Pacific Telephone
	Refinery Ofc	Pacific Telephone
1975	Refinery Ofc	Pacific Telephone
1969	MACMILLAN RING FREE OIL CO INC OIL REFINERS	Pacific Telephone
1963	Macmillan Petroleum Corp Inc GA	Pacific Telephone
1957	Macmillan Petroliur Corp A GA 4 85g	Pacific Telephone
1952	Mac Millan Petroleum Corp	Los Angeles Directory Co.
1948	Mac Millan Petroleum Corp	Los Angeles Directory Co.
1939	Drafien J A Inc truckmin	Los Angeles Directory Co.
1935	Signal Hill and Long Beach Community Free Relief	Los Angeles Directory Co.

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

20TH ST E

1620 20TH ST E

Year	Uses	Source
1939	Greenig C D	Los Angeles Directory Co.

E HILL

1456 E HILL

Year	Uses	Source
1991	ADVANCE MECHANICAL CONTRACTORS INC Plumbing Service Division	Pacific Bell
1990	ADVANCE PLUMBING CO INC LONG BEACH	Pacific Bell
	ADVANCE MECHANICAL CONTRACTORS INC LONG BEACH	Pacific Bell
1986	ADVANCE PLUMBING CO INC LONG BEACH	Pacific Bell
	ADVANCE MECHANICAL CONTRACTORS INC LONG BEACH	Pacific Bell
1985	Advance Mechanical Contractors Inc Plumbing Service Division	Pacific Bell
1981	ADVANCE PLUMBING CO INC LONG BEACH	Pacific Telephone
	ADVANCE MECHANICAL CONTRACTORS INC LONG BEACH	Pacific Telephone
1980	ADVANCE PLUMBING CO INC	Pacific Telephone
1975	Advance Water Treatment	Pacific Telephone
	ADVANCE PLUMBI NG CO INC	Pacific Telephone
	ADVANCE MECHANICAL CONTRACTORS INC	Pacific Telephone
1971	PETER BAWDEN DRILLING INC	Pacific Telephone
	Bawden Peter Drilling Inc	Pacific Telephone
1967	BROWN DRILLING CO	Pacific Telephone
1962	Brown Drilling Co	Pacific Telephone

FINDINGS

1600 E HILL

Year	Uses	Source
1991	Executive & Accounting Offices	Pacific Bell
1990	BLOOME MARK C CO INC CORPORATE OFC LONG BEACH	Pacific Bell
1986	BLOOME MARK C CO INC CORPORATE OFC LONG BEACH	Pacific Bell
1985	Petrolane Automotive Services Companies Bloome Mark C Co Inc	Pacific Bell
	Executive & Accounting Offices	Pacific Bell
	Corporate Ofc	Pacific Bell
	Automotive Services Companies Executive & Accounting Offices	Pacific Bell
1980	Executive & Accounting Offices	Pacific Telephone
1967	PETROLANE GAS SERV INC	Pacific Telephone
	Genl Ofcs	Pacific Telephone

E HILL ST

1309 E HILL ST

Year	Uses	Source
2006	AK TUG O BARGE	Haines Company, Inc.
1985	JIMSCO	Pacific Bell
1980	BEACH SUPPLY	Pacific Telephone

1315 E HILL ST

Year	Uses	Source
1950	RENT-A-WASHER CO	Pacific Telephone

1323 E HILL ST

Year	Uses	Source
1950	KAISER VERN C R LONG BCH4-7020	Pacific Telephone

1325 E HILL ST

Year	Uses	Source
2006	SABER EXHIBITS	Haines Company, Inc.
	NLB CORPORATION	Haines Company, Inc.
1980	NELSON JEWELL O	Pacific Telephone
1975	NELSON JEWELL O	Pacific Telephone

FINDINGS

1361 E HILL ST

Year	Uses	Source
1985	DRILTROL OIL WELL SERV	Pacific Bell
1980	DRILTROL OIL WELL SERV	Pacific Telephone
1975	DRILTROL OIL WELL SERV	Pacific Telephone
1964	DRILTROL OIL WELL SERV	Pacific Telephone
1963	Driltrol oil well serv G	Pacific Telephone
	C&C Sales oil well tools G	Pacific Telephone
1960	DRILTROL OIL WELL SERV	Pacific Telephone
1957	DRILIROL OIL WELL SERV	Pacific Telephone
	Driltrol oil well serv ga	Pacific Telephone

E Hill St

1365 E Hill St

Year	Uses	Source
2010	EXHIBITS WEST EXPO SERVICES	EDR Digital Archive

E HILL ST

1365 E HILL ST

Year	Uses	Source
1963	Banks Delbert E G	Pacific Telephone
1960	BANKS DELBERT E	Pacific Telephone
1957	Fisher Maurice R	Pacific Telephone
1954	FISHER M R	R. L. Polk & Co.
1952	Fisher M R	Los Angeles Directory Co.
1950	SMITH FRANCIS I	Pacific Telephone
1948	Jordan Carruthers	Los Angeles Directory Co.

1371 E HILL ST

Year	Uses	Source
1948	Humphrey Thos	Los Angeles Directory Co.

1375 E HILL ST

Year	Uses	Source
1964	BULLIS JOYCE	Pacific Telephone
1963	Barney Nora P Mrs G	Pacific Telephone
	k Vacant	Pacific Telephone
1957	Salmon Clyde	Pacific Telephone
	Roberts Sally Mrs	Pacific Telephone

FINDINGS

Year	Uses	Source
1952	Bowman J W contr R	Los Angeles Directory Co.
1950	BOWMAN J WPLSTRER	Pacific Telephone
1948	1/2 brahamson Bdw	Los Angeles Directory Co.
	Bowman J W	Los Angeles Directory Co.

1377 E HILL ST

Year	Uses	Source
1964	POST MICHAEL	Pacific Telephone
1963	Sweeney David	Pacific Telephone
1957	OEUERSTEIN JAS	Pacific Telephone
	Feuerstein James N	Pacific Telephone
	AGA 7 1 B	Pacific Telephone
1954	GUSTAFSON CARL A	R. L. Polk & Co.
1952	Sanders L B	Los Angeles Directory Co.
1948	Cotton J H	Los Angeles Directory Co.

1379 E HILL ST

Year	Uses	Source
1964	GRAY PAUL J	Pacific Telephone
1963	Anderson Eileen G	Pacific Telephone
1957	Rauch Cora C Mrs ga	Pacific Telephone
1954	BOWMAN F L	R. L. Polk & Co.
1952	Hatheway G W	Los Angeles Directory Co.
1950	NORTHROP JOS ANDREW	Pacific Telephone
1948	Mc Donald Virgil	Los Angeles Directory Co.

1381 E HILL ST

Year	Uses	Source
1964	RICHARDS M J	Pacific Telephone
1963	Wills Robt	Pacific Telephone
1957	Jackson Jesse R	Pacific Telephone
	OAKLAND JOHN R	Pacific Telephone
1952	Pound E F	Los Angeles Directory Co.
1950	WHITLOCK MARGERY L	Pacific Telephone

1383 E HILL ST

Year	Uses	Source
1963	Grow Belle Mrs G	Pacific Telephone
1957	Grow Belle Mrs	Pacific Telephone
1954	GROW BELLE	R. L. Polk & Co.

FINDINGS

Year	Uses	Source
1952	Hetherington VC	Los Angeles Directory Co.
1948	Baker J S	Los Angeles Directory Co.

1393 E HILL ST

Year	Uses	Source
1963	Edgar Allen	Pacific Telephone

1395 E HILL ST

Year	Uses	Source
1963	King Inez Mrs	Pacific Telephone

1397 E HILL ST

Year	Uses	Source
1963	Mabry Jesse	Pacific Telephone

1399 E HILL ST

Year	Uses	Source
1963	Thurman Clyde	Pacific Telephone

1405 E HILL ST

Year	Uses	Source
1963	Peters Dee	Pacific Telephone
1957	Martin Raymond M	Pacific Telephone
1952	Mc Graw E L	Los Angeles Directory Co.
1950	SOUZA JOS	Pacific Telephone
1948	Bullen B E	Los Angeles Directory Co.

1407 E HILL ST

Year	Uses	Source
1964	HEAVENER BEULAH	Pacific Telephone
1963	Heavener Beulab Mrs	Pacific Telephone
1957	No Return	Pacific Telephone
1952	La Montagne M C	Los Angeles Directory Co.
1948	Balch Donald	Los Angeles Directory Co.

1409 E HILL ST

Year	Uses	Source
1963	Phillips Adeline M	Pacific Telephone

FINDINGS

1411 E HILL ST

Year	Uses	Source
1964	LARRIGAN FLORENCE E	Pacific Telephone
1963	Larrigan Florence E Mrs G	Pacific Telephone
1960	LARRIGAN FLORENCE E	Pacific Telephone

1413 E HILL ST

Year	Uses	Source
1963	Ossen Patricia	Pacific Telephone

1415 E HILL ST

Year	Uses	Source
1964	MORGAN GORDON L	Pacific Telephone
1963	Vacant	Pacific Telephone
1960	PETRAGLIA PHILIP A	Pacific Telephone

1417 E HILL ST

Year	Uses	Source
1963	Patchm Patk	Pacific Telephone

1419 E HILL ST

Year	Uses	Source
1963	Vacant	Pacific Telephone

1421 E HILL ST

Year	Uses	Source
1964	BOWMAN IVAN O	Pacific Telephone
1963	Bowman Ivan G	Pacific Telephone
1960	BOWMAN IVAN O	Pacific Telephone

1423 E HILL ST

Year	Uses	Source
1963	i Vasquez Joseph	Pacific Telephone
	Dvorak Ronald G	Pacific Telephone
1960	DVORAK RONALD E	Pacific Telephone

1425 E HILL ST

Year	Uses	Source
1964	BLANCHARD BETTY ANN	Pacific Telephone
1963	Woodworth Ann Mrs	Pacific Telephone
1957	Byrd Richd E ga	Pacific Telephone
	SCROGHEM VIRGINIA	Pacific Telephone

FINDINGS

Year	Uses	Source
1957	WOODWORTH CECIL E	Pacific Telephone
1954	SCROGHEM VIRGINIA	R. L. Polk & Co.
	WOODWORTH CECIL E	R. L. Polk & Co.
1952	Hawkins N T	Los Angeles Directory Co.
1950	HAWKINS NEVILLE T	Pacific Telephone
1948	Hawkins N T	Los Angeles Directory Co.

1435 E HILL ST

Year	Uses	Source
1964	KASPER WM S	Pacific Telephone
	FRANKEL MARY E	Pacific Telephone
1963	Alax Apartments	Pacific Telephone
	Vacant	Pacific Telephone
	Reeves Chas	Pacific Telephone
	Hammond Russell T	Pacific Telephone
	Frankel Mary E Mrs G	Pacific Telephone
	Vacant	Pacific Telephone
	Violette James W	Pacific Telephone
	Vacant	Pacific Telephone
	Vacant	Pacific Telephone
	Vacant	Pacific Telephone
	Vacant	Pacific Telephone
	Kasper Wm	Pacific Telephone
	Vacant	Pacific Telephone
1960	FRANKEL MARY E MRS	Pacific Telephone
	HILLSIDE NURSERY SCHOOL	Pacific Telephone
1957	LOZZI ANTHONY J	Pacific Telephone
	L(AISER J F	Pacific Telephone
	ANDREWS HIIIARD F	Pacific Telephone

1444 E HILL ST

Year	Uses	Source
1985	SUNDE COMPANY	Pacific Bell
1964	BLACKWELL & SUNDE	Pacific Telephone
1963	Blackwell & Sunde Co oil well serv G	Pacific Telephone
1960	BLACKWELL & SUNDE	Pacific Telephone
1957	Apex Petroleum Corp Ltd ga	Pacific Telephone
1954	APEX PETROLEUM CORP LTD	R. L. Polk & Co.
1952	Apex Petroleum Corp Ltd	Los Angeles Directory Co.

FINDINGS

Year	Uses	Source
1950	APEX PETROLEUM CORP LTD	Pacific Telephone
	CABLE TOOL DRI11ING CO	Pacific Telephone
1948	Apex Petroleum Corp	Los Angeles Directory Co.

1445 E HILL ST

Year	Uses	Source
1964	AJAX APTS	Pacific Telephone
	ESELUN T A MRS	Pacific Telephone
1963	Eselun Barbara P Mrs G	Pacific Telephone
	Koehler Fred M G	Pacific Telephone
1960	AJAX APTS	Pacific Telephone
	ESELUN T A MRS	Pacific Telephone
1957	Frankel Mary E Mrs ga	Pacific Telephone
	ESELUN TA	Pacific Telephone
1954	ESELUN T A R	R. L. Polk & Co.
1952	Eselun T A	Los Angeles Directory Co.
1950	ESELUN T A R	Pacific Telephone
1948	Eselun T A	Los Angeles Directory Co.

E Hill St

1446 E Hill St

Year	Uses	Source
2014	PROCARE TREE SERVICE INC	EDR Digital Archive
	FENDERSCAPE INC	EDR Digital Archive
2010	PROCARE TREE SERVICE INC	EDR Digital Archive
	FENDERSCAPE INC	EDR Digital Archive

E HILL ST

1446 E HILL ST

Year	Uses	Source
2006	INC PROCARETREE	Haines Company, Inc.
	SERVICE	Haines Company, Inc.
	METCO EQUIPMENT	Haines Company, Inc.
	PROSCAPE	Haines Company, Inc.

1450 E HILL ST

Year	Uses	Source
1985	CALIFORNIA CARTAGE INC	Pacific Bell

FINDINGS

1455 E HILL ST

Year	Uses	Source
1964	KOEHLER F M	Pacific Telephone
1960	KOEHLER F M	Pacific Telephone
1957	Koehler Fred M	Pacific Telephone
1954	KOEHLER F M R	R. L. Polk & Co.
1952	Koehler F M	Los Angeles Directory Co.
1950	KOEHLER F M R	Pacific Telephone
1948	AKoehler F M	Los Angeles Directory Co.

E Hill St

1456 E Hill St

Year	Uses	Source
2010	ADVANCE PLUMBING COMPANY	EDR Digital Archive

E HILL ST

1456 E HILL ST

Year	Uses	Source
2006	PLUMBING	Haines Company, Inc.
	MECHANICAL ADVANCE	Haines Company, Inc.
	ADVANCE	Haines Company, Inc.
1985	ADVANCE MECHANICAL CONTRACTORS INC	Pacific Bell
	ADVANCE MECHANICAL CONTRACTORS INC PLUMBING SERVICE DIVISION	Pacific Bell
1980	ADVANCE PLUMBING CO INC	Pacific Telephone
	ADVANCE MECHANICAL CONTRACTORS INC	Pacific Telephone
1975	ADVANCE WATER TREATMENT	Pacific Telephone
	ADVANCE PLUMBING CO INC	Pacific Telephone
	ADVANCE MECHANICAL CONTRACTORS INC	Pacific Telephone
1964	PAYNE W S JR	Pacific Telephone
	FRANWIN OIL AND GAS CO	Pacific Telephone
	BROWN E C DRILLER	Pacific Telephone
	BROWN DRILLING COMPANY	Pacific Telephone
	PAYNE OIL FIELD EQUIPT LEASING CO	Pacific Telephone
1963	Brown Drilling Co G	Pacific Telephone
1960	BROWN DRILLING COMPANY	Pacific Telephone

FINDINGS

Year	Uses	Source
1960	BROWN E C DRILLER	Pacific Telephone
1958	Brown Drilling Co	Pacific Telephone
1957	Brown Drilling Co	Pacific Telephone
	BRAWN DRILLITNG COMPANY	Pacific Telephone
	BRAWN E C DRILLER	Pacific Telephone
1954	BROWN E C DRILLER	R. L. Polk & Co.
	BROWN DRILLING COMPANY	R. L. Polk & Co.
1952	Brown Drilling Co	Los Angeles Directory Co.
1950	BROWN E C DRILLER	Pacific Telephone
	BROWN DRILLING CO	Pacific Telephone
1948	Brown E C oil driller	Los Angeles Directory Co.

1482 E HILL ST

Year	Uses	Source
1980	EVERHART JIM	Pacific Telephone

1500 E HILL ST

Year	Uses	Source
1975	MIKE S BEARING SERVICE	Pacific Telephone
1964	MIKE S BEARING SERV	Pacific Telephone
1963	Mikes Bearing Serv G	Pacific Telephone
1957	Mikes Bearing Service he	Pacific Telephone
	MIKE S BEARING SERV	Pacific Telephone
1954	MIKE S BEARING SERV	R. L. Polk & Co.
1952	Mikes Bearing Service	Los Angeles Directory Co.
1948	Le Meur G W wlidr	Los Angeles Directory Co.

1501 E HILL ST

Year	Uses	Source
1964	A A SANDBLOSTING	Pacific Telephone
	MAC PHERSON HECTOR LONG BEACH	Pacific Telephone
	MAC PHERSON SANDY G DR LONG BEACH	Pacific Telephone
1963	A A Sandblasting Co G	Pacific Telephone
	Mac Pherson Hector Mac Pherson Sandy G G	Pacific Telephone
	Vacant	Pacific Telephone
1960	A A SANDBLASTING	Pacific Telephone
	MACPHERSON HECTOR	Pacific Telephone
	MACPHERSON SANDY G DR	Pacific Telephone

FINDINGS

Year	Uses	Source
1957	A A Sandblasting Co ga	Pacific Telephone
	Mac Pherson Sandy G ga	Pacific Telephone
	Mac Pherson Hector Plns	Pacific Telephone
	tqring Contractor	Pacific Telephone
	MVACPHERSON HECTOR	Pacific Telephone
	MACPHERSON BETTY	Pacific Telephone
	A A SANDBLASTING	Pacific Telephone
1954	MACPHERSON SANDY G DR	R. L. Polk & Co.
	A A SANDBLASTING	R. L. Polk & Co.
1952	Mac Fherson S G	Los Angeles Directory Co.
	A 1 Sandblasting Co	Los Angeles Directory Co.
1950	MACPHERSON SANDY G DR R	Pacific Telephone
	MACPHERSON SANDY G DR	Pacific Telephone
	MACPHERSON HECTOR PLASTRNG CONTR	Pacific Telephone
	MACPHERSON BETTY	Pacific Telephone
	A-I SAND BLASTING	Pacific Telephone
1948	Mac Pherson H H	Los Angeles Directory Co.
	Mac Pherson S G	Los Angeles Directory Co.

1502 E HILL ST

Year	Uses	Source
1963	Caricos air compressors G	Pacific Telephone
1960	CARICO S COMPRSRS	Pacific Telephone
1957	Caricos Truck Air Brake	Pacific Telephone
	Equip truck repr	Pacific Telephone
	CARICO S COMPRSRS	Pacific Telephone
1954	CARICO S COMPRSRS	R. L. Polk & Co.
1952	Caracos brake reprs	Los Angeles Directory Co.
1948	Buxton E V w ldr	Los Angeles Directory Co.

1525 E HILL ST

Year	Uses	Source
1964	WALSH DEVADA	Pacific Telephone
	HAMMOCK CORA	Pacific Telephone
	COTNER GUEST HOME	Pacific Telephone
1963	Cotner Dugan Guest Home rest	Pacific Telephone
1960	HOLMBERG MELKER	Pacific Telephone
	COTNER GUEST HOME	Pacific Telephone

FINDINGS

Year	Uses	Source
1957	COTNER GUEST HOME	Pacific Telephone
	ANGSTEAD MABEL	Pacific Telephone
	Cotner Chas ga	Pacific Telephone
	Cotner Guest Home ga	Pacific Telephone
1954	G COTNER BOARDING HOME	R. L. Polk & Co.
1952	Berg Nona Mrs	Los Angeles Directory Co.
1950	COTNER C W	Pacific Telephone
	COTNER BOARDING HOME REST HOME	Pacific Telephone
1948	Rupp G D	Los Angeles Directory Co.
	Hoist G G	Los Angeles Directory Co.

1527 E HILL ST

Year	Uses	Source
1952	Ahrens Alberta Mrs	Los Angeles Directory Co.

1529 E HILL ST

Year	Uses	Source
1952	Cotner C W	Los Angeles Directory Co.
1948	Ru PP R	Los Angeles Directory Co.

1541 E HILL ST

Year	Uses	Source
1948	Jennett F EL	Los Angeles Directory Co.

E Hill St

1590 E Hill St

Year	Uses	Source
2014	WARD CHARLES M JR	EDR Digital Archive
2010	WARD CHARLES M JR	EDR Digital Archive

E HILL ST

1590 E HILL ST

Year	Uses	Source
2006	CHUCKS ELECTRIC	Haines Company, Inc.

1594 E HILL ST

Year	Uses	Source
1964	STATE RADIATOR CO	Pacific Telephone

FINDINGS

Year	Uses	Source
1963	State Radiator Co G	Pacific Telephone
1960	H & H ENGINE SERV	Pacific Telephone
1957	H & H ENGINE SERV	Pacific Telephone
	H & H Engine Serv auto reprs ga	Pacific Telephone
1954	H & H ENGINE SERV	R. L. Polk & Co.

1595 E HILL ST

Year	Uses	Source
1964	FLORES PAUL H	Pacific Telephone
1963	Linn Donald A G	Pacific Telephone
1960	LINN DONALD A	Pacific Telephone
1957	Linn Donald A ga	Pacific Telephone
1954	LLNN DONALD A R	R. L. Polk & Co.
1952	Linn D A	Los Angeles Directory Co.
1950	LINN DONALD AR	Pacific Telephone
1948	LII D A	Los Angeles Directory Co.

1596 E HILL ST

Year	Uses	Source
1952	H & H Engine Service	Los Angeles Directory Co.
1950	KILLINGSWORTH TRUCKING CO	Pacific Telephone
1948	Bryson H s oil well su P	Los Angeles Directory Co.

E Hill St

1600 E Hill St

Year	Uses	Source
2014	AMERICAN UNIV HLTH SCIENCE	EDR Digital Archive
	AMERICAN UNIV HLTH SCIENCES	EDR Digital Archive
	AUHS	EDR Digital Archive
	SOUTHERN CAL CHAPTER ACRP	EDR Digital Archive
	UNIVERSAL CARE INC	EDR Digital Archive
	UHS INSURANCE AGENCY INC	EDR Digital Archive
2010	JOHNSON & DANG LLC	EDR Digital Archive
	UNIVERSAL CARE INC	EDR Digital Archive
	SOUTHERN CAL CHAPTER ACRP	EDR Digital Archive
	DIETS BY DESIGN	EDR Digital Archive
	ADVANCED RESEARCH MGT SVCS INC	EDR Digital Archive
	AMERICAN UNIV HLTH SCIENCE	EDR Digital Archive
	DHANUS HEALTHCARE TECH INC	EDR Digital Archive

FINDINGS

E HILL ST

1600 E HILL ST

Year	Uses	Source
2006	UNIVRSLCARE	Haines Company, Inc.
	DENTAL UNIVRSLCARE	Haines Company, Inc.
	MEDICAL GROUP UNIVRSLCRADMIN	Haines Company, Inc.
	UNIVRSLCARE	Haines Company, Inc.
1985	PETROLANE INCORPORATED	Pacific Bell
	PETROLANE AUTOMOTIVE SERVICES COMPANIES BLOOME MARK C CO INC	Pacific Bell
	BLOOME MARK C CO INC	Pacific Bell
	AUTOMOTIVE SERVICES COMPANIES EXECUTIVE & ACCOUNTING OFFICES	Pacific Bell
1980	PETROLANE INCORPORATED EXECUTIVE & ACCOUNTING OFFICES	Pacific Telephone
	PETROLANE INC	Pacific Telephone
1975	PETROLANE INCORPORATED EXECUTIVE & ACCOUNTING OFFICES	Pacific Telephone
1964	PETROL ANE GAS SERV INC GENL OFC	Pacific Telephone

1608 E HILL ST

Year	Uses	Source
1985	KETH SAMKHOUN	Pacific Bell

1609 E HILL ST

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.

1611 E HILL ST

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
1975	MORTON CARL M	Pacific Telephone
1964	REEVES CHAS G	Pacific Telephone
1963	Vacant	Pacific Telephone
1960	AMBERG DON L	Pacific Telephone
1957	Amberg Larry	Pacific Telephone
	AMLBERG ADN L	Pacific Telephone
1954	BATY ELA MAE	R. L. Polk & Co.
1952	Christoffers H H	Los Angeles Directory Co.

FINDINGS

1630 E HILL ST

Year	Uses	Source
1952	Ray HE	Los Angeles Directory Co.

1639 E HILL ST

Year	Uses	Source
2006	DECKER Al Jr	Haines Company, Inc.
1985	DECKER AL JR & V	Pacific Bell
1975	DECKER VERA MRS	Pacific Telephone
1964	DECKER VERA MRS	Pacific Telephone
1963	Decker Albert F jr GA	Pacific Telephone
1960	DECKER VERA MRS	Pacific Telephone
1957	DECKER VERA MRS	Pacific Telephone
	Decker Albert F jr	Pacific Telephone
1954	DECKER ALBERT F JR	R. L. Polk & Co.
1950	DECKER ALBERT FRED R	Pacific Telephone
1948	i ARay H E	Los Angeles Directory Co.

E Hill St

1640 E Hill St

Year	Uses	Source
2014	MD CARE INC	EDR Digital Archive
2010	MD CARE INC	EDR Digital Archive

E HILL ST

1641 E HILL ST

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
1980	HILL CLIFFORD R	Pacific Telephone
1975	HILL CLIFFORD R	Pacific Telephone
1964	GALAZ RAYMOND JR	Pacific Telephone
1963	Requa Richd G	Pacific Telephone
1957	MASTERSON JENINE	Pacific Telephone
	Masterson Robt L ga	Pacific Telephone
1952	Decker A F	Los Angeles Directory Co.
1948	Decker A F Jr RO	Los Angeles Directory Co.

FINDINGS

1651 E HILL ST

Year	Uses	Source
2006	THIBODEAUX Shirley	Haines Company, Inc.
1985	THIBODEAUX SHIRLEY	Pacific Bell
1964	DILLON FRANK L	Pacific Telephone
1963	Dillon Richd F G	Pacific Telephone
1960	DILLON FRANK L	Pacific Telephone
1957	CHAPMAN HEBER M	Pacific Telephone
1954	CHAPMAN HEBER M R	R. L. Polk & Co.
1952	Chapman H M	Los Angeles Directory Co.
1950	CHAPMAN HEBER IAV R	Pacific Telephone
1948	Cha Pman H t issg A	Los Angeles Directory Co.

1653 E HILL ST

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
1975	HIGGINBOTHAM JIMMY E	Pacific Telephone
1963	Warren Mamie A Mrs GE	Pacific Telephone
1960	WARREN MAMIE A	Pacific Telephone
1952	Warren M A Mrs	Los Angeles Directory Co.
1950	SMITH MURL	Pacific Telephone
1948	Johnson R WA	Los Angeles Directory Co.

1655 E HILL ST

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
1963	Blumhoff Gertrude Mrs	Pacific Telephone
1960	BLUMHOFF GERTRUDE	Pacific Telephone
1957	Blumboff Gertrude Mrs	Pacific Telephone
1950	BURCHETT BOB E	Pacific Telephone
1948	Mulr Hans	Los Angeles Directory Co.

1657 E HILL ST

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
1964	DAVIS ROBT J	Pacific Telephone
1963	Davis Ester Mrs	Pacific Telephone
1957	Barnes Ida Mrs	Pacific Telephone
	RTON DAVID S	Pacific Telephone
1954	HENDERSON JACK W*LRMG BCH4-1068	R. L. Polk & Co.

FINDINGS

Year	Uses	Source
1952	Illckox II	Los Angeles Directory Co.
1950	HICKOX H R R	Pacific Telephone
1948	Hickox H	Los Angeles Directory Co.

1695 E HILL ST

Year	Uses	Source
2006	EVANS Scott	Haines Company, Inc.
1980	NYE JAS SIGNAL HILL	Pacific Telephone
1975	MITCHELL JAS H SIGNAL HILL	Pacific Telephone
1964	CORRALES GEO LONG BEACH	Pacific Telephone
1963	Corrales Geo L G	Pacific Telephone
1960	CORRALES GEO	Pacific Telephone
1957	CORRALES GEO	Pacific Telephone
	Corrales Geo L	Pacific Telephone
	AGA 4 S	Pacific Telephone
1954	CORRALES GEO R	R. L. Polk & Co.
1952	Corrales G L	Los Angeles Directory Co.
1950	CORRALES GEO R	Pacific Telephone
1948	Corrales G LThR FI	Los Angeles Directory Co.
	Henderson JIV	Los Angeles Directory Co.

1696 E HILL ST

Year	Uses	Source
1963	Petrolane Gas Serv Inc G	Pacific Telephone
1960	PETROLANE GAS SERV INC GENL OFC	Pacific Telephone
	L P G CORP	Pacific Telephone
1958	PETROLANE GAS SERV INC	Pacific Telephone
1957	Petrolane Gas Serv Inc	Pacific Telephone
	PETROLANE GAS SERV INC GENL OFT	Pacific Telephone
1954	GENERAL OFC	R. L. Polk & Co.
	L P G CORP	R. L. Polk & Co.
1952	Petrolane Fuels	Los Angeles Directory Co.
1950	PETROLANE LTD	Pacific Telephone

1700 E HILL ST

Year	Uses	Source
2006	ARREDODNDO Juan	Haines Company, Inc.
	J BULLOCK Tim	Haines Company, Inc.
	CARO Rosalilo	Haines Company, Inc.

FINDINGS

Year	Uses	Source
2006	CHAVARRIA Nora	Haines Company, Inc.
1985	YIM REIN	Pacific Bell
	LUDWIG BETTY	Pacific Bell
	RAINBOW COURT	Pacific Bell
1980	LUDWIG BETTY	Pacific Telephone
	BUCKHOLTZ L L JR	Pacific Telephone
	GEHRING DAVID	Pacific Telephone
1963	Vacant	Pacific Telephone
	Mathews Chas	Pacific Telephone
	Gross John	Pacific Telephone
	Weir David	Pacific Telephone
	Giese Edw	Pacific Telephone
	Robinson Ronald	Pacific Telephone
	Vacant	Pacific Telephone
	Jones Irving	Pacific Telephone
	Vacant	Pacific Telephone
	Vacant	Pacific Telephone
	Vacant	Pacific Telephone
	Vacant	Pacific Telephone
	Vacant	Pacific Telephone
	Vacant	Pacific Telephone
	Minani Frank	Pacific Telephone
	Jones Jas P G	Pacific Telephone
	Eaton Harvey	Pacific Telephone
	Rainbow Court Apartments G	Pacific Telephone
	Vacant	Pacific Telephone
	Britt Wayne	Pacific Telephone
	Britt Carl	Pacific Telephone
	Edwards Owen	Pacific Telephone
	Vacant	Pacific Telephone
	Simpson E J	Pacific Telephone
	Franks Robt	Pacific Telephone
	Vacant	Pacific Telephone
	Ranney John	Pacific Telephone
	Hollingsworth Robt	Pacific Telephone
1960	HARGIS CECIL O	Pacific Telephone
1957	JONES VANONIA	Pacific Telephone
	Rainbow Court Apart ments ga	Pacific Telephone

FINDINGS

Year	Uses	Source
1954	BENWELL LEON	R. L. Polk & Co.
1952	Rainbow Court	Los Angeles Directory Co.
	Brunet W B	Los Angeles Directory Co.
	Christen W R	Los Angeles Directory Co.
	Cowan B G	Los Angeles Directory Co.
	Dodge J E	Los Angeles Directory Co.
	Doremus II R	Los Angeles Directory Co.
	Emond Jeanette Mrs	Los Angeles Directory Co.
	Erixsan A E	Los Angeles Directory Co.
	Feltes Richd	Los Angeles Directory Co.
	Gifford A E	Los Angeles Directory Co.
	Goebel M C	Los Angeles Directory Co.
	Hisey C C	Los Angeles Directory Co.
	Jackson John	Los Angeles Directory Co.
	Jones J P	Los Angeles Directory Co.
	Kaufman Morris	Los Angeles Directory Co.
	Kavalis J E	Los Angeles Directory Co.
	King A M	Los Angeles Directory Co.
	Mc Caulley W R	Los Angeles Directory Co.
	Mallow Mark	Los Angeles Directory Co.
	Moore Herschel	Los Angeles Directory Co.
	Nichol IC	Los Angeles Directory Co.
1950	SPELMAN IRIS	Pacific Telephone
	WILSON A L R	Pacific Telephone
	BECK N J SIGN PAINTR	Pacific Telephone
1948	Rinb Ow Court AWison A L	Los Angeles Directory Co.

1701 E HILL ST

Year	Uses	Source
2006	e THEAMLinne	Haines Company, Inc.
1985	DAVID J H	Pacific Bell
1980	DAVID J H	Pacific Telephone

1703 E HILL ST

Year	Uses	Source
1975	BRADY M	Pacific Telephone

FINDINGS

1727 E HILL ST

Year	Uses	Source
1963	Johnson Glenn	Pacific Telephone
1960	LITTLE FRED S	Pacific Telephone
1957	Little Fred S	Pacific Telephone
1952	Little FS	Los Angeles Directory Co.

1729 E HILL ST

Year	Uses	Source
1963	Clark Betty L Mrs G	Pacific Telephone
1957	Moody June	Pacific Telephone
	SCHMITT WM T	Pacific Telephone
1952	Murphy Theo H	Los Angeles Directory Co.

1731 E HILL ST

Year	Uses	Source
1985	BACKES L M	Pacific Bell
1964	HAYNES ARTHUR	Pacific Telephone
1963	Haynes Lena L Mrs G	Pacific Telephone
1960	HAYNES ARTHUR	Pacific Telephone
1957	SNASHALL ANNA A	Pacific Telephone
	Snashall Anna A Mrs	Pacific Telephone
1952	Snashall Anna Mrs	Los Angeles Directory Co.

1733 E HILL ST

Year	Uses	Source
1963	Atwell Richd	Pacific Telephone
1957	Rose Jack ga	Pacific Telephone
	SMITH GRAYDON J	Pacific Telephone
1954	PAGE ATTIE	R. L. Polk & Co.

1735 E HILL ST

Year	Uses	Source
1964	GUILLAUME DONALD F	Pacific Telephone
1963	Guillaume Donald F G	Pacific Telephone
1957	Buus Larry ga	Pacific Telephone
	BEU LARRY V	Pacific Telephone
1952	Moorehouse D W	Los Angeles Directory Co.

FINDINGS

1375 1/2 E HILL ST

Year	Uses	Source
1957	DENNISON RUSSELL	Pacific Telephone
1950	WILBANLOS M M	Pacific Telephone

E Wesley Dr

1316 E Wesley Dr

Year	Uses	Source
2014	LONG KRISTY	EDR Digital Archive
2010	LONG KRISTY	EDR Digital Archive

E WESLEY DR

1330 E WESLEY DR

Year	Uses	Source
2006	SAMLynn	Haines Company, Inc.

1332 E WESLEY DR

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.

1333 E WESLEY DR

Year	Uses	Source
2006	GARCIAJose	Haines Company, Inc.
1985	KUKA ORETA	Pacific Bell
	Kuka Oreta	Pacific Bell

1334 E WESLEY DR

Year	Uses	Source
2006	KREUZERWilliam	Haines Company, Inc.
1991	Herrera Jose Eloy	Pacific Bell
	Chhem Chhom	Pacific Bell
1980	CALLOWAY EARL	Pacific Telephone
	Reed Dorothy M	Pacific Telephone
	Calloway Earl	Pacific Telephone
1975	Biggers Felix E	Pacific Telephone
	BIGGERS FELIX B	Pacific Telephone

FINDINGS

E Wesley Dr

1335 E Wesley Dr

Year	Uses	Source
2014	BUNHUCH CORPORATION	EDR Digital Archive
2010	BUNHUCH CORPORATION	EDR Digital Archive

E WESLEY DR

1335 E WESLEY DR

Year	Uses	Source
2006	PEREZ Daniel	Haines Company, Inc.
	LIM Sovanna	Haines Company, Inc.
	BUNHUCHTan	Haines Company, Inc.
	HENG Sok Eng	Haines Company, Inc.
1991	Suapaia Joeita	Pacific Bell
1985	Silofau Ioane	Pacific Bell
	Ioane Niko	Pacific Bell
	SILOFAU IOANE	Pacific Bell
	IOANE NIKO	Pacific Bell
1975	Williams Michael	Pacific Telephone
	Williams Vivian	Pacific Telephone

E Wesley Dr

1336 E Wesley Dr

Year	Uses	Source
2010	HOLY MT ZION BAPTIST CHURCH	EDR Digital Archive

E WESLEY DR

1336 E WESLEY DR

Year	Uses	Source
2006	NELSON R	Haines Company, Inc.
1980	OSAKWE CHUKWUDI	Pacific Telephone
	Osakwe Chukwudi	Pacific Telephone
1975	OSAKWE CHUKWUDI	Pacific Telephone
	Osakwe Chukwudi	Pacific Telephone

FINDINGS

E Wesley Dr

1337 E Wesley Dr

Year	Uses	Source
2014	ALL AMERICAN BURGER	EDR Digital Archive
2010	ALL AMERICAN BURGER	EDR Digital Archive

E WESLEY DR

1337 E WESLEY DR

Year	Uses	Source
2006	SOKK	Haines Company, Inc.
1991	Taing Kimlorn	Pacific Bell
	Chea Channuon	Pacific Bell
1975	HOOD LAURA	Pacific Telephone
	Hood Laura	Pacific Telephone

1338 E WESLEY DR

Year	Uses	Source
2006	CHOUNSakhan	Haines Company, Inc.
1980	Miller Mattie	Pacific Telephone

1339 E WESLEY DR

Year	Uses	Source
2006	TUY Dabson	Haines Company, Inc.
	PIGOTTGerald	Haines Company, Inc.
	PERAZAMano	Haines Company, Inc.
	SOTH Say	Haines Company, Inc.
1991	Vang Ying	Pacific Bell
	Sron Ke	Pacific Bell
	Lee Leng L	Pacific Bell
1985	FAATEA EMELIO	Pacific Bell
	Faatea Emelio	Pacific Bell

1340 E WESLEY DR

Year	Uses	Source
2006	TANGSoaueng	Haines Company, Inc.
1975	MILLER GLORIA	Pacific Telephone
	Miller Gloria	Pacific Telephone

FINDINGS

1341 E WESLEY DR

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.

1342 E WESLEY DR

Year	Uses	Source
2006	e ARELLANOJose	Haines Company, Inc.
1991	Marable Overton E	Pacific Bell
1985	Marable Overton E	Pacific Bell
	MARABLE OVERTON E	Pacific Bell
1980	MARABLE OVERTON E	Pacific Telephone
	Marable Overton E	Pacific Telephone
1975	Marable Overton E	Pacific Telephone
	MARABIE OVERTON E	Pacific Telephone

E Wesley Dr

1344 E Wesley Dr

Year	Uses	Source
2014	GREGORIO MIRANDA	EDR Digital Archive

E WESLEY DR

1344 E WESLEY DR

Year	Uses	Source
2006	MIRANDAGregono	Haines Company, Inc.
1991	Garcia Abel	Pacific Bell
1985	Garcia Abel	Pacific Bell
	GARCIA ABEL	Pacific Bell

1346 E WESLEY DR

Year	Uses	Source
2006	a MARINJose	Haines Company, Inc.
1991	Williams Andre	Pacific Bell

1348 E WESLEY DR

Year	Uses	Source
2006	BERNAL Hilda	Haines Company, Inc.
	A RAPALORosa	Haines Company, Inc.
1985	Catalam Richard	Pacific Bell
	CATALAM RICHARD	Pacific Bell

FINDINGS

Year	Uses	Source
1985	VARGAS ENRIQUETA	Pacific Bell

E Wesley Dr

1349 E Wesley Dr

Year	Uses	Source
2014	AKUA INC	EDR Digital Archive

E WESLEY DR

1349 E WESLEY DR

Year	Uses	Source
2006	LEEMattlie	Haines Company, Inc.
	SOLIS Pablo	Haines Company, Inc.
1991	Marroquin Lesbia	Pacific Bell
1985	WELCH WANDA M	Pacific Bell
	Welch Wanda M	Pacific Bell
	Kennard Ruby Lee	Pacific Bell
	Davidson Lee R	Pacific Bell
	UJA ILALIA	Pacific Bell
	KENNARD RUBY LEE	Pacific Bell
	DAVIDSON LEE R	Pacific Bell
1980	Rice Adrienne	Pacific Telephone
	Kennard Ruby Lee	Pacific Telephone
	Ford Garland	Pacific Telephone
	FORD GARLAND	Pacific Telephone
	KENNARD RUBY LEE	Pacific Telephone
1975	CLEMMONS TOMOS	Pacific Telephone
	Stockard Esther	Pacific Telephone
	Rice Adrienne	Pacific Telephone
	Kennard Ruby Lee	Pacific Telephone
	Clemmons Tomos	Pacific Telephone
	KENNARD RUBY LEE	Pacific Telephone
1964	WILSON FRANCES J	Pacific Telephone

1350 E WESLEY DR

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
1991	Lopez Elizabeth	Pacific Bell
1980	Cuevas Jose L M	Pacific Telephone

FINDINGS

Year	Uses	Source
1980	CUEVAS JOSE L M	Pacific Telephone
1975	Lyon Jas	Pacific Telephone
	BOOKER TOMMY	Pacific Telephone
	Booker Tommy	Pacific Telephone
	LYON JAS	Pacific Telephone
1950	LELMKUEHLER JEWEL	Pacific Telephone

1352 E WESLEY DR

Year	Uses	Source
2006	CHUNGHang	Haines Company, Inc.
	SOKThang	Haines Company, Inc.
1991	That Moeun	Pacific Bell
1985	VELEZ CARLOS	Pacific Bell
	Velez Carlos	Pacific Bell

1353 E WESLEY DR

Year	Uses	Source
2006	GARCIAJose	Haines Company, Inc.
	OCAMPOAguslin	Haines Company, Inc.

1354 E WESLEY DR

Year	Uses	Source
2006	SOM Kim Khorn	Haines Company, Inc.
	LENGNarelh	Haines Company, Inc.
1991	Van Yen	Pacific Bell
	Sao Chea	Pacific Bell
1980	West Ricardo Sr & Debbie	Pacific Telephone
	Smith Beverly	Pacific Telephone

E Wesley Dr

1359 E Wesley Dr

Year	Uses	Source
2014	OPERATIONS SOS	EDR Digital Archive

E WESLEY DR

1359 E WESLEY DR

Year	Uses	Source
1991	Sanchez Elisa	Pacific Bell

FINDINGS

1339 1/2 E WESLEY DR

Year	Uses	Source
1964	ROBINSON MAYNARD H	Pacific Telephone

GAVIOTA AVE

2052 GAVIOTA AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
2000	XXXX	Haines
1991	Page John & Cathy	Pacific Bell
	Tapia Maria & Elias	Pacific Bell
1985	Angeline Court	Pacific Bell
	Boone Emmit	Pacific Bell
1980	Angeline Court	Pacific Telephone
	Boone Emmit	Pacific Telephone
1975	Angeline Court	Pacific Telephone
	Baxter Jim	Pacific Telephone
	Benwell Burton	Pacific Telephone
	Cummings B E	Pacific Telephone
	Harned Chas	Pacific Telephone
	Milles Henry	Pacific Telephone
	Pasley B J	Pacific Telephone
1969	VACANT	Pacific Telephone
	LAWRENCE JAMES	Pacific Telephone
	LYNCH ROBERTA MRS	Pacific Telephone
	ANGELINE COURT APARTMENTS	Pacific Telephone
	CLINE O L	Pacific Telephone
	BURNS GLORIA	Pacific Telephone
	BLACK DOUGLAS	Pacific Telephone
	THOMAS JOHNNY	Pacific Telephone
	CHASE DAN	Pacific Telephone
	SMITH STAN	Pacific Telephone
1964	ALLEN BILL L	Pacific Telephone
	ANGELINE COURT	Pacific Telephone
	BENTZ WM	Pacific Telephone
	HOWELL EARL	Pacific Telephone
	SIMON JOS	Pacific Telephone
1963	Angeline Court Apartments Howell Earl GE	Pacific Telephone

FINDINGS

Year	Uses	Source
1963	Baentz Wm GE	Pacific Telephone
	Harpin Gerald	Pacific Telephone
	Sumons Joe	Pacific Telephone
	Hebbe Dan	Pacific Telephone
	Struthers Richd	Pacific Telephone
	Fegan Howard	Pacific Telephone
	Mason Roy	Pacific Telephone
	Williams Jack	Pacific Telephone
1960	ANGELINE COURT	Pacific Telephone
	BENTZ WM	Pacific Telephone
	BOWERS ERNEST E	Pacific Telephone
	CAMPBELL BRUCE B	Pacific Telephone
	CAMPBELL DONALD C	Pacific Telephone
	HOWELL EARL	Pacific Telephone
	RUSSELL THOS J	Pacific Telephone
	WILLIAMS J MRS	Pacific Telephone
1957	Angelina Court	Pacific Telephone
	Colclasure Everett E he	Pacific Telephone
	ANGELIINE COURT	Pacific Telephone
	BENTZ WM	Pacific Telephone
	COLCLASURE E E	Pacific Telephone
	HOLMES JOHN W	Pacific Telephone
	ROFF MVARTY	Pacific Telephone
	SOSNOWSKI WM A	Pacific Telephone
	WILLIAMS J MRS	Pacific Telephone
1954	ANGELINE COURT	R. L. Polk & Co.
1952	Angeline Court Woolpert W V contr	Los Angeles Directory Co.
1950	ANGELINE COURT	Pacific Telephone
	WOOLPERT W V	Pacific Telephone
1948	Ange line Court	Los Angeles Directory Co.
	Woolpert W V	Los Angeles Directory Co.
1944	AAngeljne Court	R. L. Polk & Co.

2056 GAVIOTA AVE

Year	Uses	Source
1969	VACANT	Pacific Telephone
1963	Friedman Maurice	Pacific Telephone
1957	Paustell Bobt	Pacific Telephone
1952	Bach Frank	Los Angeles Directory Co.

FINDINGS

Year	Uses	Source
1950	NAPIER TALITBA G	Pacific Telephone
1948	Napier Tolitha Mrs	Los Angeles Directory Co.
1944	Kopecky R J	R. L. Polk & Co.

2059 GAVIOTA AVE

Year	Uses	Source
1969	NO RETURN	Pacific Telephone

2060 GAVIOTA AVE

Year	Uses	Source
2000	XXXX	Haines
1985	Gepford Terry	Pacific Bell
1980	Tripp Johnny W	Pacific Telephone
1975	Guinn Chas E	Pacific Telephone
1969	VACANT	Pacific Telephone
1963	Perry H	Pacific Telephone
1957	Farnsworth Nina Mrs	Pacific Telephone
1952	Jenkins R	Los Angeles Directory Co.
1948	Quill J IL	Los Angeles Directory Co.
1944	Napier Talitha Mrs	R. L. Polk & Co.

2061 GAVIOTA AVE

Year	Uses	Source
1969	STEPHENSON B L	Pacific Telephone

2064 GAVIOTA AVE

Year	Uses	Source
2000	XXXX	Haines
1975	Head Dennis	Pacific Telephone
1969	STELZER EVELYN MRS	Pacific Telephone
1963	Lee Loraine	Pacific Telephone
1957	Cox Lee	Pacific Telephone
1950	ROSE WILFRED	Pacific Telephone
1948	Ydren John	Los Angeles Directory Co.
1944	Ydren John	R. L. Polk & Co.

2068 GAVIOTA AVE

Year	Uses	Source
1985	Jones Randy	Pacific Bell
1969	ANELLA PAUL	Pacific Telephone

FINDINGS

Year	Uses	Source
1963	Covington Norman	Pacific Telephone
1960	SCHUMAKER FAY B	Pacific Telephone
1957	Buck Stewart C	Pacific Telephone
1952	Scott C F	Los Angeles Directory Co.
1948	Stephens R M	Los Angeles Directory Co.
1944	Stephens R M	R. L. Polk & Co.

2072 GAVIOTA AVE

Year	Uses	Source
1991	Newsome Terry	Pacific Bell
1975	Smith Michael	Pacific Telephone
1969	FAUHRER ROY	Pacific Telephone
1963	Hargis Cecil	Pacific Telephone
1957	Legg Robt	Pacific Telephone
1952	Stradley E L	Los Angeles Directory Co.
1948	Davis W G	Los Angeles Directory Co.
1944	Hawkins J S	R. L. Polk & Co.

2076 GAVIOTA AVE

Year	Uses	Source
1975	Baith David A	Pacific Telephone
1969	LOWRENCE GEO	Pacific Telephone
1963	Robinson Jack	Pacific Telephone
1957	Moyer Phil	Pacific Telephone
1952	Lynch Roy	Los Angeles Directory Co.
1948	Spurlock H 3 E	Los Angeles Directory Co.
1944	1 Nix H	R. L. Polk & Co.

2080 GAVIOTA AVE

Year	Uses	Source
1969	VACANT	Pacific Telephone
1963	Torraimes Rocky	Pacific Telephone
1957	Griffith Bobt E	Pacific Telephone
	EPPE HARRY	Pacific Telephone
1952	Evans Mae Mrs	Los Angeles Directory Co.
1948	Broderick W F	Los Angeles Directory Co.
1944	SO ilroderick WWm	R. L. Polk & Co.

FINDINGS

2084 GAVIOTA AVE

Year	Uses	Source
1980	Vonderbeck Edw J	Pacific Telephone
1969	DANIELS LARRY J	Pacific Telephone
1963	Lanstra Harvey	Pacific Telephone
1957	Westermeyer Fred	Pacific Telephone
1952	Coleman C B	Los Angeles Directory Co.
	Ryan E F	Los Angeles Directory Co.
1948	English T W	Los Angeles Directory Co.

2088 GAVIOTA AVE

Year	Uses	Source
1969	VACANT	Pacific Telephone
1963	Danielson Oscar J	Pacific Telephone
1957	Baker Ira	Pacific Telephone
1952	Easton Thos	Los Angeles Directory Co.
1948	Farinholt W N	Los Angeles Directory Co.
1944	SS Coons R H	R. L. Polk & Co.

2092 GAVIOTA AVE

Year	Uses	Source
1991	Edwards I J	Pacific Bell
1980	Telting Wm P	Pacific Telephone
1975	Hobbs Roger	Pacific Telephone
1969	BENNACH ROBT	Pacific Telephone
1964	LARSEN MILO D	Pacific Telephone
1963	Cirks Ronald	Pacific Telephone
1957	Hillen B E	Pacific Telephone
1952	Ellison E H	Los Angeles Directory Co.
1948	Ford 3 El	Los Angeles Directory Co.
1944	a 012 Jonsc Curtis	R. L. Polk & Co.

2095 GAVIOTA AVE

Year	Uses	Source
1963	Seiber Joseph G b Idg contr GE	Pacific Telephone

2110 GAVIOTA AVE

Year	Uses	Source
2006	FRIAS Manuel	Haines Company, Inc.
1991	Soto Rosaura	Pacific Bell
	Sourn Lam Y	Pacific Bell

FINDINGS

Year	Uses	Source
1985	Deweese Terry	Pacific Bell
	DEWEESE TERRY	Pacific Bell
1980	DEWEESE TERRY	Pacific Telephone
	Deweese Terry	Pacific Telephone
	Teeple Helen Lee	Pacific Telephone
1975	COTTON K	Pacific Telephone
	MCDONALD JOHN J	Pacific Telephone
	HEATH DONALD E	Pacific Telephone
	Cotton K	Pacific Telephone
	Heath Donald E	Pacific Telephone
	Mc Donald John J	Pacific Telephone
1969	C CHRISMAN RONALD M	Pacific Telephone
	E MARCHESE BARBAR	Pacific Telephone
	F CHAVIRA CLARICE MRS	Pacific Telephone
	CLINE O L	Pacific Telephone
	C CHRISMAN RONALD M	Pacific Telephone
1964	RICHARDS ADELINE LONG BEACH	Pacific Telephone
	DEVILLIER MARGARET	Pacific Telephone
	SMITH BOBBY JOE	Pacific Telephone
	TAYLOR A A JR	Pacific Telephone
1963	Under Constn	Pacific Telephone
1957	Hel Erick Sydney Mrs	Pacific Telephone
	HELFRICK SYDNEY V	Pacific Telephone
1954	HELFRICK CLOE D	R. L. Polk & Co.
1952	Helfrick CD	Los Angeles Directory Co.
1950	HELFRICK CLOE D	Pacific Telephone
1948	Helfrick Fritz	Los Angeles Directory Co.

2114 GAVIOTA AVE

Year	Uses	Source
2006	o CANCELFemando	Haines Company, Inc.
2000	CANCEL Fernando	Haines
1969	KRUSE VERNON JR	Pacific Telephone
1963	Baliff Lester	Pacific Telephone
1960	ROSS MARC DAVID	Pacific Telephone
1957	Morey Tom	Pacific Telephone
	SCHRANK ELSIE D	Pacific Telephone
1952	Vacant	Los Angeles Directory Co.
1950	SCHRANK KENNETH H R	Pacific Telephone

FINDINGS

Year	Uses	Source
1948	Schrank K: IC	Los Angeles Directory Co.

2116 GAVIOTA AVE

Year	Uses	Source
1991	Andrade Frank	Pacific Bell
1969	MENSKER ERNEST	Pacific Telephone
1963	Williams Geo	Pacific Telephone
1960	DRISCOLL ED L	Pacific Telephone
1957	Warnes Paul	Pacific Telephone
1952	Vacant	Los Angeles Directory Co.
1948	Vacant	Los Angeles Directory Co.

2128 GAVIOTA AVE

Year	Uses	Source
2006	ESCOBAR Edward	Haines Company, Inc.
2000	ESCOBAR John	Haines
1985	Hagen Gary A	Pacific Bell
	HAGEN GARY A	Pacific Bell
1980	Woodson Tim	Pacific Telephone
1975	Wells Stanley	Pacific Telephone
1969	JACKOWICK LEO B	Pacific Telephone
1964	BLACKBURN V W	Pacific Telephone
1963	Blackburn Vernon W GE	Pacific Telephone
1960	BLACKBURN V W	Pacific Telephone
1957	BLACKBURN V W	Pacific Telephone
	Blackburn Vernon W ga	Pacific Telephone

2134 GAVIOTA AVE

Year	Uses	Source
2006	TRYHarold	Haines Company, Inc.
2000	MONY Naron	Haines
1985	Spalding Robt	Pacific Bell
	SPALDING ROBT	Pacific Bell
1980	HARA NOBUMICHI	Pacific Telephone
	Hara Nobumichi	Pacific Telephone
1975	HUNTOON THOS R	Pacific Telephone
	Huntoon Thos R	Pacific Telephone
1969	COPPENS OLIVE MRS	Pacific Telephone
1963	Vacant	Pacific Telephone

FINDINGS

Year	Uses	Source
1957	LINQUIST HAROLD R	Pacific Telephone
	ULrich Alf C ga	Pacific Telephone
1954	HIATT JAS A R	R. L. Polk & Co.
1952	Hiatt J A	Los Angeles Directory Co.
1950	HIATT JAS A R	Pacific Telephone
1948	Hiatt J A	Los Angeles Directory Co.

2136 GAVIOTA AVE

Year	Uses	Source
2006	A HARE Thomas E	Haines Company, Inc.
	F SAR Chinsauro	Haines Company, Inc.
2000	LIM Ngov	Haines
	SEBREE Gamett L	Haines
	SMITH William	Haines
1991	Montoya Tom	Pacific Bell
	Perry Hosey	Pacific Bell
	Potts Gregory	Pacific Bell
	Sebree Garnett L	Pacific Bell
1985	Borda Terri	Pacific Bell
	Perry Hosey	Pacific Bell
	Sebree Garnett L	Pacific Bell
	BORDA TERRI	Pacific Bell
	PERRY HOSEY	Pacific Bell
	SEBREE GARNETT L	Pacific Bell
1980	SEBREE GARNETT L	Pacific Telephone
	Maughermar Jack W	Pacific Telephone
	Maughermar Jack W	Pacific Telephone
	Sebree Garnett L	Pacific Telephone
1975	Cobb T Y	Pacific Telephone
	Pearson R L	Pacific Telephone
	COBB T Y	Pacific Telephone
	PEARSON R L	Pacific Telephone
	Sebree Garnett L	Pacific Telephone
1969	B NOVAK LAWRENCE	Pacific Telephone
	B NOVAK LAWRENCE	Pacific Telephone
	D SEBREE GARNETT L S	Pacific Telephone
	E PYPER CARL B	Pacific Telephone
	E PYPER CARL B	Pacific Telephone
	G NORJANO VINCENT C	Pacific Telephone

FINDINGS

Year	Uses	Source
1964	SEBREE GARNETT L	Pacific Telephone
	STOAKES RICHMOND	Pacific Telephone
	TRAVERS DONALD E	Pacific Telephone
	TRAVERS LAURIE	Pacific Telephone
	ZOCHOLL CARL G	Pacific Telephone
1963	Apartments	Pacific Telephone
	A Resaney Mictil B Shadden Thos E G	Pacific Telephone
	C Vacant	Pacific Telephone
	D Greber Forest	Pacific Telephone
	E Algood Dempsey	Pacific Telephone
	F Herindeen Beck	Pacific Telephone
	G Montgomery Marc L	Pacific Telephone

2148 GAVIOTA AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
2000	MATTINGLY Joseph	Haines
1991	Yanez Jim	Pacific Bell
1985	YANEZ JIM	Pacific Bell
	Yanez Jim	Pacific Bell
1975	Schlichting Frances M	Pacific Telephone
1969	EDWARDS TERRY E	Pacific Telephone
	MATTINGLY JOSEPH E	Pacific Telephone
	PEERY JACK E	Pacific Telephone
1964	LOWDER ERNEST M	Pacific Telephone
	HALL JACK E	Pacific Telephone
1963	Lowder Ernest	Pacific Telephone
	a Twirl Robt	Pacific Telephone
	b Mattingly Joseph E G	Pacific Telephone
1957	BRADY RAY F	Pacific Telephone
	Vacant	Pacific Telephone
1954	BRADY RAY F	R. L. Polk & Co.
1952	Brady R F	Los Angeles Directory Co.
1950	BRADY RAY F	Pacific Telephone
1948	Brady Gertrude Mrs	Los Angeles Directory Co.

2149 GAVIOTA AVE

Year	Uses	Source
2006	o VALENCIA Esperanza	Haines Company, Inc.

FINDINGS

2150 GAVIOTA AVE

Year	Uses	Source
2000	GOTTFRIED Robert	Haines
1957	Peterson Leonard ga	Pacific Telephone
	PETERSON LEONARD D	Pacific Telephone
1954	IKERD WM M	R. L. Polk & Co.
1952	Thorn A C	Los Angeles Directory Co.
1950	THORN ARTHUR C R	Pacific Telephone
1948	Thom A C	Los Angeles Directory Co.
1944	ASiater K V Mrs	R. L. Polk & Co.
1939	Slater K V Mrs	Los Angeles Directory Co.
1935	Lopp W F	Los Angeles Directory Co.
	Slater K V Mrs	Los Angeles Directory Co.
1931	Lopp W F	Los Angeles Directory Co.
	Slater K V Mrs o	Los Angeles Directory Co.

2152 GAVIOTA AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
2000	XXXX	Haines
1969	DAVY SUSAN Z	Pacific Telephone
1963	Rodakowskis John	Pacific Telephone

2154 GAVIOTA AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
2000	XXXX	Haines
1991	Allen Jas	Pacific Bell
1975	Taylor Bud	Pacific Telephone
1969	TAYLOR HENRY	Pacific Telephone
1964	STOKES HOMER F	Pacific Telephone
1963	Wells Loraine Mrs G	Pacific Telephone

2156 GAVIOTA AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
2000	UDOMRATSAK Prinya	Haines
	BUCKLEY Philip	Haines
1991	Clifford Martin	Pacific Bell
1985	Rodriguez Alvaro	Pacific Bell

FINDINGS

Year	Uses	Source
1985	Alanouf Lee	Pacific Bell
	Alanouf Walid	Pacific Bell
	RODRIGUEZ ALVARO	Pacific Bell
	ALANOUF LEE	Pacific Bell
1980	BELISLE LORI	Pacific Telephone
	Miura P	Pacific Telephone
	Belisle Lori	Pacific Telephone
1975	Siegal Mark	Pacific Telephone
	Ferro Bob A	Pacific Telephone
	FERRO BOB A	Pacific Telephone
1969	D BOWMAN DAVID	Pacific Telephone
	C BRAMBLETT OPAL V	Pacific Telephone
	B WALKINGTON IDA R MRS	Pacific Telephone
	G NORJANO VINCENT C	Pacific Telephone
	APARTMENTS	Pacific Telephone
1964	BRAMBLETT OPAL V	Pacific Telephone
1963	D Allice Ronald	Pacific Telephone
	B Walkington Ida R C Bramelett Opal G	Pacific Telephone
	Apartments A Van Paelgeest Wm	Pacific Telephone
1960	PETERSON HAROLD R	Pacific Telephone
	PETERSON GEO M	Pacific Telephone

2168 GAVIOTA AVE

Year	Uses	Source
2006	Mauncio	Haines Company, Inc.
	PEREIRA MOLINA	Haines Company, Inc.
	MERCADO Frank A	Haines Company, Inc.
2000	MOLINA Mauriclo	Haines
1991	Torrales Edith	Pacific Bell
1969	MC DOWELL BILL	Pacific Telephone
1964	CARTER BUD D	Pacific Telephone
1963	Gibbs Wm E	Pacific Telephone

2170 GAVIOTA AVE

Year	Uses	Source
1957	Coates Bichd	Pacific Telephone
	COATS RICHARD W	Pacific Telephone

FINDINGS

2174 GAVIOTA AVE

Year	*Uses*	*Source*
2006	HOWELeroy C	Haines Company, Inc.
	HUANG Peter	Haines Company, Inc.
	LESNIAK Robert D	Haines Company, Inc.
2000	FUJIKAWA Byron	Haines
	HOWE Leroy C	Haines
	HUANG Jin	Haines
	HUANG Peter	Haines
	PETRILLO Robt	Haines
1991	Arriaga Ron R	Pacific Bell
	Figueroa Frank	Pacific Bell
	Howe Leroy C	Pacific Bell
	Joyce Thos J	Pacific Bell
	King Robt L	Pacific Bell
	Petrillo Robt	Pacific Bell
1985	Brown Kevin F	Pacific Bell
	Howe Leroy C	Pacific Bell
	Jones Michael S	Pacific Bell
	Petrillo Robt	Pacific Bell
	BROWN KEVIN F	Pacific Bell
	HOWE LEROY C	Pacific Bell
	JONES MICHAEL S	Pacific Bell
	PETRILLO ROBT	Pacific Bell
1980	JONES MICHAEL S	Pacific Telephone
	BROWN KEVIN F	Pacific Telephone
	HALBERG RANDALL & ALISON	Pacific Telephone
	HOWE LEROY C	Pacific Telephone
	KEATING C J	Pacific Telephone
	Brown Kevin F	Pacific Telephone
	Halberg Randall & Alison	Pacific Telephone
	Howe Leroy C	Pacific Telephone
	Jones Michael S	Pacific Telephone
	Keating C J	Pacific Telephone
1975	HAPPE WALTER P	Pacific Telephone
	HOWE LEROY C	Pacific Telephone
	Brooks Gordon W	Pacific Telephone
	Butler E M	Pacific Telephone
	Happe Walter P	Pacific Telephone

FINDINGS

Year	Uses	Source
1975	Howe Leroy C	Pacific Telephone
	Perkins Alvin	Pacific Telephone
	St Clair Thos L	Pacific Telephone
	BUTLER E M	Pacific Telephone
	BROOKS GORDON W	Pacific Telephone
	PERKINS ALVIN SIGNAL HILL	Pacific Telephone
1969	APARTMENTS	Pacific Telephone
	WRIGHT HAZEL MRS	Pacific Telephone
	SOLVEY DENNIS	Pacific Telephone
	CHESNUT JOHN	Pacific Telephone
	MILLER GEO	Pacific Telephone
	LEE DONALD	Pacific Telephone
	RICHARDSON BENTON	Pacific Telephone
	VINTON MARION K	Pacific Telephone
	WITSMAN STEVEN	Pacific Telephone
1964	LIVINGSTON R E	Pacific Telephone
	ROBERTSON CHAS T	Pacific Telephone
	STRONG HERBERT G	Pacific Telephone
	THOMPSON ANN	Pacific Telephone
	WRIGHT PAUL A	Pacific Telephone
1963	Under Constn	Pacific Telephone
1957	Weidman Margt W Mrs ga	Pacific Telephone
	REESE JAS H	Pacific Telephone
1954	WEIDMAN MARGARET R	R. L. Polk & Co.
1952	Weidman M W Mrs	Los Angeles Directory Co.
1950	WEIDMAN MARGARET R	Pacific Telephone
1948	Weidman M VW Mrs	Los Angeles Directory Co.
1944	AWeidiui M	R. L. Polk & Co.
1939	Weidman Milton	Los Angeles Directory Co.
1935	Weidman M G to	Los Angeles Directory Co.
1931	Wedman Milton	Los Angeles Directory Co.

2205 GAVIOTA AVE

Year	Uses	Source
1935	Vacant	Los Angeles Directory Co.
1931	Vacant	Los Angeles Directory Co.

FINDINGS

2206 GAVIOTA AVE

Year	Uses	Source
1931	Vacant	Los Angeles Directory Co.

2207 GAVIOTA AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
2000	MASON Keith	Haines
1969	WRIGHT WILLARD W	Pacific Telephone
1964	WRIGHT W W	Pacific Telephone
1963	Clark Alvina G Mrs GA	Pacific Telephone
1960	DONNER RICHARD C	Pacific Telephone
1957	Donner Bichd C	Pacific Telephone
	DONNER RICHARD C	Pacific Telephone
1935	Meyer W G	Los Angeles Directory Co.
1931	Skinner B L	Los Angeles Directory Co.

2208 GAVIOTA AVE

Year	Uses	Source
1931	Vacant	Los Angeles Directory Co.

2209 GAVIOTA AVE

Year	Uses	Source
2006	NARANJOJose	Haines Company, Inc.
2000	XXXX	Haines
1980	Scott Jacqueline	Pacific Telephone
1969	GACHES MM H	Pacific Telephone
1963	No Return	Pacific Telephone
1957	Bayle Jack	Pacific Telephone
1952	Downing W B Mrs	Los Angeles Directory Co.
1950	MAYES ARRIEA	Pacific Telephone
1935	Aping Rer Arnold	Los Angeles Directory Co.
1931	Craig Nellie Mrs	Los Angeles Directory Co.

2210 GAVIOTA AVE

Year	Uses	Source
2000	TER Borch	Haines
	CHARITY Albert	Haines

FINDINGS

2211 GAVIOTA AVE

Year	Uses	Source
2006	RIVERA Debbie	Haines Company, Inc.
2000	XXXX	Haines
1991	Rivera Debbie	Pacific Bell
1985	King Debbie	Pacific Bell
	KING DEBBIE	Pacific Bell
1975	Wright Paul A	Pacific Telephone
1969	WRIGHT PAUL	Pacific Telephone
1964	WRIGHT ORAL	Pacific Telephone
1963	Mauda Ronald	Pacific Telephone
1960	TRAVERS JOHN	Pacific Telephone
1957	DONNER OREN L	Pacific Telephone
	Donner Oren L ga	Pacific Telephone
1952	Donner R C B	Los Angeles Directory Co.
1950	DONNER RICHARD C	Pacific Telephone
1948	Donner R C	Los Angeles Directory Co.
1935	Murie E R	Los Angeles Directory Co.
1931	Woods S B	Los Angeles Directory Co.

2213 GAVIOTA AVE

Year	Uses	Source
2000	BUN Stephen	Haines
	RODRIGUEZ Jorge	Haines

2215 GAVIOTA AVE

Year	Uses	Source
2000	XXXX	Haines

GUNDRY AVE

2100 GUNDRY AVE

Year	Uses	Source
1980	Jenkins Ted R Co	Pacific Telephone
	JENKINS TED R CO	Pacific Telephone

2101 GUNDRY AVE

Year	Uses	Source
1960	MAULTSBY THOS	Pacific Telephone
1957	Monday Veula Mrs Ah G	Pacific Telephone
	MONDAY VEULA	Pacific Telephone

FINDINGS

Year	Uses	Source
1954	ROSS MARGARET L MRS	R. L. Polk & Co.
1952	Ross Mar gt Mrs	Los Angeles Directory Co.
1950	ABLE BIDANG MAINTENANCE	Pacific Telephone
	SCHICK CARL JANITOR SVC	Pacific Telephone
	SIGNAL HILL BLDNG MAINTENANCE	Pacific Telephone
1948	Boring Wm	Los Angeles Directory Co.
1944	Gallelo H M	R. L. Polk & Co.
1939	Hyder H V	Los Angeles Directory Co.
1935	Enders Robt	Los Angeles Directory Co.
1931	Sawnyrcy A Mrts	Los Angeles Directory Co.

2103 GUNDRY AVE

Year	Uses	Source
1950	HOGIN W B	Pacific Telephone
1948	Hogin W B	Los Angeles Directory Co.
1944	APhlllips R E	R. L. Polk & Co.
1939	Taute H H	Los Angeles Directory Co.
1935	ONeill W L	Los Angeles Directory Co.
1931	Arnfc H II J	Los Angeles Directory Co.

2104 GUNDRY AVE

Year	Uses	Source
1952	d Vacant	Los Angeles Directory Co.
	Mc Ginnis R F	Los Angeles Directory Co.
	a Zylstra H F	Los Angeles Directory Co.
	c Chittenden Donald	Los Angeles Directory Co.
	b Iewett J E	Los Angeles Directory Co.
1950	ZYLSTRA HARRY R	Pacific Telephone
1948	a Zylstra HP F	Los Angeles Directory Co.
1944	Zylstra H F	R. L. Polk & Co.
1939	Zylstra Harry	Los Angeles Directory Co.
1935	Vacant	Los Angeles Directory Co.
1931	Young 31 rfs	Los Angeles Directory Co.

2105 GUNDRY AVE

Year	Uses	Source
1950	PITMAN LORETTA MRS	Pacific Telephone
1948	APitman L A Mrs	Los Angeles Directory Co.
1944	Dunne T C	R. L. Polk & Co.

FINDINGS

Year	Uses	Source
1939	Pitman E B	Los Angeles Directory Co.
1935	Pitman E B o	Los Angeles Directory Co.
1931	Ittiztt KC B i	Los Angeles Directory Co.

2106 GUNDRY AVE

Year	Uses	Source
1950	CONDIS N MRS R	Pacific Telephone
1948	1/2 Clark E H	Los Angeles Directory Co.
	ACondis N L	Los Angeles Directory Co.
1939	Cavett F H	Los Angeles Directory Co.
1935	Vacant	Los Angeles Directory Co.
1931	f ldy N Mrs	Los Angeles Directory Co.

2107 GUNDRY AVE

Year	Uses	Source
1950	MCCARRALL RUBY R	Pacific Telephone
1948	Mc Carroll R F Mrs	Los Angeles Directory Co.

Gundry Ave

2109 Gundry Ave

Year	Uses	Source
2014	CE ALLENCOMPANY INC	EDR Digital Archive
	P&M OIL CO	EDR Digital Archive
2010	BEST CONTRACTING INC	EDR Digital Archive
	CE ALLENCOMPANY INC	EDR Digital Archive
	P&M OIL CO	EDR Digital Archive

GUNDRY AVE

2109 GUNDRY AVE

Year	Uses	Source
2006	ALLENCO	Haines Company, Inc.
	PANNELLLEONAR	Haines Company, Inc.
	R & L CO	Haines Company, Inc.
2000	ALLENCO	Haines
	NIEDECKER MARSHALL E CO	Haines
1991	BCI	Pacific Bell
1969	KALE MARY A MRS	Pacific Telephone
1964	KALE MARY MRS	Pacific Telephone

FINDINGS

Year	Uses	Source
1963	Kale Mary A Mrs BG	Pacific Telephone
1960	KALE MARY MRS	Pacific Telephone
1957	Kale Mary Mrs ga	Pacific Telephone
	TOFLASLS ALBEART N	Pacific Telephone
1952	Kale MA Mrs	Los Angeles Directory Co.
1948	Meier Roman	Los Angeles Directory Co.
1944	Mc Clure J A	R. L. Polk & Co.
1939	Friedley Danl	Los Angeles Directory Co.
1935	Friedly Dani	Los Angeles Directory Co.
1931	Scott K	Los Angeles Directory Co.

2111 GUNDRY AVE

Year	Uses	Source
2000	XXXX	Haines
1991	Allied Equip Co	Pacific Bell
	Allied Processing Equip Co	Pacific Bell
1985	ALLIED EQUIP CO	Pacific Bell
	ALLIED PROCESSING EQUIP CO	Pacific Bell
	Allied Equip Co	Pacific Bell
	Allied Export Packing Inc	Pacific Bell
	Allied Processing Equip Co	Pacific Bell
1980	Allied Equip Co	Pacific Telephone
	Allied Export Packing Inc	Pacific Telephone
	Allied Processing Equip Co	Pacific Telephone
	ALLIED EQUIP CO	Pacific Telephone
	ALLIED PROCESSING EQUIP CO	Pacific Telephone
1975	ALLIED EQUIP CO	Pacific Telephone
	ALLIED PROCESSING EQUIP CO	Pacific Telephone
	Allied Equip Co	Pacific Telephone
	Allied Export Packing	Pacific Telephone
	Allied Processing Equip Co	Pacific Telephone
1969	ALLIEO PROCESSING EQUIPMENT CO NEW C USED ECUIP	Pacific Telephone
1964	ALLIED EQUIPT CO	Pacific Telephone
	ALLIED PROCESSING EQUIPT CO	Pacific Telephone
1963	Allied Processing Equipment Co new & used G	Pacific Telephone
1960	ALLIED CHEMICAL & PROCESSING EQUIPT CO	Pacific Telephone
1957	Austin Guy ga	Pacific Telephone

FINDINGS

Year	Uses	Source
1954	NOOOD JAS	R. L. Polk & Co.
1952	Skaggs Chasa A	Los Angeles Directory Co.
1950	SKAGGS CHAS A	Pacific Telephone
1948	Vacant	Los Angeles Directory Co.
1944	Vacant	R. L. Polk & Co.
1939	Skaggs C A	Los Angeles Directory Co.
1935	Skagge C A	Los Angeles Directory Co.
1931	ll 4 tol 4 lltfrry	Los Angeles Directory Co.

2113 GUNDRY AVE

Year	Uses	Source
1931	b taggeret jos	Los Angeles Directory Co.
	lckurtwht J A	Los Angeles Directory Co.
	a Vacauitc	Los Angeles Directory Co.

Gundry Ave

2115 Gundry Ave

Year	Uses	Source
2014	OCEAN IMPORTS	EDR Digital Archive
2010	OCEAN IMPORTS	EDR Digital Archive

GUNDRY AVE

2115 GUNDRY AVE

Year	Uses	Source
2006	OCEAN IMPORTS	Haines Company, Inc.
2000	OCEAN IMPORTS	Haines
1991	Ocean Imports	Pacific Bell
1985	OCEAN IMPORTS	Pacific Bell
	Ocean Imports	Pacific Bell
1980	United Directional Services Inc	Pacific Telephone
1975	United Directional Services Inc	Pacific Telephone
1969	UNITED DIRECTIONAL SERVICES INC OIL WELL DIR SERV	Pacific Telephone
1964	GILBERT MAE L	Pacific Telephone
1963	Palikan Frank J rear Coddington Rea Mrs G	Pacific Telephone
	Donaldson Allison	Pacific Telephone
	Gilbert May Mrs B	Pacific Telephone

FINDINGS

Year	Uses	Source
1960	GILBERT MAE L	Pacific Telephone
1957	Gilbert Mae Mrs ga	Pacific Telephone
	Lopez Carlos A	Pacific Telephone
	Palmer Irma Mrs	Pacific Telephone
	GILBERT MAE L	Pacific Telephone
	BAKER ROBT A	Pacific Telephone
1954	ROENFEFDT MLELVIN	R. L. Polk & Co.
	GILBERT MAE L	R. L. Polk & Co.
1952	Coddington Rea Mrs	Los Angeles Directory Co.
	Cook W J	Los Angeles Directory Co.
	Gilbert M L Mrs	Los Angeles Directory Co.
1950	GILBERT MAE L UPHLSTRNG	Pacific Telephone
1948	Gilbert M L Mrs	Los Angeles Directory Co.
1944	b Sb Dunn H H	R. L. Polk & Co.
	a a Campbell Helen	R. L. Polk & Co.
	AGilbert Robt	R. L. Polk & Co.
	ABall T H	R. L. Polk & Co.
1939	Candland S H	Los Angeles Directory Co.
	a Vacant	Los Angeles Directory Co.
	b Dunn H R	Los Angeles Directory Co.
1935	Dunn H R	Los Angeles Directory Co.
	a Vacant	Los Angeles Directory Co.
	Edwards David	Los Angeles Directory Co.

2121 GUNDRY AVE

Year	Uses	Source
1935	HILL INTERSECTS	Los Angeles Directory Co.
	Bathlolomew F H	Los Angeles Directory Co.
1931	Brtltlotimw F H tol	Los Angeles Directory Co.

Gundry Ave

2161 Gundry Ave

Year	Uses	Source
2014	UNITED STEELWORKERS LOCAL 2801	EDR Digital Archive
2010	3777+ PARTNERS LP	EDR Digital Archive
	UNITED STEELWORKERS LOCAL 2801	EDR Digital Archive

FINDINGS

GUNDRY AVE

2161 GUNDRY AVE

Year	Uses	Source
2006	HOWARD	Haines Company, Inc.
	CONSTRUCTION	Haines Company, Inc.
2000	L & B ICE MACHINE SERVICE	Haines
	HOWARD CONSTRUCTION	Haines
1991	J & D Contractors Inc	Pacific Bell
	J & D PLUMBING & HEATING	Pacific Bell
1985	J & D PLUMBING & HEATING	Pacific Bell
	J & D CONTRACTORS INC	Pacific Bell
	J & D Contractors Inc	Pacific Bell
	J & D Plumbing & Heating	Pacific Bell
1975	Boone Machine Shop Inc	Pacific Telephone
	BOONE MACHINE SHOP INC	Pacific Telephone
1969	BOONE MACHINE SHOP	Pacific Telephone
1964	SCHAEFFER MACH SHOP	Pacific Telephone
	BOONE MACH SHOP	Pacific Telephone

Gundry Ave

2170 Gundry Ave

Year	Uses	Source
2010	P & M DIESEL	EDR Digital Archive

GUNDRY AVE

2170 GUNDRY AVE

Year	Uses	Source
2000	XXXX	Haines
	X HILL E	Haines
1991	Linler Inc Motor & Power Eng Division	Pacific Bell
1985	WALTERS ELECTRIC MOTOR SERVICE	Pacific Bell
	WALTERS ELECTRIC MOTOR SERVICE	Pacific Bell
1980	WALTERS ELECTRIC MOTOR SERVICE	Pacific Telephone
1975	WALTERS ELECTRIC MOTOR SERVICE	Pacific Telephone
1969	WALTERS ELECTRIC MOTOR SERVICE SLS SERV	Pacific Telephone
1964	WALTERS ELECTRIC MOTOR SERV LONG BEACH	Pacific Telephone

Year	Uses	Source
1963	Walters flec Motor Serv repr G	Pacific Telephone
1960	ANAHEIM ELECTRIC MOTOR REPAIR	Pacific Telephone
1957	Anaheim Elec Motor Repr ga	Pacific Telephone
	ANAHEIM ELEC MOTOR REPAIR	Pacific Telephone
1954	ANAHEIM ELEC MOTOR REPAIR	R. L. Polk & Co.
1952	Anaheim Elec Motor Repr	Los Angeles Directory Co.
1950	ANAHEIM ELEC MOTOR REPAIR	Pacific Telephone
1948	OAnaheim Elec Motor Repr	Los Angeles Directory Co.

2106 1/2 GUNDRY AVE

Year	Uses	Source
1950	FOSTER DON H	Pacific Telephone

HILL ST E

1309 HILL ST E

Year	Uses	Source
1969	CORONADO MFG CO SHIPPING REC	Pacific Telephone

1323 HILL ST E

Year	Uses	Source
1969	GAW HERBERT M	Pacific Telephone

1325 HILL ST E

Year	Uses	Source
1969	NELSON MARGIE L	Pacific Telephone

1361 HILL ST E

Year	Uses	Source
1969	SALES OIL WELL TOOL DISTR	Pacific Telephone
	DRILTROL OIL WELL SERVICING	Pacific Telephone

1444 HILL ST E

Year	Uses	Source
1969	BLACKWELL C SUNDE INC OIL WELL DRILLERS	Pacific Telephone

1456 HILL ST E

Year	Uses	Source
1969	PETER BAWDEN DRILLING INC OIL WELL DRILLERS	Pacific Telephone

FINDINGS

1500 HILL ST E

Year	Uses	Source
1969	MIKEIS BEARING SERVICE	Pacific Telephone

1502 HILL ST E

Year	Uses	Source
1969	CARICOS AIR COMPRESSORS	Pacific Telephone

1600 HILL ST E

Year	Uses	Source
1969	PETROLANE GAS SERVICE INC	Pacific Telephone

1611 HILL ST E

Year	Uses	Source
1969	MORTON CARL	Pacific Telephone

1639 HILL ST E

Year	Uses	Source
1969	DECKER ALBERT	Pacific Telephone

1641 HILL ST E

Year	Uses	Source
1969	GALAZ LINDA 7 MRS	Pacific Telephone

1651 HILL ST E

Year	Uses	Source
1969	THIBODEAUX LYNN	Pacific Telephone

1653 HILL ST E

Year	Uses	Source
1969	MORTON MICHL	Pacific Telephone

1655 HILL ST E

Year	Uses	Source
1969	NELTON ETHELEEN	Pacific Telephone

1657 HILL ST E

Year	Uses	Source
1969	CHIASSON DONALD R	Pacific Telephone

1695 HILL ST E

Year	Uses	Source
1969	CORRALES GEO L S	Pacific Telephone

FINDINGS

1700 HILL ST E

Year	Uses	Source
1969	ATTARDO ANGELO	Pacific Telephone
	MYERS A C	Pacific Telephone
	DENTON WM	Pacific Telephone
	OLIVERI ANGELA	Pacific Telephone
	LEE VIOLET N	Pacific Telephone
	DIERIEX PAUL	Pacific Telephone
	JOHNSON NAOMI	Pacific Telephone
	HENSHAW EUNICE	Pacific Telephone
	TIANGSON ERNEST E	Pacific Telephone
	LEE OTIS	Pacific Telephone
	LUDWIG BETTY J MRS	Pacific Telephone
	VACANT	Pacific Telephone
	RAINBOW COURT APARTMENTS	Pacific Telephone
	RYALS PATRICIA MRS	Pacific Telephone
	GOODWIN ALBERT	Pacific Telephone
	WHITTENMEYER SANDRA MRS	Pacific Telephone
	MARTIN W D	Pacific Telephone
	JONES NORA MRS	Pacific Telephone
	HALSE WILBUR S	Pacific Telephone
	WANOUS JAMES	Pacific Telephone
	PAIZ JAMES	Pacific Telephone
	SINGER ANDREW	Pacific Telephone
	BATAGLIA STEVEN	Pacific Telephone
	GARBUTT ROBT J	Pacific Telephone
	RUSTIG LINDA MRS	Pacific Telephone
	SPENCER ANN	Pacific Telephone
	GIESE DONALD	Pacific Telephone

1701 HILL ST E

Year	Uses	Source
1969	GLEASON MAURICE	Pacific Telephone

1703 HILL ST E

Year	Uses	Source
1969	HANSON LLOYD E	Pacific Telephone

FINDINGS

WALNUT AVE

2183 WALNUT AVE

Year	Uses	Source
2000	XXXX	Haines
1980	Donald Bros Inc	Pacific Telephone

Walnut Ave

2185 Walnut Ave

Year	Uses	Source
2014	GLOBAL SPORTSWEAR PROMOTIONS	EDR Digital Archive

WALNUT AVE

2185 WALNUT AVE

Year	Uses	Source
2006	PROMOTIONS	Haines Company, Inc.
	SPORTSWEAR&	Haines Company, Inc.
	GLOBAL	Haines Company, Inc.
2000	GLOBAL SPORTSWEAR & PROMDOTIONS	Haines
	LIMO COMPANY THE	Haines
1991	FULL SERVICE APPRAISAL CO	Pacific Bell
	Carnahan T & Associates Inc	Pacific Bell
1985	Carnahan T & Associates Inc	Pacific Bell
1980	Signal Construction	Pacific Telephone
1975	Donald Bros Inc	Pacific Telephone
	Stewart Coatings	Pacific Telephone
1969	ADVANCE PLUMBING CO INC	Pacific Telephone

2187 WALNUT AVE

Year	Uses	Source
2006	DECK	Haines Company, Inc.
	WATERPROOFING	Haines Company, Inc.
	MAGICKOTE	Haines Company, Inc.
2000	X HILL E	Haines
	ENVENT CORP	Haines

FINDINGS

Walnut Ave

2204 Walnut Ave

Year	Uses	Source
2010	YUTH FAMILY CHILD CARE	EDR Digital Archive

WALNUT AVE

2204 WALNUT AVE

Year	Uses	Source
2006	o LONG Bond	Haines Company, Inc.
2000	LONG Bond	Haines
1985	Van Every Linda & Kenneth	Pacific Bell
1969	RUTLEDGE DONALD W	Pacific Telephone

2210 WALNUT AVE

Year	Uses	Source
2006	ESPINOZAAnlon	Haines Company, Inc.
2000	ESPINOZA Antonia	Haines
1975	Erickson John E	Pacific Telephone
1969	ERICKSON JOHN E	Pacific Telephone
	A GEORGE DAVID R	Pacific Telephone
	B TRACY LLOYD D	Pacific Telephone

2212 WALNUT AVE

Year	Uses	Source
2006	SUAREZAnlonio	Haines Company, Inc.
2000	MORA Ismel	Haines

2236 WALNUT AVE

Year	Uses	Source
2000	XXXX	Haines
1975	Inglehearn Ernest	Pacific Telephone

2238 WALNUT AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
2000	BUHRMANN Margaret	Haines
	COFFEY David H	Haines
1985	Nye Jas	Pacific Bell
1980	White Thos L	Pacific Telephone

Year	Uses	Source
1975	Hydrotech	Pacific Telephone
	Toggweiler Mart	Pacific Telephone

2240 WALNUT AVE

Year	Uses	Source
2000	XXXX	Haines
1991	Beard Kris	Pacific Bell
1985	Beard Kris	Pacific Bell
1980	Beard Kris	Pacific Telephone
1969	COFFEY OUANE E	Pacific Telephone

WESLEY DR

1332 WESLEY DR

Year	Uses	Source
1969	PLEWELLEN HOMER	Pacific Telephone

1333 WESLEY DR

Year	Uses	Source
1969	SMALL WILLIE M MRS	Pacific Telephone

1334 WESLEY DR

Year	Uses	Source
1969	BIGGERS FELIX E	Pacific Telephone
	GRIFFIN HERMAN	Pacific Telephone

1336 WESLEY DR

Year	Uses	Source
1969	NELSON R	Pacific Telephone

1337 WESLEY DR

Year	Uses	Source
1969	MILLER MARIE MRS	Pacific Telephone
	MORANT JAMES A	Pacific Telephone
	HOOD LAURA MRS	Pacific Telephone

1339 WESLEY DR

Year	Uses	Source
1969	ROBINSON MAYNARD H CABT MKR	Pacific Telephone
	VACANT	Pacific Telephone

FINDINGS

1340 WESLEY DR

Year	Uses	Source
1969	VACANT	Pacific Telephone

1341 WESLEY DR

Year	Uses	Source
1969	CRENSHAW BERNICE MRS	Pacific Telephone

1342 WESLEY DR

Year	Uses	Source
1969	MARABLE OVERTON E	Pacific Telephone

1346 WESLEY DR

Year	Uses	Source
1969	LECESNE EDNA MRS	Pacific Telephone

1348 WESLEY DR

Year	Uses	Source
1969	BURNS RUB 1 E MRS	Pacific Telephone
	WILLIAMS DIANNE	Pacific Telephone

1349 WESLEY DR

Year	Uses	Source
1969	EDWARDS RUSS	Pacific Telephone
	APARTMENTS	Pacific Telephone
	FLEMMING WILLIE E	Pacific Telephone
	POINDEXTER LEONARD	Pacific Telephone
	JOHNSON DOROTHY MRS	Pacific Telephone
	ATCHISON WILLIE R	Pacific Telephone
	WILSON FRANCES J MRS	Pacific Telephone
	KENNARD SHELBY	Pacific Telephone
	RICE ROSA L MRS	Pacific Telephone

1350 WESLEY DR

Year	Uses	Source
1969	BOOKER TOMMIE	Pacific Telephone
	BLANCHARD LIZZIE M MRS	Pacific Telephone
	WOFFORD JOHN H	Pacific Telephone

1352 WESLEY DR

Year	Uses	Source
1969	B HENDERSON DOROTHY	Pacific Telephone

Year	Uses	Source
1969	CALHOUN RUFUS V REV	Pacific Telephone
	DAVIS BILLIE	Pacific Telephone

1354 WESLEY DR

Year	Uses	Source
1969	BROWN CLARESTINE MRS	Pacific Telephone
	COUBARIS GODFREY	Pacific Telephone
	HARRIS GENE	Pacific Telephone
	APARTMENTS	Pacific Telephone
	NO RETURN	Pacific Telephone

1359 WESLEY DR

Year	Uses	Source
1969	ORTIZ JOSEPH S	Pacific Telephone

WESLEY DR E

1332 WESLEY DR E

Year	Uses	Source
2000	YAI Southa	Haines
1935	Mills Dollie Mrs	Los Angeles Directory Co.

1333 WESLEY DR E

Year	Uses	Source
2000	GARCIA Jose	Haines
1935	Lemond W H	Los Angeles Directory Co.

1334 WESLEY DR E

Year	Uses	Source
2000	KREUZER William	Haines
1935	Marshall S J Mrs o	Los Angeles Directory Co.

1335 WESLEY DR E

Year	Uses	Source
2000	BUNHUCH Tan	Haines
	CHENG Ken	Haines
	CHAP Prom	Haines
1935	Vacant	Los Angeles Directory Co.

FINDINGS

1336 WESLEY DR E

Year	Uses	Source
2000	NELSON R	Haines
1935	1/2 Turnbow M P Mrs o	Los Angeles Directory Co.
	Collett M A Mrs o	Los Angeles Directory Co.

1337 WESLEY DR E

Year	Uses	Source
2000	TAING Kimlom 560 25918 Q	Haines
1935	Harrington G B	Los Angeles Directory Co.

1338 WESLEY DR E

Year	Uses	Source
2000	COILLIER C	Haines

1339 WESLEY DR E

Year	Uses	Source
1935	Robinson M H	Los Angeles Directory Co.

1340 WESLEY DR E

Year	Uses	Source
2000	XXXX	Haines
1935	Vacant	Los Angeles Directory Co.

1341 WESLEY DR E

Year	Uses	Source
2000	MILLER Marie	Haines
1935	Vacant	Los Angeles Directory Co.

1342 WESLEY DR E

Year	Uses	Source
2000	ARELLANO Jose	Haines
1935	Vacant	Los Angeles Directory Co.

1344 WESLEY DR E

Year	Uses	Source
2000	MIRANDA Gregorio	Haines
1935	Luning T F o	Los Angeles Directory Co.

1346 WESLEY DR E

Year	Uses	Source
2000	MARIN Jose	Haines

FINDINGS

Year	Uses	Source
1935	Knipp J P	Los Angeles Directory Co.

1348 WESLEY DR E

Year	Uses	Source
2000	XXXX	Haines
1935	Vacant	Los Angeles Directory Co.

1349 WESLEY DR E

Year	Uses	Source
2000	SAMOYOA Jose	Haines
	ADAM Jeff	Haines
	VELASQUEZ Ruby	Haines

1350 WESLEY DR E

Year	Uses	Source
2000	CHENG Ken	Haines
1935	b Perry W F	Los Angeles Directory Co.
	a Smith Otto o	Los Angeles Directory Co.
	Vacant	Los Angeles Directory Co.

1352 WESLEY DR E

Year	Uses	Source
2000	CHENG Ken	Haines
	THAT Moeun	Haines
	KEOBUNTA Thong Pasty	Haines
1935	Vacant	Los Angeles Directory Co.

1353 WESLEY DR E

Year	Uses	Source
2000	OCAMPO Agustin	Haines

1354 WESLEY DR E

Year	Uses	Source
2000	CHENG Ken	Haines
	LENG Narin	Haines
	LENG Nareth	Haines
	OUCH Saphy	Haines
1935	Hierro S F	Los Angeles Directory Co.

FINDINGS

1359 WESLEY DR E

Year	Uses	Source
2000	BUS 63 RES 35 NEW	Haines
	CASTRO Elisa	Haines

1360 WESLEY DR E

Year	Uses	Source
1935	Vacant	Los Angeles Directory Co.
	IJBO JC Li JUJUA i UO	Los Angeles Directory Co.

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
2020 Walnut Avenue	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
1309 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1309 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1315 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1316 E Wesley Dr	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1323 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1323 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1325 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1325 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1330 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1332 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1332 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1332 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1333 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1333 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1333 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1334 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1334 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1334 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1335 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1335 E Wesley Dr	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1335 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1336 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1336 E Wesley Dr	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1336 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1336 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1337 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1337 E Wesley Dr	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1337 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1337 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1338 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1338 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1339 1/2 E WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1339 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1339 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1339 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1340 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1340 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1340 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1341 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1341 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1341 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1342 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1342 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1342 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1344 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1344 E Wesley Dr	2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1344 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1346 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1346 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1346 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1348 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1348 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1348 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1349 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1349 E Wesley Dr	2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1349 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1349 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1350 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1350 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1350 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1352 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1352 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1352 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1353 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1353 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1354 E WESLEY DR	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1354 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1354 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1359 E WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1359 E Wesley Dr	2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1359 WESLEY DR	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1359 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1360 WESLEY DR E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1361 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1361 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1365 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1365 E Hill St	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1371 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1375 1/2 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1375 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1377 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1379 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1381 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1383 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1393 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1395 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1397 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1399 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1405 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1407 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1409 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1411 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1413 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1415 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1417 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1419 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1421 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1423 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1425 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1435 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1444 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1444 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1445 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1446 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1446 E Hill St	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1450 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1455 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1456 E HILL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1976, 1972, 1970, 1969, 1966, 1965, 1964, 1963, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1456 E Hill St	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1456 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1456 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1482 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1500 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1500 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1501 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1502 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1958, 1956, 1955, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1502 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1525 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1527 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1529 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1541 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1590 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1590 E Hill St	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1594 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1595 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1596 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1600 E HILL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1600 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1600 E Hill St	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1600 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1608 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1609 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1611 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1611 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1620 20TH ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1630 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1639 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1639 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1640 E Hill St	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1641 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1641 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1651 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1651 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1653 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1653 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1655 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1655 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1657 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1657 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1695 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1695 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1696 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1956, 1955, 1951, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1700 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1700 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1701 E HILL ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1701 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1703 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1703 HILL ST E	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1727 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1729 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1731 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1733 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1735 E HILL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2052 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2056 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1949, 1947, 1946, 1945, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2059 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2060 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2061 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2064 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1949, 1947, 1946, 1945, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2068 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2072 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2076 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
2080 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2084 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2088 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2092 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2095 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2100 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2101 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1942, 1940, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2103 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1949, 1947, 1946, 1945, 1942, 1940, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2104 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1951, 1949, 1947, 1946, 1945, 1942, 1940, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2105 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1949, 1947, 1946, 1945, 1942, 1940, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2106 1/2 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
2106 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2107 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2109 GUNDRY AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1942, 1940, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2109 Gundry Ave	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2110 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2111 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1942, 1940, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2113 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2114 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1958, 1956, 1955, 1954, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2115 GUNDRY AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1942, 1940, 1938, 1937, 1936, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2115 Gundry Ave	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2116 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1958, 1956, 1955, 1954, 1951, 1950, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
2121 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2128 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2134 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2136 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2148 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1980, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2149 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2150 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1942, 1940, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2152 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2154 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2156 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2161 GUNDRY AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1980, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
2161 Gundry Ave	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2168 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2170 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2170 GUNDRY AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2170 Gundry Ave	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2174 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1960, 1958, 1956, 1955, 1951, 1949, 1947, 1946, 1945, 1942, 1940, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2183 WALNUT AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
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2185 Walnut Ave	2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2187 WALNUT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2204 WALNUT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
2204 Walnut Ave	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
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2207 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2208 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
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2210 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2210 WALNUT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2211 GAVIOTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1980, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1962, 1961, 1958, 1956, 1955, 1954, 1951, 1949, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1934, 1933, 1932, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2212 WALNUT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2213 GAVIOTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
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2236 WALNUT AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2238 WALNUT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2240 WALNUT AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

APPENDIX C

RESPONSE PLAN AND REMEDIAL TECHNOLOGY EVALUATION

Former Chemoil Refinery
Site Cleanup Program Number 0453A
Site ID No. 2047W00
Global ID SL 2047W2348

2020 Walnut Avenue
Signal Hill, California

093-CHEMOIL-001

Prepared For:

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and

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TA□LE OF CONTENTS

PAGE

LIST OF FIGURES
LIST OF TA□LES
LIST OF APPEN□ICES

EXECUTI□E SUMMAR□ I

1 INTRO□UCTION 1-1

SITE □ESCRIPTION AN□ □AC□GROUN□ -1
2.1 Site Description ... 2-1
2.2 Surface Topography and Ground Cover ... 2-1
2.3 Geology ... 2-1
2.4 Hydrogeology ... 2-2
2.5 Surface Water ... 2-3
2.6 Regulatory Background ... 2-3
2.7 Summary of Subsurface Impacts ... 2-4
2.7.1 Soil ... 2-4
2.7.2 Soil Vapor ... 2-5
2.7.3 Groundwater ... 2-5
2.8 Conceptual Site Model ... 2-5

A□□ITIONAL IN□ESTIGATION ACTI□ITIES -1
3.1 Field Preparatory Activities ... 3-1
3.2 Soil Boring Assessment ... 3-1
3.2.1 Soil Sampling Methodology and Analytical Program ... 3-2
3.2.2 Groundwater Sampling Methodology ... 3-2
3.3 Decontamination Methods ... 3-3
3.4 Management of Investigation Derived Waste ... 3-3
3.5 Investigation Results ... 3-3
3.6 Soil Conditions ... 3-3
3.6.1 Soil ... 3-3
3.6.2 Groundwater ... 3-4
3.7 Discussion of Vertical Delineation ... 3-4

SCREENING LE□ELS AN□ □E□ELOPMENT OF SITE SPECIFIC SOIL □APOR SCREENING LE□ELS -1
4.1 Updated Soil Screening Levels ... 4-1
4.2 Soil Vapor Screening Levels ... 4-2
4.3 Groundwater Screening Levels ... 4-3

EAST AREA □UMAN □EALT□ RIS□ ASSESSMENT -1
5.1 Arsenic ... 5-1
5.2 Lead ... 5-1
5.3 Other COPCs ... 5-2
5.4 Further Considerations and Conclusions ... 5-3

TABLE OF CONTENTS

PAGE

6.0 INITIAL RESPONSE ACTION TECHNOLOGY SCREENING 6-1
6.1 General Response Actions for Contamination in Soil and Groundwater 6-1
6.2 Remedial Action Objectives 6-1
6.3 Initial Response Action Screening 6-2
6.3.1 Overall Site Management Response Action Options 6-2
6.3.1.1 No Action 6-2
6.3.1.2 Institutional and Engineering Controls 6-2
6.3.1.3 Monitored Natural Attenuation 6-3
6.3.2 In-Situ Treatment Response Action Options 6-3
6.3.2.1 Air Sparging 6-3
6.3.2.2 Bioventing 6-4
6.3.2.3 Chemical Oxidation 6-4
6.3.2.4 Soil Vapor Extraction 6-4
6.3.2.5 Thermally Enhanced Soil Vapor Extraction 6-5
6.3.2.6 Light, Non-Aqueous Phase Product Removal 6-5
6.3.3 Ex-Situ Treatment Response Action Options 6-6
6.3.3.1 Groundwater Extraction and Treatment 6-6
6.3.3.2 Excavation and Off-Site Disposal/Treatment 6-6
6.3.3.3 Excavation and On-Site Biologic Treatment 6-6
6.4 Retained Response Actions 6-7

7.0 DETAILED ANALYSIS AND SELECTION OF PREFERRED RESPONSE ACTIONS 7-1
7.1 Groundwater Response Actions Alternatives 7-1
7.1.1 Alternative 1: Air Sparging 7-1
7.1.2 Alternative 2: Light, Non-Aqueous Phase Product Removal 7-2
7.1.3 Alternative 3: Monitored Natural Attenuation 7-3
7.2 Soil and Soil Vapor Response Action Alternatives 7-3
7.2.1 Alternative 4: Excavation and Off-site Disposal 7-3
7.2.2 Alternative 5: Soil Vapor Extraction 7-3
7.3 Overall Site Management Response Action Alternatives 7-4
7.3.1 Alternative 6: Implement Institutional and Engineering Controls 7-4
7.4 Selection of Preferred Response Action 7-4

8.0 SOIL AND SOIL VAPOR REMEDIATION SYSTEM DESIGN 8-1
8.1 Phase I SVE Implementation 8-1
8.1.1 Well Layout and Design 8-1
8.1.2 Conveyance Piping 8-2
8.1.3 Vapor Extraction and Treatment Units 8-2
8.1.4 Operation and Maintenance 8-2
8.2 SVE System Design Confirmation Tests 8-3
8.2.1 Design Confirmation Test Monitoring 8-3
8.3 Supplemental On-Site Soil and Soil Vapor Sampling 8-4
8.4 Phase I Implementation Report and Phase II SVE System Workplan 8-4

9.0 GROUNDWATER REMEDIATION SYSTEM CONCEPTUAL DESIGN 9-1

TA□LE OF CONTENTS

PAGE

9.1 Air Sparging System for Groundwater Treatment 9-1
9.1.1 Field Pilot Testing 9-2
9.1.1.1 Installation of Air Sparge Points 9-2
9.1.1.2 Air Sparge Pilot Test 9-2
9.1.2 Air Sparge System Design Report 9-2
9.1.3 VOC Abatement 9-2
9.2 Liquid Non-Aqueous Phase Liquid Removal 9-3

1□ GROUN□□ ATER MONITORING PLAN ..... 1□-1
10.1 Offsite MNA Program 10-2

11 SITE RE□E□ELOPMENT SOIL MANAGEMENT PLAN 11-1

1□ INSTITUTIONAL AN□ ENGINEERING CONTROLS ..... 1□-1
12.1 Institutional Controls 12-1
12.2 Engineering Controls 12-2

1□ SC□E□ULE ..... 1□-1

1□ REFERENCES ..... 1□-1

1□ LIMITATIONS ..... 1□-1

LIST OF FIGURES

Figure 1-1 Site Location Map
Figure 2-1 Site Map
Figure 2-2 Cross-Section Location Map
Figure 2-3 Cross-Section A-A'
Figure 2-4 Cross-Section B-B'
Figure 2-5 Summary of Soil COPC Concentrations Above Screening Levels – 0 to 40 feet bgs
Figure 2-6 Summary of Benzene Concentrations in Soil Vapor at 5 feet bgs
Figure 2-7 TPHg (C4-C12), Benzene, and LNAPL Extents in Groundwater
Figure 2-8 Human Health Conceptual Site Model
Figure 3-1 Proposed New Offsite Monitoring Well Locations
Figure 7-1 Conceptual Remedial Approach
Figure 8-1 Proposed SVE Well Layout
Figure 8-2 Soil Vapor Extraction System Process Flow Diagram
Figure 9-1 Existing SME System Layout
Figure 9-2 Schematic Design of LNAPL Removal and Storage System

LIST OF TA□LES

Table 4-1 Summary of Soil Screening Levels
Table 4-2 Summary of Soil Vapor Screening Levels
Table 4-3 Summary of Groundwater Screening Levels
Table 6-1 Initial Technology Screening
Table 7-1 Analysis of Retained Response Action Technologies
Table 7-2 Technology Alternatives Cost Comparison

LIST OF APPEN□ICES

Appendix A Historical Analytical Data, Soil, Soil Vapor, and Groundwater
Appendix B Los Angeles County Department of Public Health Permits
Appendix C CPT Logs
Appendix D Derivation of Site Specific Soil Vapor Screening Levels
Appendix E Human Health Risk Assessment for East Parcel
Appendix F Monitored Natural Attenuation Performance Monitoring Plan
Appendix G Site Redevelopment Soil Management Plan

EXECUTI□E SUMMAR□

This *Response Plan and Remedial Technology Evaluation* (Response Plan) has been prepared by The Source Group, Inc. a division of Apex Companies, LLC (Apex-SGI) to address petroleum constituent subsurface impacts associated with the former Chemoil Refinery located at 2020 Walnut Avenue in Signal Hill, California (the Site). The Site is currently owned by Signal Hill Enterprises, LLC (SHE). Negotiations are underway between SHE and RE | Solutions, LLC (RES) to transfer property ownership for redevelopment purposes. A California Land Reuse and Revitalization Act (CLRRA) Agreement was executed between RES and the Los Angeles Regional Water Quality Control Board (LARWQCB) on March 4, 2017. Activities documented herein are driven by requirements from the LARWQCB with the goal to remediate the Site to acceptable levels to allow property redevelopment for light industrial and commercial purposes.

This Response Plan includes a comprehensive review of characterization activities completed to date, a description of the Conceptual Site Model (CSM), an evaluation of applicable technologies that were considered to remediate the Site, the selected preferred actions, and the conceptual design of response actions.

The Site is characterized by a Vadose Zone from ground surface to the water table at approximately 15 to 43 feet below ground surface (bgs). Flow beneath the Site is generally toward the south. Soil, soil vapor, and underlying groundwater are impacted by historic petroleum releases. The cessation of the property as an oil refinery ceased in the mid-1990s indicating that the primary source of contamination no longer exists at the Site. However residual concentrations of petroleum constituents, including the presence of light non-aqueous phase liquid (LNAPL) remain in the subsurface.

The Site is comprised of three general areas referred to as: 1) the Southwest Parcel, 2) the Northwest Parcel, and 3) the East Parcel. A human health risk assessment (HHRA) was completed for the East Parcel, where subsurface impacts are relatively low. Results of the HHRA indicated that residual concentrations in the subsurface do not pose an unacceptable human health risk to hypothetical future onsite commercial/industrial receptors. Considering the results of the HHRA, and that administrative and institutional controls will be implemented prior to development of the East Parcel, further remedial action is not warranted. The complete East Parcel HHRA is provided with this document as Appendix E.

A CSM was developed for the Site and subsurface data evaluated against site-specific screening levels. Results indicate that the remedial actions or mitigation are required at the Southwest and Northwest Parcels for the following hypothetical receptors and potentially complete exposure pathways:

R	P C E r P
Future onsite construction/utility worker	Incidental ingestion of soil; Dermal contact with soil; and Inhalation of vapors in outdoor air
Future onsite commercial/industrial worker	Incidental ingestion of soil; Dermal contact with soil; and Inhalation of vapors in indoor air
Current/future offsite commercial/industrial worker	Inhalation of vapors in indoor air
Current/future offsite resident	Inhalation of vapors in indoor air

Based on the CSM, considering the planned redevelopment activities, and considering that subsurface concentrations in the residential area downgradient from the Site do not pose an unacceptable risk, the following Remedial Action Objectives (RAOs) were developed for the Site:

- Reduce and/or maintain human health risks to acceptable levels to allow redevelopment of the Site for light industrial/commercial purposes;
- Prevent soil-related exposures (i.e., incidental ingestion, direct dermal contact, particulate inhalation and outdoor vapor inhalation of VOCs) to constituent concentrations exceeding commercial/industrial screening levels;
- Prevent indoor inhalation as a result of potential vapor intrusion of constituent concentrations exceeding commercial/industrial screening levels;
- Reduce the potential for adsorbed-phase petroleum constituents in soil to leach to groundwater underlying the Site;
- Remove to the extent practical, mobile light, non-aqueous phase liquid (LNAPL) within the three defined LNAPL areas of occurrence; and
- Control the dissolved-phase hydrocarbon groundwater plume to prevent further offsite migration of contaminants at concentrations above levels that present a risk.

Based on an evaluation of technologies to meet the RAOs defined above, the following technologies and controls were selected as the most suitable and cost effective remedial alternatives for the Site:

Proposed Groundwater Treatment Technologies:

1. Implement source area LNAPL removal and off-site disposal;
2. Operate an air sparge barrier at the property boundary; and
3. Implement a downgradient monitored natural attenuation (MNA) program.

Proposed Soil and Soil Vapor Treatment Technology

4. Operate an on-Site soil vapor extraction system focused on treatment in the deeper, more porous section of the vadose zone; and
5. Use engineering and institutional controls to mitigate contaminants in the shallower, less porous section of the vadose zone.

Proposed Engineering and Institutional Controls

6. "Cap" site with building and pavement;
7. Install a vapor mitigation system under all future buildings;
8. Restrict on-site land use through a land use covenant (LUC);
9. Prepare a Site Management Plan (SMP) associated with the LUC; and
10. Implement a Site Redevelopment Soil Management Plan for use during property redevelopment.

Phase I of the SVE system installation and operation will occur immediately following LARWQCB approval of this Response Plan. Conceptual designs for the SVE system, the air sparge barrier, and the LNAPL removal system are provided in this document. Following LARWQCB approval of this Response Plan, the following activities will be conducted:

- Installation of three new MNA wells to provide vertical delineation immediately downgradient from the Site;
- Phase I implementation of the SVE system as a combined pilot study and first phase of remedy implementation to determine design parameters for the full-scale (Phase II) system;
- Completion of an air sparge barrier pilot test and submittal of detailed design report;
- Installation of recovery wells in the LNAPL areas and installation of LNAPL removal system;
- Preparation and submittal of an SMP and LUC; and
- Preparation and submittal of a Site vapor mitigation system design report.

An MNA Plan for off-Site groundwater is provided as an Appendix to this Response Plan. The current groundwater monitoring plan for on-Site wells will be implemented until Site redevelopment occurs. It is expected that the on-Site well network will be modified during redevelopment activities to compensate for future building footprints. A long-term on-Site monitoring program with proposed well locations will be submitted once the redevelopment plan is finalized.

Also included as an Appendix to this Response Plan is a Site Redevelopment Soil Management Plan. The Redevelopment Soil Management Plan will be used to provide guidance for handling potentially contaminated soil during Site redevelopment activities such as grading, overexcavating for geotechnical requirements, or trenching for new underground utilities. The Redevelopment Soil Management Plan provides managers and workers with procedures for internal and agency notifications; excavation/grading oversight; air and safety monitoring; soil segregation and monitoring; soil sampling and analysis; waste characterization and profiling; waste recycling and disposal procedures; and record keeping and reporting requirements in areas of known or encountered impacts.

Assuming LARWQCB approval within 30 days of submittal of this document, a schedule of completion for the activities documented herein is provided in Section 13.

1 INTRODUCTION

The Source Group, Inc. a division of Apex Companies, LLC (Apex-SGI) has prepared this *Response Plan and Remedial Technology Evaluation* (Response Plan) on behalf of Signal Hill Enterprises, LLC (SHE) and RE | Solutions, LLC (RES). The purpose of the Response Plan is to identify and present a cleanup strategy for petroleum constituents present in soil, soil vapor, and groundwater. The subject property is the former Chemoil Refinery located at 2020 Walnut Avenue in Signal Hill, California (Site, Figure 1-1). It is currently owned by SHE. SHE and RE | Solutions, LLC (RES) have entered into a Purchase and Sale Agreement to transfer property ownership to RES for redevelopment purposes. A California Land Reuse and Revitalization Act (CLRRA) Agreement was executed between RES and the Los Angeles Regional Water Quality Control Board (LARWQCB) on March 4, 2017. Activities documented herein are driven by requirements from the LARWQCB with the goal to remediate the Site to acceptable levels to allow property redevelopment for light industrial and commercial purposes.

A Site investigation was previously performed to fill identified data gaps necessary to develop a Conceptual Site Model (CSM) that was be used to guide the preparation of this remedial Response Plan. APEX-SGI prepared a *Site Investigation Workplan* (Workplan), dated October 25, 2016, which was approved by LARWQCB on November 23, 2016. The Site investigation was performed from December 2016 through January 2017 and the results and interpretations documented in a *Site Investigation and Site Conceptual Model Report* dated March 29, 2017 (SGI, 2017). Additional Site investigation activities were completed in May 2017 and are documented in Section 3 of this report.

The general outline of this document is as follows:

- Section 2 provides a Site description and background and summarizes the CSM that was derived from data collected by the prior site investigations conducted at the Site.
- Section 3 summarizes results of on-Site drilling activities completed in May 2017.
- Section 4 provides the soil, soil vapor, and groundwater screening levels (SLs) that were developed for the Site and lists the chemicals of potential concern (COPCs) that were determined for each media by comparing Site data to SLs.
- Section 5 summarizes the results of a human health risk assessment (HHRA) that was completed for the East Parcel.
- Section 6 presents the remedial action objectives (RAOs) determined for the Site and presents results of the initial screening of response action technology alternatives.
- Section 7 presents a detailed analysis of the technologies that passed the screening process presented in Section 6. Based on the analysis, the preferred technologies were selected and presented at the end of Section 7 as the proposed response actions for the Site.
- Section 8 provides the design of the proposed soil vapor extraction system.

- Section 9 provides the conceptual design of the groundwater remediation system.
- Section 10 proposes the groundwater monitoring program for the Site.
- Section 11 summarizes the Site Redevelopment Soil Management Plan that will be implemented during any excavation of soils during future development; including utility installation, construction of building foundations, etc.
- Section 12 summarizes the proposed institutional and engineering controls that will be implemented as part of property redevelopment.
- Section 13 details the proposed schedule for activities detailed in this document. The schedule incorporates milestones defined in the CLRRA currently in effect between the LARWQCB and RES.
- Section 11 lists the references used throughout this document in developing the CSM, remedial cleanup objectives, and proposed remedial approach.

Key supplemental documents prepared as part of this Response Plan effort and provided as Attachments are:

- The Derivation of Site Specific Soil Vapor Screening Levels (Appendix D);
- The complete HHRA for the East Parcel (Appendix E);
- The Monitored Natural Attenuation Plan for off-site groundwater (Appendix F); and
- The Site Redevelopment Soil Management Plan which provides guidance to be used during the handling of soil during upcoming property redevelopment (Appendix G).

SITE DESCRIPTION AND BACKGROUND

1 Site Overview

The property known as the former Chemoil Refinery is located at 2020 Walnut Avenue in Signal Hill, California (Figure 1-1). The Site was developed as an oil refinery in 1922. The MacMillan-Ring Free Oil Company owned and operated the facility from 1922 until 1988. Chemoil Corporation purchased the refinery in August 1988 and operated it until February 1994. From early 1994 to early 1997, the refinery was shut down with occasional operation of its waste water system. Operation of the waste water system was discontinued and all of the above ground structures were dismantled in early 1997. It has been reported that known below ground structures, including piping, sumps, footings, and foundations, were also removed at that time (S. Testa, verbal communication, October 2016). Since December 2013, the property owner of title has been Signal Hill Enterprises, LLC.

The Site is approximately 8.2 acres, located north of the intersection of East 20th Street, East Wesley Drive, Walnut Avenue, and Alamitos Avenue. The Site is divided into an East Parcel, situated immediately east of Walnut Avenue and a West Parcel, situated immediately west of Walnut Avenue. The East Parcel encompasses approximately 2.4 acres and the West Parcel encompasses approximately 5.8 acres. The West Parcel is further subdivided into the Northwest and Southwest Parcels by East 21st Street. Hereafter, the three parcel areas will be referred to within this document as the East Parcel, the Northwest Parcel, and the Southwest Parcel. A portion of the Southwest Parcel includes the Raymond Tract Parcels, which are currently owned by a separate entity (MPO Walnut Partners, LLC). RES has signed a Letter of Intent and is negotiating a purchase agreement for acquisition of this property. The Raymond Tract Parcels will be addressed in the Response Plan because of the historical lease and operations of Chemoil on those parcels. The division of the Site into the above-indicated parcels is shown on Figure 2-1.

Surface Terrain and Ground Cover

The site currently consists of exposed surface soils, with perimeter chain link fencing and stormwater controls. A few temporary above ground facilities are on-site; associated with on-going groundwater remediation activities. The upper soils range from two to seven feet in depth and are classified as fill, consisting of silty sand with intermittent gravels and some intermixed debris. The upper fill is underlain by a silt or silty fine grained sand.

All three parcels are generally flat, with scattered earthen berms or hummocks, and slope toward the south and southeast from a topographic high of approximately 45 feet above mean sea level at the northern boundary. The parcels are separated by public surface streets with East 21st Street dividing the north and south parcels and North Walnut Avenue dividing the east and west parcels.

Geology

The Site is located within the Los Angeles Coastal Plain (California Department of Water Resources [CDWR], 1961) of the Peninsular Ranges geomorphic province of southern California (Norris and

Webb, 1990). The Los Angeles Coastal Plain is a deep structural trough that has been filled primarily with unconsolidated Miocene through Recent age sediments or alluvium that are underlain by earlier Cenozoic bedrock. The Los Angeles Coastal Plain is bounded on the north by the Santa Monica Mountains; on the northeast by the low-lying Elysian, Repetto, Merced, and Puente Hills; on the east and southeast by the Santa Ana Mountains and San Joaquin Hills; on the south by the Palos Verdes Hills and the Pacific Ocean; and on the west by the Pacific Ocean (CDWR, 1961).

The geologic structure beneath the Coastal Plain is referred to as the Los Angeles Basin and consists of undifferentiated, pre-Pleistocene bedrock overlain by approximately 2,200 feet of layered, semi-consolidated and unconsolidated water-bearing terrestrial and marine sediments. The uppermost section of these sediments, the early Pleistocene-age San Pedro Formation and the late Pleistocene-age Lakewood Formation, have been warped by geologically-recent tectonic activity into northwest- to southeast-oriented folds that are periodically disrupted by northwest-trending regional faults. The San Pedro Formation and Lakewood Formations vary in thickness from tens to several hundreds of feet thick. Flat-lying Recent (Holocene-age) alluvium, derived from alluvial fans and overflow of river systems, overlie the folded and faulted Pleistocene formations in topographically lower portions of the Coastal Plain. Where present, the Holocene alluvium can be up to 200 feet thick.

The Site is underlain by deposits of unconsolidated, laterally discontinuous sequences of silt and fine to coarse-grained sand. Coarse-grained soils consist of sand (SP) and silty sand (SM); whereas, subordinate fine-grained soils consist of silt (ML and MH) and, to a lesser degree, clay (CL).

dr

The Los Angeles Coastal Plain has been spatially divided by the CDWR into four groundwater basins (West Coast Basin, Central Basin, Santa Monica Basin, and Hollywood Basin) based on the hydrogeologic characteristics of the underlying strata and the locations of bounding geologic structures such as non-water-bearing rock and/or faults that impede groundwater movement. The Site is located within the West Coast Basin.

The West Coast Basin is bordered on the east by the Newport-Inglewood Fault; on the west by Santa Monica Bay; on the north by the Ballona Gap (north of the Los Angeles International Airport), and on the south by the Palos Verdes Hills. Based on lateral distribution and varying hydrogeologic characteristics, five major aquifers have been identified in the geologic formations underlying the West Coast Basin (CDWR, 1961). The aquifers consist of (from oldest to youngest) the Silverado and Lynwood Aquifers of the San Pedro Formation, the Gage Aquifer of the Lakewood Formation, and the Gaspur and Semi-perched Aquifers of the recent Holocene-age Alluvium. In general, the older/deeper Silverado and Lynwood Aquifers are currently designated as drinking water sources and the younger/shallow aquifers (Gage, Gaspur, and Semi-perched) are not currently used for drinking water purposes due to low yield and/or generally poor quality. Shallow groundwater beneath the Site is encountered in the Semi-perched Aquifer in the southern portion of the West Coast Basin. Groundwater quality within the Site vicinity is generally poor due to seawater intrusion and elevated salinity.

Due to Site topography, the difference between depth to water measurements in existing monitoring wells is approximately 30 feet. Depth to water in the northern portion of the Site is approximately 43 feet bgs (well MW-3), whereas depth to water in the southern portion of the Site is approximately 15 feet bgs (well MW-14). As of the June 2016 (Second Quarter) sampling event, groundwater occurred at elevations ranging from 2.09 to 3.94 feet relative to mean sea level. Groundwater flow beneath the Site is generally toward the south with localized variations in flow directions on-Site. The hydraulic gradient calculated based on Second Quarter 2016 groundwater gauging data was 0.0013 foot/foot (AA&AI, 2016b).

[illegible] S[illegible]r[illegible] [illegible]r

The nearest surface water body to the Site is the Los Angeles River, which is located 1.9 miles west of the Site. The section of the Los Angeles River west of the Site is contained in a north-south trending concrete lined flood control channel. The Los Angeles River accepts treated industrial discharge and stormwater runoff from the greater Los Angeles area.

[illegible] R[illegible]r[illegible]r[illegible]d

To date, LARWQCB has been the lead environmental regulatory agency for the Site. Environmental investigations were initiated when LARWQCB issued an Investigative Order to multiple refineries operating within the Los Angeles Basin (Order No. 85-17). Results of the subsequent investigations indicated that soil and underlying groundwater at the Site have been impacted by the discharge of petroleum hydrocarbons. On November 19, 2009, LARWQCB required installation of groundwater monitoring wells and investigations to address on-Site and off-Site data gaps. On December 7, 2012, LARWQCB approved an Interim Remedial Action Plan (IRAP) which proposed a flow-through barrier using an in-situ subsurface metabolic enhancement (SME) system to treated groundwater along the western and southern boundaries of the Site. The SME has been operating since March 2014 and the current groundwater monitoring program has been implemented since 2013.

Over the last year and a half, discussions have been underway between RES and LARWQCB regarding the pending sale and subsequent planned redevelopment for the Site. A CLRRA Agreement was executed between RES and the LARWQCB on March 4, 2017. Under the CLRRA Agreement, RES is required to conduct a Site Assessment addressing data gaps identified by LARWQCB. Site assessment activities were completed and results submitted to LARWQCB in the Site Investigation and Site Conceptual Model Report dated March 29, 2017 (Apex-SGI, 2017). The CLRRA Agreement also requires preparation of a Response Plan to address the cleanup of the Site. The LARWQCB identified that the following response actions are expected:

- Removal of LNAPL;
- Soil excavation in identified areas;
- Groundwater remediation in identified areas;
- Continued operation of the SME barrier system (or installation of an equivalent system);

- Design and installation of a vapor mitigation system;
- Periodic monitoring and reporting; and
- Recording of an environmental land use covenant (LUC) and site management plan (SMP).

This document is meant to fulfill the requirements of the Response Plan required under the CLRRA Agreement and subsequent discussions with LARWQCB.

S r S r l

Soil, soil vapor, and underlying groundwater at the Site are impacted by historic petroleum releases. A detailed presentation of historic data was presented in the Site Investigation and Site Conceptual Model Report (2017 Site Investigation Report) (Apex-SGI, 2017). A summary is briefly summarized below. Note that the extent of contamination described in the sections below are based on a comparison of data to site specific SLs which have been developed for the Site. The development of SLs and the updated final SL values for each media are described in detail in Section 4 of this report.

Tables summarizing available soil, soil vapor, and groundwater analytical data collected to date are provided in Appendix A. Cross sections that were provided in the 2017 Site Investigation Report include key information to understand the distribution of contaminants in the subsurface, including Site lithology, soil concentration data, and groundwater concentration data. For reference, copies of the cross section location map and associate cross sections are provided as Figures 2-2 through 2-4.

1 S

Total Petroleum Hydrocarbons in the gasoline, diesel, and oil range as well as VOCs have been identified in vadose soil for the subject property. VOCs detected include aromatic benzene derivative compounds, typical of petroleum refining facilities. Petroleum related constituents are primarily present in subsurface soil within a significant portion of the Northwest and Southwest Parcels.

TPHg (C4-C12) and TPHd (C13-C22) range are present above the Site-specific screening levels in soil within a significant portion of the Northwest Parcel and Southwest Parcel. Typical of sites where releases originated from the surface, elevated hydrocarbon concentrations in the vadose zone have been detected throughout the vertical soil column to groundwater in some areas of the Site and have been shown to attenuate with depth within other areas of the Site.

Hydrocarbon impact to near surface soils (surface to 5 feet bgs) appears to occur throughout the Northwest and Southwest Parcels, including the previously un-assessed northern portion of the Northwest Parcel. Hydrocarbon fractions in this near surface soil (much of which is fill) ranges from light end (gasoline range) to heavy end (oil range).

Soil data indicate that VOC constituents occur in vadose zone soil at concentrations above SLs across both the Northwest and Southwest Parcels. Benzene is considered the primary risk driver

for future Site occupants and is present above SLs through much of the Northwest Parcel. VOC data collected from the Southwest Parcel is limited; further data will be collected as part of implementation of the Response Plan.

Soil data indicate that petroleum constituents detected above SLs in the East Parcel are localized to a small area in the northeast corner.

Figure 2-5 identifies the locations where prior soil analytical data exceeds soil SLs for each parcel.

S r

Soil vapor data have been collected from on and off-site locations during investigations in 2006 (Tetra Tech), 2012 (Geosyntec), and 2016 (Apex-SGI). Data indicated that, except for a few isolated locations, detections above applicable screening levels (applicable screening levels are discussed in Section 4 of this report) are limited to on-Site; mitigation of offsite soil vapor is not warranted. Figure 2-6 presents the benzene concentration in soil vapor samples at 5 feet bgs.

Gr d r

Groundwater data collected to date indicate that TPHg, TPH in the C13 to C22 carbon range (similar carbon range to TPH as diesel), BTEX, and naphthalene are generally detected at the highest concentrations in groundwater at the Site. Petroleum constituents were not detected in groundwater underlying the East Parcel at concentrations above SLs.

Grab groundwater samples collected at multiple depths in the Northwest Parcel indicate that the highest concentration of petroleum compounds are generally found in shallow groundwater samples with lower concentrations found in deeper samples. The concentrations found in deeper samples appear to be due to diffusion from upper, higher-concentration areas. The vertical extent of petroleum-impacted groundwater has not been fully defined.

Documentation for the Site indicate the presence of three former LNAPL pools in the mid to late 1980s: 1) near MW-11 where LNAPL continues to be observed, 2) along the western border of the Northwest parcel near BMW-9, and 3) in the southern point of the Southwest parcel in the vicinity of BMW-1. Recent Site investigation activities have defined two areas of the Site where LNAPL is present in the subsurface in the Northwest Parcel (locations included on Figure 2-7). These two areas generally coincide with the two areas where LNAPL was present historically. Recent Site investigation activities also suggest the presence of LNAPL in the Southwest Parcel (location shown on Figure 2-7). The LNAPL presence in the Southwest Parcel is inferred the Southwest Parcel, based upon elevated UVOST™ responses observed during the 2016 site investigation. LNAPL at the Site is observed to be relatively thin with slow recharge rates (Apex-SGI, 2017).

C S M d

A CSM is a representation of the characteristic of the Site to demonstrate the possible and confirmed relationship(s) between the source(s) of contamination, pathways, and receptors. A CSM was developed for the Site and presented in detail in the recent Site Investigation Report (Apex-SGI,

2017). The following hypothetical human receptors were identified based on their proximity to the Site, proposed activities that could possibly result in direct or indirect contact with Site-related chemicals, and anticipated Site use.

- Future Onsite Construction/Utility Trench Worker Receptor;
- Future Onsite Commercial/Industrial Worker Receptor;
- Current/Future Offsite Commercial/Industrial Worker Receptor; and
- Current/Future Offsite Resident Receptor.

The following pathways were considered complete and significant for the hypothetical receptors that were identified for the Site:

R r	**P C E r P**
Future onsite construction/utility worker	Incidental ingestion of soil; Dermal contact with soil; and Inhalation of vapors in outdoor air
Future onsite commercial/industrial worker	Incidental ingestion of soil; Dermal contact with soil; and Inhalation of vapors in indoor air
Current/future offsite commercial/industrial worker	Inhalation of vapors in indoor air
Current/future offsite resident	Inhalation of vapors in indoor air

This CSM completed for the Site that was used to develop the remedial action objectives and remedial approach documented in this Response Plan is summarized schematically on Figure 2-8.

3.0 ADDITIONAL INVESTIGATION ACTIVITIES

Site investigation activities were conducted on May 18, 2017 with the goal of:

1) delineating the vertical migration of dissolved-phase contaminants in groundwater beneath the Site; and
2) collecting a soil sample for physical property analysis to be used for vapor intrusion modeling.

Details regarding implementation and results are provided in the sections that follow.

3.1 Field Preparation Activities

A Site-specific Health and Safety Plan (HASP) was prepared in compliance with Federal Occupational Safety and Health Administration regulations (OSHA; 29 Code of Federal Regulations, Section 1910.120) and State OSHA regulations (California Code of Regulations, Title 8, Section 5192). Apex-SGI personnel and subcontractors associated with the project were required to be familiar and comply with all provisions of the Site-specific HASP.

A soil boring permit was obtained from the Los Angeles County Department of Public Health (LACDPH). A copy of the approved permit is included in Appendix B.

A Site visit was completed to mark the locations of the proposed soil borings and DigAlert, a one-call notification alert for underground utility providers, was contacted. In addition, Apex-SGI obtained a geophysical services contractor to confirm the locations were clear of any subsurface utilities, pipelines, or other structures.

As an additional precaution, each drilling location was manually cleared using a hand auger to a minimum depth of approximately 5 feet bgs to ensure that no utilities would be impacted by the drilling operations.

3.2 Soil Boring Advancement

A Cone Penetration Testing (CPT) direct-push rig was operated by Gregg Drilling & Testing, Inc., a State of California-licensed (C-57) drilling contractor under the oversight of Apex-SGI. All borings were hand-augered to approximately 5 feet bgs prior to boring advancement using the CPT rig. Soil boring AN-22 was advanced within the southern portion of the Northwest Parcel to attempt to provide vertical delineation of the dissolved phase in groundwater. The target depth was 100 ft bgs. Drilling refusal occurred at 58 ft bgs. A second attempt to push deeper into groundwater was made at step-over boring AN-22a. However, refusal was met again at 58.5 feet bgs. No further attempts were made to push beyond 58.5 feet bgs

The locations of boring AN-22 and AN-22a are depicted on Figures 2-5 and 2-7 and further methodologies are described below. Copies of the CPT logs are available in Appendix C.

Each CPT direct-push boring was abandoned upon completion by grouting the boring with a 5 percent (%) bentonite/Portland cement slurry.

1 S S M d d A Pr r

The following samples were collected and submitted for laboratory analysis:

Physical Property Sampling

One soil sample was collected in a stainless steel sleeve as a continuous core from boring AN-22 at a depth of 4.75 to 5.25 feet bgs and submitted to PTS Laboratories in Santa Fe Springs, for the CAL-EPA DTSC Vapor Intrusion Package which includes the following analyses for soil:

- Moisture content, total porosity, air-filled porosity, water-filled porosity, total porosity, and grain and bulk density using American Petroleum Institute (API) RP40 and ASTM D2216;
- Particle size analysis using ASTM D422/D4464M; and
- Total organic compound using the Walkley-Black method.

Chemical Analytical Sampling

A soil analytical sample from boring AN-22 was collected at 4.5 feet bgs from the hand auger bucket and from boring AN-22a at 10 feet bgs using a CPT equipped with a push soil sampler.

All samples were logged on to a chain-of-custody document for delivery to American Analytics, Inc. in Chatsworth California for the following analysis:

- TPH Carbon Chain (C6-C44) by U.S. Environmental Protection Agency (USEPA) Method 8015M; and
- VOCs and fuel oxygenates by USEPA Method 8260B.

Gr d r S M d

A groundwater grab sample was collected from boring AN-22 at a depth of 58 feet bgs using a Hydropunch® groundwater sampling system. At the desired depth interval, a 4-foot long stainless steel screen housed within the drilling rod was exposed to the subsurface, and allowed to fill with groundwater. Groundwater was allowed to equilibrate within the sampling device prior to extraction using small diameter polyethylene tubing and a check valve assembly. The groundwater samples were decanted into analysis-specific laboratory supplied containers, labeled, and handled under standard chain-of-custody procedures for delivery to American Analytics, Inc. for analysis for the following parameters:

- TPH Carbon Chain (C6-C44) by EPA Method 8015M; and
- VOCs and fuel oxygenates by EPA Method 8260B.

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To support the quality of data and to minimize the potential for cross-contamination between sampling events, all reusable downhole equipment used during drilling and sampling was thoroughly contaminated prior to, and in between each use. Decontamination procedures for all reusable sampling equipment included: physical removal of excess soil and debris; thorough washing of all equipment with non-phosphate detergent/potable water solution; and triple rinse with deionized or distilled water.

[illegible] M[illegible]l[illegible]r[illegible]d [illegible]

Investigation-derived waste (IDW) generated during this project, including soil cuttings, decontamination water, and purge water were stored in UN-related, 55 gallon drums and will be profiled and disposed of in accordance with local, State, and Federal regulations.

[illegible] I[illegible] R[illegible]

Results were compared with applicable SLs for soil and groundwater as presented on the data summary tables included in Appendix A. Results are summarized below.

[illegible] S[illegible]C[illegible]d[illegible]

CPT results were generally consistent with historical CPT and logging data, which indicate the presence of both coarse-grained and fine-grained soil types to a maximum explored depth of 58.5 feet bgs (AN-22a). Coarser grained deposits interpreted as fill are encountered from surface to 1 foot bgs. In sharp contact with the fill is a fine-grained, low permeability soil that extends to approximately 5 to 7 feet bgs. This unit appears to grade into a coarser-grained soil dominantly consisting of sand to 58.5 feet bgs. These observations are consistent with previous Site investigations.

[illegible]1 S[illegible]

Sample results are included in the analytical summary tables provided in Appendix A and summarized below.

Petroleum hydrocarbon and VOCs were detected in soil collected from soil boring AN-22 at 4.5 and soil boring AN-22a at 10 feet bgs. However, only the sample from AN-22a at 10 feet bgs exceeds the final commercial/industrial Site-specific soil SLs. Soil data are consistent with previous Site investigation data for the area. A summary of the results is provided below.

- TPHg (C4-C12) was detected in both samples at concentrations of 190 milligrams per kilogram (mg/kg; AN-22 at 4.5 feet bgs) and 4,900 mg/kg (AN-22a at 10 feet bgs). The soil sample from AN-22a at 10 feet bgs exceeded the final commercial/industrial Site-specific soil SLs;

- TPHd (C13-C22) was detected in both samples at concentrations of 37 mg/kg and 619 mg/kg in samples AN-22 at 4.5 feet bgs and AN-22a at 10 feet bgs, respectively. The soil sample from AN-22a at 10 feet bgs exceeded final commercial/industrial Site-specific soil SLs;
- Benzene was not detected above laboratory reporting limits in any sample analyzed;
- No COPCs were detected above the final commercial/industrial Site-specific soil SLs in boring AN-22; and
- Naphthalene and 1,2,4-trimethylbenzene were the only other COPCs detected above the final commercial/industrial Site-specific soil SLs in boring AN-22a.

Physical property data obtained from PTS Laboratories was used for the vapor intrusion modeling assessment discussed in Section 4.0.

Gr□□□d□ □□r

Sample results are included in the analytical summary tables provided in Appendix A and summarized below.

- TPHg (C4-C12) was detected in AN-22 at 58 feet bgs at a concentration of 300 micrograms per liter (µg/L);
- TPHd (C13-C22) was detected in AN-22 at 58 feet bgs at a concentration of 864 µg/L;
- Benzene was not detected above laboratory reporting limit in AN-22 at 58 feet bgs; and
- No other COPCs were detected above the final commercial/industrial Site-specific groundwater SL or the California maximum contaminant levels (MCL) and California notification levels (NL) for groundwater in AN-22 at 58 feet bgs.

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Apex-SGI utilized long-term groundwater SLs (discussed in Section 4.0) as target values to determine when vertical delineation has been met. The following long-term groundwater SLs were used, as appropriate:

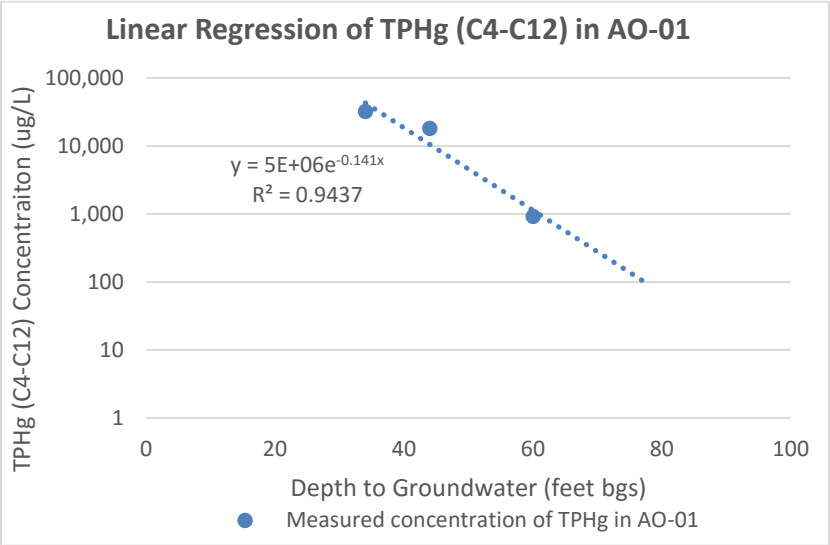
- MCLs, which are health protective drinking water standards to be met by public water systems;
- SWRCB drinking water notification levels, which are health-based advisory levels for nonregulated chemicals in drinking water without MCLs; and
- A value of 100 µg/L for TPHg and TPHd , based on SF RWQCB ESLs for drinking water based on taste and odor (MCLs are not available for TPHg and TPHd).

An evaluation of vertical delineation was used by comparing deep groundwater data collected from borings downgradient from the source area (borings AN-22 and boring AO-01). Groundwater samples from these borings were collected from the following depths:

- Boring AN-22: 58 ft bgs
- Boring AO-01: 34, 44, and 60 ft bgs

Vertical delineation of PAHs and VOCs is considered met at both locations. The benzene concentration at the deepest depth explored in boring AO-01 (60 ft bgs) only slightly exceed the MCL (1 ug/L) at a detected concentration of 1.4 µg/L and benzene concentrations in boring AN-22 were below laboratory detection limits of 0.5 µg/L at 58 ft bgs. Neither TPHg nor TPHd were at or below a concentration of 100 µg/L in borings AN-22 or AO-01 at the deepest depth explored.

Groundwater sampling via direct push methods, such as with a Hydropunch®, is insufficient to fully document the depth of TPHg and TPHd in groundwater at the Site. Therefore, Apex-SGI proposes the installation of three offsite groundwater monitoring wells immediately downgradient from the Site to provide vertical delineation. In order to estimate the approximate depth where the dissolved phase in groundwater may be less than 100 µg/L, a linear regression was performed using the concentration of TPHg (C4-C12) from offsite grab groundwater sample AO-01. Results are shown in the graph below.



Based on the linear regression above, data indicate that at approximately 78 feet bgs, the concentration of TPHg in groundwater can be predicted to attenuate below 100 µg/L.

The three, new proposed groundwater monitoring wells will be installed offsite at locations east (near MW-16) and south (near MW-15) of the proposed groundwater barrier, as shown on Figure 3-1. Two groundwater monitoring wells will be installed and screened at depths of 55 to 65 feet bgs and a third groundwater monitoring well will be screened at a depth of 75 to 85 feet bgs. These data will be used to vertically delineate the dissolved phase in groundwater and complete the design of the groundwater barrier.

□□□ SCREENING LE□ELS AN□ □E□ELOPMENT OF SITE SPECIFIC SOIL □APOR SCREENING LE□ELS

The Site Investigation Report included development of soil, soil vapor, and groundwater screening levels (SLs) that were used to evaluate the Site investigation data, to identify COPCs and to determine if further action is warranted. Details regarding the rationale for applicable screening levels were included in the Site Investigation Report. During a meeting at the LARWQCB office on April 27, 2017, LARWQCB requested that California Regional Water Quality Control Board, San Francisco Bay (SFRWQCB) environmental screening levels (ESLs) also be considered during the development of soil and Site-specific soil vapor SLs. Updated SLs incorporating the SFRWQCB ESLs are summarized below in Sections 4.1 through 4.3.

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Table 4-1 summarizes all SLs that were considered, which include:

- California DTSC modified screening levels (SLs) for residential and commercial/industrial soil (DTSC, 2016). DTSC SLs for soil were developed for direct exposure to soil via ingestion, dermal contact, and inhalation exposure pathways;
- USEPA Regional Screening Levels (RSLs) for residential and industrial soil (USEPA, 2016). USEPA RSLs for soil were developed for direct exposure to soil via ingestion, dermal contact, and inhalation exposure pathways.
- SFRWQCB ESLs for residential and commercial/industrial soil (SFRWQCB, 2016). SFRWQCB ESLs were developed for direct exposure to soil via ingestion, dermal contact, and inhalation exposure pathways.
- Calculated Site-specific SLs for TPH and VOCs for the protection of groundwater pathway, based on the 1996 guidance document. For PAHs, SFRWQCB ESLs and USEPAs RSLs were considered for the soil leaching to groundwater pathway.

Table 4-1 includes final site-specific soil SLs for each exposure scenario/receptor by selecting the lowest available value from each of the SLs bulleted above.

Based on this updated analysis, the COPCs for on-Site soil under a commercial/industrial exposure scenario are as follows:

S□□ □□□□□ U□□□□SU□	**C□□ □ □r□□□□l□d□□r□□□ E□□□□□r□ S□□□□r□□**
□r□□□C□□□□□□E□□□□□r□ P□□□□ □□□ Pr□□□□□□□□ □□Gr□□□d□ □□□r E□□□□□r□ P□□□□ □□ □Gr□□□d□ □□□r □□□□ □□□□□□□□□	
Soil (Surface to 10 feet bgs)	TPH (C6-C12) TPH (C13-C22) TPHg Benzene Ethylbenzene Naphthalene 1,3,5-Trimethylbenzene 1,2,4-Trimethylbenzene Total Xylenes Benz(a)anthracene Phenanthrene
Pr□□□□□□□□ □□Gr□□□d□ □□□r E□□□□□r□ P□□□□ □□ □Gr□□□d□ □□□r □□□□ □□□□□□□□□	
Soil (10 to 20 feet bgs)	TPH (C6-C12) TPH (C13-C22) TPHg Benzene Naphthalene 1,2,4-Trimethylbenzene Chrysene Phenanthrene Pyrene

□□□ S□□□□□□r S□r□□□□□□ L□□□□□

The DTSC, USEPA, and SFRWQCB publish ESLs and RSLs for soil vapor that are based on default attenuation factors that likely overestimate the attenuation from soil vapor to indoor air for this Site because Site conditions are more reflective of less permeable silts. Site-specific soil vapor SLs were calculated using the DTSC modified version of the Johnson and Ettinger (1991; J/E) model (DTSC, 2014) and considering Site-specific geotechnical data. Results are provided in Table 4-2.

The methods used to develop the Site-specific soil vapor SLs, including assumptions and data used for the model input parameters are detailed in Appendix D. The resulting Site-specific soil vapor SLs developed for this site will be compared to soil vapor data collected from the Site to determine the extent of soil vapor that requires vapor intrusion mitigation measures.

For comparison purposes, Table 4-2 also includes summarizes California DTSC modified SLs for commercial/industrial air (DTSC, 2016), USEPA RSLs for commercial/industrial air (USEPA, 2016), and SFRWQCB ESLs for commercial/industrial air (SFRWQCB, 2016).

The updated COPCs for on-Site soil vapor under a commercial/industrial exposure scenario are as follows:

S□□ □□□□□ U□□□ □SU□	**C□□ □ □r□□□□l□d□□□r□□□ E□□□□□r□ S□□□□r□□**
□□□□r l□□r□□□□□ □□□□ l□d□□r A□r E□□□□□r□ P□□□□ □□	
Soil Vapor	Benzene Ethylbenzene Xylenes 1,2,4-Trimethylbenzene

□□□ Gr□□□d□ □□□r S□r□□□□□□ L□□□□□

Screening levels for groundwater are consistent with the values presented in the Site Investigation Report, and are based on:

- SFRWQCB ESLs for residential and industrial groundwater vapor intrusion into indoor air (SFRWQCB, 2016). The SFRWQCB ESLs for groundwater vapor intrusion were developed for potential volatilization of chemicals from groundwater to indoor air and subsequent direct exposure to indoor air via the inhalation exposure pathway.

Table 4-3 includes final groundwater screening level values. The concentrations of the following constituents exceeded the lowest available groundwater SL; therefore, they were retained as a COPC based on vapor intrusion concerns under a commercial/industrial exposure scenario:

S□□ □□□□□ U□□□□SU□	**C□□ □ □r□□□□l□d□□□r□□□ E□□□□□r□ S□□□□r□□**
□□□□r l□□r□□□□□ □□□□ l□d□□r A□r E□□□□□r□ P□□□□ □□	
Groundwater	Benzene Ethylbenzene Naphthalene

Shallow groundwater beneath the Site is not currently used for drinking water purposes due to low yield and/or generally poor quality. Constituents present in groundwater were not retained as COPCs based on drinking water standards however were compared to applicable values considering long-term groundwater quality objectives. For evaluation of long-term groundwater objectives, the following groundwater SLs were used, as appropriate:

- California maximum contaminant levels (MCLs), which are health protective drinking water standards to be met by public water systems; and
- SWRCB drinking water notification levels, which are health-based advisory levels for nonregulated chemicals in drinking water without MCLs.

The concentrations of the following constituents exceeded the MCLs or notification levels:

S□□ □□□□ U□□□SU□	**M□□□□ □□ C□□□□□ □□□□□ L□□□□□MCL□**	**N□□□□□□□□□□□□□ L□□□□**
Groundwater	Benzene 1,2-Dichloroethane cis-1,2-Dichloroethene Ethylbenzene Tetrachloroethylene[Note 1]	tert-Butyl Alcohol sec-Butylbenzene n-Butylbenzene Naphthalene n-Propylbenzene 1,2,4-Trimethylbenzene

[Note 1] Tetrachloroethene (PCE) was not detected at a concentration above the commercial/industrial groundwater SL in any groundwater sample. In only one sample, PCE was detected at 7.7 µg/L, which slightly exceeds the residential groundwater SL of 3.2 µg/L. This grab groundwater sample was collected at 62 feet bgs at boring location AN-20. PCE is generally not a typical constituent of concern at former petroleum sites and there are no known sources of PCE onsite. Additionally, PCE was not detected in soil or soil vapor samples collected at the Site. Since PCE was not detected in multiple media and was only detected at low concentrations in deep groundwater, the PCE in groundwater is not related to former Site uses.

EAST AREA HUMAN HEALTH RISK ASSESSMENT

A Human Health Risk Assessment (HHRA) was conducted for the East Parcel, where prior investigation data indicate that subsurface impacts are relatively minor. The complete HHRA document is provided in Appendix E. A summary of the analysis conducted and results are summarized below.

Based on previous Site investigations, the following chemical compounds were evaluated in the HHRA:

- Metals;
- Total petroleum hydrocarbons (TPH); including oxygenates and carbon ranges);
- Volatile organic compounds (VOCs); and
- Polycyclic aromatic hydrocarbons (PAHs).

Based on current and likely potential future uses at the East Parcel, the following hypothetical human receptors were evaluated in the HHRA:

- Hypothetical Onsite Construction/Utility Trench Worker Receptor; and
- Hypothetical Onsite Commercial/Industrial Worker Receptor.

The following sections summarize the results of the HHRA.

1 Arsenic

In soil from 0 to 10 feet bgs, arsenic was detected at a concentration above the Southern California regional background arsenic concentration of 12 milligrams per kilogram (mg/kg) in 7 of the 27 soil samples. At these 7 locations, arsenic concentrations at the 1 foot bgs depth were below 12 mg/kg. The arsenic concentrations above 12 mg/kg were at 5 and 10 feet bgs, indicating likely background concentrations. Generally, direct contact with soil will occur in the top foot of soil, except under construction exposure scenarios. Although arsenic has been detected at depth at concentrations above the regional background of 12 mg/kg, there is no known subsurface source. Additionally, arsenic concentrations are below background near the surface and the 95-percent upper confidence limit of the mean concentration (95UCL) for arsenic in soil is 12 mg/kg. Therefore, arsenic in soil at the East Parcel is likely background, not related to previous Site use, and does not pose a risk above background to potential onsite receptors.

Lead

The maximum detected concentration of lead in soil does not exceed the Office of Environmental Health Hazard Assessment (OEHHA) commercial/industrial California Human Health Screening Level (CHHSL) of 320 mg/kg (OEHHA, 2009).

[illegible] O[illegible]r COPC[illegible]

For the remaining chemicals of potential concern (COPCs) in soil and soil vapor, the estimated hazard indices (HIs) and excess cancer risks for the potential human receptors are summarized in the following table:

[illegible]R[illegible]r[illegible]			
O[illegible] C[illegible]r[illegible]U[illegible]Tr[illegible] [illegible]r[illegible]r		O[illegible] C[illegible] [illegible]r[illegible]l[illegible]d[illegible]r[illegible] [illegible]r[illegible]r	
[illegible]rd l[illegible]d[illegible]	C[illegible]r R[illegible]	[illegible]rd l[illegible]d[illegible]	C[illegible]r R[illegible]
2	3×10^{-7}	0.3	7×10^{-6}

The following bullets summarize the soil and soil vapor COPCs contributing to HI and excess cancer risk estimates for each receptor.

[illegible]O[illegible] C[illegible]r[illegible]U[illegible]Tr[illegible] [illegible]r[illegible]r

- Although the total HI exceeds one, the individual HIs for each COPC in soil do not exceed one. Cobalt, nickel, thallium, and vanadium in soil are the primary contributors to the elevated HI. However, the primary critical effects of cobalt, nickel, thallium, and vanadium toxicity do not include the same target organ or system. Since individual HI estimates do not exceed one and the highest individual HIs are not associated with a primary critical effect on the same target organ or system, the COPCs do not pose adverse noncancer effects to the hypothetical onsite construction/utility worker receptor.
- The total excess cancer risk is less than the most stringent end of CalEPA's risk management range of 1×10^{-6} to 1×10^{-4} and is less than 1×10^{-5}, which is generally acceptable for occupational exposures. Therefore, COPCs do not pose a risk to the hypothetical onsite construction/utility trench worker receptor.

Based on the exposure pathways evaluated and the conservative upper-bound assumptions used in this HHRA, potential exposure to Site-related COPCs do not pose an unacceptable human health risk to hypothetical onsite construction/utility trench worker. Furthermore, it should be noted that although hypothetical construction/utility trench worker receptors are included in the HHRA, any hypothetical construction worker receptor will be performing activities consistent with a Site Management Plan (SMP) and a Site Health and Safety Plan (HASP). The SMP, HASP, and best management practices (BMPs) will protect construction worker receptors from exposure to Site-related contaminants.

[illegible]O[illegible] C[illegible] [illegible]r[illegible]l[illegible]d[illegible]r[illegible] [illegible]r[illegible]r

- The total HI does not exceed one; therefore, the COPCs do not pose adverse noncancer effects to the hypothetical onsite commercial/industrial worker receptor.

- The total excess cancer risk is within CalEPA's risk management range and is less than 1×10^{-5}, which is generally acceptable for occupational exposures. Therefore, COPCs do not pose a risk to the hypothetical onsite commercial/industrial worker receptor.

Based on the exposure pathways evaluated and the conservative upper-bound assumptions used in this HHRA, potential exposure to Site-related COPCs do not pose an unacceptable human health risk to hypothetical onsite commercial/industrial worker receptors.

[illegible] F[illegible]r[illegible]r C[illegible]d[illegible]r[illegible] [illegible]d C[illegible]

Administrative and institutional controls will be implemented prior to development of the East Parcel, as required in the California Land Reuse and Revitalization Act Agreement (CLRRA) prepared for the Site. Expected controls include a land use covenant (LUC) and Site Management Plan (SMP). The LUC will prohibit use of underlying groundwater and prohibit unrestricted or sensitive land uses.

Based on results of the HHRA, combined with the administrative and institutional controls planned for the Site, remedial actions are not warranted at the East Parcel prior to development of the Site for industrial/commercial purposes.

6.0 INITIAL RESPONSE ACTION TECHNOLOGY SCREENING

Response actions were developed for the former Chemoil site through evaluation of technologies and process options that are effective, implementable, and have reasonable costs to address site contamination and mitigate potential risks. Established technologies that through past successful use are often referred to as presumptive remedies were identified and screened against General Response Actions (GRAs) to reduce the number of technologies to be carried forward for further analysis. These technologies were then screened against criteria to determine which alternatives would be retained for further evaluation and consideration. This section provides details and results of this initial technology screening process.

6.1 General Response Actions for Contaminated Groundwater

GRAs are categories of remedial actions that are applied toward the remediation of contaminated sites. This Response Plan has considered the following GRA alternatives:

- No further action;
- Destruction or detoxification of contaminants through alteration of their molecular structures and/or through neutralization;
- Separation, concentration, or volume reduction;
- Immobilization of hazardous substances through changing the physical state of the contaminant or contaminated media;
- On-site or off-site disposal, isolation, or containment at an engineered facility designed to minimize the future release of hazardous substances, pollutants, or contaminants and in accordance with applicable regulations; and
- Institutional and Engineering controls (IECs) to restrict access and/or long-term monitoring to assess changes in contaminant distribution over time.

The GRAs presented above form the basis for identifying technology types and process options for the Site, which are subsequently screened for effectiveness, implementability, and practicality (cost) as detailed in Section 6.3.

6.2 Remedial Action Objectives

The response actions that have been considered for the Site are intended to meet the following Remedial Action Objectives (RAOs):

- Reduce and/or maintain human health risks to acceptable levels to allow redevelopment of the Site for light industrial/commercial purposes;

- Prevent soil-related exposures (i.e., incidental ingestion, direct dermal contact, particulate inhalation and outdoor vapor inhalation of VOCs) to constituent concentrations exceeding commercial/industrial screening levels;
- Prevent indoor inhalation as a result of potential vapor intrusion of constituent concentrations exceeding commercial/industrial screening levels;
- Reduce the potential for adsorbed-phase petroleum constituents in soil to leach to groundwater underlying the Site;
- Remove to the extent practical, mobile light, non-aqueous phase liquid (LNAPL) within the three defined LNAPL areas of occurrence; and
- Control the dissolved-phase hydrocarbon groundwater plume to prevent further offsite migration of contaminants at concentrations above levels that present a risk.

I R A S r

Potential response actions were identified based on the media of concern (soil, soil vapor, and groundwater), the physio-chemical properties of the contaminants, and experience or review of publicly available information regarding the effectiveness of these remedies at other sites with similar affected media and contaminants. Response actions were screened against the following criteria:

- Implementability;
- Effectiveness; and
- Relative Cost.

The results of the screening are presented below and summarized in Table 6-1.

1 O r S M R A O

1 1 N A

This response action requires that no further activity be performed at the site, including remediation or periodic soil and groundwater monitoring. Over time, total petroleum hydrocarbon (TPH) contaminants will naturally attenuate. This option will not be effective in removing exposure pathways, preventing migration of site contaminants, and/or minimizing short- and long-term impacts to surrounding communities and the environment. Additionally, this alternative will not be administratively feasible since it is highly unlikely that approvals will be obtained from Los Angeles RWQCB, or members of the community. Based on these reasons, this response action will not be carried forward for further evaluation.

1 I d E r C r

This response action utilizes institutional and engineering controls (IECs) to prevent completed exposure pathways between contaminated media and potential receptors. Specific to conditions at

the Chemoil site, this would include administrative prohibitions of certain uses or construction of engineered features at the site that would minimize exposure of potential receptors to contaminated media. Such actions may include the physical separation of subsurface COCs from potential receptors (by capping with structural improvements or clean imported soils, and the use of engineered barriers to prevent vapor migration into building spaces). Administrative controls can include placing constraints on the property deed, such as a uniform environmental covenant, and/or preparation and implementation of an Environmental Hazards Management Plan (EHMP). Due to the contaminant concentrations detected and the environmental hazards evaluated, this response action alone would not meet the RAOs. However, use of IECs in conjunction with other response actions is common and therefore this response action was retained for further evaluation.

1 M r d N r A

MNA is a process in which soil and/or groundwater is sampled at specified intervals to monitor and measure the natural attenuation of site contaminants. Long term monitoring is included as a component of monitored natural attenuation. TPH contaminants attenuate by multiple mechanisms including biodegradation, geochemical degradation, transport and dilution, diffusion, and volatilization. Trends in contaminant concentrations are plotted and monitored to determine if contaminant plumes are stable, contracting, or expanding. Due to the presence of LNAPL, and relatively high contaminant levels in site soil, MNA alone is not considered applicable to the existing site conditions. However, MNA is a standard approach for the remediation of groundwater and could be combined with other retained response actions. Based on its ease of implementation and relatively low cost, MNA is retained for further evaluation.

I -S Tr R A O

1 A r S r

Air sparging is a process whereby pressurized air is injected into the saturated zone to enable adsorbed or dissolved-phase hydrocarbons to volatilize into vapor-phase hydrocarbons. Implementation of air sparging requires use of a soil vapor extraction (SVE) system to mitigate any potential vapor intrusion issues resulting from volatilization of contaminants from groundwater into soil vapor. Air sparging is a proven technology for the remediation of dissolved phase TPH in groundwater and is often a technology of choice for sites such as Chemoil.

Air sparging works best in uniformly sandy soils, where there are relatively few if any preferential pathways for air migration. These are the predominant subsurface conditions in the impacted saturated zone at the Chemoil site. Based on its relatively lower cost and ease of implementability, as well as demonstrated previous success at the site, air sparging is retained for further evaluation.

Bioventing

Bioventing delivers oxygen (air) into the subsurface to stimulate natural biological degradation of the hydrocarbons. The process is especially effective for TPH contaminants. The remedial technique is frequently implemented as a separate technology by injecting low pressure air into the vadose zone to create aerobic conditions which stimulates microbial organism populations which then feed on the hydrocarbons, decreasing toxicity through biological degradation that converts TPH to carbon dioxide and water. When soil vapor extraction is implemented on a TPH impacted site (see below) this effect is accomplished by air from the atmosphere which replaces soil vapor as it is extracted from the vadose zone. This option is retained for further evaluation.

In-situ Chemical Oxidation

In-situ chemical oxidation is a process by which TPH contaminants are degraded through chemical means into carbon dioxide and water. Contaminants in upper groundwater and in the capillary fringe (smear zone), could be destroyed via in-situ chemical oxidation using ozone. The most common method of forming ozone for in-situ oxidation is concentration of oxygen in atmospheric air and transformation of a portion of the oxygen into ozone. This process produces a mixture of approximately 10% ozone and 90% oxygen. The injected ozone quickly decomposes TPH contaminants while the oxygen is available to support aerobic biodegradation of TPH contaminants. Oxygen is also available to migrate vertically into the smear zone as well as the vadose zone to support aerobic biodegradation in these areas. Ozone is a short-lived compound and produces no secondary by-products other than carbon dioxide and water. A complete aerobic biodegradation also produces only carbon dioxide and water, thus both processes are considered benign. The primary drawbacks with in-situ chemical oxidation include:

- Requires a WDR permit from RWQCB (general permit);
- May impact solubility of naturally present metals, including hexavalent chromium;
- The need for direct contact between oxidant and contaminant; and
- The technology is significantly more expensive than air sparging.

Based on these concerns, in-situ chemical oxidation is rejected but may be considered at a later date if the preferred response actions prove to be ineffective during implementation.

Soil Vapor Extraction

SVE is a process whereby a vacuum blower connected to vertical or horizontal vadose zone wells is used to induce vacuum in subsurface soils and remove in-situ soil vapor for treatment of the contaminants above ground. Significant quantities of more volatile TPH contaminants can be removed via SVE thus decreasing the time necessary to reduce contaminant. SVE is often used in combination with air sparge systems to remove VOCs resulting from volatilization of contaminants from groundwater into soil vapor. SVE has already been implemented at Chemoil associated with

the subsurface metabolism enhancement (SME) system and a significant contamination mass has been removed.

Short-term soil vapor monitoring is a component of this remedy to document soil vapor conditions during active remediation. Monitoring will occur where contaminants in unsaturated soils are expected to be affected by active remediation. Short-term monitoring will be designed to assess the short-term effectiveness of active remediation.

The primary drawback associated with SVE is the cost of vapor treatment, although this cost is considered moderate compared to other options. Based on its relatively lower cost, ease of implementability, and effectiveness at meeting RAOs, SVE is retained for further evaluation.

Thermally Enhanced Soil Vapor Extraction

Thermally enhanced SVE is similar to standard SVE except that heat is applied to the soil profile to increase TPH volatilization and removal. Heat is typically applied by electrical resistivity (using arrays of metal cathodes and carbon anodes) or by steam injection. SVE wells placed in and around the thermal injection points to remove volatized COCs. Theoretically, the addition of thermal energy to the soil expedites contaminant volatilization and subsequent extraction, resulting in shorter cleanup times. There are a number of drawbacks associated with thermally enhanced SVE including energy consumption (either electricity of natural gas) which is remarkably high for a large site like Chemoil.

Electro-resistivity thermal enhancement has been most effective in fine grained materials; while the Chemoil site is predominantly coarse grained sediments. Additionally, experience with many previous thermal projects have often indicated through life-cycle cost analyses that standard SVE would have achieved cleanup for significantly less cost than thermally enhanced SVE. Based on these concerns, thermally enhanced SVE is excluded from further evaluation.

Light Non-Aqueous Phase Product Removal

LNAPLs have been observed at several locations within the Chemoil site. Given that these deposits will continue to act as a “source” for dissolved phase TPH entering groundwater for an extended period of time, removal or reduction of the mass of LNAPL to the extent practical is necessary. During the site characterization field investigations, it was observed that the LNAPL is primarily heavy hydrocarbons and recharge into wells after removal was relatively slow. There are several technological approaches available to remove LNAPL from the surface of the water table while minimizing the removal of groundwater. These techniques can greatly reduce the overall mass of fluids being extracted and then requiring treatment. As the LNAPL will be a persistent source of TPH impacts, removal of LNAPL through passive skimming or other extraction methods that preferentially remove TPH is retained for further evaluation.

E-S Tr R A O

1 Gr d r E r d Tr

Groundwater extraction through multiple pumping wells distributed over a property and subsequent above ground treatment has been used at many sites for a wide range of contaminants. Experience at many locations has demonstrated that “pump & treat” for many impacted sites is generally considered to be less effective than other approaches (Keely, 1989; MacKay & Cherry, 1989; Voudrais, 2001). This has been found true for TPH impacted sites due to the low solubility of TPH constituents and the propensity for TPH to adsorb to soil particles.

Given the above, it is anticipated that groundwater extraction and treatment would not be able to achieve RAOs within a reasonable cost, and could result in significant negative impacts to the aquifer by inducing salt water intrusion related to the removal of large volumes of groundwater. Consequently, site wide groundwater extraction and treatment of the COCs is excluded from further consideration.

E d O-S Tr

Excavation and off-site treatment/disposal has been successfully used since the inception of site cleanups as reliable and often cost-effective means of removing contamination from an affected site. Soil is removed using excavators and other heavy equipment. Removed soil is placed in haul trucks and transported to an off-site treatment facility or landfill. The primary advantage of excavation and off-site treatment/disposal is the permanence of the remedy and relatively short time-frame needed for implementation. The primary concerns with this response action are the high capital cost, the associated emissions of greenhouse gases during transport, and the potential safety liabilities associated with the required hundreds of truck trips necessary to remove all contaminated soil and to import clean soil for backfill. Other concerns include the short-term impacts associated with the implementation of this remedial action, as well as the effects and administrative feasibility associated with moving a portion of the impacted soil to a landfill. Although there are significant concerns, particularly with the elevated costs, this remedial action was retained for further evaluation.

E d O-S Tr

Excavation and on-site treatment/disposal is the presumptive remedy for treatment of TPH impacted soil in California. Soil is removed using excavators and other heavy equipment and removed soil is transported to an on-site treatment area instead of off-site as indicated in the off-site disposal option, above. The primary concerns with this response action are the high capital cost requirements associated with excavation and the logistics of treating soil on-Site. Other concerns include the short-term impacts (particularly on surrounding residents) associated with the implementation of this remedial action. Due to the fact that the entire property is expected to be developed, there is not a suitable, large area that could serve as the on-site treatment location. Although this lack of space could be addressed by phasing the grading and excavations over several portions of the property, the extended time frame of using that approach significantly increases costs and time to complete

remediation. Based on space limitations and other logistical issues, this response action is excluded from further consideration.

R d R A

Table 6-1 summarizes the results of the initial screening of response action technologies that were considered. As indicated, the following treatment alternatives were retained for consideration for the indicated media at the Site:

Groundwater

- Air Sparging (combined with SVE)
- LNAPL removal
- Monitored natural attenuation

Soil/Soil Vapor

- SVE
- Bioventing (Note: bioventing is considered a secondary remedial response due to SVE implementation and is not evaluated as a separate response action beyond initial screening).
- Excavation and offsite disposal

Overall Site Management

- Institutional and Engineering Controls

.

7.0 DETAILED ANALYSIS AND SELECTION OF PREFERRED RESPONSE ACTIONS

Remedial response actions that passed the initial screening process described in Section 6.0 were considered for further evaluation. A total of six response action technologies were evaluated to determine their suitability for use at this site based on the following nine criteria (USEPA, 1988):

- Overall protection of human health and the environment.
- Compliance with applicable or relevant and appropriate requirements (ARARs). For this evaluation, ARARs were considered to be the RAOs defined in Section 6.2.
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, and/or volume (TMV) through treatment;
- Short-term effectiveness;
- Implementability;
- Cost;
- Regulatory agency acceptance; and
- Community acceptance.

Results are summarized in Table 7-1 and the sections that follow. Estimated capital and annual operating costs for each of the alternatives are provided in Table 7-2.

7.1 Groundwater Remedial Alternatives

7.1.1 Air Sparging

Air sparging was ranked “moderate” to “good” against the evaluation criteria. Costs to implement are considered moderate and it is anticipated that installation and startup of an air sparge system could be completed relatively quickly. The injection of air to volatilize TPH contaminants in the saturated zone is a commonly applied technology and permitting of this process is anticipated to be straightforward and not excessively time consuming. However, given the presence of LNAPL onsite, air sparging is not recommended across the Site due to the potential of mobilization and spreading of the LNAPL.

Air sparging could be utilized along the Site boundary, where LNAPL is not present, to reduce groundwater contamination from migrating off the property (this technology is referred to as an air sparge barrier). This response action would minimize the further impacts to groundwater downgradient from the property. Installation would be moderately easy to implement and some of the wells and/or infrastructure of the existing SME system may be used.

The following concerns or issues were identified with using an air sparge barrier to treat groundwater:

- Source areas would not be treated. At a minimum, a method to remove LNAPL from source areas on-Site would be required in conjunction with an air sparge barrier approach;
- Soil vapor concentrations would increase during operation of the air sparge system as a result of volatilization of contamination from groundwater to soil vapor. This issue could be addressed via the use of SVE to control vapor migration; and
- Air sparging would remove volatile contaminants within the saturated zone but would not likely reduce the volume of heavier hydrocarbon (although the volume of heavy hydrocarbons mobilizing off-site is considered to be very low). A benefit of air sparging would be the addition of oxygen into the subsurface which would promote the biodegradation of the heavier hydrocarbon constituents; however, this process generally occurs over longer period of time.

A remedial approach should be considered using an air sparge barrier along the Site boundary in combination with source area removal (i.e. LNAPL recovery and/or installation of vapor barriers beneath future buildings) and downgradient groundwater monitoring. Following the removal of LNAPL to the extent practical by other remedial measures (bailing/skimming), air sparging may be utilized within the source areas at a later date.

1 A r L N -A P Pr d R

LNAPL removal was ranked “moderate” to “good” against the evaluation criteria. Costs to implement are considered low and it is anticipated that installation and startup of an LNAPL removal system could be completed relatively quickly. In addition, these systems are effective in slanted wells, so the LNAPL removal could be incorporated into site development underneath future buildings. Although previous efforts to bail LNAPL from wells has demonstrated the product is viscous and slow to recharge into the well after removal, the recommended system can be operated on a timer, to reduce operation when the well is potentially empty.

The following concerns or issues were identified with using LNAPL recovery to treat groundwater:

- The removed LNAPL would need to be temporarily stored on-site. The storage area would need to be protected from potential damage or vandalism and spill prevention measures put into place;
- The stored LNAPL would need to be periodically collected for transport to a local recycling facility, and site development would need to include accommodation of this product transfer and transport off-site; and
- Dissolved phase groundwater concentrations beneath the site would not be treated with the LNAPL recovery system. Additional response actions, including the addition of a vapor mitigation system beneath future buildings would be needed to negate vapor intrusion concerns from future on-site workers. Additional response actions would be needed to prevent further migration of dissolved phase constituents offsite.

1 A r M r d N r A

MNA was ranked “poor” to “good” against the evaluation criteria. Costs to implement are considered low; however, given the presence of LNAPL beneath the site, the likelihood of regulatory acceptance for MNA across the entire site is low. As discussed in prior reports (Apex-SGI, 2017) existing concentrations in offsite groundwater do not pose a vapor intrusion concern. With the implementation of onsite actions, downgradient offsite concentration area expected to further decrease over time. MNA should be retained and be implemented for the downgradient portion of the groundwater plume in combination with other Response Actions implemented onsite.

As a component of MNA, long-term groundwater monitoring will be conducted to document groundwater conditions and establish groundwater contaminant trends over time.

S d S r R A A r

1 A r E d O-

Excavation and off-site disposal of soil was ranked “moderate” to “very good” against the evaluation criteria. Costs to implement this approach is very high, estimated at $9,489,200 for the top ten feet. vadose zone soil. This cost does not account for remediation of vadose zone soil below ten feet. Due to the unreasonable cost, this option was discarded from further consideration.

It is understood that during earthwork for grading and foundation or utility installation there is a high potential that some soils will be required to be excavated and off hauled during property redevelopment. A Soil Management Plan to provide guidance for handling potentially impacted soil during redevelopment activities has been provided and is included as an Appendix to the Response Plan.

A r S r E r

SVE was ranked “moderate” to “good” against the evaluation criteria. Costs to implement are considered moderate. All equipment for this alternative is readily available from commercial vendors, and it is anticipated that installation and startup of an SVE system could occur relative easily.

The following concerns or issues were identified with using SVE to treat soil and soil vapor:

- Weekly O&M activities would be required to keep the system functioning and additional maintenance costs would be accrued as the system components continue to age.
- The infrastructure of the SVE system would need to be accommodated in site development.
- Although SVE is an effective method to treat the volatile compounds present in the vadose zone, such as benzene, it has limited effectiveness in removing heavier, less volatile petroleum-related constituents from soil. However, the heavier less-volatile constituents are less mobile in the environment and pose a lower risk to site occupants and underlying groundwater. Under the proposed conceptual remedial approach, heavier end petroleum

constituents within the vadose zone should be reduced through bio-attenuation as air is distributed through the unsaturated formation (bio-venting).

A Response Action using SVE should be considered to treat the volatile constituents present in soil and soil vapor. However, SVE should be considered in combination with other measures to mitigate concerns due to the presence of less volatile compounds in the vadose zone.

O r S M R A A r

1 A r l l d E r C r

The implementation of IEC was ranked “moderate to good”. Implementing institutional and engineering controls (IECs) prior to or during vertical construction of the site can successfully meet several of the RAOs identified for the Site. IECs which are planned for the site and required under the approved California Land Reuse Revitalization Act (CLRRA) Agreement include:

- Preparation of an environmental land use covenant (LUC) and associated Site Management Plan (SMP). The LUC will prohibit use of underlying groundwater, prohibit unrestricted or sensitive uses, and require that all uses and development of the site will be consistent with an SMP, acceptable to the Los Angeles RWQCB. The LUC will run with the property should the property be sold in the future; and
- Installation of a vapor mitigation system installed as part of all future buildings constructed on the site.

In addition, planned development of the site includes construction of buildings and/or asphalt paving over more than 90% of the site, which effectively provides a barrier for human and ecological contact with the shallow soil. Areas that are neither paved or covered will a structure will be called with clean, imported fill soil.

Although implementation of IECs will not lessen the toxicity of contaminants in the subsurface, IECs are an effective measure to control potential exposure pathways in the future and should be considered along with other Response Actions.

S Pr rr d R A

Based on the detailed analysis described above of response actions that passed the screening criteria, a number of remedial technologies were combined to create the preferred remedial approach for the Site. In summary, the following response actions were selected as the most suitable and cost effective alternatives for the Site:

<u>Proposed Groundwater Treatment Technologies:</u>

1. Implement source area LNAPL removal with off-site disposal;
2. Operate an air sparge barrier at the property boundary; and
3. Implement a downgradient monitored natural attenuation (MNA) program.

Proposed Soil and Soil Vapor Treatment Technology

4. Operate an on-Site soil vapor extraction system focused on treatment in the deeper, more porous section of the vadose zone; and
5. Use engineering and institutional controls to mitigate contaminants in the shallower, less porous section of the vadose zone.

Proposed Engineering and Institutional Controls

6. "Cap" the Site with building and pavement;
7. Install vapor mitigation system under all future buildings;
8. Restrict on-site land use through an LUC;
9. Prepare SMP associated with the LUC; and
10. Prepare Soil Management Plan for use during property redevelopment.

The table below, summarizes the RAOs identified for the Site and the associated Response Action technologies.

R[illegible]d[illegible]A[illegible] O[illegible]	**Pr[illegible]d R[illegible]A[illegible] T[illegible]**
Reduce and/or maintain human health risks to acceptable levels to allow redevelopment of the Site for light industrial/commercial purposes.	- Installation of vapor mitigation system under future buildings. - Preparation of an LUC and SMP to restrict and manage on-Site land use. - Preparation and implementation of a Site Redevelopment Soil Management Plan for use during site redevelopment.
Prevent soil-related exposures (i.e., incidental ingestion, direct dermal contact, particulate inhalation and outdoor vapor inhalation of VOCs) to constituent concentrations exceeding commercial/industrial screening levels.	- "Capping" of site by development of buildings and asphalt/pavement over >90% of site to remove ingestion or dermal contact pathways. - Preparation of an SMP
Prevent indoor inhalation through vapor intrusion of constituent concentrations exceeding commercial/industrial screening levels.	- Installation of vapor mitigation system under future buildings.

Reduce the potential for adsorbed-phase petroleum constituents in soil to leach to groundwater underlying the Site.	- Operation of an SVE system to remove contaminant mass to the extent practicable. - Removal of leaching potential by “capping” of site by development of buildings and asphalt/pavement over >90% of Site. - Implementation of a groundwater monitoring program.
Remove to the extent practical, mobile LNAPL within the three defined LNAPL areas of occurrence.	- LNAPL recovery in all LNAPL areas observed at the site.
Control the dissolved-phase hydrocarbon groundwater plume to prevent further offsite migration of contaminants at concentrations above levels that present a risk.	- Installation of an air sparge barrier on the western and downgradient boundary of the property. - Semi-annual monitoring of offsite groundwater.

A remedial approach has been developed for the Site implementing the above Response Actions and is detailed in the following sections of this document. Figure 7-1 provides an illustration of the overall conceptual remedial approach for the Site.

8 SOIL AND SOIL VAPOR REMEDIATION SYSTEM DESIGN

SVE has been selected for the treatment of soil and soil vapor beneath the Northwest and Southwest parcels. SVE will be implemented in the more porous sections (greater than approximately 10 feet bgs) of the vadose zone. Mitigation of contaminants in the shallower, less porous section of the vadose zone will be addressed through engineering and administrative controls (discussion in Section 12.2). Figure 8-1 includes the assumed vadose zone treatment area (to be confirmed during Phase I SVE implementation). It is anticipated that SVE system installation and implementation will occur in the following two phases:

- Phase I will occur immediately following LARWQCB approval of this Response Plan and before property redevelopment. Phase I will include the installation and operation of thirteen SVE wells; ten situated on the Northwest Parcel and three situated on the Southwest Parcel (Figure 8-1). The purpose of the Phase I SVE implementation is to begin soil and soil vapor treatment while collecting data that will be needed to prior to implementing SVE throughout the remainder of the Site.
- Phase II will begin approximately 4 – 8 months (depending on the final redevelopment schedule) after start-up of Phase I. It is expected that all underground components (i.e. wells and conveyance piping) required for Phase II SVE implementation will be constructed prior to or during redevelopment of the Site. Phase II SVE will integrate the future redevelopment plan for the Site and is considered the final and full-scale SVE system design.

Further details are provided in the sections that follow.

8.1 PHASE I SVE I[illegible]

Apex-SGI will oversee construction of the SVE system which will be completed by a licensed subcontractor. The SVE system will include SVE wells, soil vapor conveyance piping, and a trailer or skid mounted soil vapor extraction and treatment unit. Further details are provided in the following section.

8.1.1 [illegible] Well [illegible]

The first phase of the SVE implementation includes thirteen, 2-inch diameter vapor extraction wells. The approximate locations of the Phase I SVE wells are shown on Figure 8-1. They will be installed on approximately 60-foot centers, to provide a 30-foot radius of influence (ROI). The wells will be constructed using 2-inch-diameter schedule 40 polyvinyl chloride (PVC) well casings and screened from approximately 15 to up to 30 feet bgs with 0.010-inch machined slot. The sand pack will consist of #2/16 Monterey sand or equivalent. The sand pack will extend from the bottom of the borehole to 6- to 12-inches above the top of the well screen in each boring. Two feet of hydrated bentonite will be placed above the sand pack and neat-cement-grout will be placed to the surface. Actual screen depths may be adjusted in the field based on the drill rig geologist's observations during logging. It

is expected that SVE wells installed in the Southwest Parcel will be shallower than the Northwest Parcel due to the difference in depth to groundwater.

1 C P

SVE piping will not be installed below grade until site grading occurs as part of Site redevelopment. Phase I SVE conveyance piping will be installed above ground using PVC or flexible vacuum hoses with appropriate vacuum pressure rating. Soil vapor from each SVE well will be conveyed to a common aboveground common SVE manifold. The SVE manifold will be constructed of 4-inch diameter, schedule 40 PVC and will convey the combined vapor stream to a vapor extraction and treatment unit.

1 r E r d Tr U

It is anticipated that separate mobile SVE units will be used for the Northwest and Southwest parcels during the Phase I SVE operation. The two units will be portable internal combustion engine (IC) type systems. These systems are regulated under SCAQMD “various locations” permits and are permitted to be operated on a temporary basis for up to one year at a site. This temporary operations will provide several goals:

1. The temporary system and various locations permit status will allow rapid initial deployment of the SVE remediation system following LARWQCB approval of this Response Plan;
2. The above ground conveyance piping and portable treatment system will allow easy reconfiguration of the SVE well field as performance information of the first phase of operation is evaluated; and
3. The temporary, above ground lay-out of the system will allow easier repositioning of the conveyance piping once the locations and building foundation designs of the future development is finalized.

A process flow diagram is provided as Figure 8-2. The system will be operated as described below in Section 8.1.4.

1 O r d M

The Phase I SVE and treatment systems will be mobile units which can operate under a various locations permit for up to one year. Each system will complete an initial performance test to demonstrate the system can operate within the permitted conditions. Ongoing operation and maintenance (O&M) will include weekly to biweekly site visits by a technician to record system performance. During O&M visits, the field technician will perform other maintenance functions in addition to monitoring and sampling of the effluent. These activities include:

- Measuring and recording the vapor flow rates from individual wells;
- Measuring vapor effluent (with a PID) from the thermal abatement system to confirm treated vapor discharge is in compliance with permit limits;

- PID monitoring of individual well vapor streams;
- Checking blower lubrication and general inspection of the system mechanical and automated systems to verify satisfactory operation;
- Housekeeping of the compound and well sites; and
- Measuring of liquid level within the vapor-water separator and offsite disposal of the water when necessary.

Analytical samples of the influent and post treatment effluent vapors will typically be collected monthly and submitted to a certified laboratory for analysis. Results of the monthly analysis and system performance are submitted to the SCAQMD by reports quarterly. The reports provide summary of system performance and demonstrate compliance with permit conditions (e.g., effluent contaminant limits) and are certified by a California Professional Engineer.

S E S C r T

During Phase I SVE System Operation, field tests will be performed to verify the adequacy of the 30 foot ROI well spacing design and to determine design parameters for the Phase II system. The following field tests will be conducted:

- Short-term step vacuum tests to develop the relationship between applied vacuum and vapor flow at the SVE wells. Anticipated vacuum levels of 40 inches of water column (in. WC), 80 in. WC, 120 in. WC, and 160 in. WC will be tested; and
- Longer-term constant vacuum tests to develop the ROI as a function of flow rate and applied vacuum; induced vacuums will be monitored at the nearby SVE wells.

1 C r T M r

During design confirmation test activities, field personnel will monitor pertinent system parameters, including extraction system flowrates and applied vacuums, knock-out pot water level, elapsed blower operation time, electrical usage, and air emissions.

In addition to collection of the field measurements identified above, vapor stream samples will be collected and analyzed to evaluate system performance. Total volatile organics will be measured periodically during the pilot tests using a photoionization detector (PID). In addition, vapor stream samples from the individual SVE wells will be collected in Tedlar® bags for laboratory submittal. At least three extraction well vapor samples will be collected during each constant vacuum test. The samples will be transported under chain of custody to a California-certified hazardous materials testing laboratory and analyzed for TPHg and VOCs using EPA Method 8260B (GC/MS) or equivalent. Field PID readings will also be compared to laboratory analytical results to develop a correlation between field and laboratory data.

[illegible] S[illegible] [illegible]O[illegible]-S[illegible] S[illegible]d S[illegible]r S[illegible]

Figure 8-1 shows the location of the expected soil and soil vapor treatment area, based on available data. During Phase I activities, additional soil and/or vapor sampling may be conducted and data will be used to confirm the extent of the area where treatment is warranted.

[illegible] P[illegible]l l[illegible] [illegible] R[illegible]r[illegible]d P[illegible]ll S[illegible]E S[illegible] [illegible]r[illegible]

Following completion of Phase I SVE operation, completion of the SVE design confirmation tests, and supplemental On-Site Soil Vapor Sampling, a Final Phase II SVE Design Workplan (Phase II SVE Workplan) will be prepared that presents the procedures and findings. The Phase II SVE Workplan will include the following:

- Documentation of the Phase I SVE system installation, including SVE well locations, drilling permits, boring logs, SVE well construction details, equipment specifications;
- A summary of operation and maintenance activities completed during Phase I system operation, including tabulated analytical and field results, and estimated mass removal;
- Documentation and results of the design confirmation tests completed, including procedures, tabulated field and analytical results, and the estimated ROI of the SVE wells;
- Documentation of any additional soil or soil vapor sampling conducted, comparison of the data to the SLs and a figure showing the treatment area planned for Phase II SVE operation;
- The building layout planned for redevelopment of the Northwest and Southwest areas; and
- The proposed final design for Phase II implementation based on the information bulleted above and integrating the redevelopment plan; and
- An implementation schedule and a monitoring plan for Phase II implementation.

The Phase II SVE Workplan will be reviewed, signed, and stamped by a California Professional Geologist or Engineer.

9 GROUNDWATER REMEDIATION SYSTEM CONCEPTUAL DESIGN

Based on the evaluation of response action alternatives, Apex-SGI recommends installing an air sparging/vapor extraction system at the western and southern boundaries of the Site to prevent further migration of petroleum impacted groundwater. The purpose of the air sparge system is to remove the volatile compounds from groundwater and to increase the dissolved oxygen content in the groundwater, thereby enhancing aerobic biodegradation of the downgradient petroleum constituents. In addition, a LNAPL remove system was selected as the preferred response action to remove secondary sources of LNAPL that are present in the subsurface. A conceptual design is presented in the sections that follow.

The final design will be completed following LARWQCB approval of this Response Plan and pending the following information:

- Installation and sampling of the three new offsite groundwater monitoring wells, as discussed in Section 3.7;
- An evaluation of the existing SME system to determine whether any components are adequate for conversion for use as part of the air sparge system; and
- Completion of an air sparge pilot test to determine design parameters for the system.

Further details are provided in the sections that follow.

9.1 Air Sparge System for Groundwater Treatment

Currently, a flow-through barrier groundwater treatment system (the SME system) is operating along the western and southern boundaries of the Site. The air sparging system will be installed to replace the SME system and will be installed in a similar location as the SME system. The SME system layout is shown on Figure 9-1 and includes the subsurface following components

- 92 nutrient injection points constructed using 0.75-inch diameter, Schedule 40 PVC blank and 0.020-inch screen slot material. The screened intervals are 5 feet long place approximately 5 feet above the groundwater level;
- 46 gas extraction wells constructed using 1-inch diameter, Schedule 40 PVC blank and 0.020-inch screen slot material. The screened intervals are 5 feet long place approximately 5 to 8 feet above the groundwater level; and
- 92 air injection points constructed using 0.25-inch diameter, nylon tubing connected to a 6-inch long, stainless steel screened air injection point. The air injection points are installed approximately 6 to 8 feet below the groundwater level.

A field evaluation of the above will be made to determine whether any components are adequate for conversion for use as part of the air sparge system. At a minimum, it is expected that new air sparging wells will be required, however the existing gas extraction wells may be adequate for vapor

abatement. It is anticipated that the vapor extraction wells will connected to the same SVE system(s) described in Section 8.0.

11 Field Pilot Tests

Prior to full-scale implementation, an air sparge field pilot tests be performed to gather information to design the air sparging and vapor abatement system. The proposed pilot tests are discussed in detail in the following sections.

11.1 Installation of Air Sparge Points

As mentioned earlier, a field inspection will be conducted to evaluate use of the existing SME components for conversion to an air sparge system. It is anticipated that new air sparge wells will be needed however the existing gas extraction wells may be used. Three air sparge points will be installed to facilitate field pilot testing. Wells will be placed in order to take advantage of the use of the existing vapor extraction wells and groundwater monitoring wells currently located in the SME barrier. The air sparge points will be constructed of one-inch diameter, schedule 40 PVC. The total depth and screen interval will be determined upon completion of the vertical delineation well installation and sampling discussed in Section 3.7. A threaded cap will be placed on the top and bottom of the casing. Silica sand will be placed in the annulus of the borehole to one foot above the screen. A minimum, ten-foot thick bentonite seal will be placed on top of the filter pack and the remainder of the annulus will be filled with cement slurry.

11.2 Air Sparge Pilot Test

The purpose of the air sparge pilot test is to determine the radius of influence the air sparge points and vapor abatement wells. This information will be utilized to determine the optimal spacing of the AS points. The radius of influence will generally be defined as the distance from the AS point at which “mounding” of the groundwater is observed and/or significant increases in dissolved oxygen (DO) are measured. Localized mounding of the groundwater around the air sparge point during sparging is expected to occur as a result of air displacing water from the soil matrix in the saturated zone. Air will be injected into each sparge point at a rate of approximately three cubic feet per minute using an n oil-less air compressor. The depth to groundwater and DO will be measured and recorded prior to, and during the pilot test using electronic meters. The pilot test will be terminated once these parameters have stabilized.

12 Air Sparge Study Report

An air sparge barrier design report will be submitted summarizing the result of the pilot test and providing design specifications for the full-scale air sparge system.

13 VOC Abatement

As is typical with this approach, and as mentioned earlier the air sparge system will be utilized in conjunction with a vapor extraction system for vapor recovery of the volatilized compounds. Vapors

that are extracted by the vapor extraction system will routed to the SVE system described in Section 8. The Air Sparge System Design Report mentioned in Section 9.1.2 will include the detailed design of the air sparge vapor abatement system.

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LNAPL has been identified at two locations under the property (See Figure 8-4). Additional locations may be identified during installation of the remediation well field. LNAPL removal was identified during the Remedial Technology Evaluation as necessary RAO to reduce the source of groundwater impacts and to reduce additional dissolved phase TPH entering groundwater.

Given the relatively high viscosity of the LNAPL encountered and the slow recharge of LNAPL into a well after the product was removed as part of the Site Characterization study, equipment has been selected to allow automatic removal of the LNAPL as it enters the local well. The removed product will be temporarily contained at the site surface and periodically transferred from the surface containment to a hazardous waste licensed transport vehicle for delivery to a local petroleum recycling facility. All transportation of TPH will be done under hazardous waste manifest.

It is anticipated that removal of LNAPL will begin as soon as practical, after the approval of the Response Plan. LNAPL removal is anticipated to continue post site development, until the reduction of LNAPL within the well becomes impractical. To expedite the initial removal and provide a relatively simple removal technology with the goal of minimizing system maintenance; a subsurface skimmer system utilizing an aqua-phobic belt skimmer (similar to the Ambar™ sub-surface hydrocarbon removal system, or equivalent) will be installed at a well located within each LNAPL deposit identified within the site. Figure 9-2 provides a schematic design of the oil skimmer and surface storage technology.

1 GROUNDWATER MONITORING PLAN

The current groundwater monitoring program is conducted pursuant to the LARWQCB letter dated June 7, 2013 (LARWQCB, 2013). Groundwater monitoring is conducted semi-annually, typically in June and December each year, as summarized in the following table. Groundwater monitoring well locations are shown on Figure 2-1.

Event	**Sampled**	**Analyses**
Quarter 1/Quarter 2 Semi-Annual Event	MW-8, MW-9, MW-11, MW-12, MW-14, MW-15, MW--16, MW-17, MW-19, BMW-2, BMW-5, BMW-8, and BMW-11	VOCs (including fuel oxygenates) by EPA Method 8260B TPH, including TPHg and TPHd by EPA Method 8015M SVOCs by EPA Method 8270C
Quarter 3/Quarter 4 Semi-Annual Event	MW-1, MW-1A, MW-2, MW-3, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, BMW-2, BMW-5, BMW-8, and BMW-11	VOCs (including fuel oxygenates) by EPA Method 8260B TPH, including TPHg and TPHd by EPA Method 8015M SVOCs by EPA Method 8270C

It is expected that the on-Site well network will be modified during redevelopment activities to compensate for the future building footprints. Apex-SGI will submit a long-term on-Site monitoring program with proposed well locations once the redevelopment plan is finalized. In the meantime, the current groundwater monitoring program will be implemented.

1□1 O□□□□□ MNA Pr□□r□□

As detailed in Section 7.1.3, MNA is proposed for the offsite area downgradient from the Site. An MNA monitoring program is provided in Appendix F.

11 SITE REDEVELOPMENT SOIL MANAGEMENT PLAN

As a component of site redevelopment, grading and potential excavation of the Site will be required to assure that geotechnical parameters within the near surface soil are achieved and/or for the establishment of underground utility trenches. A Site Redevelopment Soil Management Plan was prepared to provide guidance for handling potentially contaminated soil, should it be entered. The Site Redevelopment Soil Management Plan provides management and workers with procedures for internal and agency notifications; excavation/grading oversight; air and safety monitoring; soil segregation and monitoring; soil sampling and analysis; waste characterization and profiling; waste recycling and disposal procedures; and record keeping and reporting procedures in areas of known or encountered impacts. A copy of the Site Redevelopment Soil Management Plan is included as Appendix G.

1□□□ INSTITUTIONAL AN□ ENGINEERING CONTROLS

Implementation of IECs were selected as a preferred Response Action for the Site and are required as part of the CLRRA Agreement prepared for the Site.

Expected controls include an environmental LUC and an associated SMP. The LUC will prohibit use of underlying groundwater, prohibit unrestricted or sensitive land uses, and require that all uses and development of the Site be consistent with the SMP. The CCLRA specifies that an SMP will be prepared as part of the Response Plan. As discussed in Section 11, Apex-SGI has included a Site Redevelopment Soil Management Plan as Appendix G. A full SMP for use after redevelopment occurs will be submitted to the LARWQCB at later date, pending the completion of the building layout and final redevelopment plan and prior to vertical development of each portion of the property.

Engineering controls that will be included as a requirement of the SMP will include vapor mitigation system(s) that will be installed as part of the future buildings constructed for the Site. Activity use limitations, such as controls for certain activities like excavation, will be included as part of the SMP along with requirements that mitigation measures are inspected and maintained.

Further details are provided below.

1□1 I□□□□□□□□□□□C□□r□□

Institutional controls will include an SMP that will set forth all mitigation measures, including engineering and institutional controls and activity and use limitations (such as controls for certain site activities, such as excavation), as may be required to protect human health and the environment after the Response Plan has been implemented. The SMP will provide specific procedures for performing intrusive activities (such as excavation) including monitoring for air emissions. The SMP will also specify engineering controls that are required at the site. Inspections and maintenance of engineering controls will also be described and a recommended schedule for performing these activities will be included.

Institutional controls will include an LUC that limits current and future use of the Site to commercial and/or industrial use only. The LUC will run with the property should the property owner decide to sell the property in the future. The use restriction could be retracted in the future if the current or a future owner, can show that COCs at the Site have decreased to levels suitable for more sensitive uses (i.e. residential, school, hospital).

An additional condition of the LUC will restrict use of groundwater. No pumping or use of groundwater will be permitted, other than for environmental remediation purposes. Property water needs for irrigation, drinking, washing, or industrial activities will be provided by the local utility service via its closed pipe system.

1 Engineering Controls

Engineering controls that will be included in the SMP will include the following:

- Soil capping with clean fill in landscape areas that are not effectively “capped” by future buildings and paved parking areas;
- Vapor barriers (Geo-Seal ™ or equivalent systems) with passive sub-slab depressurization (SSD) will be installed beneath building envelopes to mitigate indoor vapor intrusion. The SSD system will be designed to achieve reduced sub-slab air pressure relative to indoor air pressure, thus enhancing the separation effect of the vapor barrier. The SSD system will consist of several horizontal, perforated pipes placed within a gravel layer beneath the building’s concrete slab. The perforated pipes will be connected to solid pipelines that are routed to the building roof top through walls. Vacuum pressure will be applied to the SSD system by attic turbine ventilators attached to the tops of the closed pipes above the roof line, which will pull accumulated vapors from beneath the building. The complete vapor barrier and SSD design will be finalized as part of the final vertical construction design of the proposed buildings.
- A positive pressure HVAC systems operated in closed environments (offices) to further reduce the potential of vapor intrusion.

The SMP and LUC will be submitted to the LARWQCB within four months of RES acquisition of the property. In addition, RES will submit a vapor mitigation system engineering design and specification plan to LARWQCB a minimum of 60 days prior to installation and construction of the buildings.

1 SCHEDULE

A scheduled of planned activities through Site Development is presented below.

A	Tr C
Submittal of Response Plan	July 14, 2017
LARWQCB Approval of Response Plan	August 14, 2017
RES Acquisition of Property	September 4, 2017
Installation of Offsite additional MNA Wells	September 2017
Redevelopment Design Layout Complete	October 24, 2017
Phase I SVE Implementation	October – December 2017
Evaluation of SME system components, air sparge pilot test, and submit air sparge system design report	September 2017 – December 2017
Installation of wells in LNAPL Areas and install LNAPL removal system	November 2017 – December 2017
Submittal of Site Vapor Mitigation System Design Report	November 1, 2017
Finalize on-site monitoring well network and submit long-term Groundwater Monitoring Plan.	January 2018
Submittal of SMP and LUC	January, 2018
Final Phase II SVE Design Workplan	February 2018
Site Redevelopment Begins (East Parcel)	April 2018
Site Redevelopment Begins (Northwest and Southwest Parcels)	May 2018

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1 LIMITATIONS

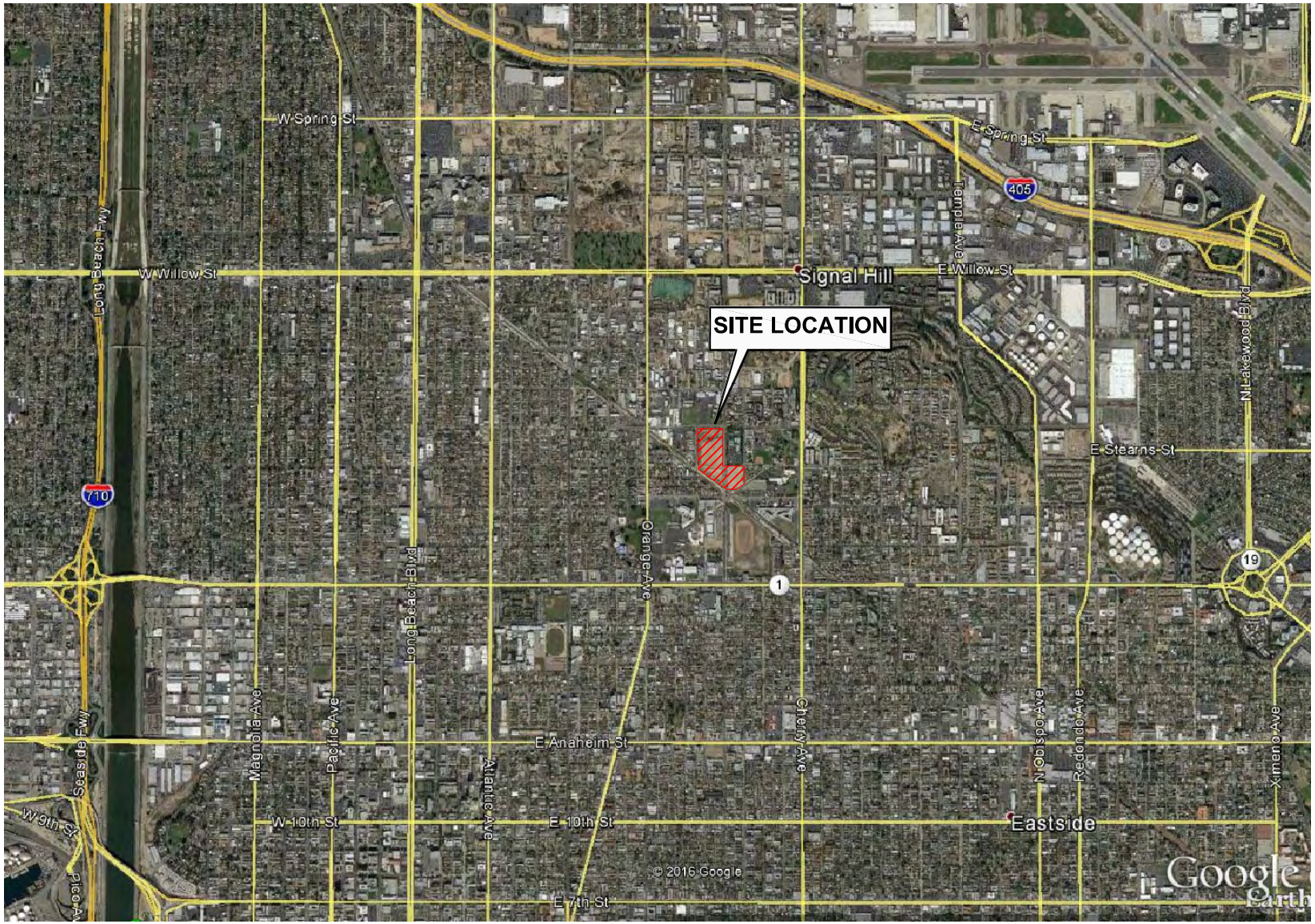
This document has been prepared for the exclusive use of SHE, RES, and their representatives as it pertains to the affected property as described above. Any interpretation of the data represents our professional opinions, and is based in part on information supplied by the client. These opinions and information are based on currently available data and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location.

The data presented in this transmittal are intended only for the purpose, site location, and project indicated. This report is not a definitive study of contamination at the site and should not be interpreted as such. The data reported are limited by the scope of the work as defined by the request of the client, the time, availability of access to the site, and information passed to Apex-SGI.

There are no representations or guarantees that the sampling points are representative of the entire site. Data collected in response to this work may reflect the conditions at specific locations at a specific point in time and does not reflect subsurface variations that may exist between sampling points. These variations cannot be anticipated nor can they be entirely accounted for even with exhaustive additional testing. No other interpretations, warranties, guarantees, expressed or implied, are included or intended in the contents of this transmittal.

As required, all proposed work will be performed under the direct supervision of a Professional Geologist or Registered Civil Engineer as defined in the Registered Geologist Act of the California Code of Regulations.

FIGURES



SGI environmental | APEX

299 WEST HILLCREST DR. SUITE 220
THOUSAND OAKS, CA 91360

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DR.BY:	APP. BY:
093-CHEMOIL-001	05/30/17	ZA	KD

SITE LOCATION MAP

0 2500 5000
HORIZONTAL SCALE IN FEET

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FIGURE 1-1

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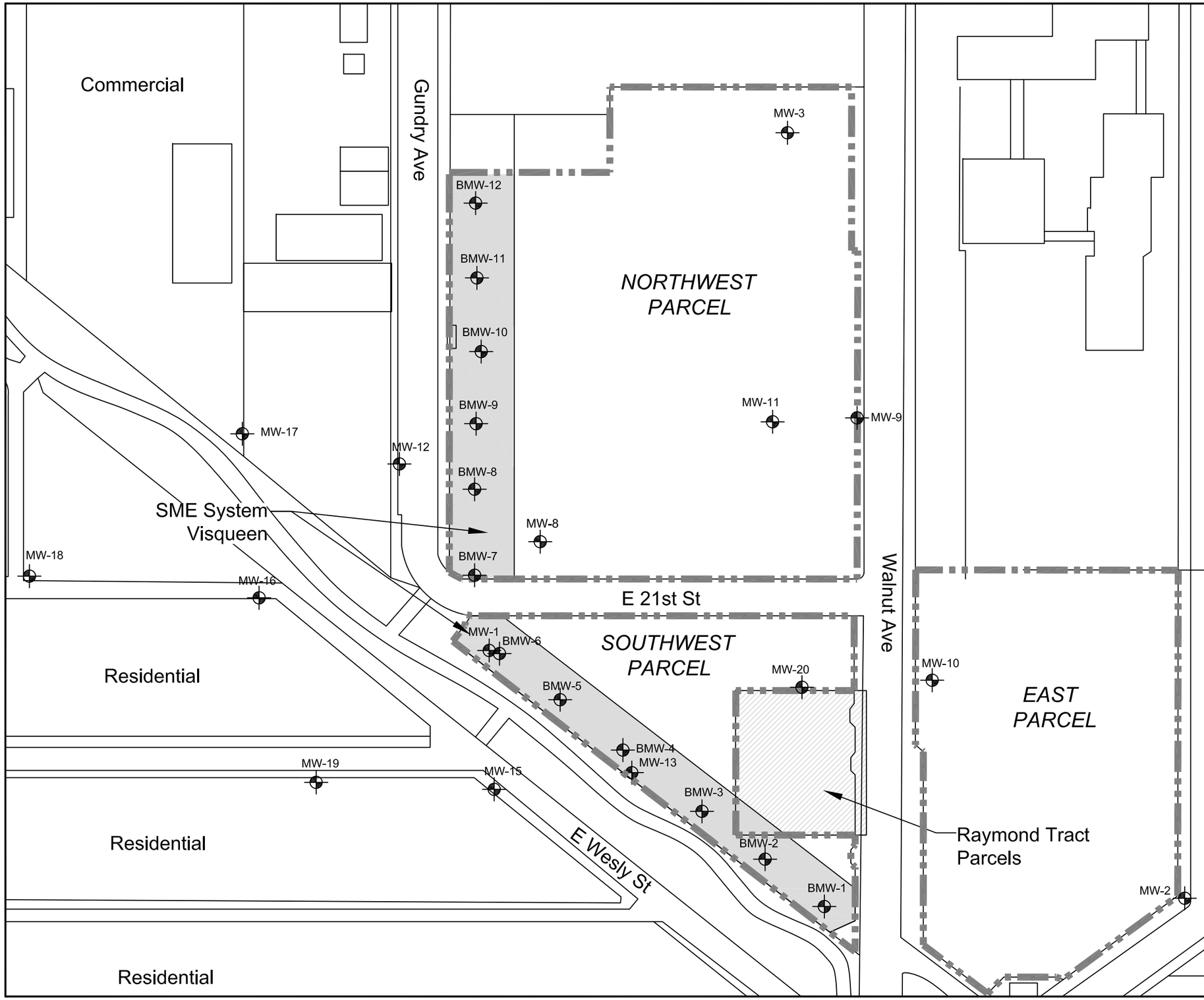

LEGEND

Site Boundary

MW-16 Groundwater Monitoring Well Locations

SME Subsurface Metabolic Enhancement

SITE MAP

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-CHEMOIL-001	02/08/17	ZA	KD

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HORIZONTAL SCALE IN FEET

SGI environmental APEX

299 WEST HILLCREST DR., SUITE 220
THOUSAND OAKS, CA 91360

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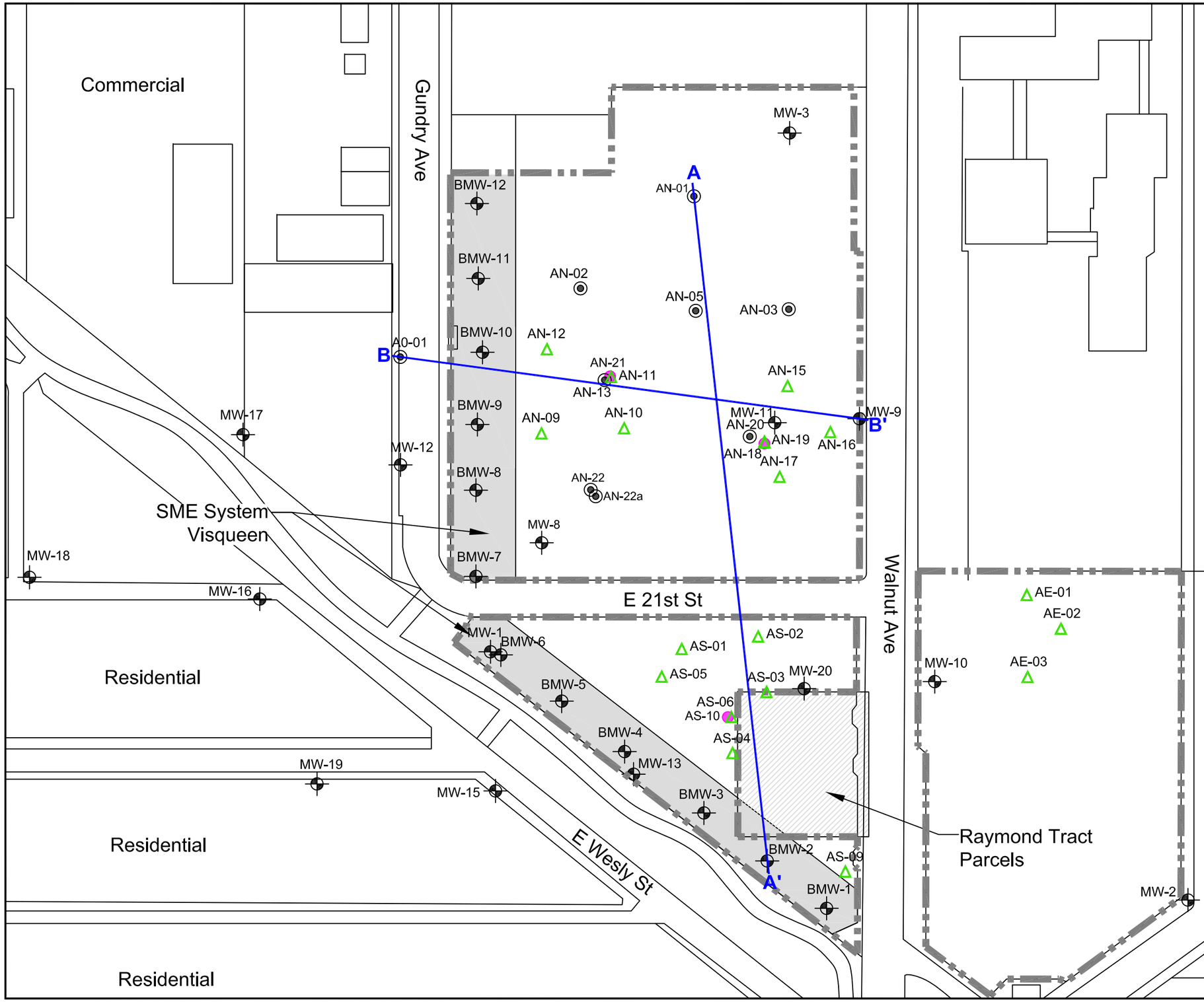
FIGURE 2-1

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\Figures\Fig.2-1-Site Map.dwg, 6/12/2017 5:33:58 PM



LEGEND

	Site Boundary
MW-16	Groundwater Monitoring Well Location
AN-20	Soil Boring and Grab Groundwater Location (Apex, 2017)
AN-10	2016 UVOST™ Boring Location
AN-21	2016 MIP© Boring Location
UVOST	Ultra-Violet Optical Screening Tool
SME	Subsurface Metabolism Enhancement

CROSS-SECTION LOCATION MAP

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
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0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental
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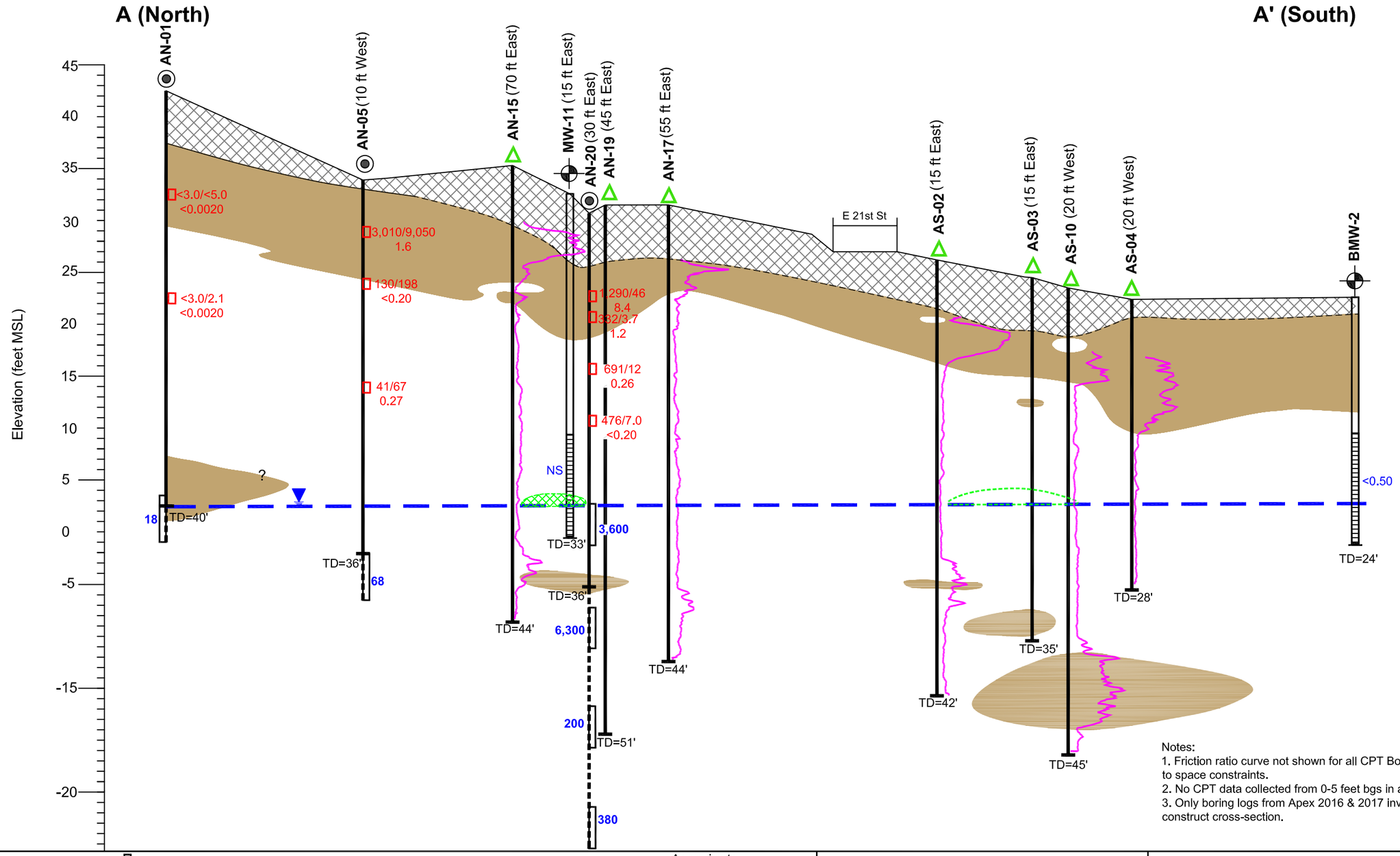
299 WEST HILLCREST DR., SUITE 220
THOUSAND OAKS, CA 91360

N

FIGURE 2-2

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\Figures\Fig.2-2,2-3,2-4-Cross Section Locations &Cross sections A-A' & B-B'.dwg, 7/14/2017 2:47:54 PM



Notes:
1. Friction ratio curve not shown for all CPT Boring locations due to space constraints.
2. No CPT data collected from 0-5 feet bgs in all CPT borings.
3. Only boring logs from Apex 2016 & 2017 investigation used to construct cross-section.

LEGEND

- Fill
- Fine Grained Material
- Coarse Grained Material
- Lithologic Contact (Dashed Where Inferred)
- MSL Mean Sea Level
- TD Total Depth of Logged Boring In Feet
- Grab Groundwater Sample
- 68 Benzene Concentration in Groundwater (micrograms per Liter)
- <0.50 Not Detected Above Indicated Reporting Limit
- NS Not Sampled
- Soil Not Logged. Boring Advanced For Grab Groundwater Sample Only
- Screened Interval, Monitoring Well Sample
- Potentiometric Surface
- CPT Boring (Apex, 2016)
- Soil Boring and Grab Groundwater Location (Apex, 2017)
- Monitoring Well Location
- TPH(C13-C22) Concentration in
- Approximate Groundwater Elevation Measured in December 2016 Monitoring event by (AA&AI, 2016b)
- Friction Ratio From CPT Report (Apex, 2016)
- Free Product Observed
- Suspected Area of Free Product

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0 60 120
HORIZONTAL SCALE IN FEET

CROSS-SECTION A-A'

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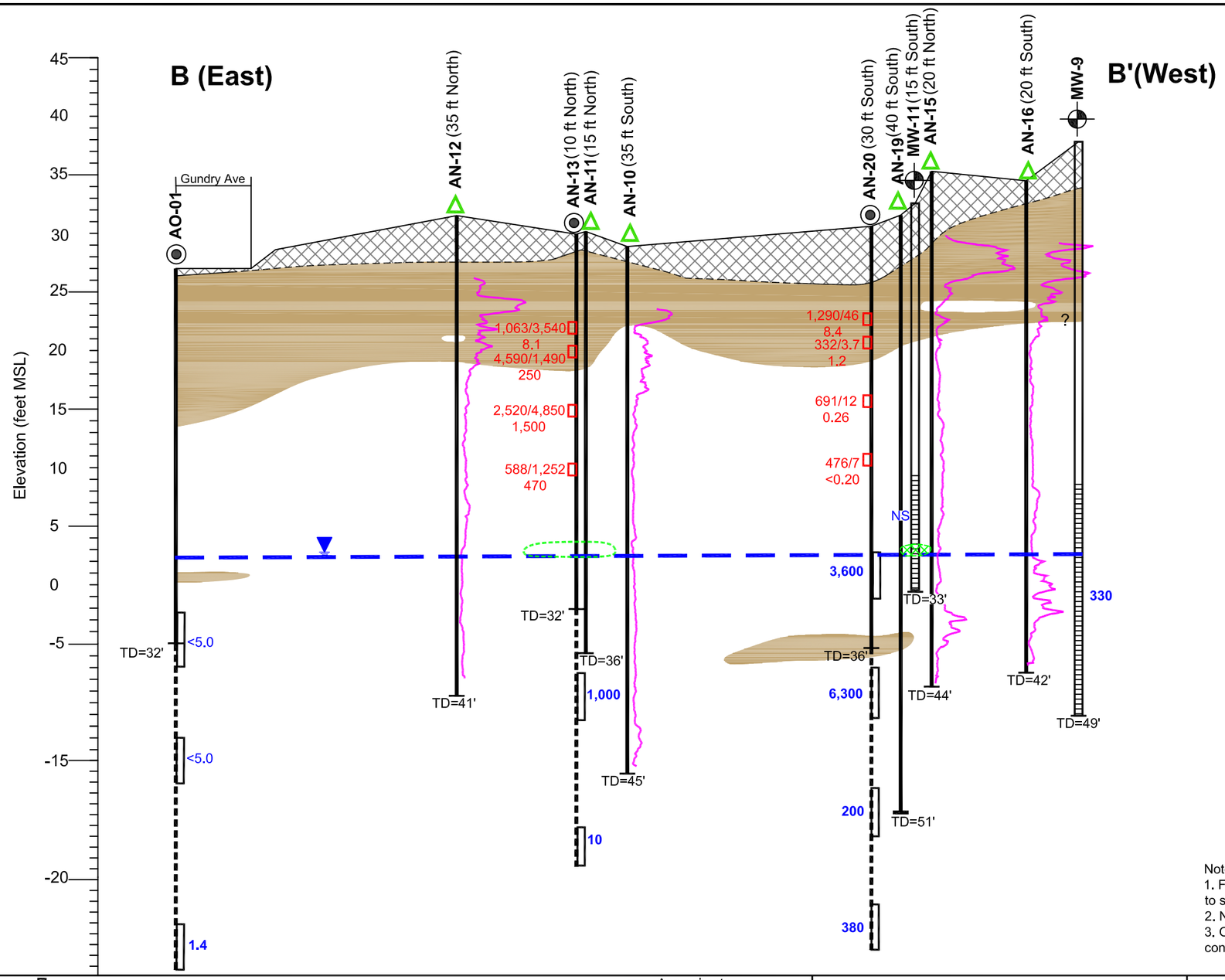
THOUSAND OAKS, CA 91360

N

FIGURE 2-3



Notes:
1. Friction ratio curve not shown for all CPT Boring locations due to space constraints.
2. No CPT data collected from 0-5 feet bgs in all CPT borings.
3. Only boring logs from Apex 2016 & 2017 investigation used to construct cross-section.

LEGEND

- Fill
- Fine Grained Material
- Coarse Grained Material
- Lithologic Contact (Dashed Where Inferred)
- MSL Mean Sea Level
- TD Total Depth of Logged Boring
- Grab Groundwater Sample
- 200 Benzene Concentration in Groundwater (micrograms per Liter)
- Not Detected Above Indicated Reporting Limit
- NS Not Sampled
- Soil Not Logged. Boring Advanced For Grab Groundwater Sample Only
- Screened Interval, Monitoring Well Sample
- Potentiometric Surface
- CPT Boring (Apex, 2016)
- Soil Boring and Grab Groundwater Location (Apex, 2017)
- Monitoring Well Location
- 2,520/4,850 — TPH(C5-C12) Concentration in Soil (milligrams per kilogram)
- 1,500 — TPH(C13-C22) Concentration in Soil (milligrams per kilogram)
- Soil Sample — Benzene Concentration in Soil (milligrams per kilogram)
- Approximate Groundwater Elevation Measured in December 2016 Monitoring event by (AA&AI, 2016b)
- Friction Ratio From CPT Report (Apex, 2016)
- Free Product Observed
- Suspected Area of Free Product

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0 60 120
HORIZONTAL SCALE IN FEET

CROSS-SECTION B-B'

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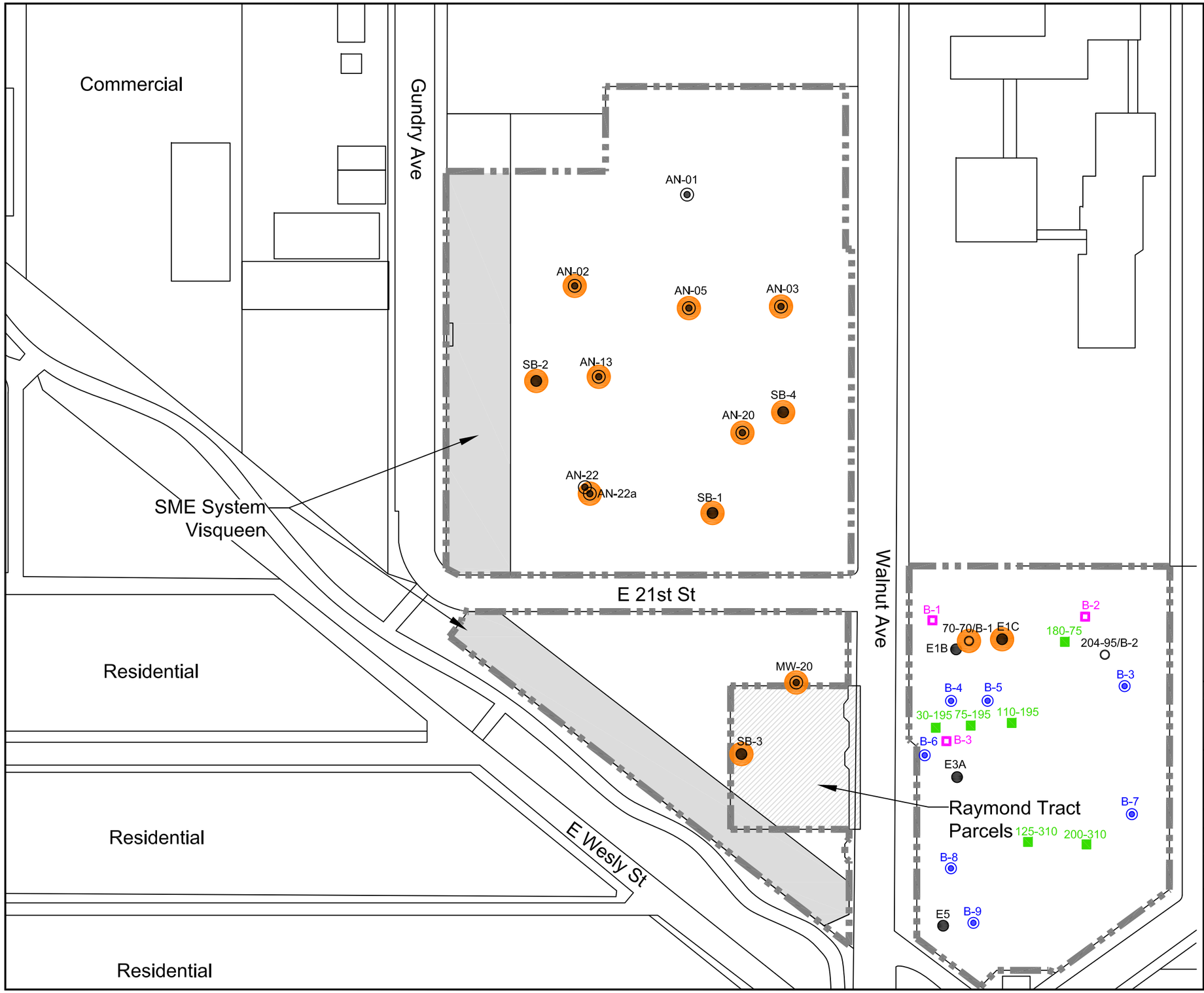
N

FIGURE 2-4

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\Figures\Fig.2-2,2-3,2-4-Cross Section Locations &Cross sections A-A' & B-B'.dwg, 6/12/2017 5:53:11 PM



LEGEND

- Site Boundary
- AN-01 — Soil Sample Locations (APEX, 2017)
- SB-4 — Soil Sample Locations (Tetratech, 2006)
- SME — Subsurface Metabolism Enhancement
- Concentration of any COPC is above its applicable final soil screening level, Commercial/Industrial Scenario
- B-7 — TEC Push-Drive Soil Boring (TEC, 2001)
- B-3 — Former EEI (1988) Soil Boring (TEC, 2001)
- 200-30 — Former TSG (1999) Soil Boring (TEC, 2001)
- 70-70/B1 — Combined TSG/TEC Boring Location (TEC, 2001)
- COPC — Chemical Of Potential Concern
- BGS — Below Ground Surface

SUMMARY OF SOIL COPC CONCENTRATIONS ABOVE SCREENING LEVELS 0 to 40 FEET BGS

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2020 WALNUT AVENUE
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0 100 200
HORIZONTAL SCALE IN FEET

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FIGURE 2-5

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\Figures\Fig 2-5-Summary of Soil COPC Concentrations Above Screening levels.dwg, 6/12/2017 5:27:58 PM

LEGEND

Site Boundary	
Wnt-4	Soil Vapor Sampling Locations, (TEC, 2009/2010)
AN-06	Soil Vapor Sample Locations, (APEX, 2017)
E1	Soil Vapor Sample Locations, (Tetratech, 2006)
SV-20	Soil Gas Sampling Locations, (Geosyntec, 2012)
<50	Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
*	Data Not Used in Contouring due to Proximity of SME System Which Began Operation After Collection of Samples
bgs	Below Ground Surface
ND	Not Detected
NS	Not Sampled
	Isoconcentration Contour, Dashed Where Inferred
	Concentrations > 909 µg/m³
	Concentrations > 10,000 µg/m³
µg/m³	Micrograms per Cubic Meter

Note:
1. Concentration of benzene in micrograms per cubic meter (µg/m³)
2. 909 µg/m³ = Site-specific soil vapor screening level for commercial/industrial land use.

SUMMARY OF BENZENE CONCENTRATIONS IN SOIL VAPOR AT 5 FEET BGS

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2020 WALNUT AVENUE
SIGNAL HILL, CA

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0 150 300
HORIZONTAL SCALE IN FEET

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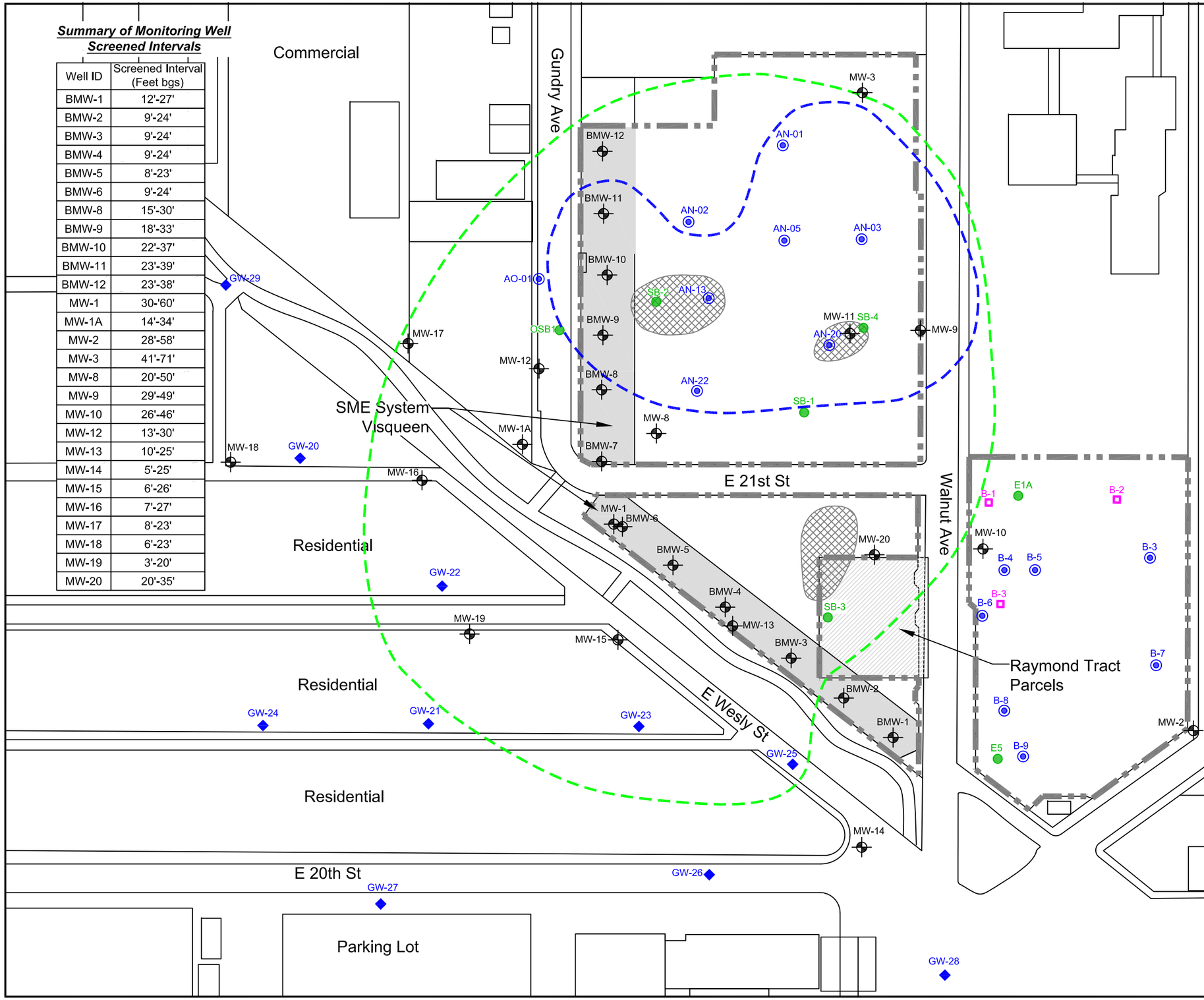
N

FIGURE 2-6

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\Figures\Fig.2-6-Summary of Benzene Concentratiosn in Soil Vapor-5 ft BGS.dwg, 7/14/2017 9:56:31 AM



Summary of Monitoring Well Screened Intervals

Well ID	Screened Interval (Feet bgs)
BMW-1	12'-27'
BMW-2	9'-24'
BMW-3	9'-24'
BMW-4	9'-24'
BMW-5	8'-23'
BMW-6	9'-24'
BMW-8	15'-30'
BMW-9	18'-33'
BMW-10	22'-37'
BMW-11	23'-39'
BMW-12	23'-38'
MW-1	30-'60'
MW-1A	14'-34'
MW-2	28'-58'
MW-3	41'-71'
MW-8	20'-50'
MW-9	29'-49'
MW-10	26'-46'
MW-12	13'-30'
MW-13	10'-25'
MW-14	5'-25'
MW-15	6'-26'
MW-16	7'-27'
MW-17	8'-23'
MW-18	6'-23'
MW-19	3'-20'
MW-20	20'-35'

LEGEND

- Site Boundary
- MW-16 — Groundwater Monitoring Well Locations
- AN-01 — Grab Groundwater Sample Locations, APEX, 2017
- SB-2 — Grab Groundwater Sample Locations, Tetra Tech, 2006. Samples Collected for First Encountered Groundwater.
- GW-29 — Grab Groundwater Sample Locations, Geosyntec, 2012
- B-3 — Former EEI (1988) Soil Boring (TEC, 2001)
- bgs — Below Ground Surface
- µg/L — Micrograms per Liter
- SME — Subsurface Metabolism Enhancement
- Area of Observed or Suspected LNAPL
- LNAPL — Light Non-Aqueous Phase Liquid
- TPHg (C4-C12) — Total Petroleum Hydrocarbons As Gasoline, Carbon Chain Range C4-C-12
- Approximate Extent of TPHg(C4-C12) Plume With Concentrations >100 µg/L in Groundwater
- Approximate Extent of Benzene Plume With Concentrations >10 µg/L in Groundwater

TPHg (C4-C12), BENZENE, AND LNAPL EXTENTS IN GROUNDWATER

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

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0 120 240
HORIZONTAL SCALE IN FEET

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APEX
299 WEST HILLCREST DR., SUITE 220
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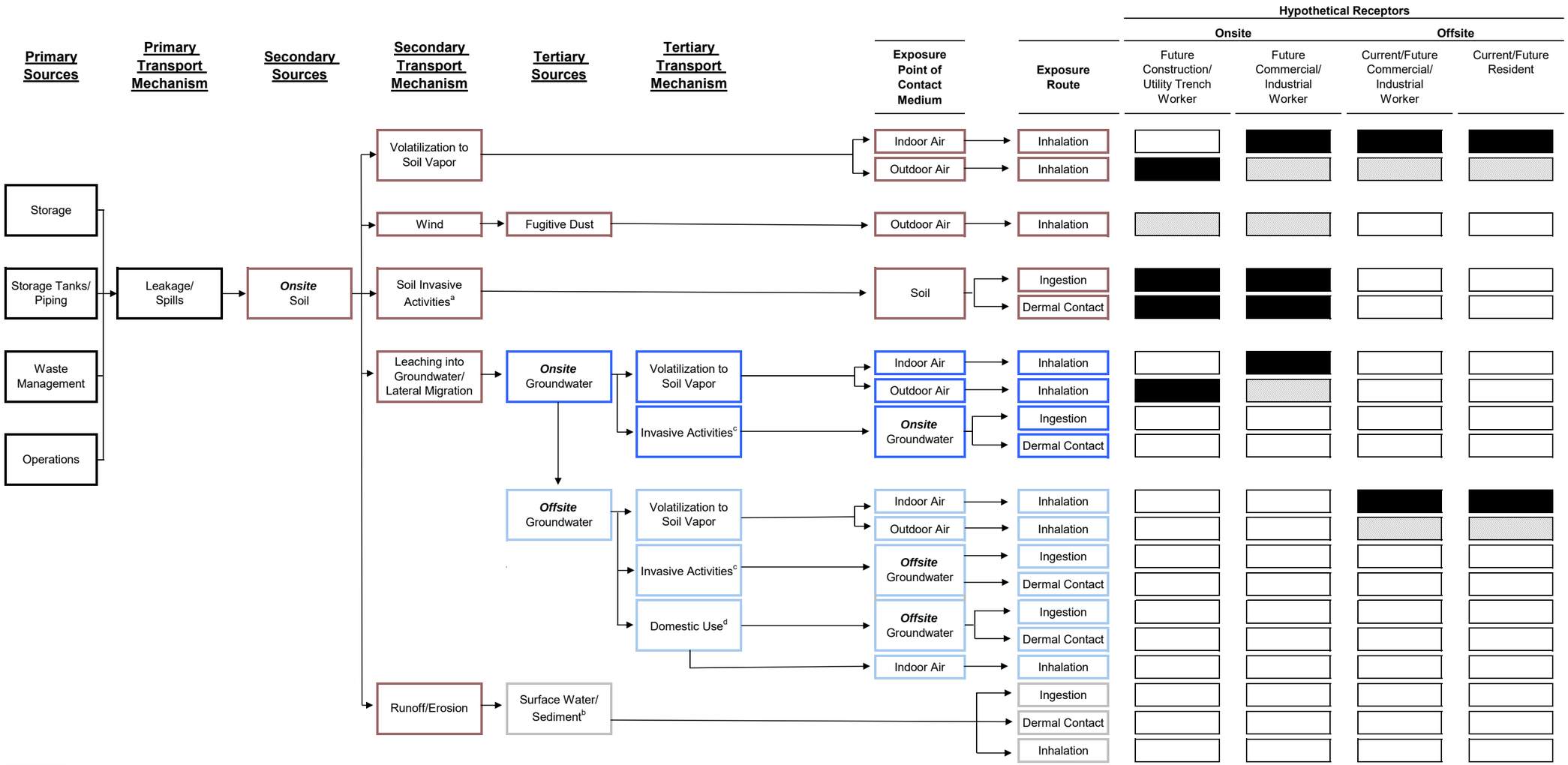
N

FIGURE 2-7

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\Figures\Fig.2-7-TPHg, Benzene & LNAPL Extents in GW.dwg, 7/11/2017 2:54:55 PM



CSM components related to soil.

CSM components related to onsite groundwater.

CSM components related to offsite groundwater.

CSM components related to surface water.

Receptor likely to be exposed via this route, so pathway is considered potentially complete.

Receptor may be exposed via this route, so pathway is considered potentially complete; however, pathway is considered minor.

Pathway is incomplete, no further evaluation required.

[a] Soil invasive activities may extend to 10 feet below ground surface (bgs) and include construction and development for commercial/industrial land use.

[b] No surface water bodies were identified within a one-half mile radius of the site.

[c] Surface invasive activities are not expected to extend beyond 10 feet bgs during construction and development. Due to Site topography, depth to water in existing monitoring wells ranges from approximately 15 feet bgs in the southern portions of the Site to 43 feet bgs in the northern portions of the Site.

[d] Groundwater quality within the Site vicinity is generally poor due to seawater intrusion and elevated salinity. Shallow groundwater is not currently used and is not likely to be developed for beneficial use. Risk management measures can be implemented to ensure that groundwater is not used. The nearest public water supply well is located downgradient approximately 850 feet south of the Site (Los Angeles County Department of Public Works Well 420), however is used for groundwater monitoring purposes only.

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CALIFORNIA

HUMAN HEALTH CONCEPTUAL SITE MODEL

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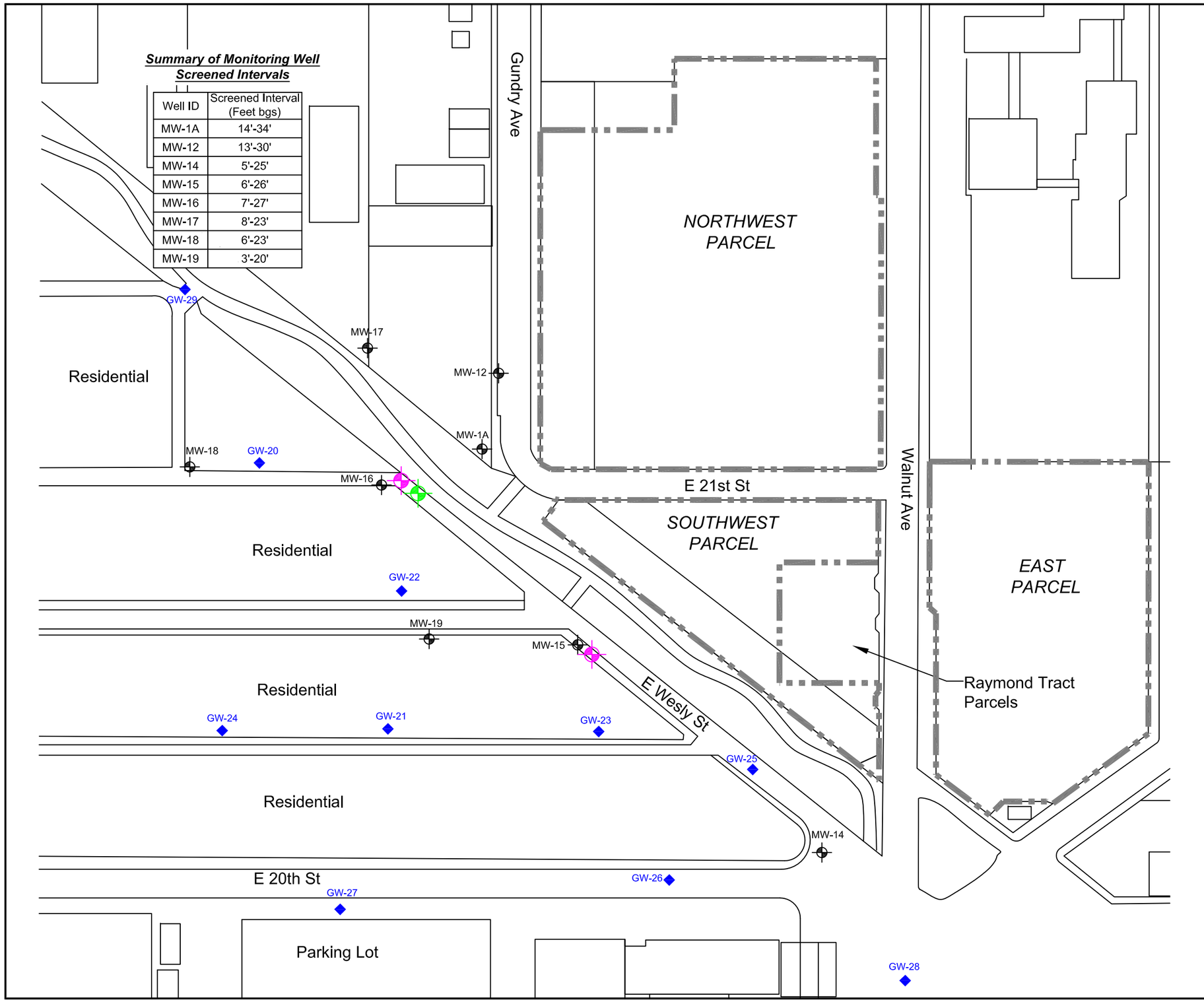
THOUSAND OAKS, CA 91360

FIGURE 2-8



Summary of Monitoring Well Screened Intervals

Well ID	Screened Interval (Feet bgs)
MW-1A	14'-34'
MW-12	13'-30'
MW-14	5'-25'
MW-15	6'-26'
MW-16	7'-27'
MW-17	8'-23'
MW-18	6'-23'
MW-19	3'-20'

LEGEND

Site Boundary

MW-16 — Off-Site Groundwater Monitoring Well Locations

GW-29 — Grab Groundwater Sample Locations, Geosyntec, 2012

Proposed New Monitoring Well, 55-65 Feet BGS Screen

Proposed New Monitoring Well, 75-85 Feet BGS Screen

BGS — Below Ground Surface

PROPOSED NEW OFFSITE MONITORING WELL LOCATIONS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

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0 120 240
HORIZONTAL SCALE IN FEET

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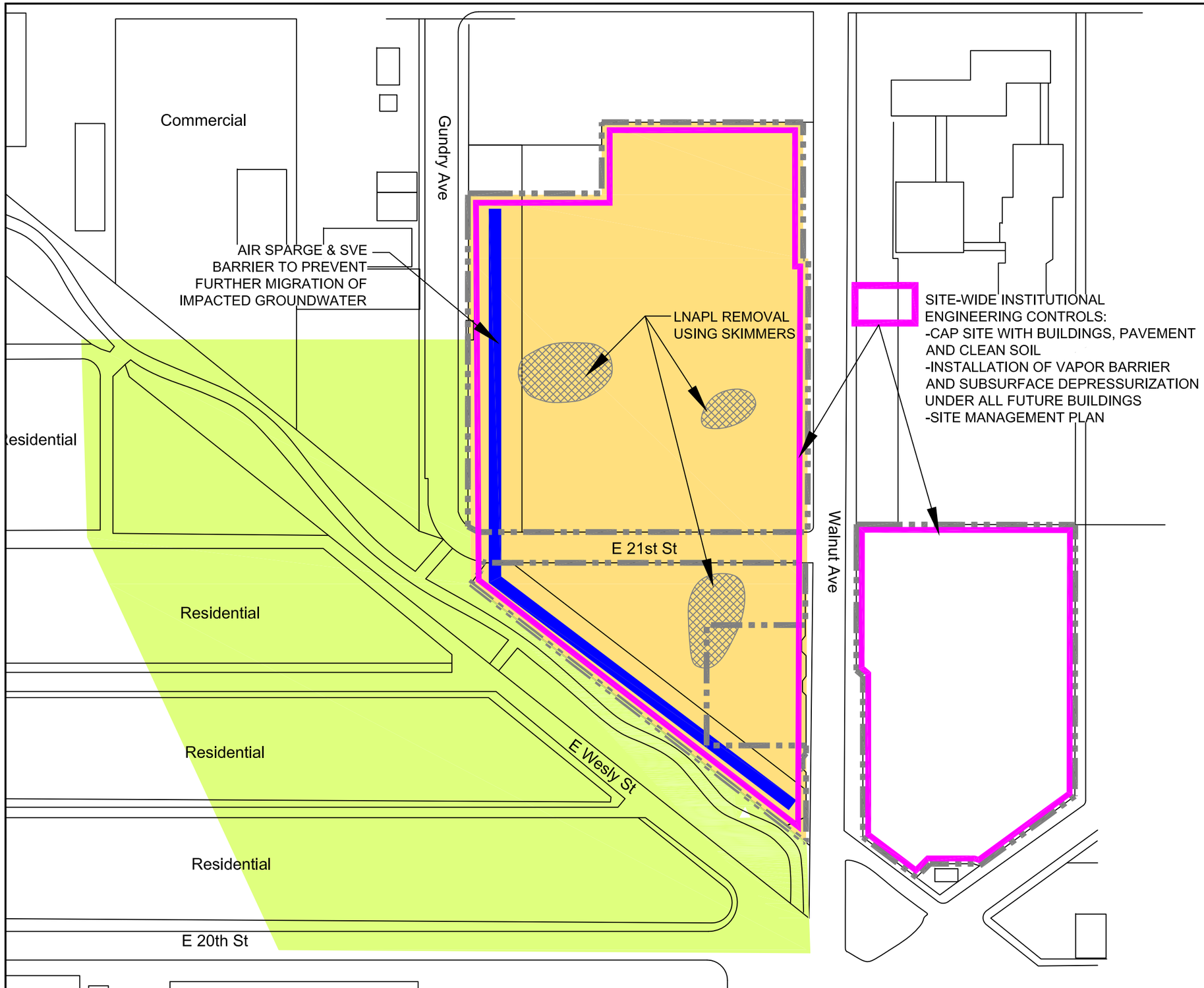
N

FIGURE 3-1

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\Figures\Fig.3-1-Proposed Monitoring Well Location.dwg, 7/11/2017 12:27:41 PM



LEGEND

- Site Boundary
- Area of Observed or Suspected LNAPL
- Downgradient MNA in Residential Area
- SVE To Treat Vadose Zone Areas With Detections Above Site-Specific Screening Levels

SVE Soil Vapor Extraction
MNA Monitored Natural Attenuation
LNAPL Light Non-Aqueous Phase Liquid

CONCEPTUAL REMEDIAL APPROACH

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
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0 120 240
HORIZONTAL SCALE IN FEET

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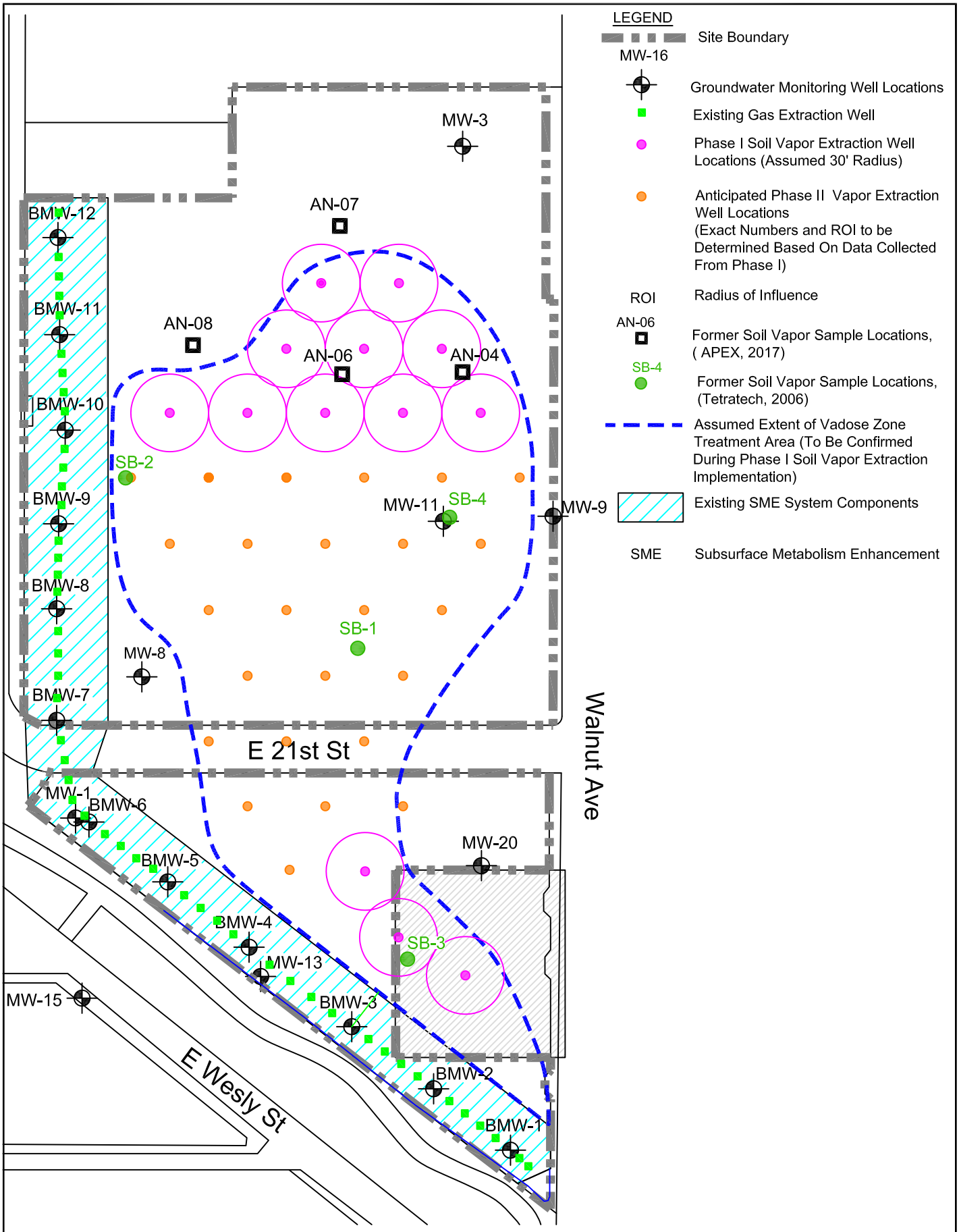
THOUSAND OAKS, CA 91360

N

FIGURE 7-1



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THOUSAND OAKS, CA 91360

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2020 WALNUT AVENUE
SIGNAL HILL, CA

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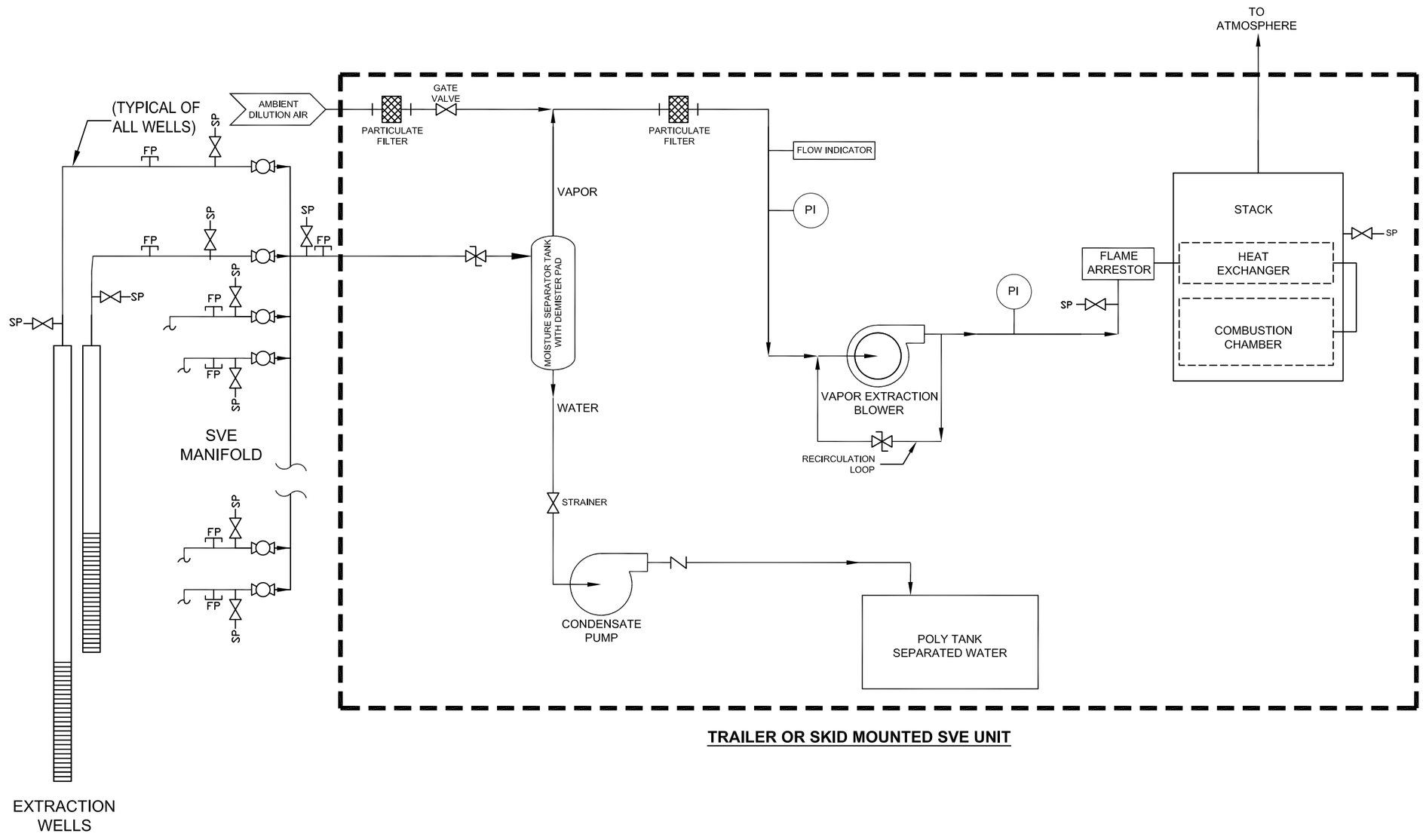
PROPOSED SVE WELL LAYOUT

0 100 200
HORIZONTAL SCALE IN FEET

N

FIGURE 8-1

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\Figures\Fig.8-1-Proposed SVE Well Layout.dwg, 7/14/2017 3:31:25 PM



LEGEND

SP	SAMPLE PORT
FP	FLOW MEASUREMENT PORT
	GLOBE VALVE
	CHECK VALVE
	BALL VALVE (HAND OPERATED)
PI	PRESSURE INDICATOR (LOCAL GAUGE)

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

SOIL VAPOR EXTRACTION SYSTEM PROCESS FLOW DIAGRAM

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093-CHEMOIL-001	6/07/2017	ZA	KD

0 0 0
NOT TO SCALE

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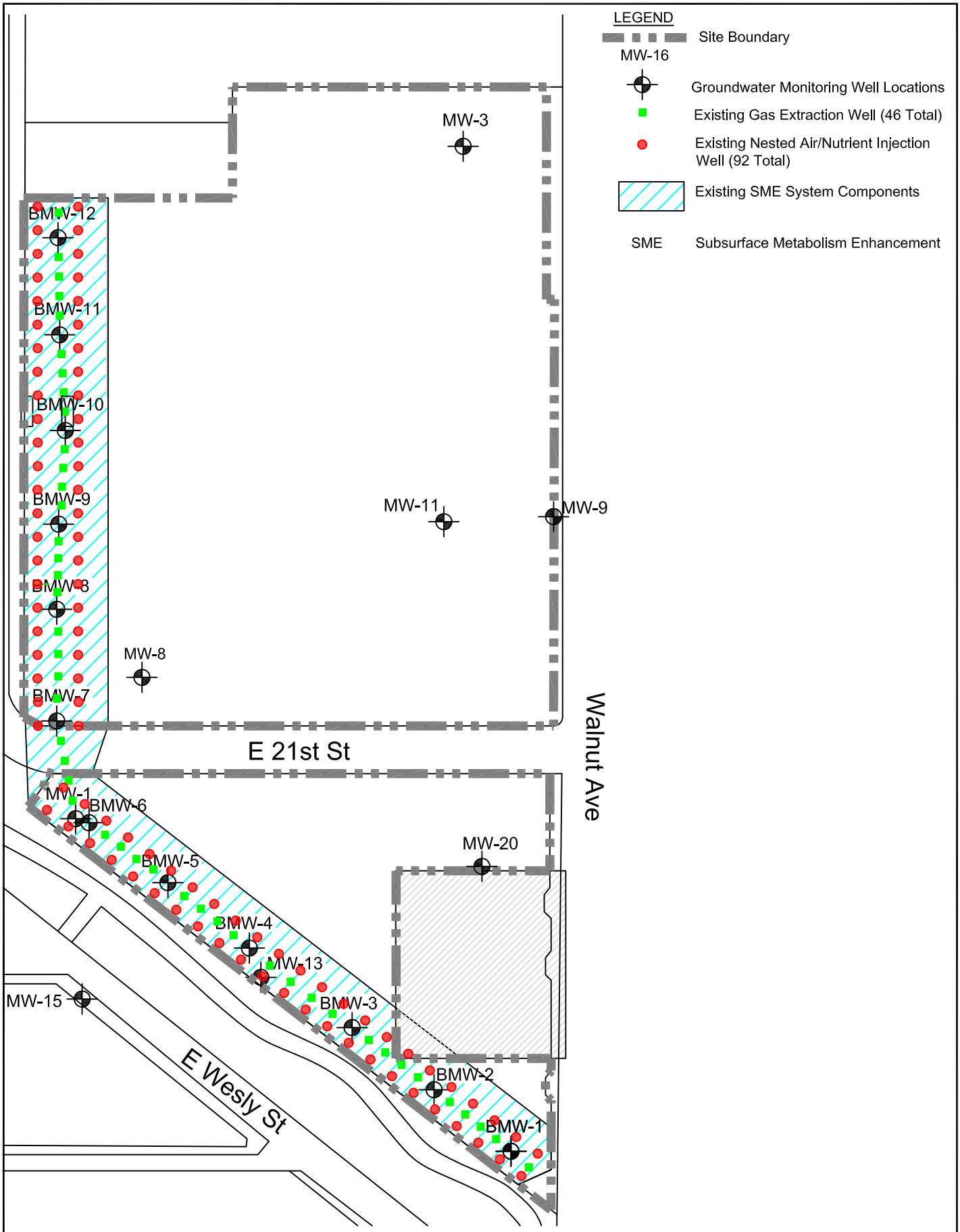
THOUSAND OAKS, CA 91360

FIGURE 8-2

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\Figures\Fig.8-2-Typical SVE Process Flow Diagram.dwg, 7/11/2017 12:34:44 PM



S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\Figures\Fig.9-1-Existing SVE System Layout.dwg, 6/13/2017 1:08:43 PM

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2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DR.BY:	APP. BY:
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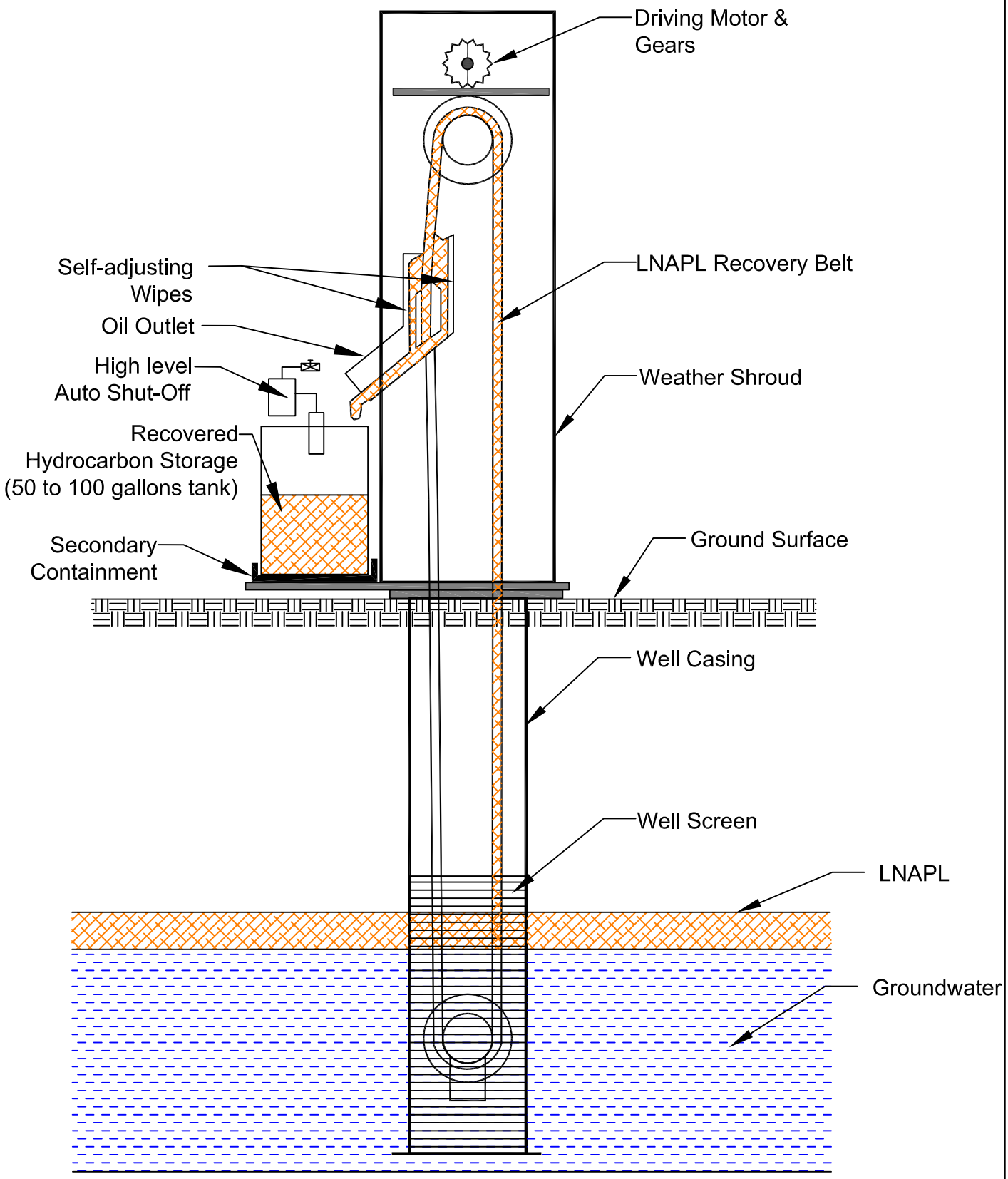
EXISTING SME SYSTEM LAYOUT

0 100 200
HORIZONTAL SCALE IN FEET

N

FIGURE 9-1



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SCHEMATIC DESIGN OF LNAPL REMOVAL AND STORAGE SYSTEM

PROJECT NO.	DATE	DR.BY:	APP. BY:
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NOT TO SCALE

FIGURE 9-2

TABLES

Table 4-1
Summary of Soil Screening Levels
Former ChemOil Refinery
Signal Hill, California

Chemical	Direct Contact with Soil					Protection of Groundwater, Aquifer is Not a Source of Drinking Water				Final Screening Levels [7]		
	Residential		Construction	Commercial/Industrial				Groundwater at 20 feet bgs [5]		Residential	Construction	Commercial/ Industrial
								100X LARWQCB Soil SLs [6] (0 to 10 ft bgs)	100X LARWQCB Soil SLs [6] (10 to 20 ft bgs)			
	SFBRWQCB ESL [1] (mg/kg)	USEPA RSL/DTSC SL [2] (mg/kg)	SFBRWQCB ESL [1] (mg/kg)	SFBRWQCB ESL [1] (mg/kg)	USEPA RSL/DTSC SL [2] (mg/kg)	SFBRWQCB ESL [3] (mg/kg)	USEPA RSL [4] (mg/kg)	LARWQCB Soil SL [5] (mg/kg)	LARWQCB Soil SL [5] (mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Total Petroleum Hydrocarbons (TPH)												
TPHg (C4-C12)	7.4E+02	8.2E+01	2.8E+03	3.9E+03	4.2E+02	- -	- -	1.0E+03	1.0E+03	8.2E+01	1.0E+03	4.2E+02
TPH (C5-C12)	7.4E+02	8.2E+01	2.8E+03	3.9E+03	4.2E+02	- -	- -	1.0E+03	1.0E+03	8.2E+01	1.0E+03	4.2E+02
TPH (C13-C22)	2.3E+02	9.6E+01	8.8E+02	1.1E+03	4.4E+02	- -	- -	1.0E+04	1.0E+04	9.6E+01	8.8E+02	4.4E+02
TPH (C23-C44)	1.1E+04	2.5E+03	3.2E+04	1.4E+05	3.3E+04	- -	- -	5.0E+04	5.0E+04	2.5E+03	3.2E+04	3.3E+04
Volatile Organic Compounds (VOCs)												
Acetone	5.9E+04	6.1E+04	2.6E+05	6.3E+05	6.7E+05	- -	- -	1.6E+02	1.5E+02	1.5E+02	1.5E+02	1.5E+02
Benzene	2.3E-01	3.3E-01	2.4E+01	1.0E+00	1.4E+00	- -	- -	6.2E-01	1.5E-01	1.5E-01	1.5E-01	1.5E-01
(8) TBA	NV	1.3E+05	NV	NV	1.5E+06	- -	- -	1.3E+00	1.2E+00	1.2E+00	1.2E+00	1.2E+00
tert-Butylbenzene	NV	2.2E+03	NV	NV	1.2E+04	- -	- -	2.8E+01	2.6E+01	2.6E+01	2.6E+01	2.6E+01
sec-Butylbenzene	NV	2.2E+03	NV	NV	1.2E+04	- -	- -	2.8E+01	2.6E+01	2.6E+01	2.6E+01	2.6E+01
n-Butylbenzene	NV	1.2E+03	NV	NV	6.4E+03	- -	- -	2.8E+01	2.6E+01	2.6E+01	2.6E+01	2.6E+01
Ethylbenzene	5.1E+00	5.8E+00	4.8E+02	2.2E+01	2.5E+01	- -	- -	6.8E+01	3.2E+01	5.1E+00	3.2E+01	2.2E+01
Isopropylbenzene	NV	1.9E+03	NV	NV	9.9E+03	- -	- -	8.4E+01	7.7E+01	7.7E+01	7.7E+01	7.7E+01
(9) 4-Isopropyltoluene	NV	1.9E+03	NV	NV	9.9E+03	- -	- -	8.4E+01	7.7E+01	7.7E+01	7.7E+01	7.7E+01
MTBE	4.2E+01	4.7E+01	3.7E+03	1.8E+02	2.1E+02	- -	- -	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00
Naphthalene	3.3E+00	3.8E+00	3.5E+02	1.4E+01	1.7E+01	- -	- -	1.8E+00	1.7E+00	1.7E+00	1.7E+00	1.7E+00
n-Propylbenzene	NV	3.8E+03	NV	NV	2.4E+04	- -	- -	2.8E+01	2.6E+01	2.6E+01	2.6E+01	2.6E+01
Toluene	9.7E+02	1.1E+03	4.1E+03	4.6E+03	5.4E+03	- -	- -	2.5E+01	1.6E+01	1.6E+01	1.6E+01	1.6E+01
1,3,5-TMB	NV	2.1E+02	NV	NV	1.1E+03	- -	- -	3.6E+01	3.3E+01	3.3E+01	3.3E+01	3.3E+01
1,2,4-TMB	NV	5.8E+01	NV	NV	2.4E+02	- -	- -	3.6E+01	3.3E+01	3.3E+01	3.3E+01	3.3E+01
o-Xylene	NV	6.5E+02	NV	NV	2.8E+03	- -	- -	NV	NV	6.5E+02	0.0E+00	2.8E+03
(10) m,p-Xylenes	NV	5.5E+02	NV	NV	2.4E+03	- -	- -	NV	NV	5.5E+02	0.0E+00	2.4E+03
Total Xylenes	5.6E+02	5.8E+02	2.4E+03	2.4E+03	2.5E+03	- -	- -	2.3E+02	1.8E+02	1.8E+02	1.8E+02	1.8E+02
Polycyclic Aromatic Hydrocarbons (PAHs)												
Acenaphthene	3.6E+03	3.6E+03	1.0E+04	4.5E+04	4.5E+04	1.9E+01	5.5E+00	NV	NV	5.5E+00	5.5E+00	5.5E+00
(11) Acenaphthylene	3.6E+03	3.6E+03	1.0E+04	4.5E+04	4.5E+04	1.3E+01	5.5E+00	NV	NV	5.5E+00	5.5E+00	5.5E+00
Anthracene	1.8E+04	1.8E+04	5.0E+04	2.3E+05	2.3E+05	2.8E+00	5.8E+01	NV	NV	2.8E+00	2.8E+00	2.8E+00
Benz(a)anthracene	1.6E-01	1.6E-01	1.6E+01	2.9E+00	2.9E+00	1.2E+01	4.2E-03	NV	NV	4.2E-03	4.2E-03	4.2E-03
Benzo(a)pyrene	1.6E-02	1.6E-02	1.6E+00	2.9E-01	2.9E-01	1.3E+02	4.0E-03	NV	NV	4.0E-03	4.0E-03	4.0E-03
Benzo(b)fluoranthene	1.6E-01	1.6E-01	1.6E+01	2.9E+00	2.9E+00	6.4E+02	4.1E-02	NV	NV	4.1E-02	4.1E-02	4.1E-02
Benzo(g,h,i)perylene	NV	NV	NV	NV	NV	2.7E+01	NV	NV	NV	2.7E+01	2.7E+01	2.7E+01
Benzo(k)fluoranthene	1.6E+00	1.6E+00	1.5E+02	2.9E+01	2.9E+01	3.7E+01	4.0E-01	NV	NV	4.0E-01	4.0E-01	4.0E-01
Chrysene	1.5E+01	1.6E+01	1.5E+03	2.6E+02	2.9E+02	2.3E+01	1.2E+00	NV	NV	1.2E+00	1.2E+00	1.2E+00
Dibenzo(a,h)anthracene	1.6E-02	1.6E-02	1.6E+00	2.9E-01	2.9E-01	1.4E+02	1.3E-02	NV	NV	1.3E-02	1.3E-02	1.3E-02
Fluoranthene	2.4E+03	2.4E+03	6.7E+03	3.0E+04	3.0E+04	6.0E+01	8.9E+01	NV	NV	6.0E+01	6.0E+01	6.0E+01
Fluorene	2.4E+03	2.4E+03	6.7E+03	3.0E+04	3.0E+04	8.9E+00	5.4E+00	NV	NV	5.4E+00	5.4E+00	5.4E+00
Indeno(1,2,3-cd)pyrene	1.6E-01	1.6E-01	1.6E+01	2.9E+00	2.9E+00	7.0E+01	1.3E-01	NV	NV	1.3E-01	1.3E-01	1.3E-01
Naphthalene	3.3E+00	3.8E+00	3.5E+02	1.4E+01	1.7E+01	- -	- -	1.8E+00	1.7E+00	1.7E+00	1.7E+00	1.7E+00
(12) Phenanthrene	1.8E+04	1.8E+04	5.0E+04	2.3E+05	2.3E+05	1.1E+01	5.8E+01	NV	NV	1.1E+01	1.1E+01	1.1E+01
Pyrene	1.8E+03	1.8E+03	5.0E+03	2.3E+04	2.3E+04	8.5E+01	1.3E+01	NV	NV	1.3E+01	1.3E+01	1.3E+01
Metals												
Lead	8.0E+01	8.0E+01	1.6E+02	3.2E+02	3.2E+02	NV	NV	NV	NV	8.0E+01	1.6E+02	3.2E+02

Notes:

C4-C12 = Carbon range.
ft bgs = feet below ground surface.
mg/kg = milligram per kilogram.
NV = No published value.
100X = One hundred times.
TBA = tert-Butyl alcohol.
MTBE = Methyl-tert-butyl ether.
TMB = Trimethylbenzene.
TPHg = TPH as gasoline.
USEPA RSL = U.S. Environmental Protection Agency Regional Screening Level (USEPA, 2016).
LARWQCB Soil SL = Los Angeles Regional Water Quality Control Board Soil Screening Level (LARWQCB, 1996).
DTSC SL = Department of Toxic Substances Control Screening Level (DTSC, 2016).
SFBRWQCB ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Level (SFBRWQCB, 2016)

[1] SFBRWQCB ESLs for soil for direct contact exposure pathways. Screening levels for TPH (C5-C12), TPH (C13-C22), and TPH (C23-C44) represent ESLs for TPH gasoline (C5-C12), TPH diesel (C10-C24), and TPH motor oil (C24-C36), respectively

[2] USEPA RSLs/DTSC SLs for soil for direct contact exposure pathways represents the lowest of the available DTSC SL or USEPA RSL. Screening levels for TPH (C5-C12), TPH (C13-C22), and TPH (C23-C44) represent lowest of aliphatic and aromatic USEPA RSLs for TPH Low (C5-C8), TPH Middle (C9-C18), and TPH High (C17-C32), respectively.

[3] SFBRWQCB ESL respresents soil SL for protection of groundwater, assuming groundwater aquifer is not a source of drinking water. Screening levels for TPH (C5-C12), TPH (C13-C22), and TPH (C23-C44) represent ESLs for TPH gasoline (C5-C12), TPH diesel (C10-C24), and TPH motor oil (C24-C36), respectivel

[4] USEPA RSL respresents soil SL for protection of groundwater, assuming groundwater aquifer is not a source of drinking water. Screening levels for TPH (C5-C12), TPH (C13-C22), and TPH (C23-C44) represent lowest of aliphatic and aromatic USEPA RSLs for TPH Low (C5-C8), TPH Middle (C9-C18), and TPH High (C17-C32), respective

[5] LARWQCB SL respresents soil SL for protection of groundwater at 20 ft bgs, assuming groundwater aquifer is not a source of drinking water. As recommended by LARWQCB (1996), for non-drinking water aquifers, screening level for TPH carbon ranges represent the LARWQCB SLs for TPH where distance above groundwater is greater than 150 feet (>150 feet). Values from LARWQCB (1996) for PAHs were not available.

[6] As recommended by LARWQCB (1996), for non-drinking water aquifers, benzene, toluene, ethylbenzene, and xylene (BTEX) screening levels are set at 100 times (100X) respective maximum contaminant levels (MCLs) as preliminary levels to be protection of human health and the environment. This method was applied to all VOCs.

[7] Final screening level represents the lowest available screening level for each exposure scenario/receptor

[8] If screening level for tert-butyl alcohol was not available; therefore, the value for sec-butyl alcohol was usec

[9] If screening level for 4-Isopropyltoluene was not available; therefore, the value for Isopropylbenzene was used.

[10] Screening level for m,p-xylenes represents the value for m-xylene.

[11] If screening level for acenaphthylene was not available; therefore, the value for acenaphthene was used.

[12] If screening level for phenanthrene was not available; therefore, the value for anthracene was used.

References:

DTSC. 2016. Human Health Risk Assessment (HHRA) Note Number 3, DTSC-modified Screening Levels (DTSC SLs). Human and Ecological Risk Office (HERO). June.
LARWQCB. 1996. Interim Site Assessment & Cleanup Guidebook. California Regional Water Quality Control Board, Los Angeles and Ventura Counties, Region 4. May 1996.
SFBRWQCB. 2016. Environmental Screening Levels (ESLS). San Francisco Bay Regional Water Quality Control Board. Revision 3. February.
USEPA. 2016. Regional Screening Levels (TR=1E-06, HQ=1). May.

Table 4-2
Summary of Soil Vapor Screening Levels
Former ChemOil Refinery
Signal Hill, California

Chemical	Vapor Intrusion to Indoor Air [6]				Site-Specific, Risk-Based Screening Levels [3]	
	Residential		Commercial/Industrial		Residential	Commercial/ Industrial
	SFBRWQCB ESL [1] µg/m^3	USEPA RSL/DTSC SL [2] µg/m^3	SFBRWQCB ESL [1] µg/m^3	USEPA RSL/DTSC SL [2] µg/m^3	µg/m^3	µg/m^3
Volatile Organic Compounds (VOCs)						
Benzene	48	97	420	840	104	909
Cyclohexane	NV	6,300,000	NV	52,000,000	7,226,599	60,703,429
Ethylbenzene	560	1,100	4,900	9,800	1,438	12,565
(4) 4-Ethyltoluene	NV	420,000	NV	3,600,000	367,842	3,089,871
(5) Heptane	NV	730,000	NV	6,200,000	894,431	7,513,217
n-Hexane	NV	730,000	NV	6,200,000	894,431	7,513,217
MTBE	5,400	11,000	47,000	94,000	12,970	113,307
Naphthalene	41	83	360	720	115	1,006
Toluene	160,000	310,000	1,300,000	2,600,000	367,842	3,089,871
1,2,4-TMB	NV	7,300	NV	62,000	10,168	85,410
1,3,5-TMB	NV	42,000	NV	360,000	51,110	429,320
m,p-Xylenes	NV	100,000	NV	880,000	133,688	1,122,976
o-Xylene	NV	100,000	NV	880,000	132,951	1,116,790
Total Xylenes	52,000	100,000	440,000	880,000	132,951	1,116,790

Notes:
µg/m^3
NV = No published value.
SFBRWQCB ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Level (SFBRWQCB, 2016)
USEPA RSL = U.S. Environmental Protection Agency Regional Screening Level (USEPA, 2016).
DTSC SL = Department of Toxic Substances Control Screening Level (DTSC, 2016).
MTBE = Methyl-tert-butyl ether.
TMB = Trimethylbenzene.

[1] SFBRWQCB ESLs for soil gas vapor intrusion for residential and commercial/industrial land use.

[2] USEPA RSLs/DTSC SLs soil gas screening level is calculated by dividing the air screening level for residential air and industrial air by the DTSC (011) default attenuation factor for new building construction of 0.001 and 0.0005, respectively. The most stringent (i.e. lowest) indoor air screening level from DSTC SLs (DTSC, 2016) and USEPA RSLs (USEPA, 2016) was used.

[3] Site-specific risk-based screening levels are calculated from Site vapor intrusion modeling and are based on five foot depth of compliance.

[4] Screening level for 4-ethyltoluene was not available; therefore, the value for isopropylbenzene was used.

[5] Screening level for heptane was not available; therefore, the value for hexane was used.

[6] Vapor intrusion to indoor air values from SFBRWQCB ESLs and USEPA RSLs/DTSC SLs were not selected as the Site screening levels; however, they are shown for comparision purposes.

References:
DTSC. 2011. Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. California Environmental Protection Agency. October.
DTSC. 2016. Human Health Risk Assessment (HHRA) Note Number 3, DTSC-modified Screening Levels (DTSC SLs). Human and Ecological Risk Office (HERO). June.
SFBRWQCB. 2016. Environmental Screening Levels (ESLS). San Francisco Bay Regional Water Quality Control Board. Revision 3. February.
USEPA. 2016. Regional Screening Levels (TR=1E-06, HQ=1). May.

Table 4-3
Summary of Groundwater Screening Levels
Former ChemOil Refinery
Signal Hill, California

Chemical	Groundwater Vapor Intrusion [1]		Final Screening Levels [2]			Long-Term Groundwater Goal
	Residential	Commercial/Industrial	Residential	Construction	Commercial/ Industrial	Drinking Water Standards [3,4]
	SFBRWQCB ESL (µg/L)	SFBRWQCB ESL (µg/L)	(µg/L)	(µg/L)	(µg/L)	California MCL/ *Notification Level* (µg/L)
Total Petroleum Hydrocarbons (TPH)						
TPHg (C4-C12)	NV	NV	NV	NV	NV	1.0E+02
TPH (C5-C12)	NV	NV	NV	NV	NV	1.0E+02
TPH (C13-C22)	NV	NV	NV	NV	NV	1.0E+02
TPH (C23-C44)	NV	NV	NV	NV	NV	5.0E+04
Volatile Organic Compounds (VOCs)						
Acetone	4.5E+07	3.7E+08	4.5E+07	NV	3.7E+08	NV
Benzene	1.4E+00	1.2E+01	1.4E+00	NV	1.2E+01	1.0E+00
TBA	NV	NV	NV	NV	NV	*1.2E+01*
sec-Butylbenzene	NV	NV	NV	NV	NV	*2.6E+02*
tert-Butylbenzene	NV	NV	NV	NV	NV	*2.6E+02*
n-Butylbenzene	NV	NV	NV	NV	NV	*2.6E+02*
1,2-Dichloroethane	7.4E+00	6.4E+01	7.4E+00	NV	6.4E+01	5.0E-01
cis-1,2-Dichloroethene	1.4E+02	1.1E+03	1.4E+02	NV	1.1E+03	6.0E+00
Ethylbenzene	1.6E+01	1.4E+02	1.6E+01	NV	1.4E+02	3.0E+02
Isopropylbenzene	NV	NV	NV	NV	NV	*7.7E+02*
4-Isopropyltoluene	NV	NV	NV	NV	NV	NV
Naphthalene	2.5E+01	2.2E+02	2.5E+01	NV	2.2E+02	*1.7E+01*
n-Propylbenzene	NV	NV	NV	NV	NV	*2.6E+02*
Tetrachloroethylene	3.7E+00	3.2E+01	3.7E+00	NV	3.2E+01	5.0E+00
Toluene	4.3E+03	3.7E+04	4.3E+03	NV	3.7E+04	1.5E+02
1,3,5-TMB	NV	NV	NV	NV	NV	*3.3E+02*
1,2,4-TMB	NV	NV	NV	NV	NV	*3.3E+02*
2-Butanone (MEK)	5.5E+06	4.6E+07	5.5E+06	NV	4.6E+07	NV
MTBE	1.5E+03	1.3E+04	1.5E+03	NV	1.3E+04	1.3E+01
o-Xylene	1.6E+03	1.3E+04	NV	NV	NV	1.8E+03
m,p-Xylenes	1.6E+03	1.3E+04	NV	NV	NV	1.8E+03
total Xylenes	1.6E+03	1.3E+04	1.6E+03	NV	1.3E+04	1.8E+03
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	NV	NV	NV	NV	NV	NV
Acenaphthylene	NV	NV	NV	NV	NV	NV
Anthracene	NV	NV	NV	NV	NV	NV
Benz(a)anthracene	NV	NV	NV	NV	NV	NV
Benzo(a)pyrene	NV	NV	NV	NV	NV	2.0E-01
Benzo(b)fluoranthene	NV	NV	NV	NV	NV	NV
Benzo(g,h,i)perylene	NV	NV	NV	NV	NV	NV
Benzo(k)fluoranthene	NV	NV	NV	NV	NV	NV
Chrysene	NV	NV	NV	NV	NV	NV
Dibenzo(a,h)anthracene	NV	NV	NV	NV	NV	NV
Fluoranthene	NV	NV	NV	NV	NV	NV
Fluorene	NV	NV	NV	NV	NV	NV
Indeno(1,2,3-cd)pyrene	NV	NV	NV	NV	NV	NV
Naphthalene	2.5E+01	2.2E+02	2.5E+01	NV	2.2E+02	*1.7E+01*
Phenanthrene	NV	NV	NV	NV	NV	NV
Pyrene	NV	NV	NV	NV	NV	NV

Notes:
µg/L = microgram per liter.
MCL = Maximum Contaminant Level.
NV = No value published.
SFBRWQCB ESL = San Francisco Bay Regional Water Quality Control Board Groundwater Screening Level for Vapor Intrusion (SFBRWQCB, 2016).
C4-C12 = Carbon range. MEK = Methyl ethyl ketone. TMB = Trimethylbenzene.
TBA = tert-Butyl alcohol. MTBE = Methyl-t-butyl ether. TPHg = TPH as gasoline.
[1] SFBRWQCB ESL for groundwater vapor intrusion, assuming deep groundwater (≥10 feet bgs), sand scenario for resident and commercial/industrial land use. No values for TPH mixtures were available.
[2] Final screening level represents the lowest available groundwater screening level for vapor intrusion for each exposure scenario/receptor.
[3] California MCLs are enforceable standards. California notification levels shown in italic font. Notification levels are advisory in nature and not enforceable standards. No values for TPH mixtures were available
[4] In the absence of MCLs or notification levels for TPH mixtures, the lesser of the SFBRWQCB ESLs for groundwater gross contamination level and groundwater odor nuisance level was used. For TPH (C4-C12) and TPH (C5-C12), the odor nuisance level for TPH as gasoline was used. For TPH (C13-C22), the odor nuisance level for TPH as diesel was used. For TPH (C23-C44), the gross contamination level for TPH as motor oil was used.

References:
SFBRWQCB. 2016. Environmental Screening Levels (ESLS). San Francisco Bay Regional Water Quality Control Board. Revision 3. February.

TABLE 6-1
INITIAL TECHNOLOGY SCREENING
Former Chemoil Refinery
Soil and Groundwater Remediation
2020 Walnut Avenue, Signal Hill, California

Remedial Action Alternative	General Approach	Implementability	Effectiveness	Relative Cost	Applicable Site Media	Retain or Reject
Overall Site Management						
No Action	No Action	Good	None	None	None	Reject
Institutional & Engineering Controls	Incorporate Institutional and Engineering Controls during site development	Good, Engineering Controls can be installed during site development and will reduce risk of soil vapor exposure. Institutional Controls will reduce risk of exposure to groundwater and direct soil contact.	Good. Engineering and Institutional Controls have been proven to reduce exposure risks.	Low to moderate- depending on Engineering Controls employed.	Groundwater, Soil Vapor, Soils - By reducing exposure risk	Retain, will be used in conjunction with active remedial technologies during site development and future land use.
Monitored Natural Attenuation	Monitor groundwater conditions. Verify progress of natural biological degradation over time.	Good. Low cost option. Monitoring can be accomplished via exisitng wells.	Poor. Natural attenuation will require many years to be achieve RAOs.	Low. Costs are limited to periodic well sampling and laboratory analysis.	Groundwater, Soil Vapor, Soils - by biological degradation.	Retain, will be used in conjunction with active remedial technologies during site development and future land use.
In-Situ Treatment Options						
Air Sparging	Air injection into subsurface via compressor(s) injecting air into separate AS wells.	Good, AS is well understood and equipment is readily available.	Good - Air can strip volatile chemicals from groundwater. Bioremediation (by injecting oxygen) will be stimulated for TPH.	Moderate. Moderate capital and low operations and maintenance (O&M) costs.	Groundwater	Retain
Bioventing	Low pressure air injection into subsurface to stimulate naturual biological attenuation over time.	Moderate. Will require additonal well points to introduce air. Alternatively, atmopheric air will enter vadose zone due to vacuum pressure caused by SVE.	Moderate. Introducing air will stimulate aerobic conditions and biological degradation.	Moderate. Additional wells and system to introduce air vadose zone will need to be operated.	Soils, soil vapor	Retain, consider additional benefit from SVE and air sparging
Chemical Oxidation	Generate on-site oxidation agent and inject into subsurface. Destroys CoCs be direct contact with oxidation agent.	Moderate. Would require numerous injection points, multiple injection events, and high amounts of oxidant over very large area.	Limited, interbedded sands and silts would lead to preferential pathways, preventing direct contact with all contaminants.	High. Oxidant generation equipment is relatively low cost, but would require extensive injection wells and conveyance piping with potentially high O&M.	Groundwater, soil vapor, adsorbed CoCs on soil particles	Reject as initial selection, may become option if AS system proves ineffective.
Soil Vapor Extraction	Extraction of subsurface vapor and contaminants for above ground treatment.	Good. Slower removal of low volatility hydrocarbons. Would use readily available remediation systems.	Good in unsaturated zone. SVE with Air Sparging (within flow through barrier) will accelerate effectiveness in groundwater.	Moderate. Moderate capital and low O&M costs.	Groundwater, soil vapor, adsorbed CoCs on soil particles	Retain
Thermal Enhanced Soil Vapor Extraction	Combine SVE with in-situ heating of subsurface soils	Moderate. Uses heating electrodes which require large amounts of energy (electricity or natural gas) to volatilize CoCs, and also requires steam and vapor recovery systems.	Accelerated treatment. Heat conducts preferentially in fine-grained soils.	Very high capital and utility costs. Much higher costs than SVE alone.	Groundwater, soil vapor, adsorbed CoCs on soil particles.	Reject, due to high cost and utility demands.
Light Non- Aquous Phase Liquid Removal	Remove LNAPL directly while minimizing groundwater removal	Moderate. Equipment is readiliy available. LNAPL has been observed to recharge slowly into extaction wells at the site.	Moderate. Slow recharge of LNAPL into wells indicates removal will take significant time.	Moderate. Equipment costs are moderate, O&M costs are relatively low.	Groundwater	Retain
Ex-Situ Treatment Options						
Dissolved Phase Groundwater Extraction	Extract groundwater via multiple wells and treat water above ground. Treated water would be discharged to local storm drain.	Moderate. Equipment is readiliy available. Low concentrations of CoCs in groundwater would lead to slow removal of CoCs.	Moderate. Substantial volumes of groundwater would be removed with low corresponding mass of CoCs due to low concentrations in groundwater.	High capital costs. Substantial volumes of groundwater would have to be removed, treated and discharged. Removed mass of CoCs would be very low compared to water discharged.	Groundwater	Reject
Excavation and Off-Site Disposal	Excavate impacted soils and transport to appropriate disposal facility.	Moderate. Excavation is practical, large volumes would generate substantial local traffic for soil transportation and replacement backfill.	Good- Would remove contaminants within excavations.	Very high due local traffic impacts, large volumes, and treatment/disposal costs.	Soil and Soil Vapor, excavation below groundwater not practical	Retain
Excavation and Enhanced On-site Bioremediation	Excavate impacted soils and treat on-site with vapor and sufactant enhanced bioremediation.	Moderate. Excavation is practical, lack of abundant local space (not being excavated) on-site makes construction of bioremediation infrastructure impractical.	Good- Would remove contaminants within excavations.	High, excavation and soil treatment costs as well as analytical costs to verify soil treatment. Needs abundant surface space to set-up treatment area.	Soil and Soil Vapor, excavation below groundwater not practical	Reject, due to time constraints & potential 1166 issues.

TABLE 7-1
ANALYSIS OF RETAINED RESPONSE ACTION TECHNOLOGIES
Former Chemoil Refinery
Soil and Groundwater Remediation
2020 Walnut Avenue, Signal Hill, California

Response Action Alternative	Description	Overall Protection of Human Health and the Environment	Compliance with Remedial Action Objectives (RAOs)	Long-Term Effectiveness (LTE)	Reduction of Toxicity, Mobility or Volume	Short-Term Effectiveness (STE)	Implementability	Costs	State Acceptance	Community Acceptance
GROUNDWATER RESPONSE ACTION ALTERNATIVES										
Alternative1: Air Sparging	In-situ remedial treatment of hydrocarbon compounds in groundwater. Air sparge in groundwater plume to strip TPH and inject oxygen to enhance natural bacteria degradation of hydrocarbons. Air sparge not recommended in source area onsite due to the presence of LNAPL however can be installed along the downgradient boundary of the property to mitigate off-site migration of dissolved TPH. SVE wells will be required in conjunction with air sparge technology.	**GOOD** This action addresses the dissoved hydrocarbons to protect off-site human and ecological receptors. There is potential for air sparging to increase risk of inhalation exposure by off-gassing volatile contaminants; therefore SVE should be inplemented in conjunction with our sparging.	**GOOD** This action complies with the RAO to prevent further migration of contaminants offisite.	**GOOD** Combined sparging and vapor extraction will mobilize contaminents from groundwater for removal from subsurface and treatment with aboveground equipment. The addition of oxygen through air sparging also promotes biodegradation of petroleum constituents. Degradation will continue after active injection activities.	**GOOD** Reduces mobile (volatile) constituents in groundwater, decreases the hydrocarbon mass, and degrades organic compounds to less to non-toxic daughter products. Organic contaminant reduction will continue to occur slowly by intrinsic biodegradation, adsorption, and dispersion over a long period.	**MODERATE** Quickly removes most volatile constituents. Over time less volatile organic compounds are degraded.	**GOOD** This alternative uses proven technology and required equipment is readily available from local suppliers. Requires installation of additional remediation and monitoring wells within the downgradient boundary to create flow through barrier. Requires installation of aboveground or underground horizontal conveyance piping.	**MODERATE** Primary costs are remediation wells, equipment for supplying oxygen to the subsurface, above ground vapor treatment equipment, operation and maintenance of equipment, and monitoring. Energy costs are moderate to operate equipment. Operational and monitoring costs would extent for a relatively long time, depending on natural degradation rates of source hydrocarbons contributing to dissolved TPH plume.	**LIKELY** Approach adds protection of human health and environment through the removal of contaminants with proven technologies.	**LIKELY** A proven technology for petroleum constituents which will provide protection to off-site, down gradient residents and sesitive receptors over time.
Altenative 2: LNAPL Removal	Extract LNAPL hydrocarbon compounds on groundwater surface by mechanical means. At least one recovery well and dedicated LNAPL removal system will be installed at each LNAPL deposit identified. Removed product and incidental water will be temporarily stored in above ground tank and then transported off-site (under manifest) to appropriate local recycling facility.	**GOOD** This action removes free product that provides source material for on-going dissolved TPH in groundwater. Active remediation to protect human and ecological receptors. Goundwater will be improved.	**GOOD** This action complies with the RAOs to remove LNAPL to the extent practicable.	**GOOD** Reduces source material contributing to groundwater impacts.	**VERY GOOD** Decreases the hydrocarbon mass. Residual contaminants will decrease by intrinsic biodegradation, adsorption, and dispersion over a period of time.	**MODERATE** Removes hydrocarbon mass relatively quickly. A downgradient treatment barrier will be required to prevent offiste migration until LNAPL removal is complete.	**VERY GOOD** This alternative uses proven, reliable technology. Requires installation of a recovery well within the LNAPL deposit. Requires installation of aboveground temporary storage tank.	**LOW** Short-term costs are very low compared to other remedial systems. Monitoring costs would extend for a period of time, depending on natural degradation rates of residual hydrocarbons.	**LIKELY** Approach adds protection of human health and environment through the removal of contaminants with proven technologies.	**LIKELY** Provides added protection to local environment over relatively short time. Recycling of recovered product is desired condition during remediation.
Alternative 3: Monitored Natural Attenuation (MNA)	Long-term monitoring of groundwater. Onsite MNA is not currently applicable due to the requirement for active remediation to remove secondary sources. Offsite MNA should be considered downgradient from the site during and following active onsite remediation.	**GOOD** Implemented downgradient from the site, this action would indicate if groundwater concentrations were increasing to unacceptable levels.	**MODERATE** Will confirm RAO that down gradient groundwater plume does not pose a risk to human health or the envrionment.	**MODERATE** Natural attenuation progresses slowly, but has been proven to be effective for TPH contaminants.	**POOR** Natural attenuation reduces toxicity very slowly and has no significant impact on reducing mobility.	**MODERATE** MNA is being considered for a portion of the groundwater plume that does not pose a risk to human health or the envrionment. This method will be effective in determing whether subsurface conditions change.	**GOOD** Groundwater monitoring for COCs is already being implemented to confirm effectiveness of remediation efforts to reduce off-site migration of CoCs and natual attentuation of residual contaminants.	**LOW** Longterm monitoring itself is a relatively low cost.	**Likely** Approach when combined with other response actions is protective of human health and environment, providing protection to off-site groundwater.	**Likely** Provides confirmation of protection of off-site receptors.

TABLE 7-1
ANALYSIS OF RETAINED RESPONSE ACTION TECHNOLOGIES
Former Chemoil Refinery
Soil and Groundwater Remediation
2020 Walnut Avenue, Signal Hill, California

Response Action Alternative	Description	Overall Protection of Human Health and the Environment	Compliance with Remedial Action Objectives (RAOs)	Long-Term Effectiveness (LTE)	Reduction of Toxicity, Mobility or Volume	Short-Term Effectiveness (STE)	Implementability	Costs	State Acceptance	Community Acceptance
SOIL AND SOIL VAPOR RESPONSE ACTION ALTERNATIVES										
Alternative 4: Excavation and Offsite Disposal	Excavation of portions of impacted soils (i.e., soils exceeding the screening levels) in the upper ten feet of the vadose zone with normal excavation equipment, disposal and/or treatment of excavated soils off-site, import of "clean" soil for backfill.	**VERY GOOD** This approach is considered the most reliable to remove subsurface contamination. Remediation would be accomplished within one year.	**GOOD** Provides significant mass removal and capping of residual contaminants. Although presence of residual contaminants in lower vadose zone saturated zone will require additional response actions to achieve RAOs.	**VERY GOOD** Provides substantial mass removal of contaminants and capping of residual contaminants which reduces exposure risk to future site occupants.	**MODERATE TO GOOD** Remediation of soil by removal and off-site treatment or containment at approved facility effectively cleans up contaminant impacts, eliminating mass and reducing mobility of contaminants. However, based on the scope assumed in this cost estimate, vadose zone soil would remtain in place below the assumed excavation depth of ten feet below grade.	**VERY GOOD** Remediation effort will have immediate results for hydrocarbon removal from the site. Equipment and transportation related emissions will have short-term increase as will the potential for exposure from volatization and fugitive dust during the excavation and handling of soil. Compliance with local air regulations, permitting and safety protocols will be required.	**VERY GOOD** Easily implemented while this site is vacant and using conventional equipment. Space at the site will ease soil management and loading for transporation. Excavation below water table with is considered impractical due to saturated soils difficulty dewatewring impacted groundwater. Substantial truck traffic generated to remove and replace soil with imported backfill will be disruptive to local residents.	**VERY HIGH** Short-term costs are relatively high due to labor, equipment, transportation and disposal.	**Likely** Approach is highly protective of human health and environment, providing protection to groundwater.	**Likely** Soil remediation achieved through excavation is established technology. Provides protection of groundwater and environmental receptors.
Alternative 5: Soil Vapor Extraction	In-situ remedial treatment of hydrocarbon compounds in soil. SVE to both removal TPH mass and stimulate bioventing. SVE well points can be installed within specific source areas of concern for mass removal.	**GOOD** This action enhances the previously observed natural degradation and effectiveness of SVE that is occuring at the site to protect human and ecological receptors.	**GOOD** This action complies with RAO to remove contaminant mass in vadose zone.	**MODERATE** Mass removal will effectively reduce source of groundwater contamination. The addition of oxygen for enhanced intrinsic biodegradation is applicable to organic constituents. Injection of air may follow preferential pathways and not contact all areas of contamination.	**GOOD** Decreases the hydrocarbon mass and degrades organic compounds to less to non-toxic daughter products. Will enhance the intrinsic biodegradation, adsorption, and dispersion.	**MODERATE** Enances current SVE mass removal activities and stimulates naturally occuring hydrocarbon bio-degradation.	**GOOD** This alternative uses proven technology and required equipment is readily available from local suppliers. Requires installation of additional remediation and monitoring wells in and around treatment areas. Requires installation of aboveground or underground horizontal conveyance piping. Both the mass removal by vapor extraction and aerobic enhancement approach is applicable to hydrocarbon constituents.	**MODERATE** Primary costs are remediation wells, abtatement equipment for treating extracted vapors, equipment for supplying oxygen to the subsurface, operation and maintenance of equipment, and monitoring. Energy costs are moderate to operate equipment. Operational and monitoring costs would extent for a relatively long time, depending on natural degradation rates of hydrocarbons.	**LIKELY** Approach adds protection of human health and environment through the removal of contaminants with proven technologies.	**LIKELY** Provides added protection to local environment over time. Ongoing remediation and IECs would have moderate impacts on future use of the property.
OVERALL SITE MANAGEMENT RESPONSE ACTION ALTERNATIVES										
Alternative 6: Implement Engineering and Institutional Controls	- Cap site with buildings, pavement, or clean soil - Reduce vapor intrusion concerns with vapor barrier and sub-surface depressurization beneath future buildings - Restrict on-site land use through land use covenant (LUC) - Prepare Site Management Plan associated with LUC - Prepare soil management plan to provide guidance during Site redevelopment	**GOOD** This approach would remove the most highly impacted soils and reduce exposure risk to residual contaminants. IECs would be necessary as significant contamination mass would be left in place and capped by backfill or other barriers. Anticipate long-term monitoring following implementation and other remediation measures to address potential off-site migration of CoCs.	**GOOD** Complies. Management, safety, and monitoring plans are required to address excavated soil handling and on-going exposure minimization measures (IECs). Site Management Plan For IEC inspections an maintenance is also required.	**MODERATE** Reduces risk of exposure to future site occupants from residual on-site contaminants.	**MODERATE** Remediation of highest impacted soil by removal reduces contaminant mass. Remediation of residual dissolved contaminants in groundwater by natural attenuation also eliminates chemical toxicity, mobility, and volume of groundwater plume. Capping the residual contamination in soil and implementing IECs will reduce exposure risks for future site occupants.	**MODERATE** Remediation effort will have immediate results for partial hydrocarbon removal from the site. Equipment and on-site treatment related emissions will have short-term increase as will the potential for exposure from volatization, fugitive dust during the excavation and handling of soil. Compliance with local air regulations, coastal permitting and safety protocols will be required.	**GOOD** Soil capping and soil vapor barriers are a readily available and understood technology. Imported soil will be transported to the site per local authority guidelines. Groundwater monitoring for COCs required for longterm term to confirm eeffectiveness of remediation efforts to reduce off-site migration of CoCs and natual attentuation of residual contaminants.	**MODERATE** Short-term costs are moderately high due to labor and equipment during both soil removal and installing engineering controls during building construction. Longterm monitoring and O&M of IECs and groundwater management systems(s) to prevent off-site migration of CoCs are also a significant cost.	**Likely** Approach is protective of human health and environment, providing protection to off-site groundwater.	**Likely** Provides protection of off-site groundwater and on-site receptors. Engine emissions and fugitive dust will be mitigated through construction management requirements. Short term traffic impacts during soil removal and backfill delivery. Ongoing longterm monitoring and IECs would impact future use of the property.

TABLE 7-2
TECHNOLOGY ALTERNATIVES COST COMPARISON
Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

ESTIMATED TOTAL AND UNIT COSTS						
Technology Alternative	**1 - AS & SVE - Flow Through Barrier**	**2 - LNAPL Recovery**	**3 - Monitored Natural Attenuation**	**4 - On-site SVE**	**5 - Institutional & Engineering Controls**	**6 - Excavate & Off-site Disposal** Note 1
Capital Costs						
Drill and install wells for 1) on-site SVE and 2) AS and SVE Flow Through Barrier	$125,000	--	$50,000	$205,000	--	--
Purchase and installation of AS and SVE system	$250,000	--	--	$250,000	--	--
Drill and install three (3) LNAPL recovery wells at $5,000 each	--	$15,000	--	--	--	--
Install conveyance piping for AS and SVE (6,800 ft for on-site SVE and (2,300 ft for barrier) at $30 / ft	$69,000	--	--	$204,000	--	--
Utility service connection (electrical and/or natural gas)	$75,000	$5,000	--	$75,000	--	--
Purchase, deliver, and install three (3) Subsurface Skimmer Units at $14,000 each	--	$42,000	--	--	--	--
Install Geo-Seal™ (116,000 ft^2 building footprints at $4 / ft)	--	--	--	--	$464,000	--
Soil excavation and loading (56,000 yd^3 in place at $51.10 / yd^3)	--	--	--	--	--	$2,861,600
Soil transport and disposal (84,000 tons at $78.90 / ton)	--	--	--	--	--	$6,626,600
Total Capital Costs	**$519,000**	**$62,000**	**$50,000**	**$734,000**	**$464,000**	**$9,488,200**
O&M						
Engineered controls annual inspections and maintenance (For 10 years at $8,000 / year - includes indoor air sampling)	--	--	--	--	$80,000	--
LNAPL transport and recycling - estimate includes 1,000 gals at each LNAPL recovery well, manifest fees and trucking (For 5 years at $2,500 / year)	--	$12,500	--	--	--	--
Annual utility usage: -electrical ($0.14 / KWh); and/or -natural gas ($1.15 / therm)	$175,000	$600	--	$225,000	--	--
Long-term monitoring, natural attenuation residual TPH (10 years)	--	--	$800,000	--	--	--
SVE and Flow Through Barrier AS and SVE O&M (Weekly for 4 years at $200,000 / year, split between systems)	$400,000	--	--	$400,000	--	--
Total O&M Costs	**$575,000**	**$13,100**	**$800,000**	**$625,000**	**$80,000**	**$0**
Total Costs						
Total Cost (Capital and O&M)	**$1,094,000**	**$75,100**	**$850,000**	**$1,359,000**	**$544,000**	**$9,488,200**
Total Cost (Excludes excavation & off-site disposal)	**$3,922,100**					--

Notes:

AS = Air sparge
SVE = Soil vapor extraction
LNAPL = Light non-aqueous phase liquid.
ft = Foot
ft^2 = Square foot
yd^3 = Cubic yard
O&M = Operations & maintenance
kWh = kilowatt-hour

Note 1 Technology identified in shaded column was not selected for final proposed Response Actions.

APPENDIX A

HISTORICAL ANALYTICAL DATA – SOIL, SOIL VAPOR, AND GROUNDWATER

□ISTORICAL SOIL □ATA

NORT□□ EST AN□ SOUT□□ EST PARCELS

Table A-1
Summary of Soil Analytical Results - Hydrocarbon Chain Characterization, Northwest and Southwest Parcels
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Depth ft bgs	Hydrocarbon Chain Identification C6-C8 mg/kg	C8-C10 mg/kg	C10-C12 mg/kg	C12-C14 mg/kg	C14-C16 mg/kg	C16-C18 mg/kg	C18-C20 mg/kg	C20-C22 mg/kg	C22-C24 mg/kg	C24-C26 mg/kg	C26-C28 mg/kg	C28-C32 mg/kg	C32-C34 mg/kg	C34-C36 mg/kg	C36-C40 mg/kg	C40-C44 mg/kg	TPH (C5-C12)[Note 1] mg/kg	TPH (C13-C22)[Note 2] mg/kg	TPH (C23-C44)[Note 3] mg/kg
Final Screening Level[4] Soil Commerical/Industrial			**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**420**	**440**	**33,000**
NORTHWEST PARCEL																					
AN-01	1/4/2017	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<8.0
	1/4/2017	20	<1.0	<1.0	<1.0	**2.0**	**1.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	**2.1**	<8.0
AN-02	1/4/2017	6.5	<50	<50	**430**	**1,600**	**2,000**	**1,300**	**880**	**1,800**	**2,900**	**4,200**	**5,000**	**8,700**	**2,100**	**1,600**	**1,800**	**1,400**	**430**	**6,780**	**26,250**
	1/4/2017	10	<1.0	<1.0	<1.0	**1.7**	**1.9**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	**2.8**	<8.0
	1/4/2017	30	**6.0**	**70**	**140**	**170**	**120**	**64**	**36**	**10**	**6.7**	**3.4**	**1.3**	**1.7**	<1.0	<1.0	<1.0	<1.0	**216**	**315**	**10**
AN-03	1/5/2017	5.5	**260**	**3,100**	**2,700**	**810**	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	**6,060**	**405**	<400
	1/5/2017	10	**46**	**650**	**750**	**320**	**23**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**1,446**	**183**	<80
	1/5/2017	20.5	**2.6**	**84**	**140**	**51**	**1.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**227**	**27**	<8.0
AN-05	1/5/2017	5	**380**	**930**	**1,700**	**1,700**	**3,000**	**2,600**	**1,400**	**1,200**	**780**	**200**	**140**	**140**	**22**	**11**	<10	<10	**3,010**	**9,050**	**892**
	1/5/2017	10	**4.9**	**33**	**92**	**92**	**59**	**49**	**23**	**21**	**13**	**6.0**	**6.4**	**5.7**	<1.0	<1.0	<1.0	<1.0	**130**	**198**	**25**
	1/5/2017	20	<1.0	**10**	**31**	**43**	**25**	**9.3**	**6.3**	**4.9**	**2.8**	**2.6**	**1.6**	**2.8**	<1.0	<1.0	<1.0	<1.0	**41**	**67**	**8**
AN-13	1/9/2017	5.5	**23**	**150**	**890**	**1,400**	**1,200**	**790**	**640**	**210**	**120**	**72**	**13**	**12**	<10	<10	<10	<10	**1,063**	**3,540**	**157**
	1/9/2017	9	**680**	**810**	**3,100**	**4,900**	**3,800**	**2,600**	**1,800**	**840**	**430**	**220**	**44**	**24**	<10	<10	<10	<10	**4,590**	**11,490**	**503**
	1/9/2017	15	**310**	**610**	**1,600**	**2,300**	**1,700**	**970**	**700**	**330**	**160**	**93**	**21**	**18**	<10	<10	<10	<10	**2,520**	**4,850**	**212**
	1/9/2017	20	**28**	**170**	**390**	**550**	**440**	**250**	**190**	**97**	**40**	**22**	<10	<10	<10	<10	<10	<10	**588**	**1,252**	**42**
AN-20	1/18/2017	8	**100**	**760**	**430**	**92**	<10	<10	<10	<10	<10	<10	<10	**16**	**10**	<10	**10**	<10	**1,290**	**46**	**36**
	1/18/2017	10	**24**	**230**	**78**	**7.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**332**	**3.7**	<8.0
	1/18/2017	15	**31**	**450**	**210**	**24**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**691**	**12**	<80
	1/18/2017	20	**16**	**320**	**140**	**14**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**476**	**7**	<80
AN-22	5/18/2017	4.5	<1.0	**24**	**88**	**62**	**6.0**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**112**	**37**	<8.0
AN-22a	5/18/2017	10	**620**	**2,400**	**2,500**	**1,100**	**62**	**7.0**	<5.0	<5.0	<5.0	<5.0	<5.0	**5.9**	<5.0	<5.0	<5.0	<5.0	**5,520**	**619**	**5.9**
SB1	5/16/2006	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3,112**	**14,726**	**1,053**
	5/16/2006	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**440**	**3,731**	**231**
	5/16/2006	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2,410**	**4,567**	**185**
	5/16/2006	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1,958**	**3,614**	**147**
	5/16/2006	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2,243**	**6,048**	**268**
	5/16/2006	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1,562**	**561**	**17**
	5/16/2006	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1,296**	**1,910**	**71**
SB-2	5/15/2016	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2,592**	**6,314**	**7,337**
	5/15/2016	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4.5	<25	<48
	5/15/2016	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4.5	<25	<48
	5/15/2016	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4.5	<25	<48
	5/15/2016	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3.2**	<25	<48
	5/15/2016	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2.7**	<25	<48
	5/15/2016	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3,252**	**2,931**	**30**
SB-4	5/16/2016	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**11,782**	**1,052**	<48
	5/16/2016	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3,134**	**401**	<48
	5/16/2016	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**6,737**	**457**	<48
	5/16/2016	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5,814**	**462**	<48
	5/16/2016	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1,752**	**638**	<48
	5/16/2016	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3,799**	**363**	<48
	5/16/2016	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**11,840**	**4,942**	<238
	5/16/2016	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5,769**	**594**	<48

Table A-1
Summary of Soil Analytical Results - Hydrocarbon Chain Characterization, Northwest and Southwest Parcels
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Depth ft bgs	Hydrocarbon Chain Identification																TPH (C5-C12)[Note 1]	TPH (C13-C22)[Note 2]	TPH (C23-C44)[Note 3]
			C6-C8	C8-C10	C10-C12	C12-C14	C14-C16	C16-C18	C18-C20	C20-C22	C22-C24	C24-C26	C26-C28	C28-C32	C32-C34	C34-C36	C36-C40	C40-C44			
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Final Screening Level[4] Soil Commerical/Industrial			**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**420**	**440**	**33,000**
SOUTHWEST PARCEL																					
MW-20	1/10/2017	7	<1.0	**17**	**24**	**30**	**35**	**32**	**30**	**22**	**17**	**16**	**15**	**31**	**13**	**6.6**	**16**	**5.1**	**41**	**134**	**111**
	1/10/2017	11	<5.0	**130**	**230**	**310**	**250**	**230**	**230**	**160**	**160**	**130**	**140**	**320**	**130**	**68**	**140**	**81**	**360**	**1,025**	**1,089**
	1/10/2017	19	<10	**390**	**1,200**	**2,000**	**1,600**	**1,200**	**840**	**400**	**180**	**120**	**51**	**71**	**16**	**12**	**10**	<10	**1,590**	**5,040**	**370**
SB-3	5/15/2016	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2,939**	**5,094**	**1,375**
	5/15/2016	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1,124**	**335**	**16**
	5/15/2016	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**7,026**	**3,014**	**206**
	5/15/2016	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2,261**	**11,577**	**793**
	5/15/2016	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3,483**	**3,561**	**250**

Notes:
TPH = Total petroleum hydrocarbons, by EPA Method 8015M.
C4-C12 = Carbon range.
ft bgs = feet below ground surface.
mg/kg = milligram per kilogram.
NV = No value.
- = Data not presented herein. Refer to Tetra Tech, 2006.
<X.XX = Not detected above indicated reporting limit (RL).

Bold values were reported above laboratory detection limits.
Shaded and bold value exceeds Table 4-1: Final Screening Levels for Soil - Commercial/Industrial Scenario (Apex-SGI, 2017).
[1] TPH (C5-C12) was calculated based on summing detected results from C6-C8, C8-C10, and C10-C12.
[2] TPH (C13-C22) was calculated based on summing detected results of one half C12-C13 and the results between C14 and C22.
[3] TPH (C23-C44) was calculated based on summing the results of one half C22-C24 and the results between C24 and C44.
[4] Final Screening Level, Soil Commercial/Industrial is from Table 4-1: Final Screening Levels for Soil - Commercial/Industrial Scenario (Apex-SGI, 2017).

References:
The Source Group, Inc., a division of Apex Companies, LLC (Apex-SGI). 2017. Response Plan and Remedial Technology Evaluation, Former Chemoil Refinery, Signal Hill, California. June.
Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

Table A-2
Summary of Soil Analytical Results - Volatile Organic Compounds, Northwest and Southwest Parcels
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Depth ft bgs	TPHg (C4-C12) mg/kg	Acetone mg/kg	Benzene mg/kg	TBA mg/kg	tert-Butylbenzene mg/kg	sec-Butylbenzene mg/kg	n-Butylbenzene mg/kg	Ethylbenzene mg/kg	Isopropylbenzene mg/kg	4-Isopropyltoluene mg/kg	MTBE mg/kg	Naphthalene mg/kg	n-Propylbenzene mg/kg	Toluene mg/kg	1,3,5-TMB mg/kg	1,2,4-TMB mg/kg	o-Xylene mg/kg	m,p-Xylenes mg/kg	Total Xylenes mg/kg
Final Screening Level [1] Soil Commerical/Industrial			**420**	**150**	**0.15**	**1.2**	**26**	**26**	**26**	**22**	**77**	**77**	**1.3**	**1.7**	**26**	**16**	**33**	**33**	**2,800**	**2,400**	**176**
NORTHWEST PARCEL																					
AN-01	1/4/2017	10	<0.50	<0.050	<0.0020	<0.020	<0.0050	<0.0050	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0020	<0.0050	<0.0050	<0.0020	<0.0020	<0.0040
	1/4/2017	20	<0.50	<0.050	<0.0020	<0.020	<0.0050	<0.0050	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0020	<0.0050	<0.0050	<0.0020	<0.0020	<0.0040
AN-02	1/4/2017	6.5	**370**	<0.10	**0.089**	<0.040	<0.010	<0.010	**0.011**	**0.12**	**0.020**	**0.011**	<0.010	**0.05**	**0.021**	**0.0052**	**0.014**	**0.070**	**0.015**	**0.022**	**0.037**
	1/4/2017	10	**1.5**	**0.065**	<0.0020	<0.020	<0.0050	<0.0050	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0020	<0.0050	<0.0050	<0.0020	<0.0020	<0.0040
	1/4/2017	30	**380**	<0.10	<0.0040	<0.040	**0.016**	**0.20**	**0.14**	**0.0045**	**0.24**	<0.010	<0.010	**1.6**	**0.53**	<0.0040	<0.010	<0.010	<0.0040	<0.0040	<0.0080
AN-03	1/5/2017	5.5	**19,000**	<20	**1.7**	<8.0	<2.0	**10**	**8.8**	**28**	**13**	**16**	<2.0	**19**	**19**	<0.80	**250**	**170**	**36**	**210**	**246**
	1/5/2017	10	**6,800**	<50	<2.0	<20	<5.0	**7.1**	<5.0	**8.7**	<5.0	<5.0	<5.0	<10	**15**	<2.0	**7.9**	**12**	<2.0	**3.7**	**3.7**
	1/5/2017	20.5	**250**	<5.0	<0.20	<2.0	<0.50	**0.73**	<0.50	<0.20	<0.50	**0.75**	<0.50	**1.6**	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.40
AN-05	1/5/2017	5	**3,800**	<5.0	**1.6**	<2.0	<0.50	**3.7**	**6.7**	**7.8**	**3.1**	**4.3**	<0.50	**13**	**6.2**	<0.20	**8.7**	**32**	**1.4**	**12**	**13.4**
	1/5/2017	10	**510**	<5.0	<0.20	<2.0	<0.50	<0.50	**0.77**	**0.93**	<0.50	<0.50	<0.50	**1.7**	**0.79**	<0.20	**0.77**	**2.6**	<0.20	**0.56**	**0.56**
	1/5/2017	10 (DUP)	**620**	<5.0	<0.20	<2.0	<0.50	<0.50	**0.85**	**0.79**	<0.50	<0.50	<0.50	**1.9**	**0.65**	<0.20	**0.74**	**2.7**	<0.20	**0.52**	**0.52**
	1/5/2017	20	**2,700**	<5.0	**0.27**	<2.0	<0.50	**1.7**	**2.5**	**6.5**	**2.1**	**1.5**	<0.50	**6.4**	**3.8**	<0.20	**2.2**	**8.9**	<0.20	**2.0**	**2.0**
AN-13	1/9/2017	5.5	**8.1**	<0.10	<0.0040	<0.040	<0.010	**0.034**	**0.048**	<0.0040	**0.012**	<0.010	<0.010	**0.11**	**0.033**	<0.0040	<0.010	<0.010	<0.0040	<0.0040	<0.0080
	1/9/2017	9	**250**	<0.10	**0.17**	<0.040	<0.010	**0.20**	**0.29**	**0.96**	**0.38**	<0.010	<0.010	**2.9**	**0.40**	<0.0040	<0.010	<0.010	**0.0080**	<0.0040	**0.0080**
	1/9/2017	15	**1,500**	<5.0	**0.42**	<2.0	<0.50	**2.7**	**4.0**	**7.9**	**4.3**	<0.50	<0.50	**16**	**5.4**	<0.20	<0.50	<0.50	<0.20	<0.20	<0.40
	1/9/2017	20	**470**	<5.0	<0.20	<2.0	<0.50	**0.90**	**1.0**	**2.0**	**1.0**	<0.50	<0.50	**5.2**	**1.8**	<0.20	<0.50	<0.50	<0.20	<0.20	<0.40
AN-20	1/18/2017	8	**5,500**	<10	**8.4**	<4.0	<1.0	**5.5**	**9.4**	**27**	**12**	**8.5**	<1.0	**9.9**	**15**	**9.2**	**16**	**54**	**36**	**70**	**106**
	1/18/2017	10	**1,200**	<5.0	**1.2**	<2.0	<0.50	**1.9**	**2.6**	**6.6**	**3.0**	**2.6**	<0.50	**2.2**	**4.3**	**0.26**	**4.6**	**13**	**5.0**	**15**	**20**
	1/18/2017	15	**920**	<5.0	**0.26**	<2.0	<0.50	**1.5**	**2.3**	**3.9**	**1.9**	**2.2**	<0.50	**1.6**	**3.0**	<0.20	**3.5**	**10**	**1.3**	**7.4**	**8.7**
	1/18/2017	20	**940**	<5.0	<0.20	<2.0	<0.50	**1.1**	**1.8**	**1.9**	**0.79**	**1.6**	<0.50	**1.2**	**1.9**	<0.20	**2.0**	**7.4**	**0.43**	**2.7**	**3.1**
AN-22	5/18/2017	4.5	**190**	<2.5	<0.10	<1.0	<0.25	<0.25	**0.3**	<0.10	<0.25	**0.28**	<0.25	**0.51**	<0.25	<0.10	**0.33**	**0.81**	<0.10	<0.10	<0.20
AN-22a	5/18/2017	10	**4,900**	<10	<0.40	<4.0	<1.0	**6.4**	**5.0**	**12**	**6.8**	**9.7**	<1.0	**16**	**13**	<0.40	**15**	**35**	<0.40	**6.6**	**6.6**
SB1	5/16/2006	4	--	ND	**0.486**	<0.100	**0.104**	**1.300**	<0.025	**1.310**	**0.528**	ND	ND	**16.800**	**1.000**	**0.263**	**0.0261J**	**2.770**	**0.218**	**0.200**	**0.418**
	5/16/2006	10	--	ND	**0.076**	**0.0888J**	<0.005	**0.012**	<0.005	**0.182**	**0.037**	ND	ND	**0.124**	**0.037**	**0.0030J**	**0.0050J**	**0.012**	**0.0048J**	**0.0067J**	**0.0115 J**
	5/16/2006	15	--	ND	**0.121**	<0.200	**0.121**	**2.070**	<0.050	**2.500**	**2.450**	ND	ND	**9.960**	**3.390**	**0.467**	**1.700**	**7.710**	**0.229**	**0.890**	**1.119**
	5/16/2006	20	--	ND	**0.142**	<0.120	**0.073**	**1.270**	<0.030	**1.270**	**1.650**	ND	ND	**6.040**	**2.260**	**0.297**	**0.957**	**4.380**	**0.136**	**0.518**	**0.654**
	5/16/2006	25	--	ND	**0.202**	<0.100	**0.079**	**1.330**	<0.025	**2.530**	**1.840**	ND	ND	**6.190**	**2.430**	**0.308**	**0.800**	**3.850**	**0.149**	**0.560**	**0.709**
	5/16/2006	30	--	ND	**0.236**	<0.080	**0.066**	**1.050**	<0.020	**1.780**	**1.550**	ND	ND	**5.140**	**2.000**	**0.230**	**0.775**	**3.530**	**0.134**	**0.513**	**0.647**
	5/16/2006	35	--	ND	**0.110**	<0.220	**0.0692J**	**1.040**	<0.055	**1.150**	**1.980**	ND	ND	**4.060**	**2.300**	**0.566**	**0.211**	**1.250**	**0.0915J**	**0.279**	**0.3705**
SB2	5/15/2006	5	--	ND	**11.300**	<0.100	**0.068**	**0.533**	<0.025	**9.970**	**1.480**	ND	ND	**0.431**	**1.260**	**0.472**	**0.290**	**1.020**	**0.184**	**0.640**	**0.824**
	5/15/2006	10	--	ND	**0.173**	<0.020	<0.005	<0.005	<0.005	**0.024**	<0.005	ND	ND	<0.005	<0.005	0.002J	<0.005	<0.005	<0.002	<0.002	<0.002
	5/15/2006	16	--	ND	**0.0084J**	<0.020	<0.005	<0.005	<0.005	**0.0079J**	<0.005	ND	ND	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.002	<0.002
	5/15/2006	20	--	ND	**0.0063J**	<0.020	<0.005	<0.005	<0.005	**0.0047J**	<0.005	ND	ND	**0.011**	<0.005	<0.002	<0.005	<0.005	<0.002	<0.002	<0.002
	5/15/2006	25	--	ND	**0.0049J**	<0.020	<0.005	<0.005	<0.005	**0.0063J**	<0.005	ND	ND	**0.0081J**	<0.005	<0.002	<0.005	<0.005	<0.002	<0.002	<0.002
	5/15/2006	30	--	ND	**0.018**	<0.020	<0.005	**0.017**	**0.013**	**0.111**	**0.039**	ND	ND	**0.079**	**0.054**	**0.0033J**	<0.005	**0.018**	<0.002	**0.003J**	**0.003J**
	5/15/2006	35	--	ND	**3.280**	<0.080	**0.162**	**2.110**	<0.020	**13.300**	**3.300**	ND	ND	**10.800**	**4.920**	**0.307**	**2.970**	**10.300**	**0.240**	**0.945**	**1.185**
SB4	5/16/2006	5	--	ND	**5.900**	<0.200	**0.590**	**10.700**	<0.050	**17.700**	**10.900**	ND	ND	**21.900**	**18.000**	**0.488**	**0.151**	**60.000**	**0.157**	**7.290**	**7.447**
	5/16/2006	10	--	ND	**3.470**	<0.200	**0.304**	**5.140**	<0.050	**13.900**	**5.140**	ND	ND	**6.400**	**8.350**	**0.855**	**9.700**	**29.600**	**6.230**	**35.200**	**41.430**
	5/16/2006	15	--	ND	**0.979**	<0.080	**0.150**	**2.050**	<0.020	**5.570**	**2.160**	ND	ND	**4.770**	**3.640**	**1.470**	**6.340**	**18.100**	**7.180**	**23.000**	**30.180**
	5/16/2006	20	--	ND	**7.270**	<0.260	**0.631**	**11.100**	<0.065	**19.600**	**10.700**	ND	ND	**24.300**	**17.900**	**1.930**	**9.080**	**61.000**	**3.080**	**19.600**	**22.680**
	5/16/2006	25	--	ND	**0.092**	<0.180	**0.113**	**1.540**	<0.045	**2.270**	**1.310**	ND	ND	**4.880**	**2.170**	**0.711**	**4.640**	**13.800**	**3.650**	**11.200**	**14.850**
	5/16/2006	30	--	ND	**10.800**	<0.200	**0.322**	**5.200**	<0.050	**18.800**	**6.110**	ND	ND	**19.900**	**10.300**	**0.478**	**13.600**	**44.500**	**3.350**	**40.000**	**43.350**
	5/16/2006	35	--	ND	**4.080**	<0.100	**0.558**	**7.970**	<0.025	**20.900**	**8.270**	ND	ND	**36.800**	**14.500**	**3.390**	**27.200**	**79.400**	**26.600**	**90.300**	**116.900**
	5/16/2006	40	--	ND	**1.200**	<0.200	**0.289**	**3.970**	<0.050	**8.280**	**3.760**	ND	ND	**11.200**	**6.020**	**1.860**	**12.300**	**34.800**	**12.100**	**38.300**	**50.400**

Table A-2
Summary of Soil Analytical Results - Volatile Organic Compounds, Northwest and Southwest Parcels
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Depth ft bgs	TPHg (C4-C12) mg/kg	Acetone mg/kg	Benzene mg/kg	TBA mg/kg	tert-Butylbenzene mg/kg	sec-Butylbenzene mg/kg	n-Butylbenzene mg/kg	Ethylbenzene mg/kg	Isopropylbenzene mg/kg	4-Isopropyltoluene mg/kg	MTBE mg/kg	Naphthalene mg/kg	n-Propylbenzene mg/kg	Toluene mg/kg	1,3,5-TMB mg/kg	1,2,4-TMB mg/kg	o-Xylene mg/kg	m,p-Xylenes mg/kg	Total Xylenes mg/kg
Final Screening Level [1] Soil Commerical/Industrial			**420**	**150**	**0.15**	**1.2**	**26**	**26**	**26**	**22**	**77**	**77**	**1.3**	**1.7**	**26**	**16**	**33**	**33**	**2,800**	**2,400**	**176**
SOUTHWEST PARCEL																					
MW-20	1/10/2017	7	**11**	<0.10	<0.0040	<0.040	<0.010	**0.037**	**0.017**	**0.019**	**0.043**	<0.010	<0.010	**0.052**	**0.062**	<0.0040	<0.010	<0.010	<0.0040	<0.0040	<0.0080
	1/10/2017	11	**260**	<5.0	<0.20	<2.0	<0.50	**0.66**	<0.50	<0.20	<0.50	<0.50	<0.50	<1.0	**1.1**	<0.20	<0.50	<0.50	<0.20	<0.20	<0.40
	1/10/2017	19	**600**	<5.0	<0.20	<2.0	<0.50	**2.3**	**1.7**	<0.20	**2.1**	<0.50	<0.50	**12**	**3.5**	<0.20	<0.50	<0.50	<0.20	<0.20	<0.40
SB3	5/15/2006	5	--	ND	ND	ND	**0.606**	**6.230**	**3.000**	**8.990**	**7.800**	ND	ND	**19.000**	**12.500**	**0.257**	ND	**0.050**	**0.051**	**0.051J**	**1.02**
	5/15/2006	10	--	ND	**0.373**	ND	**0.102**	**0.792**	ND	**3.230**	**1.200**	ND	ND	**4.200**	**1.700**	**3.900**	**4.530**	**10.900**	**5.760**	**20.400**	**26.160**
	5/15/2006	15	--	ND	**0.086**	ND	**0.926**	**8.200**	ND	**15.600**	**9.770**	ND	ND	**50.700**	**15.200**	**0.966**	**12.500**	**96.500**	**7.600**	**23.700**	**31.300**
	5/15/2006	20	--	ND	**0.0462J**	ND	**0.587**	**5.970**	ND	ND	**7.160**	ND	ND	**30.600**	**10.100**	**0.449**	**1.220**	**60.000**	**1.450**	**9.000**	**10.450**
	5/15/2006	25	--	ND	ND	ND	**0.477**	**5.060**	ND	**0.268**	**6.930**	ND	ND	**23.100**	**10.600**	**0.284**	**0.490**	**45.100**	**0.103**	**9.200**	**9.303**

Notes:
VOC = Volatile organic compounds , fuel oxygenates, and TPHg, by EPA Method 8260B.
TPHg = Total petroleum hydrocarbons as gasoline.
TBA = tert-Butyl alcohol.
MTBE = Methyl-tert-butyl ether.
TMB = Trimethylbenzene.
ft bgs = feet below ground surface.
mg/kg = milligram per kilogram.
ND = Not detected at laboratory reporting limit. See Tetra Tech, 2006 for laboratory reporting limit.
<X.XX = Not detected above indicated reporting limit (RL).
J = Analyte was detected; however, analyte concentration is an estimated value which is between the method detection limit and the practical quantitation limit.
-- = Not analyzed.

Bold values were reported above laboratory detection limits.
Shaded and bold value exceeds Table 4-1: Final Screening Levels for Soil - Commercial/Industrial Scenario (Apex-SGI, 2017).
[1] Final Screening Level, Soil Commercial/Industrial is from Table 4-1: Final Screening Levels for Soil - Commercial/Industrial Scenario (Apex-SGI, 2017).

References:
The Source Group, Inc., a division of Apex Companies, LLC (Apex-SGI). 2017. Response Plan and Remedial Technology Evaluation, Former Chemoil Refinery, Signal Hill, California. June.
Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

Table A-3
Summary of Soil Analytical Results - Polycyclic Aromatic Hydrocarbons and Lead, Northwest and Southwest Parcels
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Depth ft bgs	Acenaphthene mg/kg	Acenaphthylene mg/kg	Anthracene mg/kg	Benz(a)anthracene mg/kg	Benzo(a)pyrene mg/kg	Benzo(b)fluoranthene mg/kg	Benzo(g,h,i)perylene mg/kg	Benzo(k)fluoranthene mg/kg	Chrysene mg/kg	Dibenzo(a,h)anthracene mg/kg	Fluoranthene mg/kg	Fluorene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Naphthalene mg/kg	Phenanthrene mg/kg	Pyrene mg/kg	Lead mg/kg
Final Screening Level [1] Soil Commerical/Industrial			**5.5**	**5.5**	**2.8**	**0.0042**	**0.004**	**0.041**	**27**	**0.4**	**1.2**	**0.013**	**60**	**5.4**	**0.13**	**1.7**	**11**	**13**	**320**
NORTHWEST PARCEL																			
AN-01	1/4/2017	10	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040	<0.010	<0.010	<0.010	--
	1/4/2017	20	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040	<0.010	<0.010	<0.010	--
AN-02	1/4/2017	6.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<20	<5.0	<5.0	<5.0	**34**
	1/4/2017	10	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040	<0.010	<0.010	<0.010	--
	1/4/2017	30	**0.043**	**0.022**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	**0.090**	<0.040	**0.67**	**0.084**	<0.010	--
AN-03	1/5/2017	5.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.80	**24**	<0.20	<0.20	**4.4**
	1/5/2017	10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.40	**3.0**	<0.10	<0.10	--
	1/5/2017	20.5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	**0.43**	<0.050	<0.050	--
AN-05	1/5/2017	5	<0.50	<0.50	**2.0**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**0.57**	**3.7**	<2.0	**11**	**9.2**	**1.2**	**6.8**
	1/5/2017	10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.40	**0.76**	**0.20**	<0.10	--
	1/5/2017	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	**4.0**	**0.69**	<0.50	--
AN-13	1/9/2017	5.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	**0.33**	<0.40	**0.62**	**0.34**	<0.10	--
	1/9/2017	9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**2.2**	<2.0	**14**	**2.0**	<0.50	**5.1**
	1/9/2017	15	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**1.4**	<2.0	**15**	**1.2**	<0.50	--
	1/9/2017	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**0.65**	<2.0	**3.2**	**0.55**	<0.50	--
AN-20	1/18/2017	8	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.40	**7.3**	<0.10	<0.10	--
	1/18/2017	10	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040	**0.59**	<0.010	<0.010	--
	1/18/2017	15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040	**0.96**	<0.010	<0.010	--
	1/18/2017	20	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040	**0.86**	<0.010	<0.010	--
SB1	5/16/2006	4	**0.794**	ND	**0.114**	ND	ND	ND	ND	ND	ND	ND	**0.097**	**3.680**	ND	**17.300**	**26.500**	**1.240**	--
	5/16/2006	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2006	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2006	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2006	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2006	30	**0.033**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.104**	ND	**0.226**	**0.424**	ND	--
	5/16/2006	35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB2	5/15/2006	5	**0.122**	ND	**0.160**	ND	ND	ND	ND	ND	**1.083**	ND	**0.063**	**1.340**	ND	ND	**4.050**	**0.712**	**4.20J**
	5/15/2006	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/15/2006	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**4.90J**
	5/15/2006	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/15/2006	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/15/2006	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/15/2006	35	--	--	--	--	--	--	--	--	--		--	--		--	--	--	--
SB4	5/16/2006	5	**0.159**	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.010	**0.068**	ND	**3.300**	**1.040**	ND	**22.1**
	5/16/2006	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2006	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**4.00J**
	5/16/2006	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2006	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2006	30	**0.045**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0180J**	ND	**3.130**	**0.059**	ND	ND
	5/16/2006	35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2006	40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table A-3
Summary of Soil Analytical Results - Polycyclic Aromatic Hydrocarbons and Lead, Northwest and Southwest Parcels
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Depth	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Lead
		ft bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Final Screening Level [1] Soil Commerical/Industrial			**5.5**	**5.5**	**2.8**	**0.0042**	**0.004**	**0.041**	**27**	**0.4**	**1.2**	**0.013**	**60**	**5.4**	**0.13**	**1.7**	**11**	**13**	**320**
SOUTHWEST PARCEL																			
MW-20	1/10/2017	7	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040	<0.010	<0.010	<0.010	**4.9**
	1/10/2017	11	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.80	**0.24**	<0.20	<0.20	<0.20
	1/10/2017	19	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.40	**8.3**	**0.80**	<0.10	<0.10
SB3	5/15/2006	4	**0.409**	ND	ND	**1.010**	ND	ND	ND	ND	**0.688**	ND	**0.048**	**0.870**	ND	**11.100**	**7.630**	**7.630**	**0.522**
	5/15/2006	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/15/2006	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/15/2006	20	**0.564**	ND	**0.900**	ND	ND	ND	ND	ND	**0.832**	ND	**0.089**	**4.350**	ND	**52.900**	**30.900**	**30.900**	**10.700**
	5/15/2006	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
PAH = Polycyclic aromatic hydrocarbons, by EPA Method 8270C.
Total lead, by EPA Method 6010B.
ft bgs = feet below ground surface.
mg/kg = milligram per kilogram.
ND = Not detected at laboratory reporting limit. See Tetra Tech, 2006 for laboratory reporting limit.
<X.XX = Not detected above indicated reporting limit (RL).
-- = Not analyzed.

Bold values were reported above laboratory detection limits.
Shaded and bold value exceeds Table 4-1: Final Screening Levels for Soil - Commerical/Industrial Scenario (Apex-SGI, 2017).
[1] Final Screening Level, Soil Commercial/Industrial is from Table 4-1: Final Screening Levels for Soil - Commercial/Industrial Scenario (Apex-SGI, 2017)

References:
The Source Group, Inc., a division of Apex Companies, LLC (Apex-SGI). 2017. Response Plan and Remedial Technology Evaluation, Former Chemoil Refinery, Signal Hill, California. June.
Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

□ISTORICAL SOIL □ATA

EAST PARCEL

Table A-4
Summary of Analytical Results for Total Petroleum Hydrocarbons (TPH) in Soil, East Parcel
Former ChemOil Refinery
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	Sample Depth	TPHg	TPHd	U. S. EPA Method 8015 - TPH																	Total TPH[1]		
							C06-C08	C08-C10	C10-C12	C12-C14	C14-C16	C16-C18	C18-C20	C20-C22	C22-C24	C24-C26	C26-C28	C28-C32	C32-C34	C34-C38	C38-C40	C40-C44	Total	C5-C12 (Note 2)	C13-C22 (Note 3)	C23-C44 (Note 4)
				feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Depth Range: 0 to 10 feet bgs																										
B-1	EEI	(a) (b) (c)	1988	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-1	EEI	(a) (b) (c) (d)	1988	10	--	ND<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-2	EEI	(a) (b) (c)	1988	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-2	EEI	(a) (b) (c)	1988	10	--	**11,000 ***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	2	**2,000**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	10	--	**1,100**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	10	--	**410 ***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
110-95-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**13**	ND<1	ND<1	**6.5**
110-95-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**8.8**	ND<1	ND<1	ND<1	**2.6**	ND<1	**11**	ND<1	ND<1	**11.4**
110-95-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
125-310-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**11**	**14**	**27**	**24**	**24**	**25**	**7.4**	**11**	ND<1	ND<1	**143**	ND<1	**25**	**104.9**
125-310-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**15**	ND<1	ND<1	**1.9**	ND<1	ND<1	ND<1	ND<1	**17**	ND<1	ND<1	**9.4**
125-310-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
180-75-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
180-75-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
180-75-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
200-310-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**15**	ND<1	ND<1	**1.9**	ND<1	ND<1	ND<1	ND<1	**17**	ND<1	ND<1	**9.4**
200-310-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
200-310-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
204-95-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	**42**	**91**	**180**	**240**	**450**	**270**	**220**	**430**	**200**	**2,123**	ND<20	**42**	**2,036**
204-95-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**14**	ND<1	ND<1	ND<1	**3.0**	**4.8**	**22**	ND<1	ND<1	**21.8**
204-95-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**28**	ND<1	ND<1	ND<1	**4.0**	**2.1**	**34**	ND<1	ND<1	**34.1**
30-195-1	TSG	(a) (b) (c) (d) (e) (g)	1999	1	**24**	--	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
30-195-5	TSG	(a) (b) (c) (d) (e) (g)	1999	5	**30**	--	ND<1	**6.3**	**3.0**	ND<1	ND<1	**3.5**	**3.9**	**1.8**	**1.2**	ND<1	**7.1**	ND<1	**1.1**	ND<1	ND<1	ND<1	**28**	**9.3**	**9.2**	**8.8**
30-195-10	TSG	(a) (b) (c) (d) (e) (g)	1999	10	**8.8**	--	ND<1	**6.1**	**1.3**	ND<1	ND<1	**5.3**	**6.9**	**2.8**	**2.9**	**1.7**	**2.1**	ND<1	ND<1	ND<1	ND<1	ND<1	**29**	**7.4**	**15.0**	**5.3**
70-70-1	TSG	(a) (b) (c) (d) (e)	1999	1	**10**	--	ND<20	ND<20	ND<20	ND<20	**510**	**820**	**650**	**320**	**220**	**260**	**590**	**960**	**550**	**470**	**700**	**240**	**6,290**	ND<20	**2,300**	**3,880**
70-70-5	TSG	(a) (b) (c) (d) (e)	1999	5	**7.2**	--	ND<10	ND<10	ND<10	**50**	**310**	**270**	**170**	**59**	**76**	**53**	**56**	**110**	**85**	**52**	**74**	**22**	**1,387**	ND<10	**834**	**490**
70-70-10	TSG	(a) (b) (c) (d) (e)	1999	10	**370**	--	ND<10	**230**	**310**	**580**	**2,300**	**2,300**	**1,300**	**350**	**290**	**470**	**570**	**890**	**470**	**400**	**550**	**170**	**11,180**	**830**	**6,540**	**3,665**
75-195-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**10**	ND<1	ND<1	**7**	ND<1	ND<1	ND<1	ND<1	**17**	ND<1	ND<1	**12**
75-195-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**10**	ND<1	**7.7**	ND<1	ND<1	ND<1	**2.0**	**1.1**	**21**	ND<1	ND<1	**15.8**
75-195-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
B-6-1	TEC	(a) (b) (c)	2001	1	--	**45**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-6-10	TEC	(a) (b) (c)	2001	10	--	**10**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-8-1	TEC	(a) (b) (c)	2001	1	--	**46**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-9-1	TEC	(a) (b) (c)	2001	1	--	**220**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1B	Tetra Tech		06/01/06	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
E1C	Tetra Tech		06/01/06	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**94**	**201**	**92**
E3A	Tetra Tech		06/01/06	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
E5	Tetra Tech		06/01/06	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
E5	Tetra Tech		06/01/06	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
Depth Range: Greater than 10 feet bgs																										
70-70-15	TSG	(a) (b) (c) (d) (e)	1999	15	**370**	--	66	980	2,200	3,300	2,900	2,400	1,700	860	1,200	910	720	740	120	350	88	78	18,612	**4896**	**9,510**	**3,606**
70-70-20	TSG	(a) (b) (c) (d) (e)	1999	20	**760**	--	ND<5	1,800	3,300	8,100	4,300	3,400	2,700	1,400	1,800	1,100	1,300	960	210	480	93	120	31,063	**9150**	**15,850**	**5,163**
70-70-25	TSG	(a) (b) (c) (d) (e)	1999	25	ND<1	--	ND<1	1.2	4.7	11	10	9.1	12	11	16	11	12	8.6	3.7	5.4	2.5	ND<1	118	**11.4**	**47.6**	**51.2**
B-2-40	TEC	(a) (b) (c) (d)	2001	40	--	ND<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-9-15	TEC	(a) (b) (c)	2001	#VALUE!	--	**27**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-9-20	TEC	(a) (b) (c)	2001	20	--	**17**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1B	Tetra Tech		06/01/06	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
E1B	Tetra Tech		06/01/06	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.72**	**7.59 J**	**5.04 J**
E1C	Tetra Tech		06/01/06	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1,829**	**2,540**	**2,162**
E1C	Tetra Tech		06/01/06	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4,999**	**13,030**	**8,238**
E5	Tetra Tech		06/01/06	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
E5	Tetra Tech		06/01/06	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48

Table A-4
Summary of Analytical Results for Total Petroleum Hydrocarbons (TPH) in Soil, East Parcel
Former ChemOil Refinery
Signal Hill, California

Notes:
mg/kg = milligrams per kilogram.
bgs = below ground surface.
U.S. EPA = United States Environmental Protection Agency.
TPH = Total Petroleum Hydrocarbons.
TPHg = total petroleum hydrocarbons as gasoline.
TPHd = total petroleum hydrocarbons as diesel.
ND = not detected.
ND< = less than the laboratory reporting limit in data from Tetra Tech, 2006 samples or analytical detection limit in data from Testa, 2001.
* = Carbon range C8-C30
Consultant listed is the consultant that collected the data. Data from EEI, TSG, and TEC are recorded from TEC, 2001 report.
EEI = Engineering Enterprises, Inc.
TSG = The Source Group, Inc.
TEC = Testa Environmental Corporation
-- = sample not analyzed for compound.
- = Data not presented herein. Refer to Tetra Tech, 2006.
[1] For use in the risk assessment, laboratory analytical results for carbon data within the specific TPH carbon ranges were summed to represent a total TPH value for each carbon range.
[2] TPH (C5-C12) was calculated based on summing detected results from C6-C8, C8-C10, and C10-C12.
[3] TPH (C13-C22) was calculated based on summing detected results of one half C12-C14 and the results between C14 and C22.
[4] TPH (C23-C44) was calculated based on summing the results of one half C22-C24 and the results between C24 and C44.
Data qualifiers from TEC, 2001:
(a) Sample date is unknown. The date listed is the date reported.
(b) Table 5-3 in TEC, 2001 does not indicate the whether this is soil or groundwater data. The table is inferred to be soil data based on the report text.
(c) Table 5-3 in TEC, 2001 does not indicate what units these data are presented in. Units are inferred from the report text.
(d) <1 was not defined in this table. All <1 symbols were assumed to indicate "not detected above the analytical detection limit".
(e)The sum totals of TPH presented in TEC, 2001 did not sum up and were recalculated for this report.
(f) The carbon ranges for TPHg and TPHd were not defined except where indicated.
(g) TSG boring 130-195 is not shown on any figure in TEC, 2001. It is assumed to be boring 130-95 on all figures in TEC, 2001.
References:
TEC. 2001. Report on Additional Subsurface Assessment, Former Chemoil Refinery - Eastern Parcel, Signal Hill, California. December 14.
Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

Table A-5
Summary of Analytical Results for Volatile Organic Compounds (VOCs) in Soil, East Parcel
Former ChemOil Refiney
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	Sample Depth	U.S. EPA Method 8260B - VOCs								
					Benzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Ethylbenzene	Isopropylbenzene	Naphthalene	Toluene	Total Xylenes
				feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Depth Range: 0 to 10 feet bgs													
B-1	EEI	(a) (b) (c)	1988	2	--	--	--	--	--	--	--	--	--
B-1	EEI	(a) (b) (c)	1988	10	--	--	--	--	--	--	--	--	--
B-2	EEI	(a) (b) (c)	1988	2	--	--	--	--	--	--	--	--	--
B-2	EEI	(a) (b) (c)	1988	10	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	2	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	10	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	10	--	--	--	--	--	--	--	--	--
110-95-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
110-95-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
110-95-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
125-310-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
125-310-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
125-310-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
180-75-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
180-75-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
180-75-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
200-310-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
200-310-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
200-310-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
204-95-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
204-95-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
204-95-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
30-195-1	TSG	(a) (b) (c) (e)	1999	1	ND<0.005	--	--	--	**0.017**	--	--	ND<0.005	**0.014**
30-195-5	TSG	(a) (b) (c) (e)	1999	5	ND<0.005	--	--	--	**0.52**	--	--	**0.0068**	**0.13**
30-195-10	TSG	(a) (b) (c) (e)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
70-70-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	**0.024**	--	--	ND<0.005	**0.045**
70-70-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	**0.013**	--	--	ND<0.005	**0.058**
70-70-10	TSG	(a) (b) (c)	1999	10	**0.057**	--	--	--	**0.82**	--	--	**0.29**	**3.4**
75-195-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
75-195-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
75-195-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-6-1	TEC	(a) (b) (c)	2001	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-6-10	TEC	(a) (b) (c)	2001	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-8-1	TEC	(a) (b) (c)	2001	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-9-1	TEC	(a) (b) (c)	2001	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
Depth Range: Greater than 10 feet bgs													
E1B	Tetra Tech		06/01/06	5	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E1C	Tetra Tech		06/01/06	5	ND<0.002	ND<0.005	ND<0.005	ND<0.005	**0.0088 J**	ND<0.005	**0.0050 J**	ND<0.002	ND<0.002
E3A	Tetra Tech		06/01/06	10	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E5	Tetra Tech		06/01/06	5	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E5	Tetra Tech		06/01/06	10	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
70-70-15	TSG	(a) (b) (c)	1999	15	ND<0.005	--	--	--	**0.33**	--	--	**0.33**	**4.2**
70-70-20	TSG	(a) (b) (c)	1999	20	ND<0.005	--	--	--	**0.25**	--	--	**0.80**	**8.1**
70-70-25	TSG	(a) (b) (c)	1999	25	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-2-40	TEC	(a) (b) (c) (d)	2001	40	ND<0.005	**5.1**	**10**	--	ND<0.005	--	--	ND<0.005	**7.2**
B-9-15	TEC	(a) (b) (c)	2001	15	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-9-20	TEC	(a) (b) (c)	2001	20	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01

Table A-5
Summary of Analytical Results for Volatile Organic Compounds (VOCs) in Soil, East Parcel
Former ChemOil Refiney
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	Sample Depth	U.S. EPA Method 8260B - VOCs								
					Benzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Ethylbenzene	Isopropylbenzene	Naphthalene	Toluene	Total Xylenes
				feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
E1B	Tetra Tech		06/01/06	15	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E1B	Tetra Tech		06/01/06	25	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E1C	Tetra Tech		06/01/06	15	ND<0.012	**1.100**	**3.100**	**0.175**	ND<0.012	**2.600**	**4.320**	**0.114**	ND<0.012
E1C	Tetra Tech		06/01/06	25	ND<0.012	**1.190**	**4.760**	**0.281**	**0.0594 J**	**4.020**	**9.080**	**0.136**	**0.0458 J**
E5	Tetra Tech		06/01/06	15	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E5	Tetra Tech		06/01/06	20	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002

Notes:
mg/kg = milligram per kilogram.
bgs = below ground surface.
U.S. EPA = United States Environmental Protection Agency.
VOCs = volatile organic compounds.
ND = not detected.
ND< = less than the laboratory reporting limit in data from Tetra Tech, 2006 samples or analytical detection limit in data from TEC, 2001.
Consultant listed is the consultant that collected the data. Data from EEI, TSG, and TEC are recorded from TEC, 2001 report.
EEI = Engineering Enterprises, Inc.
TSG = The Source Group, Inc.
TEC = Testa Environmental Corporation
-- = sample not analyzed for compound.
J = analyte was detected; however, analyte concentration is an estimated value between the method detection limit and the practical quantitation limit.
Data qualifiers from TEC, 2001:
(a) Sample date is unknown. The date listed is the date reported.
(b) The analytical method for benzene, toluene, ethylbenzene and xylenes (BTEX) is unknown for all samples reported in TEC, 2001. Table 5-1 lists the method for as U.S. EPA Method 8020; however, the report text states the method is U.S. EPA Method 8260B. It is assumed the analytical method used is U.S. EPA Method 8260B.
(c) The analytical method for n-Butylbenzene and sec-butylbenzene are unknown. The report text indicates the analytical method for VOCs is U.S. EPA Method 8260 for all samples collected by TEC, 2001, so it is assumed that this is the actual analytical method used to analyze VOCs.
(d) Two concentrations are listed for xylenes in sample B-2-40. The higher concentration was assumed to be correct and is listed in this table.
(e)TSG boring 130-195 is not shown on any figure in TEC, 2001. It is assumed to be boring 130-95 on all figures in TEC, 2001.
References:
TEC. 2001. Report on Additional Subsurface Assessment, Former Chemoil Refinery - Eastern Parcel, Signal Hill, California. December 14.
Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

Table A-6
Summary of Analytical Results for Polycyclic Aromatic Hydrocarbons (PAHs) in Soil, East Parcel
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Sample Depth	U.S. EPA Method 8270C - PAHs															
			Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
		feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
E1B	6/1/2006	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1B	6/1/2006	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1B	6/1/2006	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1C	6/1/2006	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1C	6/1/2006	15	**0.221**	ND	ND	ND	ND	ND	ND	ND	**1.59**	ND	**0.036**	**0.387**	ND	**1.19**	**1.95**	**1.95**
E1C	6/1/2006	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E3A	6/1/2006	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E5	6/1/2006	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E5	6/1/2006	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E5	6/1/2006	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E5	6/1/2006	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
mg/kg = milligram per kilogram.
ft bgs = feet below ground surface.
PAHs = Polycyclic aromatic hydrocarbons.
U.S. EPA = United States Environmental Protection Agency.
ND = Not detected at laboratory reporting limit. See Tetra Tech, 2006 for laboratory reporting limit.
-- = Not analyzed.

References:
Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

Table A-7
Summary of Analytical Results for Metals in Soil, East Parcel
Former ChemOil Refinery
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	Sample Depth	U.S. EPA Method 6010B - Metals																
					Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Depth Range: 0 to 10 feet bgs																					
B-1-1	TEC	(a) (b) (c) (d)	2001	1	**0.50**	**4.5**	**50**	ND<0.15	ND<0.15	**10**	**4.0**	**8.0**	**2.0**	ND<0.10	ND<0.25	**5.0**	ND<0.25	ND<0.15	**0.42**	**17**	**23**
B-1-5	TEC	(a) (b) (c) (d)	2001	5	**0.50**	**13**	**92**	ND<0.15	ND<0.15	**20**	**11**	**21**	**4.0**	ND<0.10	**0.36**	**17**	ND<0.25	ND<0.15	**0.50**	**46**	**46**
B-1-10	TEC	(a) (b) (c) (d)	2001	10	**0.50**	**12**	**86**	ND<0.15	ND<0.15	**20**	**10**	**19**	ND<0.25	**3.0**	ND<0.25	**17**	ND<0.25	ND<0.15	**0.50**	**38**	**41**
B-2-1	TEC	(a) (b) (c) (d)	2001	1	**1.0**	**9.5**	**120**	ND<0.15	ND<0.15	**40**	**7.0**	**48**	**100**	**--**	**0.50**	**64**	ND<0.25	ND<0.15	**0.50**	**120**	**200**
B-2-5	TEC	(a) (b) (c) (d)	2001	5	**0.50**	**10**	**450**	ND<0.15	ND<0.15	**18**	**10**	**15**	**3.0**	**0.11**	ND<0.25	**18**	ND<0.25	ND<0.15	**1.0**	**31**	**38**
B-2-10	TEC	(a) (b) (c) (d)	2001	10	**0.50**	**8.0**	**56**	ND<0.15	ND<0.15	**8.5**	**4.5**	**9.0**	**1.5**	ND<0.10	ND<0.25	**7.5**	ND<0.25	ND<0.15	**0.33**	**20**	**27**
B-3-1	TEC	(a) (b) (c) (d)	2001	1	**0.39**	**5.0**	**58**	ND<0.15	ND<0.15	**9.5**	**4.5**	**8.0**	1.5	ND<0.10	**0.33**	**6.0**	ND<0.25	ND<0.15	**0.50**	**18**	**22**
B-3-5	TEC	(a) (b) (c) (d)	2001	5	**0.50**	**12**	**100**	ND<0.15	ND<0.15	**19**	**10**	**16**	**3.0**	ND<0.10	**0.41**	**14**	ND<0.25	ND<0.15	**1.0**	**41**	**41**
B-3-10	TEC	(a) (b) (c) (d)	2001	10	**1.0**	**16**	**150**	ND<0.15	ND<0.15	**25**	**12**	**26**	**4.5**	ND<0.10	**0.50**	**20**	ND<0.25	ND<0.15	**1.5**	**48**	**48**
B-4-1	TEC	(a) (b) (c) (d)	2001	1	**0.50**	**10**	**76**	ND<0.15	ND<0.15	**18**	**8.0**	**16**	**3.0**	ND<0.10	**0.36**	**12**	ND<0.25	ND<0.15	**1.0**	**36**	**41**
B-4-5	TEC	(a) (b) (c) (d)	2001	5	**0.50**	**18**	**90**	ND<0.15	ND<0.15	**28**	**13**	**31**	**4.5**	ND<0.10	**0.50**	**22**	ND<0.25	ND<0.15	**2.0**	**53**	**56**
B-4-10	TEC	(a) (b) (c) (d)	2001	10	ND<0.25	**4.5**	**44**	ND<0.15	ND<0.15	**8.0**	**4.0**	**7.5**	**1.0**	ND<0.10	**0.26**	**6.5**	ND<0.25	ND<0.15	ND<0.25	**16**	**23**
B-5-1	TEC	(a) (b) (c) (d)	2001	1	**0.50**	**4.5**	**54**	ND<0.15	ND<0.15	**10**	**4.5**	**7.0**	**2.0**	ND<0.10	**0.42**	**6.0**	ND<0.25	ND<0.15	**1.0**	**17**	**24**
B-5-5	TEC	(a) (b) (c) (d)	2001	5	**0.50**	**9.0**	**73**	ND<0.15	ND<0.15	**15**	**8.0**	**12**	**2.5**	ND<0.10	**0.50**	**12**	ND<0.25	ND<0.15	**1.0**	**30**	**38**
B-5-10	TEC	(a) (b) (c) (d)	2001	10	**0.50**	**18**	**140**	ND<0.15	ND<0.15	**32**	**13**	**31**	**5.5**	**0.12**	**0.50**	**23**	ND<0.25	ND<0.15	**1.5**	**52**	**57**
B-6-1	TEC	(a) (b) (c) (d)	2001	1	**0.36**	**4.0**	**30**	ND<0.15	ND<0.15	**7.5**	**3.5**	**3.0**	**0.50**	ND<0.10	**0.35**	**5.5**	ND<0.25	ND<0.15	**0.50**	**15**	**22**
B-6-5	TEC	(a) (b) (c) (d)	2001	5	**0.50**	**10**	**68**	ND<0.15	ND<0.15	**16**	**8.0**	**14**	**3.0**	ND<0.10	**0.42**	**12**	ND<0.25	ND<0.15	**1.0**	**32**	**45**
B-6-10	TEC	(a) (b) (c) (d)	2001	10	**0.50**	**17**	**310**	ND<0.15	ND<0.15	**25**	**12**	**26**	**5.0**	ND<0.10	**0.50**	**20**	ND<0.25	ND<0.15	**1.0**	**48**	**48**
B-7-1	TEC	(a) (b) (c) (d)	2001	1	**0.45**	**5.0**	**56**	ND<0.15	ND<0.15	**9.0**	**4.5**	**7.5**	**3.0**	ND<0.10	**0.35**	**5.5**	ND<0.25	ND<0.15	**0.50**	**16**	**23**
B-7-5	TEC	(a) (b) (c) (d)	2001	5	**0.50**	**9.0**	**88**	ND<0.15	ND<0.15	**16**	**6.5**	**12**	**3.0**	ND<0.10	**0.49**	**10**	ND<0.25	ND<0.15	**0.50**	**27**	**38**
B-7-10	TEC	(a) (b) (c) (d)	2001	10	**1.0**	**18**	**98**	ND<0.15	ND<0.15	**26**	**14**	**31**	**6.0**	ND<0.10	**0.50**	**22**	ND<0.25	ND<0.15	**1.5**	**52**	**54**
B-8-1	TEC	(a) (b) (c) (d)	2001	1	**0.50**	**4.5**	**47**	ND<0.15	ND<0.15	**9.5**	**4.5**	**6.5**	**1.5**	ND<0.10	**0.49**	**4.5**	ND<0.25	ND<0.15	**0.50**	**17**	**22**
B-8-5	TEC	(a) (b) (c) (d)	2001	5	**0.50**	**12**	**73**	ND<0.15	ND<0.15	**22**	**10**	**17**	**3.5**	ND<0.10	**0.42**	**15**	ND<0.25	ND<0.15	**1.5**	**40**	**50**
B-8-10	TEC	(a) (b) (c) (d)	2001	10	**1.0**	**16**	**76**	ND<0.15	ND<0.15	**25**	**12**	**28**	**4.5**	ND<0.10	**0.50**	**20**	ND<0.25	ND<0.15	**1.5**	**48**	**50**
B-9-1	TEC	(a) (b) (c) (d)	2001	1	**0.50**	**7.0**	**72**	ND<0.15	ND<0.15	**12**	**6.0**	**12**	**5.5**	ND<0.10	**0.47**	**8.0**	ND<0.25	ND<0.15	**0.50**	**22**	**39**
B-9-5	TEC	(a) (b) (c) (d)	2001	5	**1.0**	**9.0**	**84**	ND<0.15	ND<0.15	**16**	**7.5**	**12**	**3.0**	ND<0.10	**0.46**	**11**	ND<0.25	ND<0.15	**0.50**	**29**	**40**
B-9-10	TEC	(a) (b) (c) (d)	2001	10	**0.50**	**7.0**	**140**	ND<0.15	ND<0.15	**10**	**7.0**	**12**	**3.0**	ND<0.10	**0.37**	**10**	ND<0.25	ND<0.15	**1.0**	**19**	**26**
Depth Range: Greater than 10 feet bgs																					
B-1-15	TEC	(a) (b) (c) (d)	2001	15	**0.41**	**5.0**	**54**	ND<0.15	ND<0.15	**5.5**	**3.6**	**6.0**	**1.0**	ND<0.10	ND<0.25	**5.0**	ND<0.25	ND<0.15	ND<0.25	**12**	**18**
B-1-20	TEC	(a) (b) (c) (d)	2001	20	ND<0.25	**3.0**	**15**	ND<0.15	ND<0.15	**5.0**	**1.5**	**1.5**	**0.50**	ND<0.10	ND<0.25	**2.5**	ND<0.25	ND<0.15	ND<0.25	**9.5**	**10**
B-1-25	TEC	(a) (b) (c) (d)	2001	25	ND<0.25	**5.0**	**22**	ND<0.15	ND<0.15	**7.0**	**3.5**	**3.0**	**0.50**	ND<0.10	**0.50**	**4.5**	ND<0.25	**5.0**	**0.50**	**15**	**18**
B-1-30	TEC	(a) (b) (c) (d)	2001	30	ND<0.25	**5.0**	**24**	ND<0.15	ND<0.15	**8.0**	**3.0**	**3.5**	**0.50**	ND<0.10	**0.37**	**4.5**	ND<0.25	ND<0.15	**0.48**	**16**	**18**
B-1-35	TEC	(a) (b) (c) (d)	2001	35	**0.42**	**10**	**26**	ND<0.15	ND<0.15	**7.0**	**3.5**	**6.5**	**1.0**	ND<0.10	**0.50**	**5.0**	ND<0.25	ND<0.15	**0.45**	**20**	**22**
B-2-15	TEC	(a) (b) (c) (d)	2001	15	**0.50**	**9.5**	**63**	ND<0.15	ND<0.15	**16**	**8.0**	**12**	**2.0**	ND<0.10	**0.50**	**12**	ND<0.25	**0.50**	**1.0**	**32**	**36**
B-2-20	TEC	(a) (b) (c) (d)	2001	20	**0.38**	**6.0**	**50**	ND<0.15	ND<0.15	**10**	**6.0**	**10**	**1.5**	ND<0.10	**0.44**	**8.0**	ND<0.25	ND<0.15	**0.50**	**24**	**29**
B-2-25	TEC	(a) (b) (c) (d)	2001	25	ND<0.25	**2.5**	**24**	ND<0.15	ND<0.15	**6.5**	**3.0**	**5.5**	**1.0**	ND<0.10	**0.29**	**4.5**	ND<0.25	ND<0.15	**0.25**	**12**	**16**
B-2-30	TEC	(a) (b) (c) (d)	2001	30	**0.47**	**8.0**	**35**	ND<0.15	ND<0.15	**9.0**	**4.5**	**4.5**	**1.0**	ND<0.10	**0.30**	**5.5**	ND<0.25	ND<0.15	**0.50**	**18**	**25**
B-2-35	TEC	(a) (b) (c) (d)	2001	35	**0.32**	**5.5**	**28**	ND<0.15	ND<0.15	**8.0**	**4.5**	**4.0**	**0.50**	ND<0.10	**0.34**	**5.0**	ND<0.25	ND<0.15	**0.45**	**18**	**26**
B-2-40	TEC	(a) (b) (c) (d)	2001	40	**0.50**	**5.5**	**32**	ND<0.15	ND<0.15	**9.0**	**5.5**	**5.0**	**0.50**	ND<0.10	**0.31**	**6.0**	ND<0.25	ND<0.15	**0.50**	**20**	**30**
B-3-15	TEC	(a) (b) (c) (d)	2001	15	**0.39**	**3.5**	**38**	ND<0.15	ND<0.15	**6.5**	**3.5**	**6.0**	**1.0**	ND<0.10	**0.27**	**5.5**	ND<0.25	ND<0.15	**0.36**	**14**	**16**
B-3-20	TEC	(a) (b) (c) (d)	2001	20	**0.43**	**5.5**	**50**	ND<0.15	ND<0.15	**10**	**5.5**	**10**	**1.5**	ND<0.10	ND<0.25	**8.0**	ND<0.25	ND<0.15	**0.50**	**22**	**26**
B-3-25	TEC	(a) (b) (c) (d)	2001	25	**0.26**	**5.0**	**29**	ND<0.15	ND<0.15	**9.5**	**4.5**	**3.5**	**1.0**	ND<0.10	**0.50**	**6.0**	ND<0.25	ND<0.15	**0.50**	**16**	**25**
B-3-33	TEC	(a) (b) (c) (d)	2001	33	**0.42**	**8.0**	**34**	ND<0.15	ND<0.15	**8.0**	**5.0**	**5.0**	**0.50**	ND<0.10	ND<0.25	**5.5**	ND<0.25	ND<0.15	**0.50**	**19**	**28**
B-4-15	TEC	(a) (b) (c) (d)	2001	15	**0.42**	**4.5**	**43**	ND<0.15	ND<0.15	**9.0**	**4.5**	**7.0**	**3.0**	ND<0.10	**0.46**	**5.0**	ND<0.25	ND<0.15	**0.50**	**18**	**21**
B-4-20	TEC	(a) (b) (c) (d)	2001	20	**0.34**	**3.5**	**33**	ND<0.15	ND<0.15	**6.0**	**2.5**	**5.5**	**1.0**	ND<0.10	**0.29**	**4.0**	ND<0.25	ND<0.15	ND<0.25	**13**	**14**
B-4-25	TEC	(a) (b) (c) (d)	2001	25	**0.38**	**4.0**	**36**	ND<0.15	ND<0.15	**7.0**	**3.5**	**3.0**	**2.0**	ND<0.10	ND<0.25	**5.0**	ND<0.25	ND<0.15	**0.50**	**14**	**20**
B-5-15	TEC	(a) (b) (c) (d)	2001	15	**0.45**	**6.0**	**82**	ND<0.15	ND<0.15	**10**	**6.0**	**11**	**1.5**	ND<0.10	ND<0.25	**8.5**	ND<0.25	ND<0.15	**0.50**	**21**	**29**
B-5-20	TEC	(a) (b) (c) (d)	2001	20	ND<0.25	**3.0**	**20**	ND<0.15	ND<0.15	**5.0**	**2.0**	**4.0**	**1.0**	ND<0.10	**0.30**	**3.5**	ND<0.25	ND<0.15	**0.28**	**10**	**12**

Table A-7
Summary of Analytical Results for Metals in Soil, East Parcel
Former ChemOil Refinery
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	Sample Depth	U.S. EPA Method 6010B - Metals																
					Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
B-5-25	TEC	(a) (b) (c) (d)	2001	25	**0.40**	**4.0**	**29**	ND<0.15	ND<0.15	**6.5**	**3.5**	**3.0**	**0.50**	ND<0.10	**0.38**	**4.5**	ND<0.25	ND<0.15	**0.41**	**14**	**20**
B-6-15	TEC	(a) (b) (c) (d)	2001	15	**0.31**	**6.0**	**40**	ND<0.15	ND<0.15	**8.5**	**5.0**	**12**	**8.0**	ND<0.10	**0.26**	**8.0**	ND<0.25	ND<0.15	**0.49**	**18**	**28**
B-6-20	TEC	(a) (b) (c) (d)	2001	20	**0.25**	**5.0**	**27**	ND<0.15	ND<0.15	**5.5**	**3.0**	**5.0**	**1.0**	ND<0.10	ND<0.25	**3.5**	ND<0.25	ND<0.15	**0.34**	**12**	**14**
B-6-25	TEC	(a) (b) (c) (d)	2001	25	ND<0.25	**3.0**	**23**	ND<0.15	ND<0.15	**7.0**	**2.0**	**3.5**	**1.5**	ND<0.10	**0.25**	**2.5**	ND<0.25	ND<0.15	ND<0.25	**9.5**	**12**
B-7-15	TEC	(a) (b) (c) (d)	2001	15	**0.46**	**7.5**	**61**	ND<0.15	ND<0.15	**11**	**6.5**	**15**	**2.5**	**0.12**	**0.40**	**10**	ND<0.25	ND<0.15	**0.50**	**24**	**32**
B-7-20	TEC	(a) (b) (c) (d)	2001	20	**0.50**	**6.5**	**62**	ND<0.15	ND<0.15	**12**	**6.5**	**13**	**3.0**	ND<0.10	**0.26**	**9.5**	ND<0.25	ND<0.15	**0.50**	**24**	**31**
B-7-25	TEC	(a) (b) (c) (d)	2001	25	**0.36**	**4.5**	**34**	ND<0.15	ND<0.15	**8.0**	**4.0**	**3.0**	**1.0**	ND<0.10	**0.30**	**55**	ND<0.25	ND<0.15	**0.47**	**15**	**20**
B-8-15	TEC	(a) (b) (c) (d)	2001	15	**0.50**	**7.5**	**62**	ND<0.15	ND<0.15	**12**	**7.5**	**14**	**2.0**	ND<0.10	ND<0.25	**11**	ND<0.25	ND<0.15	**1.0**	**26**	**37**
B-8-20	TEC	(a) (b) (c) (d)	2001	20	**0.50**	**4.5**	**29**	ND<0.15	ND<0.15	**5.0**	**2.5**	**4.0**	**1.0**	ND<0.10	ND<0.25	**3.5**	ND<0.25	ND<0.15	ND<0.25	**12**	**13**
B-8-25	TEC	(a) (b) (c) (d)	2001	25	**1.0**	**12**	**100**	ND<0.15	ND<0.15	**25**	**14**	**24**	**5.0**	ND<0.10	**0.37**	**20**	ND<0.25	ND<0.15	**1.5**	**32**	**62**
B-9-15	TEC	(a) (b) (c) (d)	2001	15	**0.50**	**7.0**	**66**	ND<0.15	ND<0.15	**10**	**6.0**	**10**	**2.0**	ND<0.10	**0.38**	**8.5**	ND<0.25	ND<0.15	**0.50**	**22**	**26**
B-9-20	TEC	(a) (b) (c) (d)	2001	20	**0.50**	**4.5**	**26**	ND<0.15	ND<0.15	**5.5**	**2.5**	**5.0**	**1.5**	**0.12**	ND<0.25	**3.5**	ND<0.25	ND<0.15	**0.31**	**12**	**14**

Notes:
mg/kg = milligram per kilogram.
bgs = below ground surface.
U.S. EPA = United States Environmental Protection Agency.
ND = not detected.
ND< = less than analytical detection limit listed.
TEC = Testa Environmental Corporation
-- = sample not analyzed for compound.
Data qualifiers from TEC, 2001:
(a) Sample date is unknown. The date listed is the date reported.
(b) Table 5-2 in TEC, 2001 does not indicate the whether this is soil or groundwater data. The units listed on the table indicate this is groundwater data (milligrams per liter), but the report text indicates this table is soil data. The table is inferred to be soil data based on the report text and the units are assumed to be milligrams per kilogram.
(c) The consultant is inferred from the report text and figures.
(d) No analytical method is listed on Table 5-2 in TEC, 2001. The report text lists the analytical method for soil as U.S. EPA Method 6010B; therefore, it is assumed this is the correct listed method.
References:
TEC. 2001. Report on Additional Subsurface Assessment, Former Chemoil Refinery - Eastern Parcel, Signal Hill, California. December 14.

□ISTORICAL SOIL □APOR □ATA

NORT□□ EST□SOUT□□ EST□AN□ EAST PARCELS

Table A-8
Summary of Soil Vapor Analytical Results - Volatile Organic Compounds, Northwest, Southwest and East Parcels
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Depth feet bgs	Benzene µg/m³	Cyclohexane µg/m³	Ethylbenzene µg/m³	4-Ethyltoluene[2] µg/m³	Heptane[3] µg/m³	n-Hexane µg/m³	Methyl tert-Butyl Ether µg/m³	Naphthalene µg/m³	Toluene µg/m³	1,2,4-Trimethylbenzene µg/m³	1,3,5-Trimethylbenzene µg/m³	m,p-Xylenes µg/m³	o-Xylene µg/m³	Xylenes µg/m³
Site-Specific, Risk-Based Screening Level [1] Soil Vapor Commerical/Industrial			**909**	**60,703,429**	**12,565**	**3,089,871**	**7,513,217**	**7,513,217**	**113,307**	**1,006**	**3,089,871**	**85,410**	**429,320**	**1,122,976**	**1,116,790**	**1,116,790**
NORTHWEST PARCEL																
AN-04	1/17/2017	5	**194,875.66**	**2,478,331.29**	**208,431.90**	**103,239.26**	**819,713.70**	**458,216.77**	<43,263.80	<62,905.52	<45,222.09	**167,149.28**	**93,399.18**	**955,312.88**	**191,062.58**	**1,146,375.46**
AN-06	1/17/2017	5	**271,548.06**	**2,099,697.34**	**28,255.15**	<29,496.93	**393,462.58**	**634,453.99**	<21,631.90	<31,452.76	<22,611.04	<29,496.93	<29,494.48	<52,107.98	<26,053.99	<78,161.97
AN-07	1/17/2017	5	<6.39	<6.88	<8.68	<9.83	<8.20	<7.05	<7.21	<10.48	<7.54	<9.83	<9.83	<17.37	<8.68	<26.05
AN-08	1/17/2017	5	<6.39	<6.88	<8.68	<9.83	<8.20	<7.05	<7.21	<10.48	<7.54	<9.83	<9.83	<17.37	<8.68	<26.05
	1/17/2017	5 (DUP)	<6.39	<6.88	<8.68	<9.83	<8.20	<7.05	<7.21	<10.48	<7.54	<9.83	<9.83	<17.37	<8.68	<26.05
SB1	5/30/2006	5	<820	--	**2,100**	--	--	--	<820	--	<820	**4,300**	<1,230	<1,640	<800	<2,460
	5/30/2006	15	**24,000**	--	**26,900**	--	--	--	<800	--	<800	**4,380**	<1,200	**10,800**	<800	**10,800**
SB2	5/30/2006	5	**242,000**	--	**15,200**	--	--	--	<820	--	<820	<1,230	<1,230	<1,640	<820	<2,460
	5/30/2006	19.5	**230,000**	--	**108,000**	--	--	--	<800	--	<800	<1,200	<1,200	<1,600	<800	<2,400
SB4	5/30/2006	5	**10,100**	--	**6,810**	--	--	--	**1,680**	--	<800	**10,300**	**5,490**	**9,040**	<800	**9,040**
	5/30/2006	16.5	**802,000**	--	**159,000**	--	--	--	<800	--	**70,800**	**7,770**	**5,830**	**221,000**	**41,100**	**262,100**
SOUTHWEST PARCEL																
SB3	5/18/2006	15	**3,400**	--	**31,900**	--	--	--	<800	--	<800	**2,490**	**1,720**	<1,600	<800	<2,400
	5/18/2006	15	**2,500**	--	**22,300**	--	--	--	<800	--	<800	**3,460**	**3,370**	<1,600	<800	<2,400
	5/18/2006	15	**2,940**	--	**48,400**	--	--	--	<800	--	<820	**3,500**	**3,070**	<1,600	<800	<2,400
	5/30/2006	5	**12,100**	--	**25,600**	--	--	--	<820	--	<820	<1,230	<1,230	<1,640	<800	<2,440
	5/30/2006	15	**7,140**	--	**60,600**	--	--	--	<800	--	<800	<1,200	<1,200	<1,600	<800	<2,400
EAST PARCEL																
E1	6/2/2006	15	<796	--	**10,800**	--	--	--	<796	--	<796	<1,194	<1,194	<1,592	<796	<2,388

Notes:
VOCs measured by EPA Method TO-15.
µg/m³ = microgram per cubic meter.
DTSC SL= Department of Toxic Substances Control Screening Level (DTSC, 2016).
USEPA RSL= U.S. Environmental Protection Agency Regional Screening Level (USEPA, 2016).
<X.XX = Not detected at or above the indicated laboratory reporting limit.
NV = No published value.
ND = Not detected at laboratory reporting limit. See Tetra Tech, 2006 for laboratory reporting limit.
- = Not analyzed.
DUP = Duplicate sample.

Bold values were reported above laboratory detection limits.
Shaded and bold value exceeds Table 4-2: Summary of Soil Vapor Screening Levels - Site-Specific, Risk-Based Screening Levels - Commercial/Industrial Scenario (Apex-SGI, 2017).
[1] Final Screening Level, Soil Vapor Commercial/Industrial is from Table 4-2: Summary of Soil Vapor Screening Levels, Site-Specific, Risk-Based Screening Levels - Commercial/Industrial Scenario (Apex-SGI, 2017)

References:

The Source Group, Inc., a division of Apex Companies, LLC (Apex-SGI). 2017. Response Plan and Remedial Technology Evaluation, Former Chemoil Refinery, Signal Hill, California. June.
Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

□ISTORICAL SOIL □APOR □ATA

OFFSITE

Table 4
Analytical Results of Volatile Organic Compounds in Soil Vapor
Former Chemoil Refinery
Signal Hill, California

Sample Location	Sample Depth (ft bgs)	Sample Date	Concentration (µg/m^3)																			
			EPA Method TO-15 Volatile Organic Compounds																			
			Acetone	Benzene	Bromo-dichloro-methane	cis-1,2-Dichloro-ethene	Carbon Disulfide	Chloroform	Chloro-methane	Dibromo-chloro-methane	Dichloro-difluoro-methane	Ethanol	Ethyl-benzene	Methyl-tert Butyl Ether (MTBE)	Naphthalene	o-Xylene	p/m-Xylene	Tert-Butyl Alcohol (TBA)	Tetrachloro-ethene	Toluene	Trichloro-fluoro-methane	Vinyl-Chloride
Residential CHHSLs			**NA**	**36.2**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**420**	**4,000**	**31.9**	**317,000**	**317,000**	**NA**	**180**	**135,000**	**NA**	**13.3**
Residential ESLs			**330,000**	**42**	**69**	**3,700**	**NA**	**230**	**NA**	**NA**	**NA**	**NA**	**490**	**4,700**	**36**	**1,000**	**1,000**	**NA**	**210**	**31,000**	**NA**	**16**
GW/SV-20-5	5	05/30/12	54	3.2	3.6	<2	<6.2	200	<1	<4.3	2.5	<9.4	<2.2	<7.2	<26	<2.2	<8.7	<6.1	9.3	2.7	68	<1.3
GW/SV-20-10	10	05/30/12	6.9	<1.6	<3.4	<2	<6.2	220	<1	<4.3	<2.5	<9.4	<2.2	<7.2	<26	<2.2	<8.7	<6.1	7.3	<1.9	69	<1.3
GW/SV-21-5	5	06/13/12	45	2.4	<3.4	<2	<6.2	6.3	<1.3	<4.3	<2.5	<9.4	<2.2	<7.2	<26	<2.2	<8.7	<6.1	<3.4	<1.9	<5.6	<1.3
GW/SV-21-10	10	06/13/12	100	<3.3	<6.8	<4	<13	<5.0	<2.7	<8.7	<5.0	60	<4.4	<15	<53	<4.4	<18	<12	<5.5	<3.8	<5.5	<2.6
GW/SV-22-5	5	05/30/12	<220	<74	<150	<92	<290	<110	<48	<200	<110	<440	<100	<330	<1200	<100	<400	<280	<160	<87	<260	<59
GW/SV-22-10	10	05/30/12	1,400	<160	<340	<200	<620	<240	<100	<430	<250	<940	1000	<720	<2600	240	<870	1500	<340	510	<560	<130
GW/SV-22-10/Dup	10	05/30/12	1,800	<160	<340	<200	<620	310	<100	<430	<250	<940	970	<720	<2600	240	<870	<610	<340	320	<560	<130
GW/SV-23-5	5	06/13/12	38	<1.6	<3.4	<2	<6.2	<2.4	<1.3	<4.3	<2.5	<9.4	<2.2	<7.2	<26	<2.2	<8.7	<6.1	<3.4	2.9	<5.6	<1.3
GW/SV-23-10	10	06/13/12	100	34	<3.4	<2	71	<2.4	<1.3	<4.3	<2.5	<9.4	3.8	<7.2	<26	<2.2	<8.7	<6.1	7.4	14	<5.6	<1.3
GW/SV-23-10/Dup	10	06/13/12	95	11	<11	<6.3	51	<7.8	<4.2	<14	<7.9	<30	<6.9	<23	<83	<6.9	<28	<19	<11	11	<18	<4.1
GW/SV-24-5	5	06/13/12	13	<1.6	<3.4	<2	<6.2	<2.4	<1.3	<4.3	<2.5	<9.4	<2.2	<7.2	<26	<2.2	<8.7	<6.1	<3.4	2.4	<5.6	<1.3
GW/SV-24-10	10	06/13/12	22	4.1	<3.4	<2	<6.2	17	<1.3	<4.3	<2.5	<9.4	<2.2	<7.2	<26	<2.2	<8.7	<6.1	9.9	<1.9	<5.6	<1.3
GW/SV-25-5	5	05/30/12	16	19	<3.4	<2	<6.2	3.5	<1	<4.3	<2.5	<9.4	11	<7.2	<26	14	30	<6.1	<3.4	20	<5.6	<1.3
GW/SV-25-10	10	05/30/12	<4.8	1.9	<3.4	<2	<6.2	<2.4	<1	<4.3	<2.5	<9.4	<2.2	9	<26	<2.2	<8.7	<6.1	<3.4	<1.9	<5.6	<1.3
GW/SV-26-5	5	05/31/12	17	3.6	<3.4	4.2	<6.2	<2.4	<1	<4.3	<2.5	<9.4	<2.2	<7.2	<26	<2.2	<8.7	<6.1	25	3.3	<5.6	<1.3
GW/SV-26-10	10	05/31/12	14	<1.6	<3.4	<2	<6.2	<2.4	<1	<4.3	<2.5	<9.4	<2.2	<7.2	<26	<2.2	<8.7	<6.1	28	<1.9	<5.6	<1.3
GW/SV-27-5	5	05/31/12	45	9.3	<3.4	<2	<6.2	5.2	<1	<4.3	2.6	<9.4	3.3	<7.2	<26	4.6	12	<6.1	67	16	<5.6	<1.3
GW/SV-27-10	10	05/31/12	21	2.8	<3.4	3.3	<6.2	22	<1	<4.3	<2.5	<9.4	<2.2	<7.2	<26	<2.2	<8.7	<6.1	84	2	<5.6	2.9
GW/SV-28-5	5	05/31/12	25	3.9	7.5	<2	<6.2	12	<1	<4.3	<2.5	<9.4	<2.2	<7.2	<26	2.9	<8.7	<6.1	<3.4	5.2	<5.6	<1.3
GW/SV-28-10	10	05/31/12	29	2.3	<3.4	<2	<6.2	11	<1	<4.3	<2.5	12	<2.2	<7.2	<26	<2.2	<8.7	<6.1	<3.4	<1.9	<5.6	<1.3
GW/SV-29-5	5	05/31/12	220	11	5.2	<2	13	14	1.2	4.8	3.3	13	2.8	<7.2	<26	4.2	9.4	<6.1	6.8	11	13	<1.3
GW/SV-29-10	10	05/31/12	15	<1.6	<3.4	<2	<6.2	<2.4	<1	<4.3	2.9	<9.4	<2.2	<7.2	<26	<2.2	<8.7	<6.1	150	<1.9	15	<1.3

Notes:
1. Soil vapor samples collected in batch-certified 1-liter summa canisters and analyzed by CalScience Environmental Laboratories, Inc. of Garden Grove, California using EPA Method TO-15.
2. Except for the target petroleum-based chemicals of potential concern (COPCs), only constituents detected in at least one sample are presented. A full list of analytes from EPA Method TO-15 is presented in the analytical laboratory reports.

Abbreviations:
ft bgs = feet below ground surface
< indicates that the compound was not detected at or above the laboratory reporting limit shown.
NA = Not Available
CHHSLs = California Human Health Screening Levels (CHHSLs) for volatile chemicals in soil vapor below residential buildings constructed without engineered fill below sub-slab gravel (California Environmental Protection Agency, 2005).
ESLs = Environmental Screening Levels for residential uses, Update to Environmental Screening Levels for Sites with Impacted Soil and Groundwater, Regional Water Quality Control Board, San Francisco Bay, Table E-4 Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns, May 2008.

Table 4
Analytical Results of Volatile Organic Compounds in Soil Vapor
Former Chemoil Refinery
Signal Hill, California

Sample Location	Sample Depth (ft bgs)	Sample Date	Concentration (µg/m³)						Concentration (% Volume)					
			EPA Method TO-15 Volatile Organic Compounds						Fixed Gases					
			1,1,1-Trichloro-ethane	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	2-Butanone	4-Ethyl-toluene	4-Methyl-2-Pentanone	Carbon Dioxide	Carbon Monoxide	Helium	Oxygen + Argon [3]	Methane	Nitrogen
Residential CHHSLs			**991,000**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Residential ESLs			**230,000**	**420**	**230,000**	**520,000**	**NA**	**310,000**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
GW/SV-20-5	5	05/30/12	<2.7	<7.4	<2.5	10	<2.5	<6.1	3.75	<0.5	<0.01	16.6	<0.5	79.6
GW/SV-20-10	10	05/30/12	<2.7	<7.4	<2.5	4.9	<2.5	<6.1	<0.5	<0.5	<0.01	21.9	<0.5	78.1
GW/SV-21-5	5	06/13/12	<2.7	<7.4	<2.5	8.7	<2.5	<6.1	<0.5	<0.5	<0.01	21.1	<0.5	78.4
GW/SV-21-10	10	06/13/12	<5.6	<15	<5.0	8.7	<5.0	<13	7.12	<0.5	<0.01	4.76	<0.5	84.8
GW/SV-22-5	5	05/30/12	<130	<340	<110	<200	<110	<280	10.7	<0.5	<0.01	4.52	28.1	56.6
GW/SV-22-10	10	05/30/12	<270	<740	<250	<440	<250	<610	15.9	<0.5	<0.01	2.2	35.2	46.6
GW/SV-22-10/Du	10	05/30/12	<270	<740	<250	<440	<250	<610	15.8	<0.5	<0.01	2.38	34.9	47
GW/SV-23-5	5	06/13/12	<2.7	<7.4	<2.5	9.1	<2.5	<6.1	0.939	<0.5	<0.01	21	<0.5	78
GW/SV-23-10	10	06/13/12	<2.7	<7.4	<2.5	40	<2.5	<6.1	1.23	<0.5	<0.01	14.4	1.43	82.9
GW/SV-23-10/Du	10	06/13/12	<8.7	<23	<7.8	29	<7.8	<20	1.14	<0.5	<0.01	16.1	6.18	76.5
GW/SV-24-5	5	06/13/12	<2.7	<7.4	<2.5	<4.4	<2.5	<6.1	0.866	<0.5	<0.01	20.9	<0.5	78.2
GW/SV-24-10	10	06/13/12	<2.7	<7.4	<2.5	9.3	<2.5	<6.1	3.56	<0.5	<0.01	18.5	<0.5	78
GW/SV-25-5	5	05/30/12	<2.7	8	2.8	18	<2.5	<6.1	9.96	<0.5	<0.01	5.64	3.61	80.8
GW/SV-25-10	10	05/30/12	<2.7	<7.4	<2.5	8.1	<2.5	<6.1	11.9	<0.5	<0.01	2.54	5.64	79.9
GW/SV-26-5	5	05/31/12	<2.7	<7.4	<2.5	<4.4	<2.5	<6.1	7.19	<0.5	<0.01	9.4	<0.5	83.4
GW/SV-26-10	10	05/31/12	<2.7	<7.4	<2.5	<4.4	<2.5	<6.1	6.78	<0.5	<0.01	9.89	<0.5	83.3
GW/SV-27-5	5	05/31/12	3.6	<7.4	<2.5	13	<2.5	<6.1	4.49	<0.5	<0.01	11.6	<0.5	83.9
GW/SV-27-10	10	05/31/12	<2.7	<7.4	<2.5	10	<2.5	<6.1	4.89	<0.5	<0.01	12.1	<0.5	83
GW/SV-28-5	5	05/31/12	<2.7	<7.4	<2.5	6.9	<2.5	<6.1	3.06	<0.5	0.0215	19.3	<0.5	77.7
GW/SV-28-10	10	05/31/12	<2.7	<7.4	<2.5	8.3	<2.5	<6.1	10.1	<0.5	<0.01	11.9	<0.5	78
GW/SV-29-5	5	05/31/12	7	30	8.6	64	4.2	8.4	<0.5	<0.5	<0.01	18	<0.5	82
GW/SV-29-10	10	05/31/12	<2.7	<7.4	<2.5	6.2	<2.5	<6.1	1.58	<0.5	<0.01	15.2	<0.5	83.2

Notes:
1. Soil vapor samples collected in batch-certified 1-liter summa canisters and analyzed by CalScience Environmental Laboratories, Inc. of Garden Grove, California using EPA Method TO-15.
2. Except for the target petroleum-based chemicals of potential concern (COPCs), only constituents detected in at least one sample are presented. A full list of analytes from EPA Method TO-15 is presented in the analytical laboratory reports.
3. Oxygen and Argon gasses are reported together because they convolute with each other and are difficult to separate in the laboratory testing. Typically, Argon is present in insignificant quantities.

Abbreviations:
ft bgs = feet below ground surface
< indicates that the compound was not detected at or above the laboratory reporting limit shown.
NA = Not Available
CHHSLs = California Human Health Screening Levels (CHHSLs) for volatile chemicals in soil vapor below residential buildings constructed without engineered fill below sub-slab gravel (California Environmental Protection Agency, 2005).
ESLs = Environmental Screening Levels for residential uses, Update for Sites with Impacted Soil and Groundwater, Regional Water Quality Control Board, San Francisco Bay, Table E-4 Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns, May 2008.

TABLE 7-2a

SUMMARY OF SOIL GAS SURVEY DATA - SOUTHERN PERIMETER (a)

Location: Along the southern perimeter of the Western Parcel from west to east.

Parameter			Soil Gas Probe No.													
			SGP-1-5 (b)	SGP-1-15	SGP-2-5	SGP-2-15	SGP-3-5	SGP-3-15	SGP-4-5	SGP-4-15	SGP-5-5	SGP-5-15	SGP-6-5	SGP-6-15	SGP-7-5	SGP-7-15
	CHHSLs Residential Land Use	CHHSLs Commerical/Industrial Land Use														
Benzene	36.2	122	**220**	36	ND	ND	**53**	ND	**82**	ND	**77**	ND	**2,100**	ND	**76**	ND
	36.2	122	**430**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	980*	3,300**	780	ND	ND	**1,500**	ND	580	**990**	ND	220	ND	ND	110	ND	ND
	980*	3,300**	960	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	980*	3,300**	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	NLE	NLE	780	90	ND	580	ND	6,900	1,300	10,000	450	6,500	910	17,000	950	17,000
	NLE	NLE	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	4,000	13,400	ND	ND	60	410	3,400	ND	ND	ND	ND	ND	ND	ND	ND	ND
	4,000	13,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	NLE	NLE	80	ND	ND	ND	ND	5,900	640	ND	280	4,200	740	12,000	6,300	6,200
sec-Butylbenzene	NLE	NLE	ND	ND	ND	ND	1,600	ND	260	3,100	140	2,700	240	3,400	170	3,000
	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert-Butylbenzene	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	135,000	378,000	290	ND	ND	950	ND	ND	1,000	ND	ND	ND	ND	ND	ND	ND
	135,000	378,000	330	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	NLE	NLE	220	220	ND	130	ND	ND	ND	ND	150	ND	ND	ND	ND	ND
	NLE	NLE	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	NLE	NLE	50	ND	ND	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	319,000	887,000	50	300	ND	5,200	ND	ND	3,230	ND	150	ND	ND	190	60	ND
	319,000	887,000	1,040	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	319,000	887,000	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:

(a) All units in micrograms per cubic meter (ug/m3).

(b) SGP-1-5 = soil gas probe - probe number - depth in feet below ground surface.

(c) ND = Not detected at or above parameter's respective analytical detection level.

(d) D = Duplicate.

NLE = no level established.

* RWQCB Region 2; Environmental Screening Level, lowest residential.

** RWQCB Region 2; Environmental Screening Level, lowest commercial/industrial.

TABLE 7-2b

SUMMARY OF SOIL GAS SURVEY DATA - WESTERN PERIMETER (a)

Location: Along Gundry Avenue immediately west of the Western Parcel.

Parameter	CHHSLs Residential Land Use	CHHSLs Commerical/Industrial Land Use	Soil Gas Probe No.														
			Gdy-1-5 (b)	Gdy-1-15	Gdy-2-5	Gdy-2-15	Gdy-3-5	Gdy-3-15	Gdy-4-5	Gdy-4-15	Gdy-5-5	Gdy-5-15	Gdy-6-5	Gdy-6-15	Gdy-7-5	Gdy-7-15	Gdy-7-15 (c)
Benzene	36.2	122	89	ND	ND	ND	ND	ND	51	ND	ND	ND	ND	ND	ND	ND	NA
Cyclohexane	NLE	NLE	NA(e)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	260
Ethylbenzene	980*	3,300**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Isopropylbenzene	NLE	NLE	100	9,200	ND	630	ND	1,100	ND	1,900	ND	ND	ND	ND	ND	16,000	NA
	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MTBE	4,000	13,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
n-Propylbenzene	NLE	NLE	ND	570	ND	ND	ND	670	ND	1,200	ND	ND	ND	ND	ND	5,900	NA
sec-Butylbenzene	NLE	NLE	ND	2,300	ND	1,800	580	3,000	ND	3,900	ND	2,100	ND	ND	ND	2,800	NA
	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Tert-Butylbenzene	NLE	NLE	ND	510	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Toluene	135,000	378,000	250	ND	ND	ND	ND	ND	280	510	93	ND	ND	ND	ND	820	NA
1,2,4-Trimethylbenze	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
1,3,5-Trimethylbenze	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Xylenes	319,000	887,000	120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA

NOTES:

(a) All units in micrograms per cubic meter (ug/m3).

(b) Gdy-1-5 = Gundry Avenue - probe number - depth in feet below ground surface.

(c) EPA TO-15 analysis

(d) ND = Not detected at or above parameter's analytical detection level.

(e) NA = Not analyzed

(f) D = Duplicate sample.

* RWQCB Region 2; Environmental Screening Level, lowest residential

** RWQCB Region 2; Environmental Screening Level, lowest commercial/industrial

TABLE 7-2c

SUMMARY OF SOIL GAS SURVEY DATA - EASTERN PERIMETER(a)

Location: Along Walnut Avenue immediately west of the Western Parcel										
Parameter			Soil Gas Probe Number							
	CHHSLs Residential Land Use	CHHSLs Commerical/Industrial Land Use	Wnt-1-5 (b)	Wnt-1-15	Wnt-1-15 (c)	Wnt-2-5	Wnt-2-15	Wnt-3-5	Wnt-3-15	Wnt-4-5
Benzene	36.2	122	**43**	ND	**6**	ND	ND	**51**	ND	ND
Cyclohexane	NLE	NLE	ND	ND	68	ND	ND	ND	ND	ND
cis-1,2-Dichloroethane	NLE	NLE	ND	ND	39	ND	ND	ND	ND	ND
1,1-Dichloroethane	1,500	5,100	ND	ND	**3**	ND	ND	ND	ND	ND
1,2-Dichloroethane	94	3,100	ND	ND	**4**	ND	ND	ND	ND	ND
Ethylbenzene	980*	3,300**	61	ND	**21**	ND	**1,600**	ND	620	260
Heptane	NLE	NLE	ND	ND	34	ND	ND	ND	ND	ND
Isopropylbenzene	NLE	NLE	ND	75	ND	23,000	ND	280	81,000	ND
MTBE	4,000	13,400	ND	ND	ND	ND	**47,000**	ND	ND	ND
n-Propylbenzene	NLE	NLE	ND	ND	ND	2,200	8,700	ND	17,000	ND
Propylene	NLE	NLE	ND	ND	190	ND	ND	ND	ND	ND
sec-Butylbenzene	NLE	NLE	ND	ND	ND	1,300	1,800	ND	8,900	ND
Tert-Butylbenzene	NLE	NLE	ND	ND	ND	ND	ND	ND	630	ND
Toluene	135,000	378,000	150	88	**290**	840	600	130	740	130
1,1,1-Trichloroethane	NLE	NLE	ND	ND	33	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	319,000	887,000	255	130	26	ND	ND	ND	ND	960

NOTES:

(a) All units in micrograms per cubic meter (ug/m3).

(b) Wnt-1-5 = Walnut Avenue - probe number - depth in feet below ground surface.

(c) EPA TO-15 analysis

(d) ND = Not detected at or above parameter's analytical detection level.

(e) NA = Not analyzed

NLE = no level established

* RWQCB Region 2; Environmental Screening Level, lowest residential

** RWQCB Region 2; Environmental Screening Level, lowest commercial/industrial

TABLE 7-2d

SUMMARY OF SOIL GAS SURVEY DATA - NORTHERN PERIMETER (a)

Parameter	CHHSLs Residential Land Use	CHHSLs Commercial/Industrial Land Use	Soil Gas Probe Number							
			Hill-1-5 (b)	Hill-1-15	Hill-2-15	Hill-2-15	Hill-3-5	Hill-3-15	Hill-4-5	Hill-4-15
Benzene	36.2	122	50	ND	ND	ND	86	ND	ND	ND
Ethylbenzene	980*	3,300**	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	4,000	13,400	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND
Tert-Butylbenzene	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	135,000	378,000	180	ND	ND	68	250	130	ND	ND
	135,000	378,000	ND	ND	ND	69	ND	ND	ND	ND
1,2,4-Trimethylbenzene	NLE	NLE	ND	ND	ND	110	ND	ND	ND	ND
	NLE	NLE	ND	ND	ND	99	ND	ND	ND	ND
1,3,5-Trimethylbenzene	NLE	NLE	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	319,000	887,000	ND	ND	ND	ND	120	ND	ND	ND

NOTES:

(a) All units in micrograms per cubic meter (ug/m3).

(b) Hill-1-5 = Hill Street - probe number - depth in feet below ground surface.

(c) ND = Not detected at or above parameter's respective analytical detection level.

NLE = no level established.

* RWQCB Region 2; Environmental Screening Level, lowest residential.

** RWQCB Region 2; Environmental Screening Level, lowest commercial/industrial.

TABLE 7-3

ANALYTICAL RESULTS FOR OFF SITE SOIL GAS SURVEY (a) - SOUTH OF SITE

Location: Adjacent to southern perimeter, off-site, along Wesley Drive															
Parameter			Soil Gas Probe No. - Depth below ground surface in feet (b)												
			SGP-WD-1-5 (b)	SGP-WD-2-5	SGP-WD-2-5	SGP-WD-2-10	SGP-WD-3-5	SGP-WD-3-10	SGP-WD-4-5	SGP-WD-4-10	SGP-WD-4-10	SGP-WD-5-5	SGP-WD-5-10	SGP-WD-6-5	SGP-WD-6-10
	CHHSLs Residential Land Use	CHHSLs Commerical/Industrial Land Use			EPA TO-15						EPA TO-15				
Acetone	NLE (c)	NLE	ND (d)	ND	270	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NLE	NLE	ND	ND	52	ND	ND	ND	ND	ND	ND	D	ND	ND	ND
Benzene	36.2	122	**56(39)**	47(DUP 47)(e)	47	ND	ND	ND	ND	ND	ND	39	ND	71	53
Chlorobenzene	NLE	NLE	**ND**	ND	180	ND	ND	ND	ND	ND	2,500	ND	ND	ND	ND
Ethylbenzene	NLE	NLE	**ND**	ND	81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	NLE	NLE	ND	ND	ND	62	ND	4,900	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	NLE	NLE	ND	ND	77	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	4,000	13,400	ND	ND	ND	150	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	NLE	NLE	ND	ND	ND	ND	ND	1,500	ND	510	ND	ND	ND	ND	ND
Toluene(1V)	135,000	378,000	77	ND	NA (f)	ND	ND	ND	ND	ND	NA	ND	ND	200	ND
Toluene 1V (3V)(7V)	135,000	378,000	77(160)(140)	160(DUP 160)	170	71	ND	ND	66	530	ND	130	ND	ND	130
1,1,1-Trichloroethane	NLE	NLE	100	350(DUP 340)	250	50	ND	ND	270	ND	ND	380	ND	420	170
Xylenes -m,p	319,000	887,000	ND	130(DUP 120)	120	ND	ND	ND	ND	ND	ND	ND	ND	100	ND
Xylenes -o	315,000	879,000	ND	ND	43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Petroleum Hydrocarbons (ug/L; C4-C12)			ND (50)	ND (50)		99	5,400	5,300	380	9,100		180	160	ND(50)	100

NOTES:

(a) All units in micrograms per cubic meter (ug/m3).

(b) SGP-WD-1-5 = soil gas probe - Wesley Drive- probe number - depth in feet below ground surface.

(c) NLE = No level established.

(d) ND = Not detected at or above parameter's respective analytical detection level.

(e) DUP = Duplicate.

(f) NA = Not analyzed.

L□□□□d

- ○ Monitoring Well
- ▲ Soil Gas Probe (TEC, 2009 and 2010)
- ✚ Soil, Soil Gas, and Grab Goundwater Sampling Locations (Geosyntec, 2012)

NOTE:
Approximate locations of monitoring well and soil gas probes from Testa Environmental Corporation's (TEC) June 2011 Report on Phase II and Phase III Additional Site Characterization

N

0 300 600 Feet

S□□□S□□G□□□□□d Gr□□
Gr□□□d□ □□□r S□□ □□□□ L□□□□□□□□

Former Chemoil Refinery
2020 Walnut Avenue, Signal Hill, CA

Geosyntec consultants

Figure □

WA 1617 | July 2012

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Figure 1 - Phase I and II Boring Locations, Former Chemoil Refinery, Signal Hill, California

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Table A-9
Summary of Groundwater Analytical Results - Hydrocarbon Chain Characterization, Northwest and Southwest Parcels
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Depth	Hydrocarbon Chain Identification																TPH	TPH	TPH	TPH
			C6-C8	C8-C10	C10-C12	C12-C14	C14-C16	C16-C18	C18-C20	C20-C22	C22-C24	C24-C26	C26-C28	C28-C32	C32-C34	C34-C36	C36-C40	C40-C44	(C6-C12)[Note 1]	(C13-C22)[Note 2]	(C23-C44)[Note 3]	(C6-C44)
		ft bgs	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
California MCL[4] / *Notification Level[5]*			**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**100**	**100**	**50,000**	**NV**
Final Screening Level Groundwater Commerical/Industrial [6]			**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**
AN-01	1/4/2017	40	<1.0	**1.1**	**20**	**70**	**45**	**37**	**27**	**20**	**8.6**	**5.1**	**2.2**	**3.4**	<1.0	<1.0	<1.0	<1.0	**21**	**164**	**15**	**240**
AN-02	1/5/2017	38	**14**	**200**	**420**	**520**	**400**	**220**	**96**	**50**	**23**	**11**	<10	<10	<10	<10	<10	<10	**634**	**1026**	**22.5**	**2,000**
AN-03	1/5/2017	40	**0.78**	**4.6**	**9.4**	**9.0**	**5.8**	**2.5**	**1.7**	**1.1**	**0.41**	**0.29**	**0.36**	**0.14**	<0.10	<0.10	<0.10	<0.10	**15**	**16**	**1.00**	**36**
AN-05	1/5/2017	40	**1.6**	**14**	**35**	**44**	**35**	**21**	**12**	**6.4**	**2.7**	**1.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**51**	**96**	**2.7**	**170**
AN-13	1/9/2017	41	**1.3**	**8.0**	**26**	**33**	**25**	**14**	**7.0**	**3.3**	**1.2**	**0.50**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**35**	**66**	**1.1**	**120**
	1/9/2017	54	<0.10	**0.62**	**4.2**	**4.1**	**0.69**	**0.28**	**0.17**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	**4.8**	**3.2**	<0.90	**10**
AN-20	1/18/2017	32	**7.0**	**25**	**18**	**15**	**12**	**3.7**	**1.1**	**0.58**	**0.12**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	**50**	**25**	**0.06**	**83**
	1/18/2017	42	**14**	**48**	**49**	**30**	**9.4**	**1.4**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**111**	**26**	<2.5	**150**
	1/18/2017	62	**0.36**	**1.2**	**1.4**	**1.5**	**0.23**	**0.092**	**0.081**	**0.12**	**0.047**	**0.030**	**0.64**	**0.072**	<0.010	<0.010	**0.026**	<0.010	**2.96**	**1.273**	**0.77**	**5.9**
AN-22	5/18/2017	58	**0.013**	**0.065**	**0.25**	**0.34**	**0.4**	**0.160**	**0.073**	**0.061**	**0.047**	**0.025**	**0.036**	**0.019**	<0.010	<0.010	<0.010	<0.010	**0.328**	**0.864**	**0.104**	**1.5**
SOUTHWEST PARCEL																						
MW-20	1/18/2017	20-35	<0.050	**0.10**	**0.81**	**1.5**	**3.1**	**1.8**	**0.80**	**0.60**	**0.38**	**0.11**	**0.10**	**0.073**	<0.050	<0.050	<0.050	<0.050	**0.91**	**7.05**	**0.47**	**9.4**
WEST OF GUNDRY AVENUE, OFFSITE																						
AO-1	1/10/2017	34	**4.3**	**17**	**15**	**5.5**	**0.91**	**0.13**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	**36**	**3.8**	<1.0	**44**
	1/10/2017	44	**2.1**	**7.7**	**6.2**	**2.4**	**0.57**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	**16**	**1.8**	<1.10	**19**
	1/10/2017	60	**0.035**	**0.19**	**0.61**	**0.78**	**0.55**	**0.44**	**0.33**	**0.27**	**0.18**	**0.084**	**0.57**	**0.097**	**0.022**	**0.030**	**0.013**	<0.010	**0.8**	**2.0**	**0.86**	**4.2**

Notes:
TPH = Total petroleum hydrocarbons measured by EPA Method 8015M.
C4-C12 = Carbon range.
ft bgs = feet below ground surface.
mg/L = milligram per liter.
NV = No value.
<X.XX = Not detected above indicated reporting limit (RL).

Bold values were reported above laboratory detection limits.
[1] TPH_{C4-C12} was calculated based on summing detected results from C6-C8, C8-C10, and C10-C12.
[2] $TPH_{C13-C22}$ was calculated based on summing detected results of one half C12-C13 and the results between C14 and C22.
[3] $TPH_{C23-C44}$ was calculated based on summing the results of one half C22-C24 and the results between C24 and C44.
[4] California MCLs shown in bold font. MCLs are enforceable standards. No values for TPH mixtures were available.
[5] California notification levels shown in italic font. Notification levels are advisory in nature and not enforceable standards. No values for TPH mixtures were available.
[6] Final Screening Level, Groundwater Commercial/Industrial is from Table 4-3: Final Screening Levels for Groundwater - Commercial/Industrial Scenario (Apex-SGI, 2017).

References:
The Source Group, Inc., a division of Apex Companies, LLC (Apex-SGI). 2017. Response Plan and Remedial Technology Evaluation, Former Chemoil Refinery, Signal Hill, California. June.

Table A-10
Summary of Groundwater Analytical Results - Volatile Organic Compounds, Northwest and Southwest Parcels
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Depth ft bgs	TPHg (C4-C12) µg/L	Acetone µg/L	Benzene µg/L	TBA µg/L	sec-Butylbenzene µg/L	tert-Butylbenzene µg/L	n-Butylbenzene µg/L	1,2-Dichloroethane µg/L	cis-1,2-Dichloroethene µg/L	Ethylbenzene µg/L	Isopropylbenzene µg/L	4-Isopropyltoluene µg/L	Naphthalene µg/L	n-Propylbenzene µg/L	Tetrachloroethylene µg/L	Toluene µg/L	1,3,5-TMB µg/L	1,2,4-TMB µg/L	2-Butanone (MEK) µg/L	MTBE µg/L	o-Xylene µg/L	m,p-Xylenes µg/L	total Xylenes µg/L
California MCL[1] / *Notification Level*[2]			**100**	**NV**	**1**	*12*	*260*	*260*	*260*	**0.5**	**6.0**	**300**	*770*	**NV**	*17*	*260*	**5**	**150**	*330*	*330*	**NV**	**13**	**1,750**	**1,750**	**1,750**
Final Screening Level Groundwater Commerical/Industrial[3]			**NV**	**3.7E+08**	**12**	**NV**	**NV**	**NV**	**NV**	**64**	**1,100**	**140**	**NV**	**NV**	**220**	**NV**	**32**	**37,000**	**NV**	**NV**	**4.60E+07**	**13,000**	**NV**	**NV**	**13,000**
NORTHWEST PARCEL																									
AN-01	1/4/2017	40	**53,000**	<100	**18**	<100	**28**	<5.0	**24**	<5.0	<5.0	<5.0	**57**	<10	**560**	**63**	<5.0	<5.0	<5.0	<5.0	<100	<20	<5.0	<10	<15
AN-02	1/5/2017	38	**81,000**	<100	<5.0	**110**	**180**	**18**	**160**	<5.0	<5.0	<5.0	**290**	<10	**1,300**	**380**	<5.0	<5.0	<5.0	<5.0	<100	<20	<5.0	<10	<15
AN-03	1/5/2017	40	**35,000**	<100	**990**	<100	**420**	**48**	**370**	<5.0	**7.6**	**91**	**710**	**16**	**1,600**	**850**	<5.0	<5.0	**9.0**	**19**	<100	<20	**13**	**34**	**47**
AN-05	1/5/2017	40	**170,000**	<100	**68**	**140**	**66**	<5.0	**73**	<5.0	<5.0	**9.2**	**110**	<10	**830**	**150**	<5.0	<5.0	<5.0	<5.0	<100	<20	<5.0	<10	<15
AN-13	1/9/2017	41	**12,000**	<500	**1,000**	<500	<25	<25	**27**	<25	<25	**370**	**85**	<50	**380**	**110**	<25	<25	<25	<25	<500	<100	<25	<50	<75
	1/9/2017	54	**240**	<10	**10**	<10	**1.1**	<0.50	**1.4**	**38**	<0.50	**5.7**	**1.6**	<1.0	**12**	**2.1**	<0.50	<0.50	<0.50	<0.50	<10	<2.0	<0.50	<1.0	<1.5
AN-20	1/18/2017	32	**19,000**	<1000	**3,600**	<1000	<50	<50	<50	<50	**120**	**1,000**	**120**	<100	<200	**130**	<50	<50	**99**	**410**	<1,000	<200	<50	**460**	**460**
	1/18/2017	42	**26,000**	<1000	**6,300**	<1000	<50	<50	<50	<50	**150**	**1,200**	**130**	<100	**380**	**160**	<50	<50	**220**	**680**	<1,000	<200	<50	**1,400**	**1,400**
	1/18/2017	52	**3,900**	**120**	**200**	<10	**6.2**	<0.50	**5.9**	<0.50	**5.0**	**83**	**19**	**7.4**	**16**	**22**	**3.2**	**2.2**	**24**	**63**	**18**	<2.0	**8.4**	**130**	**138**
	1/18/2017	62	**8,400**	**160**	**380**	<50	**11**	<2.5	**11**	<2.5	**5.6**	**300**	**57**	**14**	**72**	**63**	**7.7**	**13**	**63**	**190**	<50	<10	**24**	**320**	**344**
AN-22	5/18/2017	58	**300**	<10	<0.50	<10	**1.2**	<0.52	**1.1**	<0.50	<0.50	**0.70**	**1.8**	<1.0	**2.6**	**2.3**	<0.50	<0.50	<0.50	**0.96**	<10	<2.0	<0.50	<1.0	<1.5
SOUTHWEST PARCEL																									
MW-20	1/18/2017	20-35	**360**	<10	<0.50	**100**	**3.5**	<0.50	**1.2**	<0.50	<0.50	**1.1**	**6.8**	<1.0	**120**	**10**	**0.74**	<0.50	<0.50	<0.50	<10	<2.0	<0.50	<1.0	<1.5
WEST OF GUNDRY AVENUE, OFFSITE																									
AO-01	1/10/2017	34	**32,000**	<100	<5.0	<100	**45**	<5.0	**42**	<5.0	<5.0	**320**	**150**	**41**	**160**	**200**	<5.0	<5.0	**65**	**310**	<100	<20	<5.0	<10	<15
	1/10/2017	44	**18,000**	<100	<5.0	<100	**65**	<5.0	**83**	<5.0	<5.0	**590**	**150**	**78**	**180**	**190**	<5.0	<5.0	**210**	**520**	<100	<20	**32**	**850**	**882**
	1/10/2017	60	**920**	**33**	**1.4**	<10	**1.8**	<0.50	**1.9**	<0.50	**1.6**	**13**	**4.1**	**1.8**	**5.7**	**4.9**	<0.50	<0.50	**5.6**	**16**	<10	<2.0	**0.97**	**22**	**23**

Notes:
Volatile organic compounds, fuel oxygenates, and TPHg measured by EPA Method 8260B.
ft bgs = feet below ground surface.
µg/L = microgram per liter.
TPHg = Total petroleum hydrocarbons as gasoline.
TBA = tert-Butyl alcohol.
MTBE = Methyl-t-butyl ether.
TMB = Trimethylbenzene.
NV = No value published.
<X.XX = Not detected above indicated reporting limit (RL).
-- = Not analyzed.
Bold values were reported above laboratory detection limits.
Shaded and bold value exceeds lowest of Table 4-3: Final Screening Levels for Groundwater - Commercial/Industrial Scenario (Apex-SGI).
[1] California MCLs shown in bold font. MCLs are enforceable standards.
[2] California notification levels shown in italic font. Notification levels are advisory in nature and not enforceable standards.
[3] Final Screening Level, Groundwater Commercial/Industrial is from Table 4-3: Final Screening Levels for Groundwater - Commercial/Industrial Scenario (Apex-SGI, 2017).

References:
The Source Group, Inc., a division of Apex Companies, LLC (Apex-SGI). 2017. Response Plan and Remedial Technology Evaluation, Former Chemoil Refinery, Signal Hill, California. June.

Table A-11
Summary of Groundwater Analytical Results - Polycyclic Aromatic Hydrocarbons, Northwest and Southwest Parcels
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Depth ft bgs	Acenaphthene µg/L	Acenaphthylene µg/L	Anthracene µg/L	Benz(a)anthracene µg/L	Benzo(a)pyrene µg/L	Benzo(b)fluoranthene µg/L	Benzo(g,h,i)perylene µg/L	Benzo(k)fluoranthene µg/L	Chrysene µg/L	Dibenzo(a,h)anthracene µg/L	Fluoranthene µg/L	Fluorene µg/L	Indeno(1,2,3-cd)pyrene µg/L	Naphthalene µg/L	Phenanthrene µg/L	Pyrene µg/L
California MCL[1] / *Notification Level[2]*			**NV**	**NV**	**NV**	**NV**	**0.2**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	*17*	**NV**	**NV**
Final Screening Level Groundwater Commerical/Industrial[3]			**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**NV**	**220**	**NV**	**NV**
NORTHWEST PARCEL																		
AN-02	1/5/2017	38	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	**110**	<40	**1,100**	**170**	<40
AN-03	1/5/2017	40	**4.4**	**3.2**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**9.6**	<2.0	**560**	**10**	<2.0
AN-05	1/5/2017	40	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**28**	<10	**580**	**31**	<10
AN-13	1/9/2017	41	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**12**	<2.0	**260**	**10**	<2.0
	1/9/2017	54	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	**0.72**	<0.20	**11**	**1.0**	<0.20
AN-20	1/18/2017	32	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	**230**	**3.1**	<0.20
	1/18/2017	42	**17**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**7.0**	<2.0	**550**	**4.5**	<2.0
	1/18/2017	62	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	**0.20**	<0.20	**4.5**	**0.26**	<0.20
SOUTHWEST PARCEL																		
MW-20	1/18/2017	20-35	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	**2.2**	<0.20	**160**	**1.4**	<0.20
WEST OF GUNDRY AVENUE, OFFSITE																		
AO-01	1/10/2017	34	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	**0.98**	<0.20	**110**	**0.69**	<0.20
	1/10/2017	44	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	**91**	**0.65**	<0.20
	1/10/2017	60	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	**0.48**	<0.20	**3.6**	**0.57**	<0.20

Notes:
Polycyclic aromatic hydrocarbons (PAHs) measured by EPA Method 8270C.
ft bgs = feet below ground surface.
µg/L = microgram per liter.
MCL = Maximum Contaminant Level.
NV = No value published.
<X.XX = Not detected above indicated reporting limit (RL).

Bold values were reported above laboratory detection limits.
Shaded and bold value exceeds lowest of Table 4-3: Final Screening Levels for Groundwater - Commercial/Industrial Scenario (Apex-SGI, 2017).
[1] California MCLs shown in bold font. MCLs are enforceable standards.
[2] California notification levels shown in italic font. Notification levels are advisory in nature and not enforceable standards.
[3] Final Screening Level, Groundwater Commercial/Industrial is from Table 4-3: Final Screening Levels for Groundwater - Commercial/Industrial Scenario (Apex-SGI, 2017)

References:
The Source Group, Inc., a division of Apex Companies, LLC (Apex-SGI). 2017. Response Plan and Remedial Technology Evaluation, Former Chemoil Refinery, Signal Hill, California. June.

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EAST PARCEL

Table A-12
Summary of Analytical Results for Volatile Organic Compounds (VOCs) in Groundwater, East Parcel
Former ChemOil Refinery
Signal Hill, California

Sample ID	Consultant	Sample Date	U.S. EPA Method 8015B		U.S. EPA Method 8020B	U.S EPA Method 8260B - VOCs														
			TPHg mg/L	TPHd mg/L	Bis (2-chloroethyl) ether µg/L	Benzene µg/L	tert-Butyl Alcohol µg/L	n-Butylbenzene µg/L	sec-Butylbenzene µg/L	cis-1,2-Dichloroethene µg/L	Ethylbenzene µg/L	Isopropylbenzene µg/L	4-Isopropyltoluene µg/L	Naphthalene µg/L	n-Propylbenzene µg/L	Toluene µg/L	1,2,4-Trimethylbenzene µg/L	1,3,5-Trimethylbenzene µg/L	m,p-Xylene µg/L	o-Xylene µg/L
MW-2	AA&AI	12/9/2012	ND<0.05	**0.48**	ND<10	ND<0.5	ND<10	ND<0.50	ND<0.50	ND<1	ND<0.5	ND<0.50	ND<0.50	ND<1	ND<0.50	ND<0.5	ND<1	ND<1	ND<1.0	ND<0.50
MW-2	AA&AI	12/27/2013	ND<0.05	ND<0.5	ND<10	ND<0.5	ND<10	ND<1	ND<1	ND<1	ND<1	ND<1	--	ND<3	ND<1	ND<0.5	ND<1	ND<1	--	--
MW-2	AA&AI	12/7/2014	ND<0.05	ND<0.5	ND<10	ND<0.5	ND<10	ND<1	ND<1	ND<1	ND<1	ND<1	--	ND<3	ND<1	ND<0.5	ND<1	ND<1	--	--
MW-2	AA&AI	12/10/2015	ND<0.05	ND<0.5	ND<10	ND<0.5	ND<10	ND<1	ND<1	ND<1	ND<1	ND<1	--	ND<3	ND<1	ND<0.5	ND<1	ND<1	--	--
MW-10	AA&AI	12/9/2012	**0.080**	**2.5**	ND<10	ND<0.5	**220**	ND<0.50	ND<0.50	ND<1	ND<0.5	**0.71**	ND<0.50	**1.3**	**0.51**	ND<0.5	ND<1	ND<1	ND<1.0	**0.65**
MW-10	AA&AI	12/27/2013	ND<0.05	ND<0.5	ND<10	ND<0.5	**130**	ND<1	ND<1	ND<1	ND<1	ND<1	--	ND<3	ND<1	ND<0.5	ND<1	ND<1	--	--
MW-10	AA&AI	12/7/2014	ND<0.050	ND<0.5	ND<10	ND<0.5	ND<10	ND<1	ND<1	ND<1	ND<1	ND<1	--	ND<3	ND<1	ND<0.5	ND<1	ND<1	--	--
MW-10	AA&AI	12/10/2015	ND<0.050	**0.911**	ND<10	ND<0.5	ND<10	ND<1	ND<1	ND<1	ND<1	ND<1	--	ND<3	ND<1	ND<0.5	ND<1	ND<1	--	--
MW-10	AA&AI	12/15/2016	**0.079**	**1.03**	ND<9.5	ND<0.50	**15**	ND<1.0	ND<1.0	ND<0.50	ND<0.50	**0.65**	ND<0.50	**1.5**	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50
B-1	TEC	2001	ND<0.20	--	**1,500**	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**2.1**
B-2	TEC	2001	ND<0.20	--	ND<110	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-3	TEC	2001	ND<0.20	--	ND<110	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-4	TEC	2001	ND<0.20	--	**100**	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**3.0**
B-5	TEC	2001	ND<0.20	--	ND<110	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-6	TEC	2001	ND<0.20	--	ND<11	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-7	TEC	2001	ND<0.20	--	ND<11	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-8	TEC	2001	ND<0.20	--	ND<11	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-9	TEC	2001	ND<0.20	--	ND<11	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
E1A	Tetra Tech	6/1/2006	--	--	--	ND<0.5	--	ND<0.5	**1.6**	ND<0.5	ND<0.5	**8.7**	--	**11.6**	**9.6**	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5
E1A	Tetra Tech	6/1/2006	--	--	--	ND<0.5	--	ND<0.5	**1.7**	ND<0.5	ND<0.5	**13.3**	--	**64.7**	**13.2**	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5
E5	Tetra Tech	6/1/2006	--	--	--	ND<0.5	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5

Notes:
mg/L = milligram per liter.
µg/L = microgram per liter.
U.S. EPA = United States Environmental Protection Agency.
TPHg = total petroleum hydrocarbons as gasoline.
TPHd - total petroleum hydrocarbons as diesel.
VOCs = volatile organic compounds.
ND = not detected.
ND< = less than the laboratory reporting limit in data from Tetra Tech, 2006 samples or analytical detection limit in data from TEC, 2001.
AA&AI = Ami Amini & Adini, Inc.
TEC = Testa Environmental Corporation.
Data qualifiers from TEC, 2001:
B-1 through B-9 are reported in TEC, 2001.
(a) Sample date is unknown. The date listed is the date reported.
(b) The consultant is unknown. Data collected for borings B-1 through B-9 are assumed to be collected by TEC, 2001, as it is stated in the report text 9 borings were installed as part of their investigation with the same naming convention.
(c) The sample depth is unknown.

References:

AA&AI. 2017. Groundwater Monitoring Report – Fourth Quarter 2016, Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, California. January 15.
AA&AI. 2016. Groundwater Monitoring Report – Fourth Quarter 2015, Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, California. January 15.
AA&AI. 2015. Groundwater Monitoring Report – Fourth Quarter 2014, Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, California. January 15.
AA&AI. 2014. Groundwater Monitoring Report – Fourth Quarter 2013, Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, California. January 15.
TEC. 2013. Report on Groundwater Quality Monitoring Program January 2013, Former Chemoil Refinery, Slic No. 453A, Signal Hill, California. January 15.
TEC. 2001. Report on Additional Subsurface Assessment, Former Chemoil Refinery - Eastern Parcel, Signal Hill, California. December 14.
Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

Table A-13
Summary of Analytical Results for Metals in Groundwater, East Parcel
Former Chemoil Refinery
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	U.S EPA Method 6010B - Metals																
				Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Thallium µg/L	Vanadium µg/L	Zinc µg/L
MW-2	unknown	(a) (b) (c) (d) (e)	unknown	ND<0.0050	**0.0067**	**0.090**	ND<0.0030	ND<0.0030	**0.030**	ND<0.0030	**0.010**	ND<0.0050	ND<0.0020	ND<0.0050	ND<0.0030	ND<0.0050	ND<0.0030	ND<0.0050	**0.0077**	**0.030**
MW-10	unknown	(a) (b) (c) (d) (e)	unknown	ND<0.0050	**0.26**	**0.060**	ND<0.0030	ND<0.0030	ND<0.0030	ND<0.0030	**0.0072**	ND<0.0050	ND<0.0020	**0.010**	ND<0.0030	ND<0.0050	ND<0.0030	ND<0.0050	ND<0.0030	**0.030**
B-1	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.12**	**0.26**	ND<0.0030	ND<0.0030	**0.050**	**0.010**	**0.030**	ND<0.0050	ND<0.0020	**0.080**	**0.020**	ND<0.0050	ND<0.0030	ND<0.0050	**0.070**	**0.10**
B-2	TEC	(a) (b) (c) (d) (e)	2001	**0.0069**	**0.14**	**0.65**	ND<0.0030	ND<0.0030	**0.21**	**0.090**	**0.12**	**0.020**	ND<0.0020	**0.060**	**0.11**	ND<0.0050	ND<0.0030	**0.010**	**0.32**	**0.54**
B-3	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**10.03**	**0.19**	ND<0.0030	ND<0.0030	**0.030**	**0.020**	**0.020**	ND<0.0050	ND<0.0020	**0.030**	**0.020**	ND<0.0050	ND<0.0030	ND<0.0050	**0.070**	**0.10**
B-4	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.11**	**0.50**	ND<0.0030	ND<0.0030	**0.060**	**0.020**	**0.030**	ND<0.0050	ND<0.0020	**0.090**	**0.040**	ND<0.0050	ND<0.0030	ND<0.0050	**0.10**	**0.21**
B-5	TEC	(a) (b) (c) (d) (e)	2001	**0.0051**	**0.23**	**2.9**	ND<0.0030	ND<0.0030	**0.35**	**0.27**	**0.30**	**0.11**	ND<0.0020	**0.040**	**0.29**	ND<0.0050	ND<0.0030	**0.020**	**0.50**	**0.72**
B-6	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.030**	**0.31**	ND<0.0030	ND<0.0030	**0.030**	**0.050**	**0.040**	ND<0.0050	ND<0.0020	**0.020**	**0.030**	ND<0.0050	ND<0.0030	ND<0.0050	**0.070**	**0.070**
B-7	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.10**	**0.69**	ND<0.0030	ND<0.0030	**0.23**	**0.070**	**0.12**	**0.020**	ND<0.0020	**0.060**	**0.11**	ND<0.0050	ND<0.0030	**0.010**	**0.26**	**0.43**
B-8	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.040**	**0.33**	ND<0.0030	ND<0.0030	**0.060**	**0.020**	**0.050**	ND<0.0050	ND<0.0020	**0.060**	**0.030**	ND<0.0050	ND<0.0030	ND<0.0050	**0.080**	**0.13**
B-9	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.0091**	**215**	ND<0.0030	ND<0.0030	**0.010**	**0.010**	**0.020**	ND<0.0050	ND<0.0020	**0.030**	**0.010**	ND<0.0050	ND<0.0030	ND<0.0050	**0.030**	**0.050**

Notes:
µg/L = micrograms per liter.
U.S. EPA = United States Environmental Protection Agency.
ND = not detected.
ND< = Less than analytical detection limit listed.
TEC = Testa Environmental Corporation.
Data qualifiers from TEC, 2001:
MW-1, MW-10, and B-1 through B-9 are reported in TEC, 2001.
(a) Sample date is unknown. The date listed is the date reported.
(b) The consultant is unknown. Data collected for borings B-1 through B-9 are assumed to be collected by TEC, 2001, as it is stated in the report text 9 borings were installed as part of their investigation with the same naming convention.
(c) The sample depth is unknown.
(d) No analytical method is listed in Table 6-2. The report text lists the analytical method for soil as U.S. EPA Method 6010B; therefore, it is assumed this is the correct listed method.
(e) No units are listed in Table 6-2 or in the report text. The units are assumed to be ug/L.
References:
TEC. 2001. Report on Additional Subsurface Assessment, Former Chemoil Refinery - Eastern Parcel, Signal Hill, California. December 14.

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Table 1
Current Groundwater Analytical Data
Former ChemOil Refinery
2020 Walnut, Signal Hill, California 90755

Well ID	Date	DO (mg/L)	ORP (mV)	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	cis- 1,2-DCE (µg/L)	1,3,5-TMB (µg/L)	1,2,4-TMB (µg/L)	Naphthalene (µg/L)
MW-1	12/14/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-1A	12/14/16	<1	-34	6,900	9,000	<0.50	<0.50	<0.50	<1.0	5.0	<1.0	<1.0	<1.0	11	<0.50	<0.50	<0.50	<0.50	310
MW-2	12/15/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	12/14/16	<1	>-100	<50	<400	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50
MW-8	12/15/16	<1	-28.00	2,900	2,800	3.7	<0.50	1.1	<1.0	1.1	<1.0	<1.0	<1.0	120	<0.50	<0.50	<0.50	<0.50	57
MW-9	12/14/16	<1	-58	17,000	57,000	330	<25	140	150	<50	<50	<50	<50	<500	<25	<25	<25	38	310
MW-10	12/14/16	<1	-55.00	79	1,030	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	15	<0.50	<0.50	<0.50	<0.50	1.5
MW-11	12/15/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-12	12/15/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-13	12/14/16	<1	-15.00	250	<400	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<0.50	<0.50	<0.50	<0.50	4.3
MW-14	12/14/16	<1	51	<50	<400	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50
MW-15	12/15/16	<1	-24	3,300	6,600	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<0.50	<0.50	<0.50	<0.50	4.2
MW-16	12/14/16	<1	-15	5,100	1,400	<0.50	<0.50	<0.50	<1.0	7.2	<1.0	<1.0	<1.0	<10	<0.50	<0.50	<0.50	<0.50	75
MW-17	12/14/16	<1	35	120	<400	<0.50	<0.50	<0.50	<1.0	29	<1.0	<1.0	<1.0	19	<0.50	<0.50	<0.50	<0.50	<0.50
MW-18	12/14/16	2.00	32.00	<50	<400	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50
MW-19	12/15/16	1.00	-36	1,700	4,850	<2.5	<2.5	<2.5	<5.0	<5.0	<5.0	<5.0	<5.0	<50	<2.5	<2.5	<2.5	<2.5	20
BMW-1	12/15/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BMW-2	12/15/16	6-8	7	<50	610	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50
BMW-3	12/15/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BMW-4	12/15/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BMW-5	12/15/16	6-8	18	550	<400	<0.50	0.78	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	36	<0.50	<0.50	<0.50	<0.50	3.3
BMW-6	12/15/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BMW-7	12/15/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BMW-8	12/15/16	6-8	23	870	<400	<0.50	0.65	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<0.50	<0.50	<0.50	<0.50	1.5
BMW-9	12/15/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 1
Current Groundwater Analytical Data
Former ChemOil Refinery
2020 Walnut, Signal Hill, California 90755

Well ID	Date	DO (mg/L)	ORP (mV)	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	cis- 1,2-DCE (µg/L)	1,3,5-TMB (µg/L)	1,2,4-TMB (µg/L)	Naphthalene (µg/L)
BMW-10	12/15/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BMW-11	12/15/16	2.00	-12	4,600	1,200	200	<2.5	120	<5.0	<5.0	<5.0	<5.0	<5.0	<50	<2.5	<2.5	4.8	12	120
BMW-12	12/15/16	—	—	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PQL		NA	NA	100	500	1	1	1	2	2	2	2	2	20	5	2	5	5	5
MDL		NA	NA	50	750	0.5	0.5	0.5	1	1	1	1	1	10	0.5	1	1	1	1

Notes:

MW1, MW2, etc. are monitoring well designations
GC/MS = Gas chromatography/mass spectrometry
DO = Dissolved oxygen
ORP = Oxidation reduction potential
TPHg = Total petroleum hydrocarbons as gasoline (LUFT GC/MS)
TPHd = Tptal petroleum hydrocarbons as diesel (LUFT GC/MS)
MTBE = Methyl tertiary butyl ether (EPA Method 8260B)
ETBE = Ethyl tertiary butyl ether (EPA Method 8260B)
DIPE = Di-isopropyl ether (EPA Method 8260B)
TAME = Tertiary amyl methyl ether (EPA Method 8260B)
TBA = Tertiary butyl alcohol (EPA Method 8260B)
DCA = Dichloroethane (EPA Method 8260B)
DCE = Dichloroethene (EPA Method 8260B)
PCE = Tetrachloroethene (EPA Method 8260B)
TMB = Trimethylbenzene (EPA Method 8260B)
mg/L = Milligrams per liter
mV = Millivolts
µg/L = Micrograms per liter
— = Not measured or not applicable
* = Result obtained from a higher dilution
PQL = Practical quantitation limit
MDL = Method detection limit
J = Estimated value between the MDL and PQL
NS = Not sampled

Other detected contaminant concentrations (µg/L) during this event:
Isopropylbenzene: 89 (MW-1A), 140 (MW-8), 75 (MW-9), 0.65 (MW-10), 8.1 (MW-13), 59 (MW-15), 98 (MW-16), 85 (MW-19), 13 (BMW-5), 3.3 (BMW-8), 64 (BMW-11)
n-Propylbenzene: 49 (MW-1A), 130 (MW-8), 91 (MW-9), 3.7 (MW-13), 3.8 (MW-15), 40 (MW-16), 2.8 (MW-19), 5.0 (BMW-5), 4.2 (BMW-8), 63 (BMW-11)
sec-Butylbenzene: 14 (MW-1A), 23 (MW-8), 1.3 (MW-13), 19 (MW-15), 23 (MW-16), 10 (MW-19), 4.1 (BMW-5), 3.0 (BMW-8), 10 (BMW-11)
n-Butylbenzene: 1.3 (MW-1A), 5.3 (MW-8), 5.4 (BMW-11)
2-Methylnapthalene: 93 (MW-1A), 11 (MW-8), 100 (MW-9), 30 (MW-16), 44 (MW-19), 38 (BMW-11)

APPENDIX B

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH PERMITS

EN□IRONMENTAL □EALT□

□r□□□□□ □ □□□r Pr□□r□□

5050 Commerce Drive, Baldwin Park, CA 91706
Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: vgallegos@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

SR□1 □□□11

□1□□ □ □□□□□A□□ S□□□□□□ □□□□□□□□ □ □r□ P□□□ A□□r□□□□

TO □E COMPLETE□ □□ APPLICANT□

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
2105 Walnut Avenue	Signal Hill	90755	Casey.huff@apexcos.com

NOTICE□

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- ***ONCE APPROVED NOTIFY VINCENT GALLEGOS AT vgallegos@ph.lacounty.gov PREFERABLY 4 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.***

TO □E COMPLETE□ □□ □EPARTMENT OF PU□LIC □EALT□□ □RIN□ING □ ATER PROGRAM□

X WORK PLAN APPROVED: 3 direct push boring's DATE: May 15, 2017

ADDITIONAL APPROVAL CONDITIONS:

- Please provide/ verify project dates and time via my email listed above this comment box
- This approval for the 3 borings does not include permission or approval to convert borings or additionally construct such borings to Monitoring / vapor wells. If conversion is field warranted, submit an application $519.00 per well with work plan/ resend work plan that describes well construction that includes State Well Completion Reports.
- Assure that the drilling, sampling and backfill of boring occurs within 72 hours.

.

Vincent Gallegos R.E.H.S.
Drinking Water Program
vgallegos@ph.lacounty.gov

GROUT SEAL INSPECTION)

DATE ACCEPTED: REHS signature	

APPENDIX C

CPT LOGS

May 19, 2017

The Source Group/APEX
Attn: Kirsten Duey

Subject: CPT Site Investigation
Former Chemoil Refinery
Signal Hill, California
GREGG Project Number: 17-570SH

Dear Ms. Duey:

The following report presents the results of GREGG Drilling & Testing's Cone Penetration Test investigation for the above referenced site. The following testing services were performed:

1	Cone Penetration Tests	(CPTU)	☒
2	Pore Pressure Dissipation Tests	(PPD)	☒
3	Seismic Cone Penetration Tests	(SCPTU)	☐
4	UVOST Laser Induced Fluorescence	(UVOST)	☐
5	Groundwater Sampling	(GWS)	☐
6	Soil Sampling	(SS)	☐
7	Vapor Sampling	(VS)	☐
8	Membrane Interface Probe	(MIP)	☐
9	Vane Shear Testing	(VST)	☐
10	Dilatometer Testing	(DMT)	☐

A list of reference papers providing additional background on the specific tests conducted is provided in the bibliography following the text of the report. If you would like a copy of any of these publications or should you have any questions or comments regarding the contents of this report, please do not hesitate to contact our office at (562) 427-6899.

Sincerely,
GREGG Drilling & Testing, Inc.

Peter Robertson
Technical Director, Gregg Drilling & Testing, Inc.

Cone Penetration Test Sounding Summary

-Table 1-

CPT Sounding Identification	Date	Termination Depth (feet)	Depth of Groundwater Samples (feet)	Depth of Soil Samples (feet)	Depth of Pore Pressure Dissipation Tests (feet)
AN-22	5/18/17	58	58	-	-
AN-22a	5/18/17	59	-	-	-

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Campanella, R.G. and I. Weemees, "Development and Use of An Electrical Resistivity Cone for Groundwater Contamination Studies", Canadian Geotechnical Journal, Vol. 27 No. 5, 1990 pp. 557-567.

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Woeller, D.J., P.K. Robertson, T.J. Boyd and Dave Thomas, "Detection of Polyaromatic Hydrocarbon Contaminants Using the UVIF-CPT", 53rd Canadian Geotechnical Conference Montreal, QC October pp. 733-739, 2000.

Zemo, D.A., T.A. Delfino, J.D. Gallinatti, V.A. Baker and L.R. Hilpert, "Field Comparison of Analytical Results from Discrete-Depth Groundwater Samplers" BAT EnviroProbe and QED HydroPunch, Sixth national Outdoor Action Conference, Las Vegas, Nevada Proceedings, 1992, pp 299-312.

Copies of ASTM Standards are available through www.astm.org

Cone Penetration Testing Procedure (CPT)

Gregg Drilling carries out all Cone Penetration Tests (CPT) using an integrated electronic cone system, *Figure CPT*.

The cone takes measurements of tip resistance (q_c), sleeve resistance (f_s), and penetration pore water pressure (u_2). Measurements are taken at either 2.5 or 5 cm intervals during penetration to provide a nearly continuous profile. CPT data reduction and basic interpretation is performed in real time facilitating on-site decision making. The above mentioned parameters are stored electronically for further analysis and reference. All CPT soundings are performed in accordance with revised ASTM standards (D 5778-12).

The 5mm thick porous plastic filter element is located directly behind the cone tip in the u_2 location. A new saturated filter element is used on each sounding to measure both penetration pore pressures as well as measurements during a dissipation test (*PPDT*). Prior to each test, the filter element is fully saturated with oil under vacuum pressure to improve accuracy.

When the sounding is completed, the test hole is backfilled according to client specifications. If grouting is used, the procedure generally consists of pushing a hollow tremie pipe with a "knock out" plug to the termination depth of the CPT hole. Grout is then pumped under pressure as the tremie pipe is pulled from the hole. Disruption or further contamination to the site is therefore minimized.

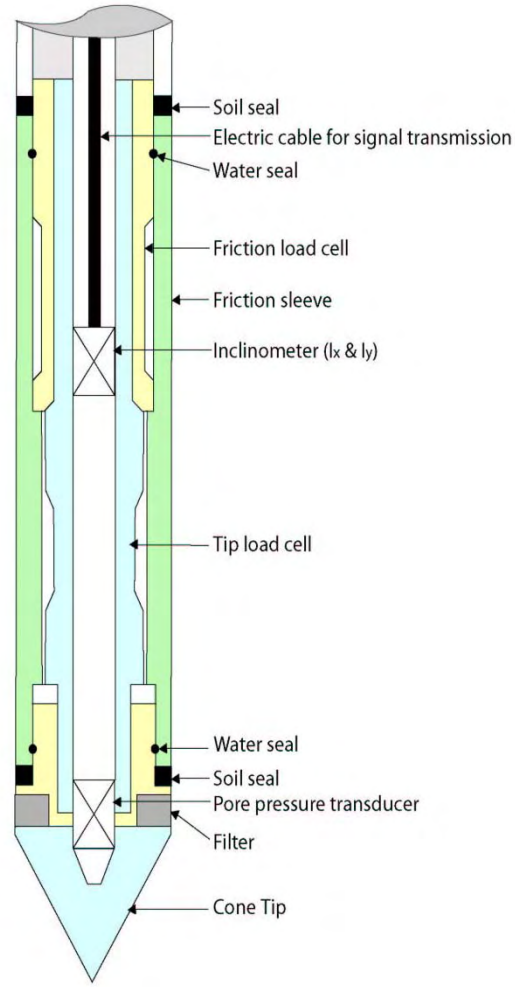


Figure CPT

Gregg 15cm^2 Standard Cone Specifications

Dimensions	
Cone base area	15 cm^2
Sleeve surface area	225 cm^2
Cone net area ratio	0.80
Specifications	
Cone load cell	
Full scale range	180 kN (20 tons)
Overload capacity	150%
Full scale tip stress	120 MPa (1,200 tsf)
Repeatability	120 kPa (1.2 tsf)
Sleeve load cell	
Full scale range	31 kN (3.5 tons)
Overload capacity	150%
Full scale sleeve stress	1,400 kPa (15 tsf)
Repeatability	1.4 kPa (0.015 tsf)
Pore pressure transducer	
Full scale range	7,000 kPa (1,000 psi)
Overload capacity	150%
Repeatability	7 kPa (1 psi)

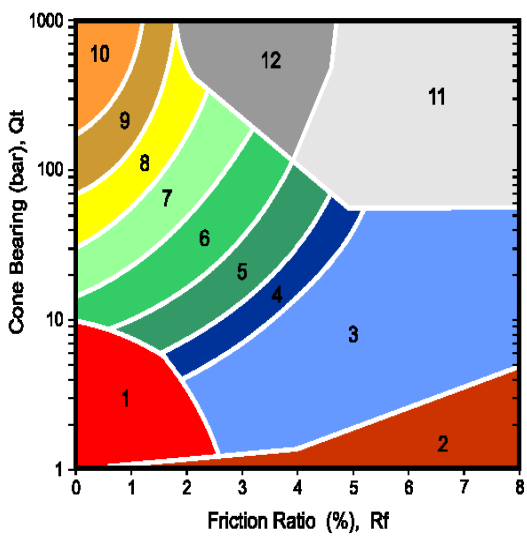
Note: The repeatability during field use will depend somewhat on ground conditions, abrasion, maintenance and zero load stability.

Cone Penetration Test Data & Interpretation

The Cone Penetration Test (CPT) data collected are presented in graphical and electronic form in the report. The plots include interpreted Soil Behavior Type (SBT) based on the charts described by Robertson (1990). Typical plots display SBT based on the non-normalized charts of Robertson et al (1986). For CPT soundings deeper than 30m, we recommend the use of the normalized charts of Robertson (1990) which can be displayed as SBTn, upon request. The report also includes spreadsheet output of computer calculations of basic interpretation in terms of SBT and SBTn and various geotechnical parameters using current published correlations based on the comprehensive review by Lunne, Robertson and Powell (1997), as well as recent updates by Professor Robertson (Guide to Cone Penetration Testing, 2015). The interpretations are presented only as a guide for geotechnical use and should be carefully reviewed. Gregg Drilling & Testing Inc. does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the software and does not assume any liability for use of the results in any design or review. The user should be fully aware of the techniques and limitations of any method used in the software. Some interpretation methods require input of the groundwater level to calculate vertical effective stress. An estimate of the in-situ groundwater level has been made based on field observations and/or CPT results, but should be verified by the user.

A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface.

Note that it is not always possible to clearly identify a soil type based solely on q_t, f_s, and u_2. In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the correct soil behavior type.



ZONE		SBT
1		Sensitive, fine grained
2		Organic materials
3		Clay
4		Silty clay to clay
5		Clayey silt to silty clay
6		Sandy silt to clayey silt
7		Silty sand to sandy silt
8		Sand to silty sand
9		Sand
10		Gravely sand to sand
11		Very stiff fine grained*
12		Sand to clayey sand*

*over consolidated or cemented

Figure SBT (After Robertson et al., 1986) – Note: Colors may vary slightly compared to plots

Cone Penetration Test (CPT) Interpretation

Gregg uses a proprietary CPT interpretation and plotting software. The software takes the CPT data and performs basic interpretation in terms of soil behavior type (SBT) and various geotechnical parameters using current published empirical correlations based on the comprehensive review by Lunne, Robertson and Powell (1997). The interpretation is presented in tabular format using MS Excel. The interpretations are presented only as a guide for geotechnical use and should be carefully reviewed. Gregg does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the software and does not assume any liability for any use of the results in any design or review. The user should be fully aware of the techniques and limitations of any method used in the software.

The following provides a summary of the methods used for the interpretation. Many of the empirical correlations to estimate geotechnical parameters have constants that have a range of values depending on soil type, geologic origin and other factors. The software uses 'default' values that have been selected to provide, in general, conservatively low estimates of the various geotechnical parameters.

Input:

1. Units for display (Imperial or metric) (atm. pressure, p_a = 0.96 tsf or 0.1 MPa)
2. Depth interval to average results (ft or m). Data are collected at either 0.02 or 0.05m and can be averaged every 1, 3 or 5 intervals.
3. Elevation of ground surface (ft or m)
4. Depth to water table, z_w (ft or m) – input required
5. Net area ratio for cone, a (default to 0.80)
6. Relative Density constant, C_{Dr} (default to 350)
7. Young's modulus number for sands, α (default to 5)
8. Small strain shear modulus number
   a. for sands, S_G (default to 180 for SBT_n 5, 6, 7)
   b. for clays, C_G (default to 50 for SBT_n 1, 2, 3 & 4)
9. Undrained shear strength cone factor for clays, N_{kt} (default to 15)
10. Over Consolidation ratio number, k_{ocr} (default to 0.3)
11. Unit weight of water, (default to γ_w = 62.4 lb/ft^3 or 9.81 kN/m^3)

Column

1. Depth, z, (m) – CPT data is collected in meters
2. Depth (ft)
3. Cone resistance, q_c (tsf or MPa)
4. Sleeve resistance, f_s (tsf or MPa)
5. Penetration pore pressure, u (psi or MPa), measured behind the cone (i.e. u_2)
6. Other – any additional data
7. Total cone resistance, q_t (tsf or MPa) $q_t = q_c + u\,(1-a)$

8	Friction Ratio, R_f (%)	$R_f = (f_s/q_t) \times 100\%$
9	Soil Behavior Type (non-normalized), SBT	see note
10	Unit weight, γ (pcf or kN/m^3)	based on SBT, see note
11	Total overburden stress, σ_v (tsf)	$\sigma_{vo} = \sigma z$
12	In-situ pore pressure, u_o (tsf)	$u_o = \gamma_w (z - z_w)$
13	Effective overburden stress, σ'_{vo} (tsf)	$\sigma'_{vo} = \sigma_{vo} - u_o$
14	Normalized cone resistance, Q_{t1}	$Q_{t1} = (q_t - \sigma_{vo}) / \sigma'_{vo}$
15	Normalized friction ratio, F_r (%)	$F_r = f_s / (q_t - \sigma_{vo}) \times 100\%$
16	Normalized Pore Pressure ratio, B_q	$B_q = u - u_o / (q_t - \sigma_{vo})$
17	Soil Behavior Type (normalized), SBT_n	see note
18	SBT_n Index, I_c	see note
19	Normalized Cone resistance, Q_{tn} (n varies with I_c)	see note
20	Estimated permeability, k_{SBT} (cm/sec or ft/sec)	see note
21	Equivalent SPT N_{60}, blows/ft	see note
22	Equivalent SPT $(N_1)_{60}$ blows/ft	see note
23	Estimated Relative Density, D_r, (%)	see note
24	Estimated Friction Angle, ϕ', (degrees)	see note
25	Estimated Young's modulus, E_s (tsf)	see note
26	Estimated small strain Shear modulus, Go (tsf)	see note
27	Estimated Undrained shear strength, s_u (tsf)	see note
28	Estimated Undrained strength ratio	s_u/σ_v'
29	Estimated Over Consolidation ratio, OCR	see note

Notes:

1 Soil Behavior Type (non-normalized), SBT (Lunne et al., 1997 and table below)

2 Unit weight, γ either constant at 119 pcf or based on Non-normalized SBT (Lunne et al., 1997 and table below)

3 Soil Behavior Type (Normalized), SBT_n Lunne et al. (1997)

4 SBT_n Index, I_c $I_c = ((3.47 - \log Q_{t1})^2 + (\log F_r + 1.22)^2)^{0.5}$

5 Normalized Cone resistance, Q_{tn} (n varies with Ic)

$Q_{tn} = ((q_t - \sigma_{vo})/pa)\ (pa/(\sigma'_{vo})^n$ and recalculate I_c, then iterate:

When $I_c < 1.64$, n = 0.5 (clean sand)
When $I_c > 3.30$, n = 1.0 (clays)
When $1.64 < I_c < 3.30$, $n = (I_c - 1.64)0.3 + 0.5$
Iterate until the change in n, $\Delta n < 0.01$

6 Estimated permeability, k_{SBT} based on Normalized SBT_n (Lunne et al., 1997 and table below)

7 Equivalent SPT N_{60}, blows/ft Lunne et al. (1997)

$$\frac{(q_t/p_a)}{N_{60}} = 8.5\left(1 - \frac{I_c}{4.6}\right)$$

8 Equivalent SPT $(N_1)_{60}$ blows/ft $(N_1)_{60} = N_{60}\, C_N$,
where $C_N = (pa/\sigma'_{vo})^{0.5}$

9 Relative Density, D_r, (%) $D_r^2 = Q_{tn} / C_{Dr}$
Only SBT_n 5, 6, 7 & 8 *Show 'N/A' in zones 1, 2, 3, 4 & 9*

10 Friction Angle, ϕ', (degrees) $\tan \phi' = \frac{1}{2.68}\left[\log\left(\frac{q_c}{\sigma'_{vo}}\right) + 0.29\right]$
Only SBT_n 5, 6, 7 & 8 *Show'N/A' in zones 1, 2, 3, 4 & 9*

11 Young's modulus, E_s $E_s = \alpha\, q_t$
Only SBT_n 5, 6, 7 & 8 *Show 'N/A' in zones 1, 2, 3, 4 & 9*

12 Small strain shear modulus, Go
a. $G_o = S_G\,(q_t\ \sigma'_{vo}\ pa)^{1/3}$ *For SBT_n 5, 6, 7*
b. $G_o = C_G\, q_t$ *For SBT_n 1, 2, 3& 4*
Show 'N/A' in zones 8 & 9

13 Undrained shear strength, s_u $s_u = (q_t - \sigma_{vo}) / N_{kt}$
Only SBT_n 1, 2, 3, 4 & 9 *Show 'N/A' in zones 5, 6, 7 & 8*

14 Over Consolidation ratio, OCR $OCR = k_{ocr}\, Q_{t1}$
Only SBT_n 1, 2, 3, 4 & 9 *Show 'N/A' in zones 5, 6, 7 & 8*

The following updated and simplified SBT descriptions have been used in the software:

SBT Zones		**SBT_n Zones**	
1	sensitive fine grained	1	sensitive fine grained
2	organic soil	2	organic soil
3	clay	3	clay
4	clay & silty clay	4	clay & silty clay
5	clay & silty clay		
6	sandy silt & clayey silt		

7	silty sand & sandy silt	5	silty sand & sandy silt
8	sand & silty sand	6	sand & silty sand
9	sand		
10	sand	7	sand
11	very dense/stiff soil*	8	very dense/stiff soil*
12	very dense/stiff soil*	9	very dense/stiff soil*

*heavily overconsolidated and/or cemented

Track when soils fall with zones of same description and print that description (i.e. if soils fall only within SBT zones 4 & 5, print 'clays & silty clays')

Estimated Permeability (see Lunne et al., 1997)

SBT_n	Permeability (ft/sec)	(m/sec)
1	$3x\ 10^{-8}$	$1x\ 10^{-8}$
2	$3x\ 10^{-7}$	$1x\ 10^{-7}$
3	$1x\ 10^{-9}$	$3x\ 10^{-10}$
4	$3x\ 10^{-8}$	$1x\ 10^{-8}$
5	$3x\ 10^{-6}$	$1x\ 10^{-6}$
6	$3x\ 10^{-4}$	$1x\ 10^{-4}$
7	$3x\ 10^{-2}$	$1x\ 10^{-2}$
8	$3x\ 10^{-6}$	$1x\ 10^{-6}$
9	$1x\ 10^{-8}$	$3x\ 10^{-9}$

Estimated Unit Weight (see Lunne et al., 1997)

SBT	Approximate Unit Weight (lb/ft^3)	(kN/m^3)
1	111.4	17.5
2	79.6	12.5
3	111.4	17.5
4	114.6	18.0
5	114.6	18.0
6	114.6	18.0
7	117.8	18.5
8	120.9	19.0
9	124.1	19.5
10	127.3	20.0
11	130.5	20.5
12	120.9	19.0

Pore Pressure Dissipation Tests (PPDT)

Pore Pressure Dissipation Tests (PPDT's) conducted at various intervals can be used to measure equilibrium water pressure (at the time of the CPT). If conditions are hydrostatic, the equilibrium water pressure can be used to determine the approximate depth of the ground water table. A PPDT is conducted when penetration is halted at specific intervals determined by the field representative. The variation of the penetration pore pressure (*u)* with time is measured behind the tip of the cone and recorded.

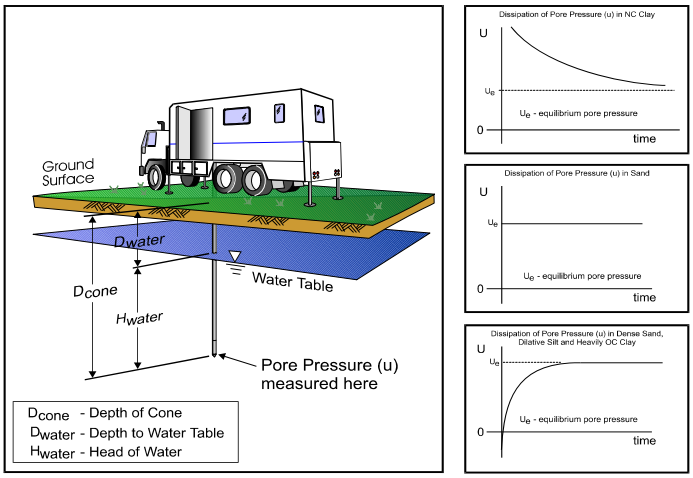
Pore pressure dissipation data can be interpreted to provide estimates of:

- Equilibrium piezometric pressure
- Phreatic Surface
- In situ horizontal coefficient of consolidation (c_h)
- In situ horizontal coefficient of permeability (k_h)

In order to correctly interpret the equilibrium piezometric pressure and/or the phreatic surface, the pore pressure must be monitored until it reaches equilibrium, *Figure PPDT*. This time is commonly referred to as t_{100}, the point at which 100% of the excess pore pressure has dissipated.

A complete reference on pore pressure dissipation tests is presented by Robertson et al. 1992 and Lunne et al. 1997.

A summary of the pore pressure dissipation tests are summarized in Table 1.



Water Table Calculation

$$D_{water} = D_{cone} - H_{water}$$

where $H_{water} = U_e$ (depth units)

Useful Conversion Factors: 1psi = 0.704m = 2.31 feet (water)
1tsf = 0.958 bar = 13.9 psi
1m = 3.28 feet

Figure PPDT

Seismic Cone Penetration Testing (SCPT)

Seismic Cone Penetration Testing (SCPT) can be conducted at various intervals during the Cone Penetration Test. Shear wave velocity (Vs) can then be calculated over a specified interval with depth. A small interval for seismic testing, such as 1-1.5m (3-5ft) allows for a detailed look at the shear wave profile with depth. Conversely, a larger interval such as 3-6m (10-20ft) allows for a more average shear wave velocity to be calculated. Gregg's cones have a horizontally active geophone located 0.2m (0.66ft) behind the tip.

To conduct the seismic shear wave test, the penetration of the cone is stopped and the rods are decoupled from the rig. An automatic hammer is triggered to send a shear wave into the soil. The distance from the source to the cone is calculated knowing the total depth of the cone and the horizontal offset distance between the source and the cone. To calculate an interval velocity, a minimum of two tests must be performed at two different depths. The arrival times between the two wave traces are compared to obtain the difference in time (Δt). The difference in depth is calculated (Δd) and velocity can be determined using the simple equation: $v = \Delta d/\Delta t$

Multiple wave traces can be recorded at the same depth to improve quality of the data.

A complete reference on seismic cone penetration tests is presented by Robertson et al. 1986 and Lunne et al. 1997.

A summary the shear wave velocities, arrival times and wave traces are provided with the report.

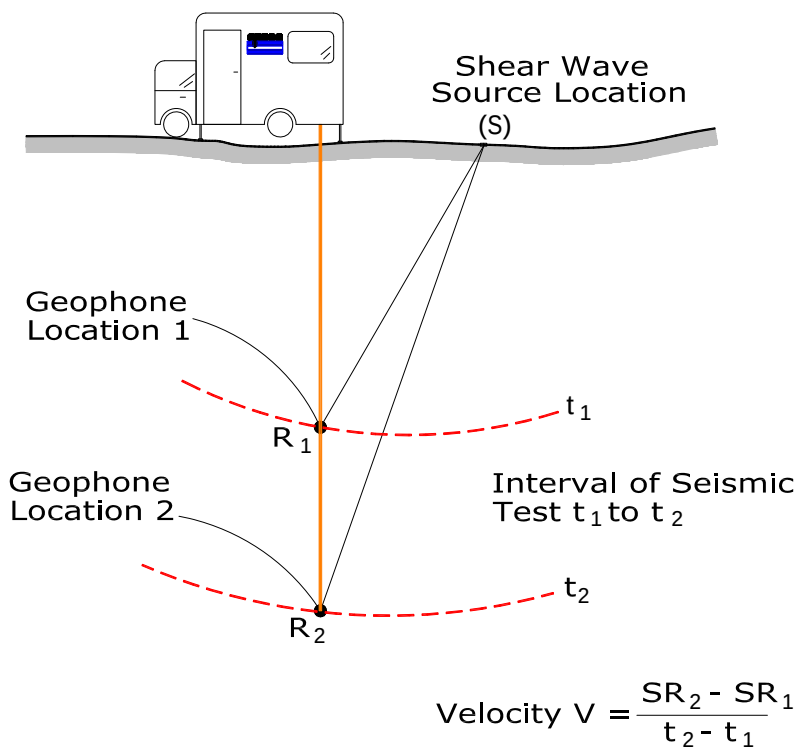


Figure SCPT

Groundwater Sampling

Gregg Drilling & Testing, Inc. conducts groundwater sampling using a sampler as shown in *Figure GWS*. The groundwater sampler has a retrievable stainless steel or disposable PVC screen with steel drop off tip. This allows for samples to be taken at multiple depth intervals within the same sounding location. In areas of slower water recharge, provisions may be made to set temporary PVC well screens during sampling to allow the pushing equipment to advance to the next sample location while the groundwater is allowed to infiltrate.

The groundwater sampler operates by advancing 44.5mm (1¾ inch) hollow push rods with the filter tip in a closed configuration to the base of the desired sampling interval. Once at the desired sample depth, the push rods are retracted; exposing the encased filter screen and allowing groundwater to infiltrate hydrostatically from the formation into the inlet screen. A small diameter bailer (approximately ½ or ¾ inch) is lowered through the push rods into the screen section for sample collection. The number of downhole trips with the bailer and time necessary to complete the sample collection at each depth interval is a function of sampling protocols, volume requirements, and the yield characteristics and storage capacity of the formation. Upon completion of sample collection, the push rods and sampler, with the exception of the PVC screen and steel drop off tip are retrieved to the ground surface, decontaminated and prepared for the next sampling event.

For a detailed reference on direct push groundwater sampling, refer to Zemo et. al., 1992.

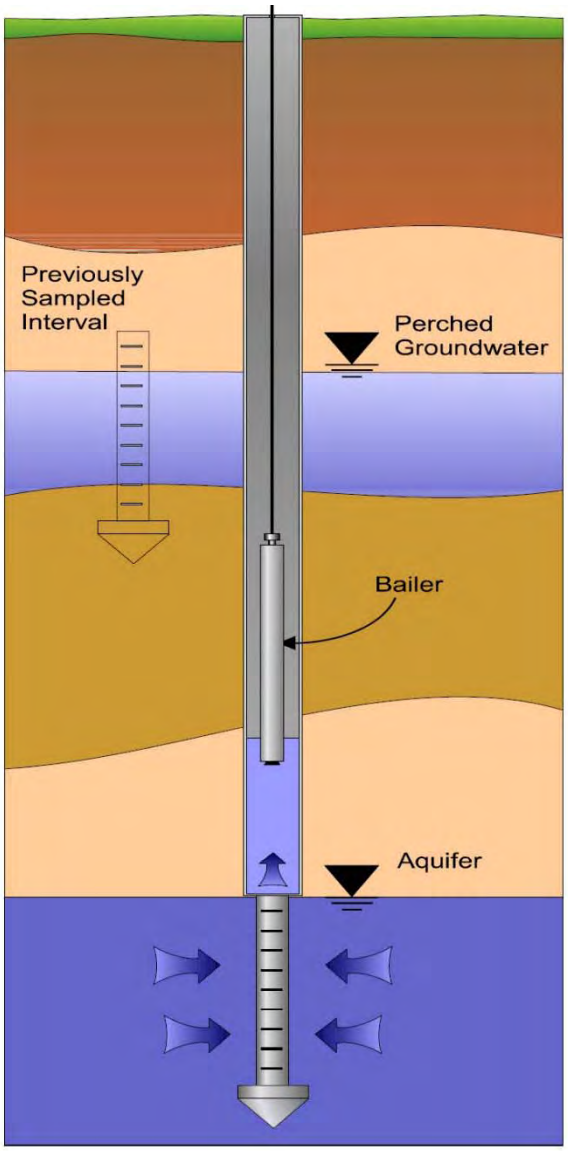


Figure GWS

Soil Sampling

Gregg Drilling & Testing, Inc. uses a piston-type push-in sampler to obtain small soil samples without generating any soil cuttings, *Figure SS*. Two different types of samplers (12 and 18 inch) are used depending on the soil type and density. The soil sampler is initially pushed in a "closed" position to the desired sampling interval using the CPT pushing equipment. Keeping the sampler closed minimizes the potential of cross contamination. The inner tip of the sampler is then retracted leaving a hollow soil sampler with inner 1¼" diameter sample tubes. The hollow sampler is then pushed in a locked "open" position to collect a soil sample. The filled sampler and push rods are then retrieved to the ground surface. Because the soil enters the sampler at a constant rate, the opportunity for 100% recovery is increased. For environmental analysis, the soil sample tube ends are sealed with Teflon and plastic caps. Often, a longer "split tube" can be used for geotechnical sampling.

For a detailed reference on direct push soil sampling, refer to Robertson et al, 1998.

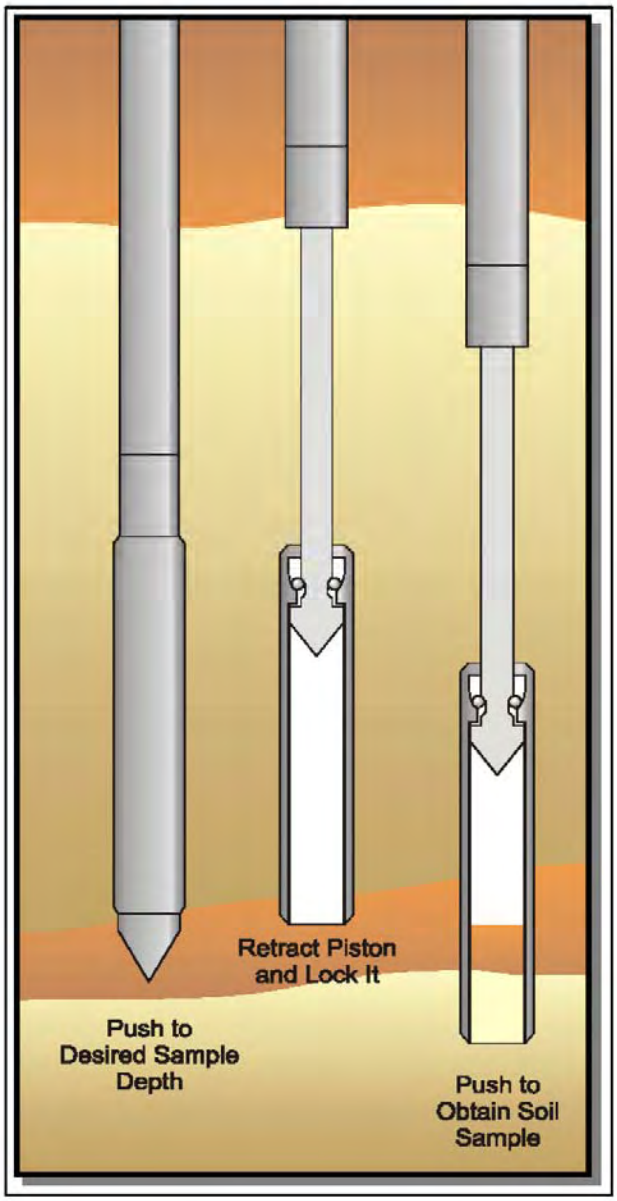


Figure SS

Ultra-Violet Induced Fluorescence (UVOST)

Gregg Drilling conducts Laser Induced Fluorescence (LIF) Cone Penetration Tests using a UVOST module that is located behind the standard piezocone, *Figure UVOST*. The laser induced fluorescence cone works on the principle that polycyclic aromatic hydrocarbons (PAH's), mixed with soil and/or groundwater, fluoresce when irradiated by ultra violet light. Therefore, by measuring the intensity of fluorescence, the lateral and vertical extent of hydrocarbon contamination in the ground can be estimated.

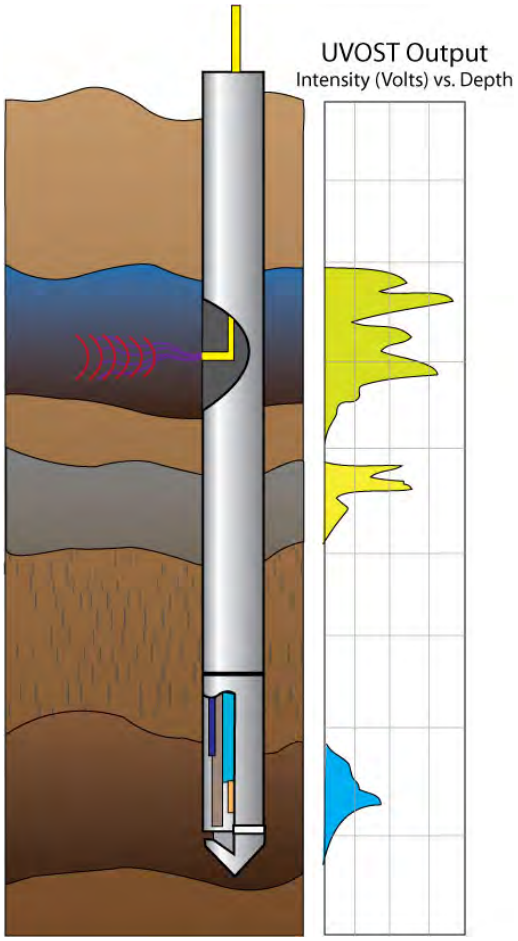


Figure UVOST

The UVOST module uses principles of fluorescence spectrometry by irradiating the soil with ultra violet light produced by a laser and transmitted to the cone through fiber optic cables. The UV light passes through a small window in the side of the cone into the soil. Any hydrocarbon molecules present in the soil absorb the light energy during radiation and immediately re-emit the light at a longer wavelength. This re-emission is termed fluorescence. The UVOST system also measures the emission decay with time at four different wavelengths (350nm, 400nm, 450nm, and 500nm). This allows the software to determine a product "signature" at each data point. This process provides a method to evaluate the type of contaminant. A sample output from the UVOST system is shown in *Figure Output*. In general, the typical detection limit for the UVOST system is <100 ppm and it will operate effectively above and below the saturated zone.

With the capability to push up to 200m (600ft) per day, laser induced fluorescence offers a fast and efficient means for delineating PAH contaminant plumes. Color coded logs offer qualitative information in a quick glance and can be produced in the field for real-time decision making. Coupled with the data provided by the CPT, a complete site assessment can be completed with no samples or cuttings, saving laboratory costs as well as site and environmental impact.

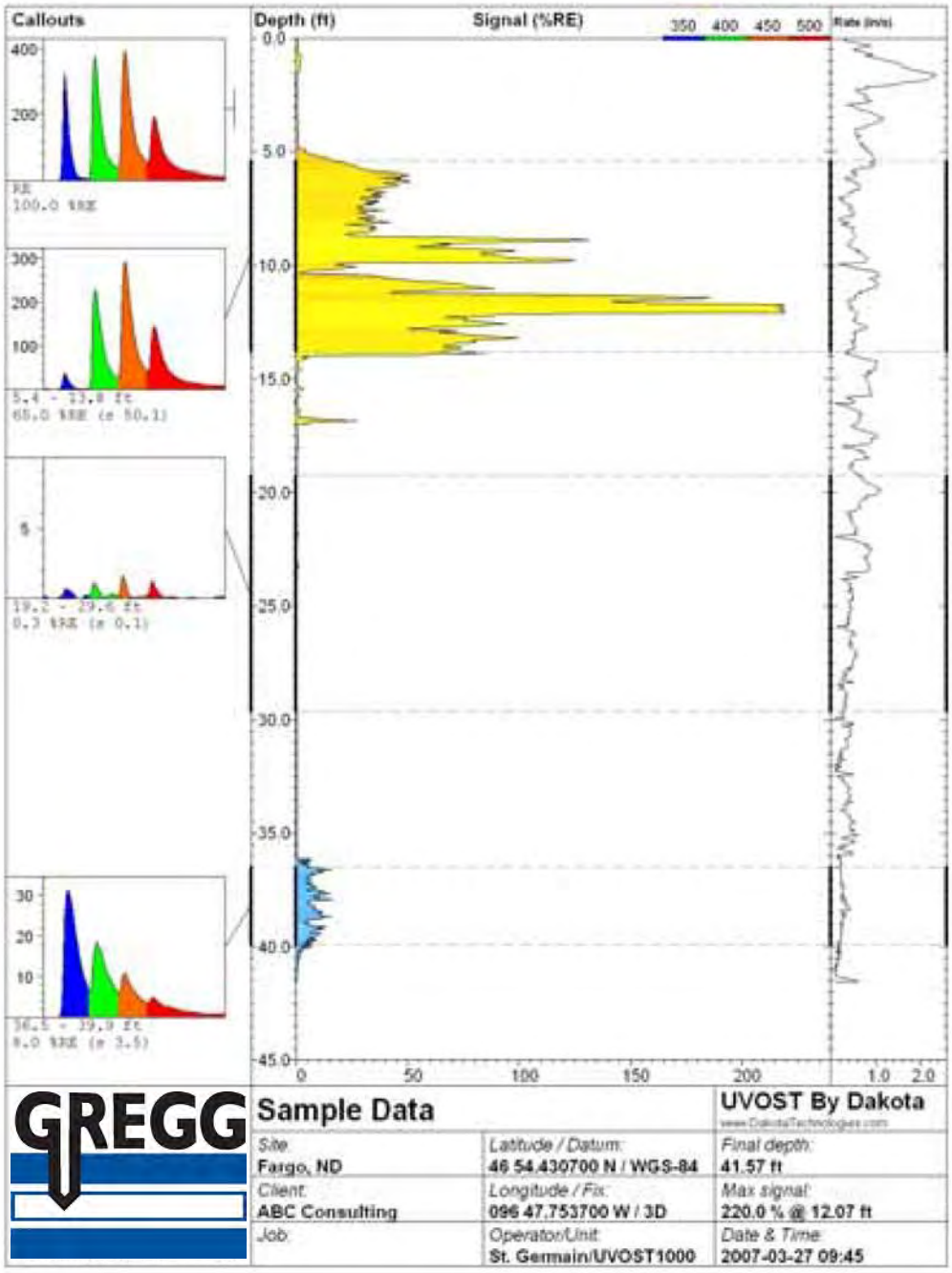


Figure Output

Hydrocarbons detected with UVOST

- Gasoline
- Diesel
- Jet (Kerasene)
- Motor Oil
- Cutting fluids
- Hydraulic fluids
- Crude Oil

Hydrocarbons rarely detected using UVOST

- Extremely weathered gasoline
- Coal tar
- Creosote
- Bunker Oil
- Polychlorinated bi-phenols (PCB's)
- Chlorinated solvent DNAPL
- Dissolved phase (aqueous) PAH's

Potential False Positives (fluorescence observed)

- Sea-shells (weak-medium)
- Paper (medium-strong depending on color)
- Peat/meadow mat (weak)
- Calcite/calcareous sands (weak)
- Tree roots (weak-medium)
- Sewer lines (medium-strong)

Potential False Negatives (do not fluoresce)

- Extremely weathered fuels (especially gasoline)
- Aviation gasoline (weak)
- "Dry" PAHs such as aqueous phase, lamp black, purifier chips
- Creosotes (most)
- Coal tars (most) gasoline (weak)
- Most chlorinated solvents
- Benzene, toluene, zylenes (relatively pure)

Dakota Technologies
UVOST Log Reference

2008-12-12

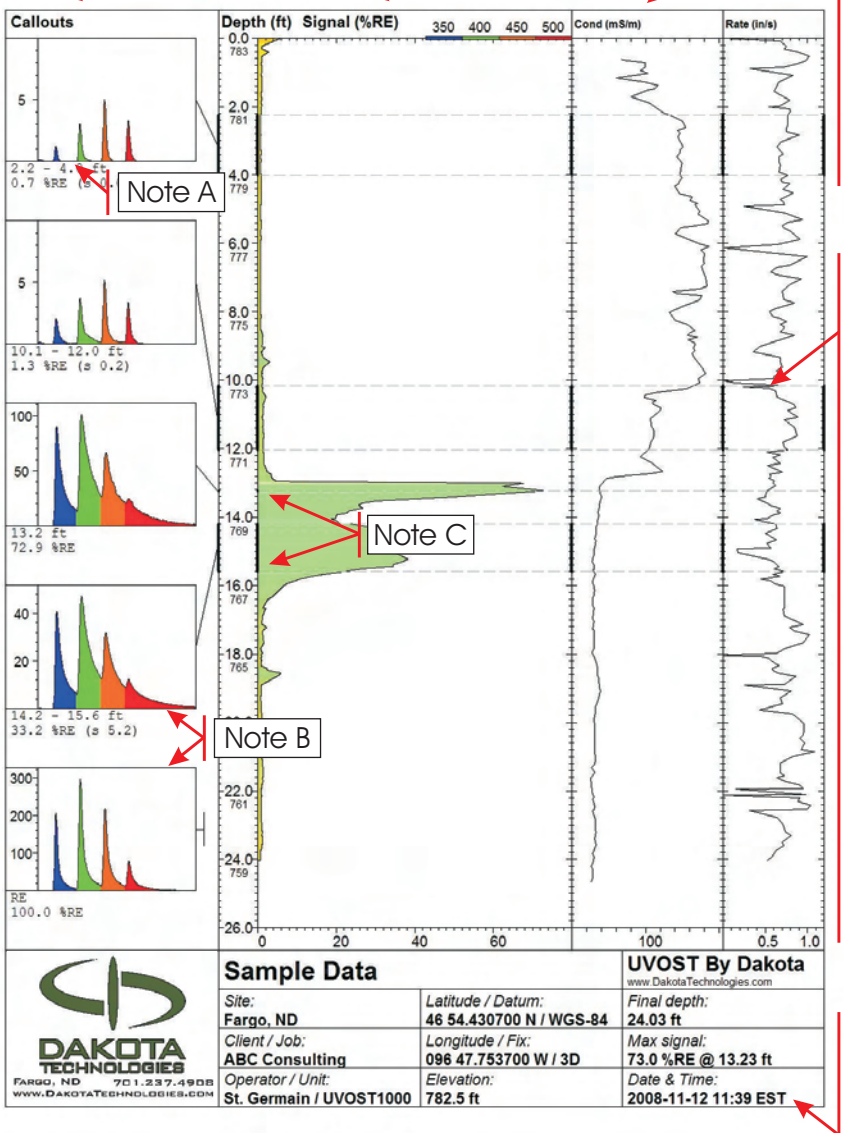
Main Plot :
Signal (total fluorescence) versus depth where signal is relative to the Reference Emitter (RE). The total area of the waveform is divided by the total area of the Reference Emitter yielding the %RE. This %RE scales with the NAPL fluorescence. The fill color is based on relative contribution of each channel's area to the total waveform area (see callout waveform). The channel-to-color relationship and corresponding wavelengths are given in the upper right corner of the main plot.

Callouts :
Waveforms from selected depths or depth ranges showing the multi-wavelength waveform for that depth.

The four peaks are due to fluorescence at four wavelengths and referred to as "channels". Each channel is assigned a color.

Various NAPLs will have a unique waveform "fingerprint" due to the relative amplitude of the four channels and/or broadening of one or more channels.

Basic waveform statistics and any operator notes are given below the callout.



Conductivity Plot :
The Electrical Conductivity (EC) of the soil can be logged simultaneously with the UVOST data. EC often provides insight into the stratigraphy.
Note the drop in EC from 10 - 13 ft, indicating a shift from consolidated to unconsolidated stratigraphy. This correlates with the observed NAPL distribution.

Rate Plot :
The rate of probe advancement. ~ 0.8in (2cm) per second is preferred.

A noticeable decrease in the rate of advancement may be indicative of difficult probing conditions (gravel, angular sands, etc.) such as that seen here at ~5 ft.

Notice that this log was terminated arbitrarily, not due to "refusal", which would have been indicated by a sudden rate drop at final depth.

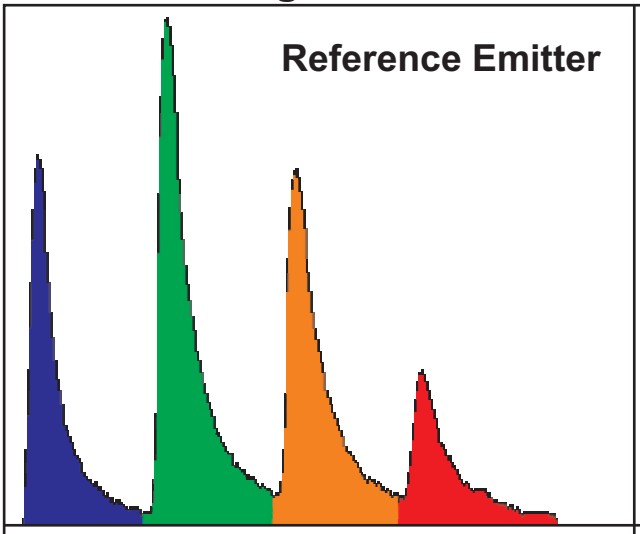
Info Box :
Contains pertinent log info including name and location.

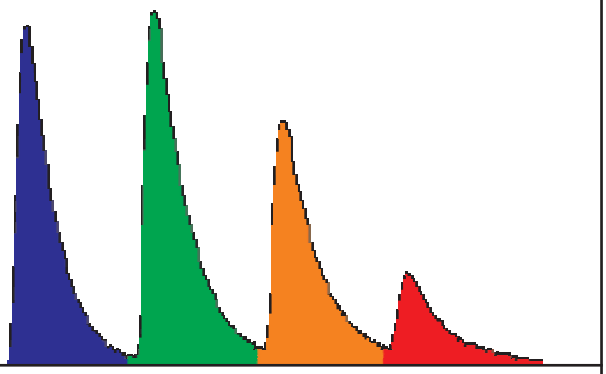
Note A :
Time is along the x axis. No scale is given, but it is a consistent 320ns wide.
The y axis is in mV and directly corresponds to the amount of light striking the photodetector.

Note B :
These two waveforms are clearly different. The first is weathered diesel from the log itself while the second is the Reference Emitter (a blend of NAPLs) always taken before each log for calibration.

Note C :
Callouts can be a single depth (see 3rd callout) or a range (see 4th callout). The range is noted on the depth axis by a bold line. When the callout is a range, the average and standard deviation in %RE is given below the callout.

Waveform Signal Calculation



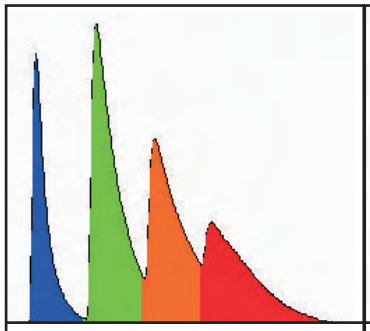


CH1		CH2		CH3		CH4		Total		CH1		CH2		CH3		CH4		Total
4820	+	8108	+	6249	+	2984	=	**22161**	***Channel***	4923	+	5743	+	4166	+	1735	=	**16587**
21.7		36.6		28.2		13.5		**100%**	***Area (pVs)***	22.3		25.9		18.8		7.8		**75%**
									Percent RE									

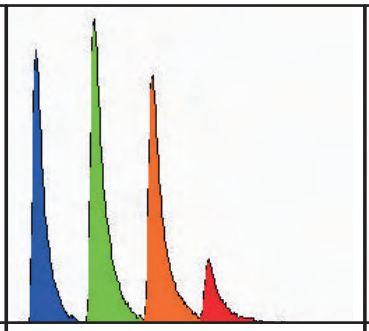
Data Files

***.lif.raw.bin**	Raw data file. Header is ASCII format and contains information stored when the file was initially written (e.g. date, total depth, max signal, gps, etc., and any information entered by the operator). All raw waveforms are appended to the bottom of the file in a binary format.
***.lif.plt**	Stores the plot scheme history (e.g. callout depths) for associated Raw file. Transfer along with the Raw file in order to recall previous plots.
***.lif.jpg**	A jpg image of the OST log including the main signal vs. depth plot, callouts, information, etc.
***.lif.dat.txt**	Data export of a single Raw file. ASCII tab delimited format. No string header is provided for the columns (to make importing into other programs easier). Each row is a unique depth reading. The columns are: Depth, Total Signal (%RE), Ch1%, Ch2%, Ch3%, Ch4%, Rate, Conductivity Depth, Conductivity Signal, Hammer Rate. Summing channels 1 to 4 yields the Total Signal.
***.lif.sum.txt**	A summary file for a number of Raw files. ASCII tab delimited format. The file contains a string header. The summary includes one row for each Raw file and contains information for each file including: the file name, gps coordinates, max depth, max signal, and depth at which the max signal occured.
***.lif.log.txt**	An activity log generated automatically located in the OST application directory in the 'log' subfolder. Each OST unit the computer operates will generate a separate log file per month. A log file contains much of the header information contained within each separate Raw file, including: date, total depth, max signal, etc.

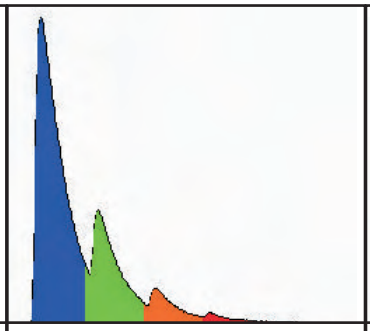
Common Waveforms (highly dependent on soil, weathering, etc.)



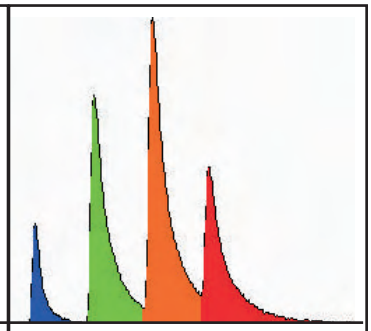
Diesel



Gas



Kerosene

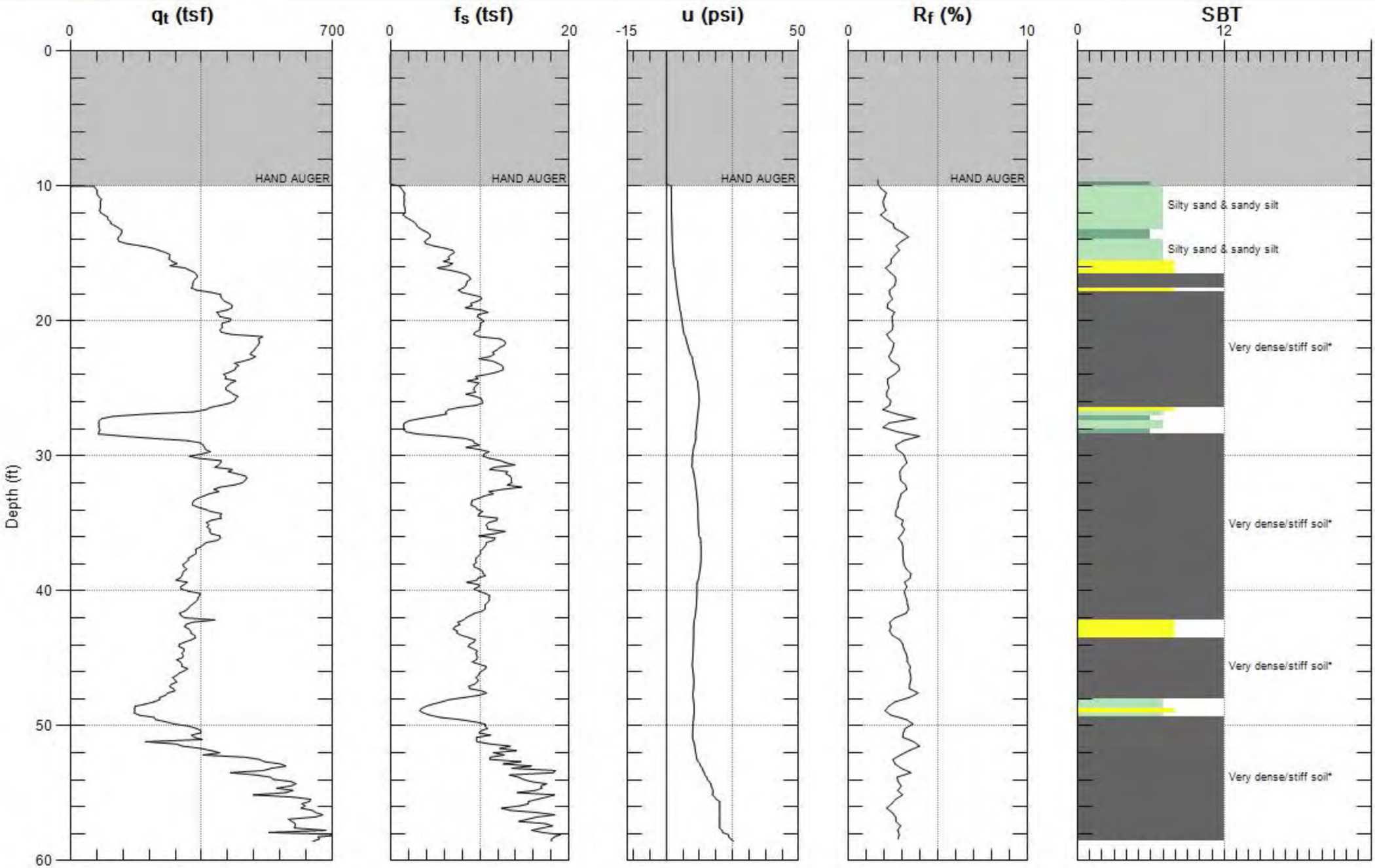


Motor Oil

THE SOURCE GROUP/APEX

Site: FMR. CHEMOIL
Sounding: AN-22A

Engineer: P.GOMEZ
Date: 5/18/17 09:50



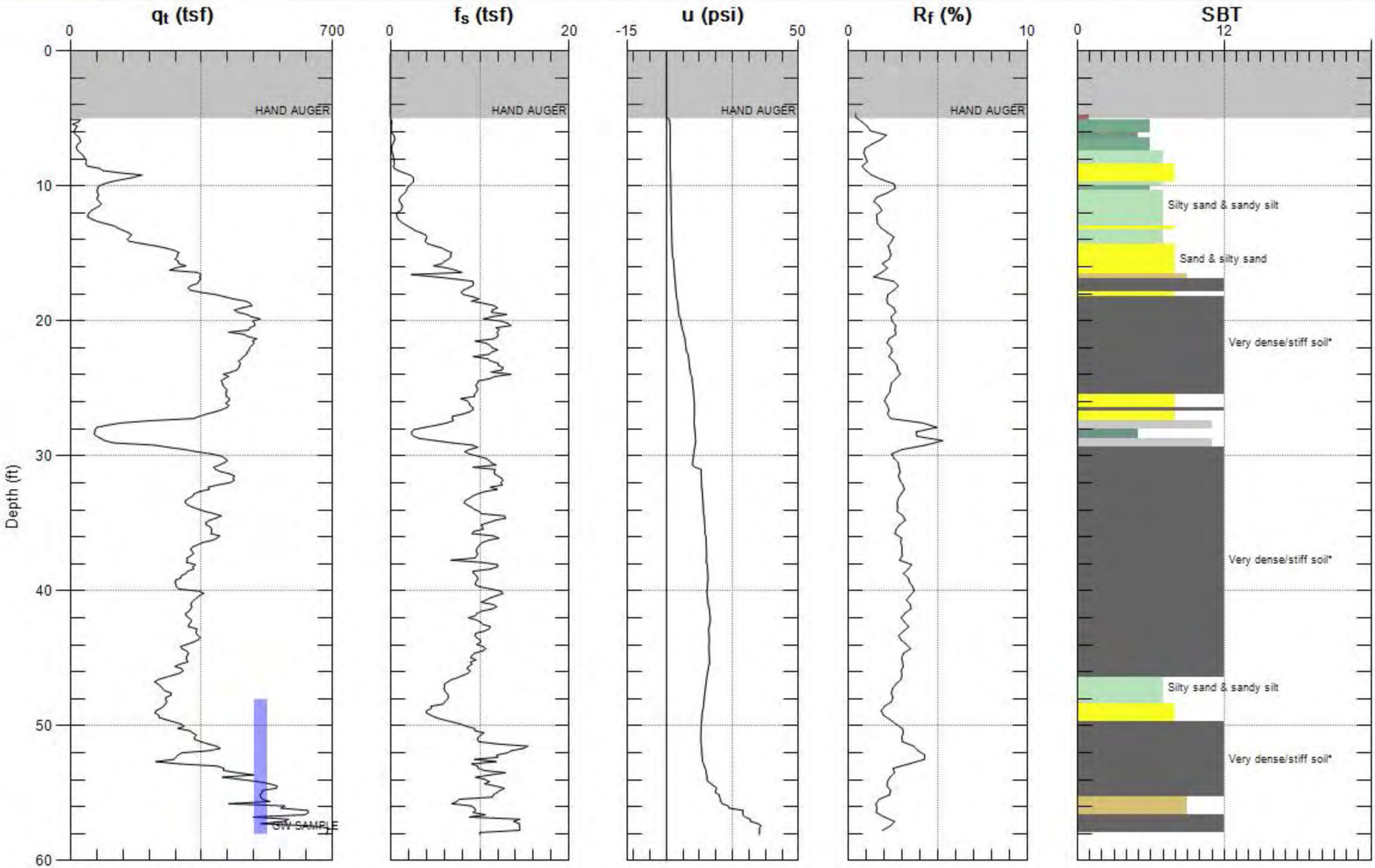
Max. Depth: 58.563 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

THE SOURCE GROUP/APEX

Site: FMR. CHEMOIL
Sounding: AN-22

Engineer: P.GOMEZ
Date: 5/18/17 07:48



Max. Depth: 58.071 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX D

DERIVATION OF SITE SPECIFIC SOIL VAPOR SCREENING LEVELS

APPENDIX D
DERIVATION OF SITE-SPECIFIC SOIL VAPOR SCREENING LEVELS

Former Chemoil Refinery
Site Cleanup Program Number 0453A
Site ID No. 2047W00
Global ID SL 2047W2348

2020 Walnut Avenue
Signal Hill, California

093-CHEMOIL-001

Prepared For:

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2880 Bryant Street
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Prepared By:

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TABLE OF CONTENTS

PAGE

LIST OF TABLES ..... **ii**
LIST OF ATTACHMENTS ..... **ii**

1.0 SITE-SPECIFIC SOIL VAPOR SCREENING LEVELS **1-1**
1.1 Modeling Vapor Emission from Soil Vapor into Indoor Air 1-1
1.1.1 Site-Specific Geotechnical Soil Data 1-1
1.1.2 Toxicity Assessment 1-3
1.1.3 Risk Characterization 1-3
1.2 Site-Specific Screening Levels 1-4

2.0 REFERENCES **2-1**

LIST OF TABLES

Table D-1 Residential Site-Specific Screening Levels for the Chemicals of Potential Concern (COPCs) in Soil Vapor (5 feet bgs)

Table D-2 Commercial/Industrial Site-Specific Screening Levels for the Chemicals of Potential Concern (COPCs) in Soil Vapor (5 feet bgs)

LIST OF ATTACHMENTS

Attachment D-1 Soil Boring Logs

Attachment D-2 Physical Soil Properties Laboratory Report

Attachment D-3 Output of Johnson and Ettinger Model for Subsurface Vapor Intrusion into Buildings From Soil Vapor

1.0 SITE-SPECIFIC SOIL VAPOR SCREENING LEVELS

This section describes the methods used to estimate Site-specific soil vapor screening levels for future onsite resident and commercial/industrial worker receptors for the former Chemoil Refinery located at 2020 Walnut Avenue in Signal Hill, California (Site). The San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs), U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs), and Department of Toxic Substances Control (DTSC) modified screening levels (SLs) for soil vapor are based on default attenuation factors that likely overestimate the attenuation from soil vapor to indoor air for this Site because Site conditions are more reflective of less permeable silts. Therefore, the DTSC modified version of the Johnson and Ettinger (1991; J/E) model (DTSC, 2014) was used to estimate Site-specific screening levels that take into account Site-specific geotechnical data.

1.1 Modeling Vapor Emission from Soil Vapor into Indoor Air

Using the maximum detected VOC concentrations in soil vapor data collected at 5 feet below ground surface (bgs), the fate and transport modeling was performed and a concentration in indoor air for each VOC was estimated. Site conditions were generalized to create a simplified conceptual model to estimate vapor concentration in indoor air. The Site is generally underlain by deposits of unconsolidated, laterally discontinuous sequences of silt and fine to coarse-grained sand. Coarse-grained soils consist of sand (SP) and silty sand (SM); whereas, subordinate fine-grained soils consist of silt (ML and MH) and, to a lesser degree, clay (CL). First encountered groundwater occurs at approximately 30 feet bgs.

1.1.1 Site-Specific Geotechnical Soil Data

The results from physical soil properties analyses were used to determine the appropriate U.S. Department of Agriculture (USDA) soil textural classification, dry bulk density, and porosity for soil at the Site. During the Site investigation conducted in May 2017, soil sample AN-22-5 was collected at 4.75 to 5.25 feet bgs on the Northwest Parcel, for the purposes of physical soil property characterization. The soil sample was analyzed for particle size distribution, dry bulk density, and porosity by PTS Laboratories, Inc. in Santa Fe Springs, California. In addition, the soil vapor sample locations were logged by a geologist. The particle size distribution analysis indicates that Site soils most closely fit with the “silt” USDA soil textural classification. A review of Tetra Tech’s soil physical property data and onsite soil boring logs shows that this classification is consistent with the soils observed at approximately 4 to 6 feet bgs during 2006 Site investigation (Tetra Tech, 2006). The Apex-SGI and Tetra Tech soil boring logs and soil characterization analytical reports are provided in Attachments D-1 and D-2, respectively. The following table summarizes the physical properties for the soil sample collected by Apex-SGI in 2017 and the two soil samples collected by Tetra Tech in 2006:

Soil Sample	Sample Depth (ft bgs)	Sample Date	Soil Type Based on Grain Size	Soil Bulk Density (g/cm^3)	Total Porosity (cm^3/cm^3)	Water-Filled Porosity (cm^3/cm^3)	Air-Filled Porosity (cm^3/cm^3)
AN-22-5	4.75-5.25	5-18-17	Silt	1.46	0.465	0.293	0.172
SB1-051606-GT-4'	4	5-16-06	Silt	1.72	0.359	0.222	0.137
SB2-051506-GT-6'	6	5-15-06	Silt	1.66	0.384	0.196	0.188

ft bgs = feet below ground surface
g/cm^3 = grams per cubic centimeter
cm^3/cm^3 = cubic centimeter per cubic centimeter

Based on the physical soil properties analyses results, silt (SI) was selected as the Vadose Zone Soil Type input parameter for the vapor intrusion model. The reported values for dry bulk density and porosity were similar for all three samples collected from 4 to 6 feet bgs; therefore, the reported values for the most recently collected soil sample, AN-22-5, were used as model input parameters in development of Site-specific soil vapor screening levels.

In accordance with DTSC (2014), default values of 24 degrees Celsius for average soil temperature and 15 centimeters (cm) for depth to the bottom of an enclosed space floor for slab-on-grade construction were used as vapor intrusion model input parameters.

The following table summarizes the Site-specific properties input into the DTSC J/E model for vapor migration from soil vapor to indoor air.

Model Variables – Vapor Migration from Soil Vapor to Indoor Air		
Properties	**Symbol**	**Assumed Value**
Depth Below Grade to Bottom of Enclosed Space Floor (default)	L_F	15 centimeters
Soil Vapor Sampling Depth Below Grade (5 feet)	L_S	152 centimeters
Average Soil Temperature (default)	T_s	24°C
Vadose Zone SCS Soil Type (Site-specific)	- -	Silt (SI)
Vadose Zone Soil Dry Bulk Density (Site-specific)	ρ_b	1.46 g/cm^3
Vadose Zone Soil Total Porosity (Site-specific)	θ_T	0.465 cm^3/cm^3
Vadose Zone Soil Water-Filled Porosity (Site-specific)	θ_w	0.172 cm^3/cm^3
Average Vapor Flow Rate into Building (default)	Q_{soil}	5 L/min
Residential Exposure Factors		
Averaging Time for Carcinogens	AT_C	70 years
Averaging Time for Noncarcinogens	AT_{NC}	26 years
Exposure Duration	ED	26 years
Exposure Frequency	EF	350 days/year
Exposure Time	ET	24 hours/day
Air Exchange Rate	ACH	0.5 $hour^{-1}$

Model Variables – Vapor Migration from Soil Vapor to Indoor Air (Continued)		
Properties	**Symbol**	**Assumed Value**
Commercial Exposure Factors		
Averaging Time for Carcinogens	AT_C	70 years
Averaging Time for Noncarcinogens	AT_{NC}	25 years
Exposure Duration	ED	25 years
Exposure Frequency	EF	250 days/year
Exposure Time	ET	8 hours/day
Air Exchange Rate	ACH	1 $hour^{-1}$

g/cm^3 = gram per cubic centimeter
L/min = liter per minute

The spreadsheets containing the input parameters and results of the DTSC J/E model for subsurface vapor intrusion into buildings for the residential and commercial exposure scenarios are provided in Attachment D-3.

1.1.2 Toxicity Assessment

Toxicity values are combined with exposure factors to estimate adverse noncancer health effects and excess cancer risks. Toxicity values include inhalation reference concentrations (RfCs) and inhalation unit risk factors (IURs). Toxicity values supplied by the DTSC J/E model (DTSC, 2014) were used.

1.1.3 Risk Characterization

The risk characterization process incorporates data from the exposure and toxicity assessments to estimate noncancer adverse health effects and excess cancer risks. To estimate noncancer effects, the chronic daily intake is divided by the RfC. The resulting value is referred to as a hazard quotient (HQ). A HQ less than or equal to 1 indicates that no adverse noncancer health effects are expected to occur (USEPA, 1989). Consistent with USEPA (1989) risk assessment guidelines, carcinogenic effects are typically evaluated by multiplying the IUR by the chronic daily intake averaged over 70 years to estimate lifetime excess cancer risk. The resulting values are referred to as excess cancer risks. These potential excess cancer risks are compared to the CalEPA risk management range of one-in-one-million (1×10^{-6}) to one-in-ten thousand (1×10^{-4}).

Consistent with USEPA (1989; 1991) guidelines, the following general equations were used to estimate excess cancer risks and noncancer adverse health effects (expressed as a HQ):

For carcinogens: $$Risk = \frac{EPC_{indoor\ air} x EF x ED x ET x IUR}{AT_c}$$

For noncarcinogens: $$HQ = \frac{EPC_{indoor\ air} x EF x ED x ET x \frac{1}{RfC}}{AT_n}$$

Where:
$EPC_{indoor\ air}$ = Exposure point concentration in indoor air ($EPC_{indoor\ air}$; micrograms per cubic meter [$\mu g/m^3$]).

EF = Exposure frequency (days/year), see table above.
ED = Exposure duration (years), see table above.
ET = Exposure time (hours/day), see table above.
AT = Averaging time (days).
For noncarcinogenic effects (hours), AT = ED x 365 days/year x 24 hours/day.
For carcinogenic effects, AT (hours) = 70 years x 365 days/year x 24 hours/day.
IUR = Inhalation unit risk for carcinogenic chemicals $(\mu g/m^3)^{-1}$.
RfC = Inhalation reference concentration for noncarcinogenic chemicals $(\mu g/m^3)$.

The HQ and excess cancer risk for VOCs in soil vapor were estimated by using the exposure factors presented in the table above and toxicity values supplied by the DTSC J/E model in the equations above. Risk characterization of inhalation of VOCs volatilizing from soil vapor into indoor air for the resident and commercial/industrial worker receptors are presented in Tables D-1 through D-2, respectively.

1.2 Site-Specific Screening Levels

The Site-specific screening levels were estimated for the following hypothetical human receptors:

- Resident Receptor; and
- Commercial/Industrial Worker Receptor.

Using the HQ and excess cancer risk estimates, source EPCs, and USEPA/CalEPA target HI and target excess cancer risk, Site-specific screening levels were estimated using the equations below. Site-specific screening levels based on noncarcinogenic effects used a target HI of one. Site-specific screening levels based on carcinogenic effects used a target excess cancer risk of 1×10^{-6}, which represents the lower end (most stringent) of the CalEPA's risk management range and is the point of departure for risk management decisions for all receptors

<u>Site-Specific Screening Level – Noncarcinogenic Effects</u>

$$Site - Specific\ Screening\ Level_{nc} = \frac{HQ_T \times EPC_{i,p}}{HQ_{i,p}}$$

Where:
Site-specific Screening Level$_{nc}$ =Site-specific soil vapor screening level for noncarcinogenic effects for chemical i via pathway p $(\mu g/m^3)$;
HQ_T = Target hazard quotient (1), a HQ less than or equal to 1 indicates that no adverse noncancer health effects are expected to occur (USEPA, 1989; unitless);
$EPC_{i,p}$ = Exposure point concentration in soil vapor for source for chemical i via pathway p $(\mu g/m^3)$; and
$HQ_{i,p}$ = Hazard quotient for chemical i via pathway p (unitless).

Site-Specific Screening Level – Carcinogenic Effects

$$Site - Specific\ Screening\ Level_c = \frac{CR_T \times EPC_{i,p}}{CR_{i,p}}$$

Where:

Site-specific Screening Level$_c$ =Site-specific soil vapor screening level for carcinogenic effects for chemical i via pathway p (µg/m^3);

CR_T = Target excess cancer risk (1 x 10^{-6}), the upper end (most stringent) of CalEPA's risk management range of one-in-ten thousand (1 x 10^{-4}) to one-in-one-million (1 x 10^{-6});

$EPC_{i,p}$ = Exposure point concentration in soil vapor for source for chemical i via pathway p (µg/m^3); and

$CR_{i,p}$ = Excess cancer risk for chemical i via pathway p (unitless).

The Site-specific screening levels for soil vapor for residential and commercial exposure scenarios are presented in Tables D-1 through D-2, respectively.

2.0 REFERENCES

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Johnson, P.C. and R.A. Ettinger. 1991. Heuristic Model for Predicting the Intrusion Rate of Contaminant Vapors into Buildings. Environmental Science and Technology. Vol. 25, No. 8, pp. 1445-52.

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U.S. Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund, Human Health Evaluation Manual, Part A. Interim Final. Solid Waste and Emergency Response. December.

USEPA. 1991. Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (Part B, Development of Risk-based Preliminary Remediation Goals). Interim. Office of Emergency and Remedial Response, Washington D.C., Publication 9285.7-01B. December.

TABLES

Table D-1
Residential Site-Specific Screening Levels for the Chemicals of Potential Concern (COPCs) in Soil Vapor (5 feet bgs)
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	Soil Vapor - 5 feet bgs		Indoor Air[2]				Risk-Based Screening Level		
	MDC ($\mu g/m^3$)	$EPC_{soil\ vapor}$[1] ($\mu g/m^3$)	Soil Vapor to Indoor Air Attenuation Factor (unitless)	$EPC_{indoor\ air}$ ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard	Carcinogenic Effects[3] ($\mu g/m^3$)	Noncarcinogenic Effects[4] ($\mu g/m^3$)	Lowest Soil Vapor RBSL[5] ($\mu g/m^3$)
Benzene	271,548	271,548	9.3E-04	2.53E+02	2.6E-03	8.1E+01	1 E+02	3 E+03	1.0E+02
Cyclohexane	2,478,331	2,478,331	8.7E-04	2.15E+03	- -	3.4E-01	- -	7 E+06	7.2E+06
Ethylbenzene	208,432	208,432	7.8E-04	1.63E+02	1.4E-04	1.6E-01	1 E+03	1 E+06	1.4E+03
(6) 4-Ethyltoluene	103,239	103,239	8.5E-04	8.78E+01	- -	2.8E-01	- -	4 E+05	3.7E+05
(7) Heptane	819,714	819,714	8.2E-04	6.69E+02	- -	9.2E-01	- -	9 E+05	8.9E+05
n-Hexane	634,454	634,454	8.2E-04	5.18E+02	- -	7.1E-01	- -	9 E+05	8.9E+05
Methyl tert-Butyl Ether	1,680	1,680	8.3E-04	1.40E+00	1.3E-07	4.5E-04	1 E+04	4 E+06	1.3E+04
Naphthalene	31,452.760	31,453	7.2E-04	2.26E+01	2.7E-04	7.2E+00	1 E+02	4 E+03	1.2E+02
Toluene	22,611	22,611	8.5E-04	1.92E+01	- -	6.1E-02	- -	4 E+05	3.7E+05
1,2,4-Trimethylbenzene	167,149	167,149	7.2E-04	1.20E+02	- -	1.6E+01	- -	1 E+04	1.0E+04
1,3,5-Trimethylbenzene	93,399	93,399	7.1E-04	6.67E+01	- -	1.8E+00	- -	5 E+04	5.1E+04
m,p-Xylenes	955,313	955,313	7.8E-04	7.45E+02	- -	7.1E+00	- -	1 E+05	1.3E+05
o-Xylene	191,063	191,063	7.8E-04	1.50E+02	- -	1.4E+00	- -	1 E+05	1.3E+05
Xylenes	1,146,375	1,146,375	- -	- -	- -	- -	- -	- -	1.3E+05

Notes:
feet bgs = feet below ground surface.
MDC = maximum detected concentration.
EPC = exposure point concentration.
$\mu g/m^3$ = micrograms per cubic meter.
RBSL = risk-based screening level.

[1] Represents the maximum detected concentration.
[2] The EPC in soil vapor ($EPC_{soil\ vapor}$) were coupled with the vapor intrusion model to estimate attenuation factor, EPC in indoor air, cancer risk, and noncancer hazard for each chemical.
[3] Represents the RBSL for carcinogenic effects, based on a target excess cancer risk of one-in-one million (1×10^{-6}).
Soil Vapor $RBSL_i$ = $EPC_{soil\ vapor,i}$ x Target Cancer Risk of 1×10^{-6} / Excess Cancer Risk for compound *i*
[4] Represents the noncancer hazard, based on a target hazard quotient of one (1).
Soil Vapor $RBSL_i$ = $EPC_{soil\ vapor,i}$ x Target Noncancer Hazard Index of 1 / Hazard Quotient for compound *i*
[5] Represents the lower of the RBSLs based on noncarcinogenic or carcinogenic effects.
[6] In the vapor intrusion model, toluene was used as a surrogate for 4-ethyltoluene.
[7] In the vapor intrusion model, n-hexane was used as a surrogate for heptane.

Table D-2
Commercial/Industrial Site-Specific Screening Levels for the Chemicals of Potential Concern (COPCs) in Soil Vapor (5 feet bgs)
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	Soil Vapor - 5 feet bgs		Indoor Air[2]				Risk-Based Screening Level		
	MDC ($\mu g/m^3$)	$EPC_{soil\ vapor}$[1] ($\mu g/m^3$)	Soil Vapor to Indoor Air Attenuation Factor (unitless)	$EPC_{indoor\ air}$ ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard	Carcinogenic Effects[3] ($\mu g/m^3$)	Noncarcinogenic Effects[4] ($\mu g/m^3$)	Lowest Soil Vapor RBSL[5] ($\mu g/m^3$)
Benzene	271,548	271,548	4.7E-04	1.26E+02	3.0E-04	9.6E+00	9 E+02	3 E+04	9.1E+02
Cyclohexane	2,478,331	2,478,331	4.3E-04	1.07E+03	- -	4.1E-02	- -	6 E+07	6.1E+07
Ethylbenzene	208,432	208,432	3.9E-04	8.14E+01	1.7E-05	1.9E-02	1 E+04	1 E+07	1.3E+04
(6) 4-Ethyltoluene	103,239	103,239	4.3E-04	4.39E+01	- -	3.3E-02	- -	3 E+06	3.1E+06
(7) Heptane	819,714	819,714	4.1E-04	3.35E+02	- -	1.1E-01	- -	8 E+06	7.5E+06
n-Hexane	634,454	634,454	4.1E-04	2.59E+02	- -	8.4E-02	- -	8 E+06	7.5E+06
Methyl tert-Butyl Ether	1,680	1,680	4.2E-04	6.99E-01	1.5E-08	5.3E-05	1 E+05	3 E+07	1.1E+05
Naphthalene	31,452.760	31,453	3.6E-04	1.13E+01	3.1E-05	8.6E-01	1 E+03	4 E+04	1.0E+03
Toluene	22,611	22,611	4.3E-04	9.62E+00	- -	7.3E-03	- -	3 E+06	3.1E+06
1,2,4-Trimethylbenzene	167,149	167,149	3.6E-04	6.00E+01	- -	2.0E+00	- -	9 E+04	8.5E+04
1,3,5-Trimethylbenzene	93,399	93,399	3.6E-04	3.34E+01	- -	2.2E-01	- -	4 E+05	4.3E+05
m,p-Xylenes	955,313	955,313	3.9E-04	3.73E+02	- -	8.5E-01	- -	1 E+06	1.1E+06
o-Xylene	191,063	191,063	3.9E-04	7.49E+01	- -	1.7E-01	- -	1 E+06	1.1E+06
Xylenes	1,146,375	1,146,375	- -	- -	- -	- -	- -	- -	1.1E+06

Notes:
feet bgs = feet below ground surface.
MDC = maximum detected concentration.
EPC = exposure point concentration.
$\mu g/m^3$ = micrograms per cubic meter.
RBSL = risk-based screening level.

[1] Represents the maximum detected concentration.
[2] The EPC in soil vapor ($EPC_{soil\ vapor}$) were coupled with the vapor intrusion model to estimate attenuation factor, EPC in indoor air, cancer risk, and noncancer hazard for each chemical.
[3] Represents the RBSL for carcinogenic effects, based on a target excess cancer risk of one-in-one million (1×10^{-6}).
Soil Vapor $RBSL_i$ = $EPC_{soil\ vapor,i}$ x Target Cancer Risk of 1×10^{-6} / Excess Cancer Risk for compound *i*
[4] Represents the noncancer hazard, based on a target hazard quotient of one (1).
Soil Vapor $RBSL_i$ = $EPC_{soil\ vapor,i}$ x Target Noncancer Hazard Index of 1 / Hazard Quotient for compound *i*
[5] Represents the lower of the RBSLs based on noncarcinogenic or carcinogenic effects.
[6] In the vapor intrusion model, toluene was used as a surrogate for 4-ethyltoluene.
[7] In the vapor intrusion model, n-hexane was used as a surrogate for heptane.

ATTACHMENT D-1

SOIL BORING LOGS

APEX-SGI SOIL BORING LOG FOR AN-22

The Source Group, Inc.

BORING ID: AN-22

PROJECT NAME AND ADDRESS:	Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, CA		
BORING LOCATION (AT SITE):		Project No. 093-Chemoil-001 Task 6	
CONTRACTOR AND EQUIPMENT:	Gregg Drilling/Hand Auger	Logged By: Paola Gomez-Birenbaum	
SAMPLING METHOD:	Hand Auger/Slide Hammer	MONITORING DEVICE:	MiniRae 3000
START DATE/ (TIME)	5/18/17 745	FINISH DATE/ (TIME):	5/18/17 840
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH:	58'	BORING DIAMETER	4" Hand Auger ; 1.5"
SOIL GAS PROBE INSTALLATION DEPTH:		SCREEN INTERVAL(S):	SLOT (IN):
ANNULUS FILL MATERIAL:	bentonite grout	BORING ANGLE:	TREND:

LITHOLOGIC DESCRIPTION
(classification, color, moisture, density, grain size/plasticity, other)

Well Construction

✓ Boring cleared to 5 feet bgs with hand auger

Time: 0800
Depth:
(sample interval): 0-1
PID Result: Ø
Blow Counts:
Laboratory Sample ID:

Soil Type: SM ; Group Name: Silty SAND, some Gravel
20 % Gravel; 40 % Sand; 40 % Silt; ___ % Clay; Color: medium brown
Moisture content: ___ dry; ✓ slightly moist; ___ moist; ___ very moist; ___ saturated
Grain size: ✓ fine; ✓ medium; ___ coarse; Grading: ___ poorly; ___ well-graded
Plasticity (clays/silts): ✓ non-plastic; ___ medium plasticity; ___ high plasticity
Odors: ✓ none; ___ hydrocarbon; ___ other (describe: ___)
Other comments:
med stiff
f-m gravel (subangular)

Time: 0803
Depth:
(sample interval): 1-3
PID Result: 40.5
Blow Counts:
Laboratory Sample ID:

Soil Type: CL ; Group Name: CLAY, trace silt
___ % Gravel; ___ % Sand; 5 % Silt; 95 % Clay; Color: light brown
Moisture content: ___ dry; ___ slightly moist; ✓ moist; ___ very moist; ___ saturated
Grain size: ___ fine; ___ medium; ___ coarse; Grading: ___ poorly; ___ well-graded
Plasticity (clays/silts): ___ non-plastic; ✓ medium plasticity; ___ high plasticity
Odors: ✓ none; ___ hydrocarbon; ___ other (describe: ___)
Other comments:
stiff

Time: 0805
Depth:
(sample interval): 3-4.5
PID Result: +15000
Blow Counts:
Laboratory Sample ID:

Soil Type: ML ; Group Name: SILT
___ % Gravel; ___ % Sand; 100 % Silt; ___ % Clay; Color: dk grey brown
Moisture content: ___ dry; ___ slightly moist; ✓ moist; ___ very moist; ___ saturated
Grain size: ___ fine; ___ medium; ___ coarse; Grading: ___ poorly; ___ well-graded
Plasticity (clays/silts): ✓ non-plastic; ___ medium plasticity; ___ high plasticity
Odors: ___ none; ✓ hydrocarbon; ___ other (describe: ___)
Other comments:
stiff
strong odor

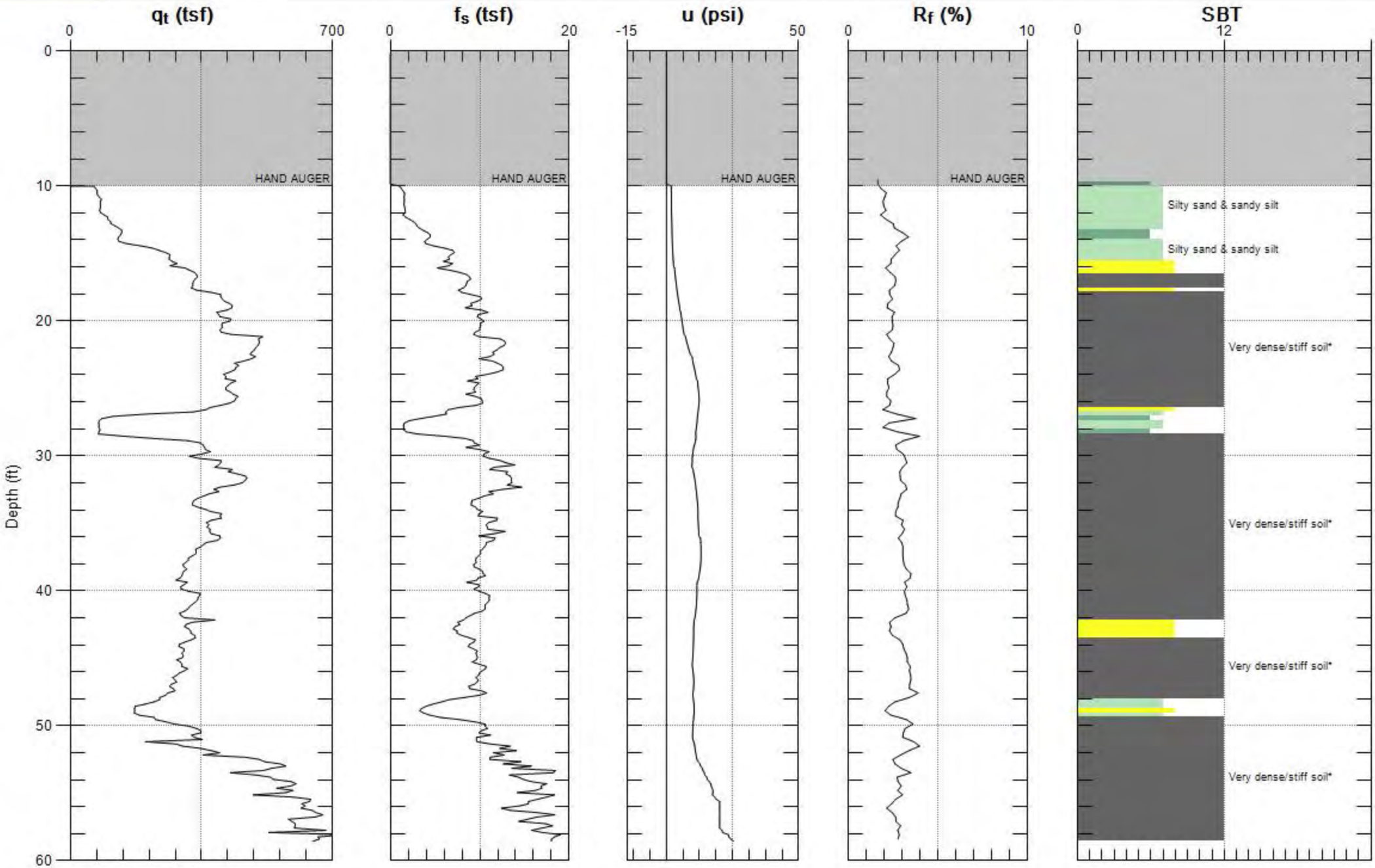
Time:
Depth:
(sample interval):
PID Result:
Blow Counts:
Laboratory Sample ID

Soil Type: ___ ; Group Name: ___
___ % Gravel; ___ % Sand; ___ % Silt; ___ % Clay; Color: ___
Moisture content: ___ dry; ___ slightly moist; ___ moist; ___ very moist; ___ saturated
Grain size: ___ fine; ___ medium; ___ coarse; Grading: ___ poorly; ___ well-graded
Plasticity (clays/silts): ___ non-plastic; ___ medium plasticity; ___ high plasticity
Odors: ___ none; ___ hydrocarbon; ___ other (describe: ___)
Other comments:

THE SOURCE GROUP/APEX

Site: FMR. CHEMOIL
Sounding: AN-22A

Engineer: P.GOMEZ
Date: 5/18/17 09:50



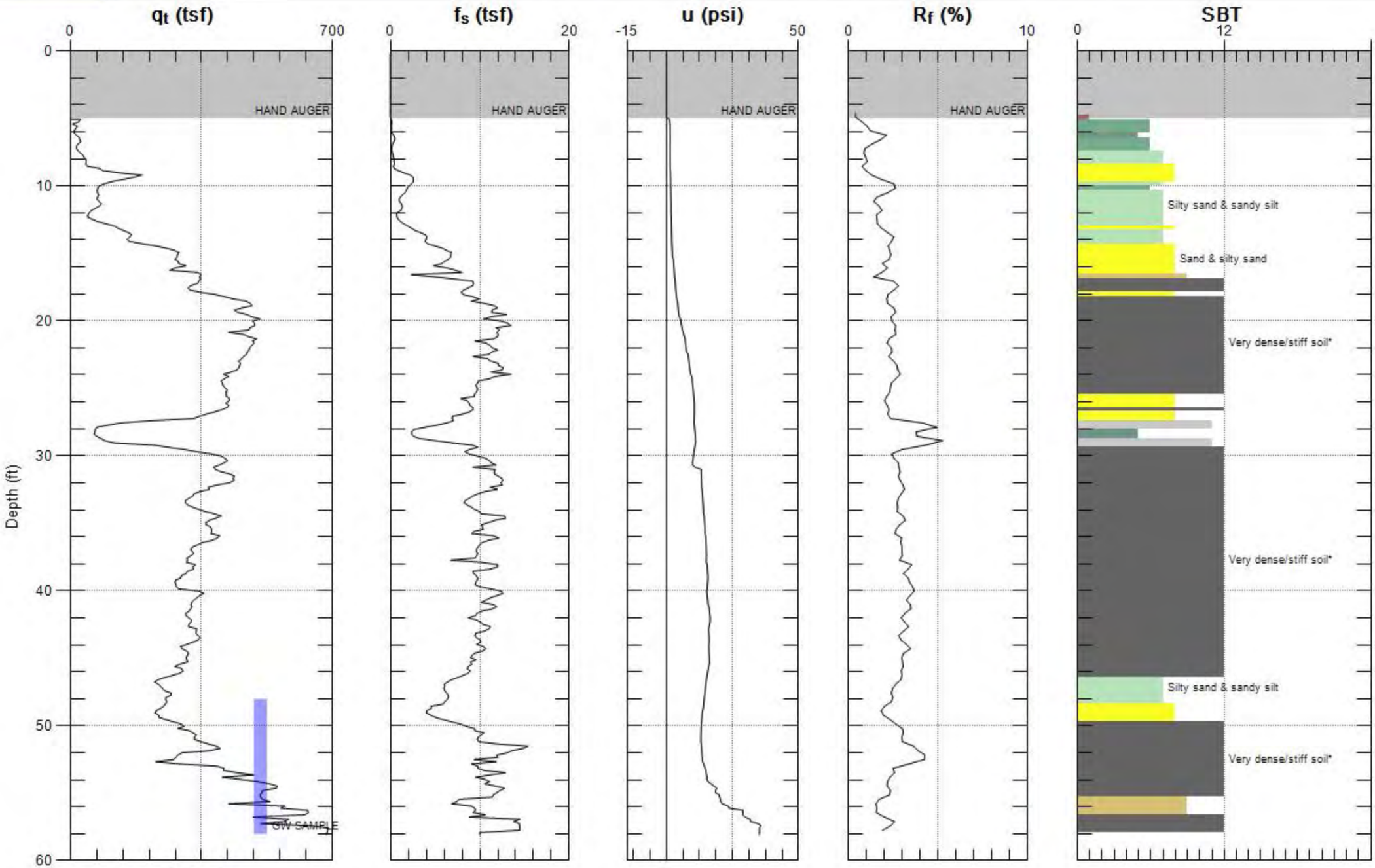
Max. Depth: 58.563 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

THE SOURCE GROUP/APEX

Site: FMR. CHEMOIL
Sounding: AN-22

Engineer: P.GOMEZ
Date: 5/18/17 07:48



Max. Depth: 58.071 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

TETRA TECH SOIL BORING LOGS FOR SB1 AND SB2

Tetra Tech, Inc.
348 W. Hospitality Ln. Suite 100
San Bernardino, CA 92408
Telephone: (909) 381-1674
Telefax (909) 889-1391

SOIL BORING LOG

BORING/WELL ID: SB1

CLIENT: GEM, Inc.
PROJECT NUMBER: 18116-01
LOCATION: Former Chemoil Refinery

GEOLOGIST: D. Bertolacci
REVIEWED BY:
DATE(S) DRILLED: 05 / 16 / 2006
DRILLING COMPANY: Gregg Drilling, Inc.

TOTAL DEPTH: 40'
BOREHOLE DIA.: 1.25"
DRILLING METHOD: CPT/DP
SAMPLING METHOD: Acetate Sleeve

Depth (ft. bgs)	Sample Recovery	Blow Counts	Sample Number	Sampling Time	Soil (ppm) FID/PID	Breathing Zone (ppm) FID/PID	Lithologic Contact (ft. bgs)	GROUP SYMBOL	Color	Moisture	% Gravel	% Sand	% Non-plastic Fines	% Plastic Fines	Grading	Plasticity (Fines)	Angularity (Sand / Gravel)	Grain Size Range (Sand)	Grain Size Range (Gravel)	Max. Grain Size (Gravel)	Comments / Well Construction
1					0.0	0.0		SM	brown 7.5YR 4/4	dry	5	65	30	—	P	non	Sr	VF	F	3/8"	no odor
									Silty Sand												
3	X		SB1-GT-051606-4	1100			Color change 3.5' bgs	SM/SC	black 10YR 2/1	dry to M	—	40	30	30	P	non-low	Sr	VF	—	—	Strong odor, micaceous
4	X		SB1-051606-4'	0945	81.8	0.0			Silty Sand / Clayey Sand												
5									no recovery @ 5'												
6								SM black br													
7																					
8						0.0		black SM	black 10YR 2/1	dry	<5	70	30	<5	P	non-low	Sr	VF	F	3/8"	Strong odor
10	X		SB1-051606-10'	0955		0.0		br SM	As above												
								SP	Gray 10YR 5/1	dry to M	—	100	—	—	P	—	Sr	VF-F	—	—	Strong odor
						0.1		SP	As above												
15	X		SB1-051606-15'	1000		0.1		SP	Gray 10YR 6/1	dry to M	—	100	—	—	P	—	Sr	VF-F	—	—	Strong odor
									well sorted												
						1.0		SP	As above, increasing grain size, trace plastic fines, mainly fine, trace M sand; Gray 10YR 7/1												Strong odor
20	X		SB1-051606-20'	1005		1.0		SP	As above												
								See USCS flow Chart	Use Munsell color chart	Dry Moist Wet	> 1/4 inch	visible - 1/4 in.	visible with hand lens	not visible	W G U P	high med low non	A Sa Sr R	V. Fine Fine Med Coarse	V. Fine Fine Med Coarse	Inches	odor, staining, mineralogy, stucture, cementation, HCl reaction

Notes:

<5-5%=trace, 10%=few, 15-25%=little, 30-45%=some, 50+%=mostly (cobbles only)
Well Graded - 5 consecutive seive sizes, % decreases with each decreasing particle size
Poorly Graded - one or more particle sizes missing (Gap Graded), or
all particles basically same size (Uniformly Graded)

Tetra Tech, Inc.
348 W. Hospitality Ln. Suite 100
San Bernardino, CA 92408
Telephone: (909) 381-1674
Telefax (909) 889-1391

SOIL BORING LOG

BORING/WELL ID: SB2

CLIENT: GEM, Inc.
PROJECT NUMBER: 18116-01
LOCATION: Former Chemoil Refinery

GEOLOGIST: D. Bertolacci
REVIEWED BY:
DATE(S) DRILLED: 05 / 15 / 2006
DRILLING COMPANY: Gregg Drilling, Inc.

TOTAL DEPTH: 45'
BOREHOLE DIA.: 1.25"
DRILLING METHOD: CPT/DP
SAMPLING METHOD: Acetate Sleeve

Depth (ft. bgs)	Sample Recovery	Blow Counts	Sample Number	Sampling Time	Soil (ppm) FID/PID	Breathing Zone (ppm) FID/PID	Lithologic Contact (ft. bgs)	GROUP SYMBOL	Color	Moisture	% Gravel	% Sand	% Non-plastic Fines	% Plastic Fines	Grading	Plasticity (Fines)	Angularity (Sand / Gravel)	Grain Size Range (Sand)	Grain Size Range (Gravel)	Max. Grain Size (Gravel)	Comments / Well Construction
									GROUP NAME / GEOLOGIC DESCRIPTION / ADDITIONAL MODIFIERS												
1, 2								ML	black 7.5YR2.5/1 to strong brown 7.5YR5/6 Sandy Silt	dry	–	30	60	10	P	non-low	Sr	VF	–	–	no odor staining micaceous
3, 4								ML	As above												"
5	X		SB2-051506-GT 5'	14:30	102 ±	0.0															
	X		SB2-051506-GT 6'					ML	As above												"
								ML	As above												"
									color change, decreasing sand, increasing fines dk grey 2.5Y 4/1												
10	X		SB2-051506-10'	1445		0.0		ML	dk grey 2.5Y 4/1	dry	–	10	75	15	P	non/low	Sr	VF	–	–	no odor, some iron oxide staining, very micaceous
								ML	As above												
									no recovery @ 15'												
15	X		SB2-051506-16'	1450		0.0		ML	As above												
								ML	As above												
20	X		SB2-051506-20'	1455		0.0		SP	Poorly Graded sand, well sorted grey 2.5Y5/1	dry	–	low	–	–	P	–	Sr	VF-F	–	–	no odor, staining
								See USCS flow Chart	Use Munsell color chart	Dry Moist Wet	< 1/4 inch	visible - 1/4 in.	visible with hand lens	not visible	W G U P	high med low non	A Sa Sr R	V. Fine Fine Med Coarse	V. Fine Fine Med Coarse	Inches	odor, staining, mineralogy, stucture, cementation, HCl reaction

Notes:

<5-5%=trace, 10%=few, 15-25%=little, 30-45%=some, 50+%=mostly (cobbles only)
Well Graded - 5 consecutive sieve sizes, % decreases with each decreasing particle size
Poorly Graded - one or more particle sizes missing (Gap Graded), or
all particles basically same size (Uniformly Graded)

ATTACHMENT D-2

PHYSICAL SOIL PROPERTIES LABORATORY REPORTS

APEX-SGI PHYSICAL SOIL PROPERTIES LABORATORY REPORT

PTS Laboratories, Inc.

8100 Secura Way • Santa Fe Springs, CA 90670
Telephone (562) 347-2500 • Fax (562) 907-3610

May 22, 2017

Kirsten Duey
The Source Group, Inc.
3478 Buskirk Avenue, Suite 100
Pleasant Hill, CA 94523

Re: PTS File No: 47257
Physical Properties Data
Former Chemoil Refinery; 093-Chemoil-001 Task 6

Dear Ms. Duey:

Please find enclosed report for Physical Properties analyses conducted upon the sample received from your Former Chemoil Refinery; 093-Chemoil-001 Task 6 project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The sample is currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the sample will be disposed of at that time. You may contact me regarding storage, disposal, or return of the sample.

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please give me a call at (562) 347-2502.

Sincerely,
PTS Laboratories, Inc.

Michael Mark Brady, P.G.
Laboratory Director

Encl.

PTS Laboratories

Project Name: Former Chemoil Refinery
Project Number: 093-Chemoil-001 Task 6

PTS File No: 47257
Client: The Source Group, Inc.

TEST PROGRAM - 20170518

CORE ID	Depth ft.	Core Recovery ft.	CAL-EPA DTSC Vapor Intrusion					Comments
		Plugs:	Various					
Date Received: 20170518								
AN-22-5	4.75-5.25	0.5	X					
TOTALS:	1 Core	0.5	1					1

Laboratory Test Program Notes
Contaminant identification: _____
Standard TAT for basic analysis is 10-15 business days.
CAL-EPA DTSC Vapor Intrusion: Bulk & grain density, total porosity, moisture content, volumetric air & moisture, TOC/foc, and grain size distribution.

PTS File No: 47257
Client: The Source Group, Inc.
Report Date: 05/22/17

PTS Laboratories

PHYSICAL PROPERTIES DATA - CAL-EPA DTSC Vapor Intrusion Package

Project Name: Former Chemoil Refinery
Project No: 093-Chemoil-001 Task 6

			METHODS:	API RP40/ASTM D2216		API RP 40		API RP 40		
SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	ANALYSIS DATE	MOISTURE CONTENT,		DENSITY		POROSITY, (2)		
				% weight	cm^3/cm^3	DRY BULK, g/cm^3	GRAIN, g/cm^3	TOTAL, cm^3/cm^3	AIR-FILLED, cm^3/cm^3	WATER-FILLED, cm^3/cm^3
AN-22-5	4.75-5.25	V	20170518	11.8	0.172	1.46	2.73	0.465	0.293	0.172

(1) Sample Orientation: H = horizontal; V = vertical; R = remold
(2) Total Porosity = all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.
Vb = Bulk Volume, cc; Pv = Pore Volume, cc; ND = Not Detected

PTS Laboratories, Inc.

The Source Group, Inc.
PTS File No: 47257

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: Former Chemoil Refinery
PROJECT NO: 093-Chemoil-001 Task 6

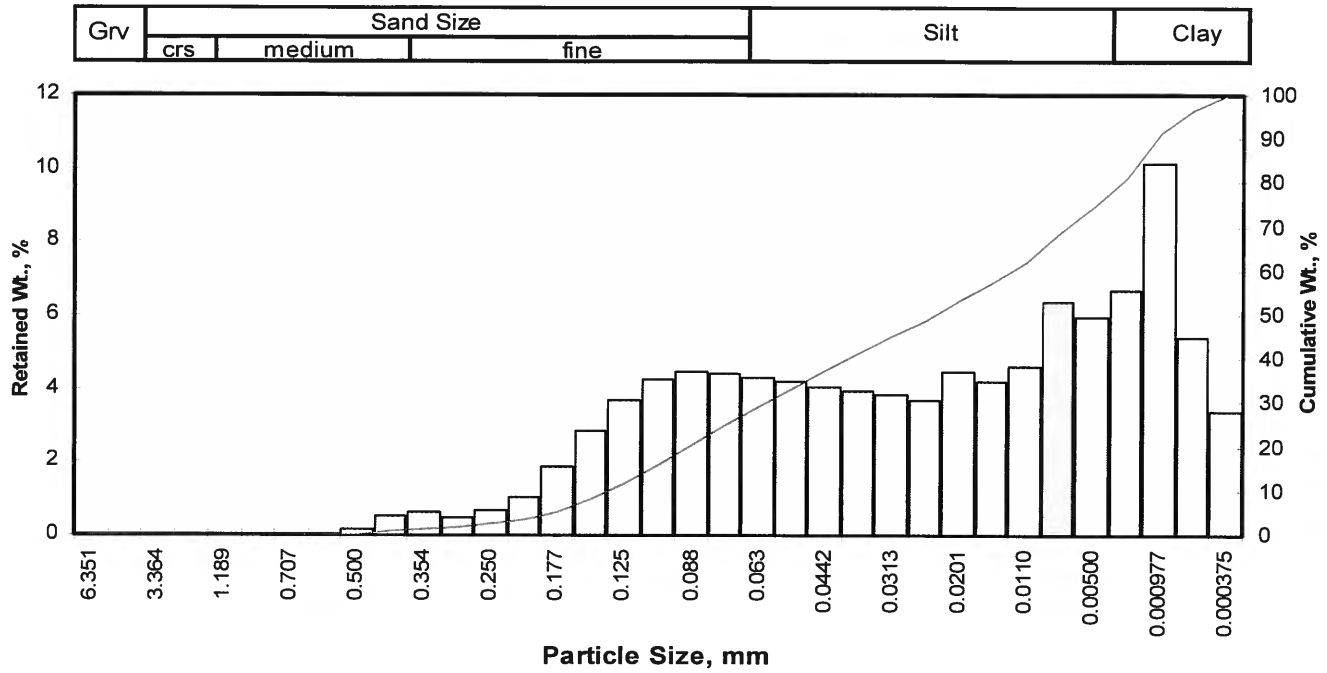
Sample ID	Depth, ft.	Mean Grain Size Description (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
AN-22-5	4.75-5.25	Silt	0.024	0.00	0.00	0.66	24.25	49.55	25.55	75.10

(1) Based on Mean from Trask

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	The Source Group, Inc.	**PTS File No:**	47257
Project:	Former Chemoil Refinery	**Sample ID:**	AN-22-5
Project No:	093-Chemoil-001 Task 6	**Depth, ft:**	4.75-5.25



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.01	0.01	0.01
0.0197	0.500	1.00	35	0.15	0.15	0.16
0.0166	0.420	1.25	40	0.49	0.49	0.66
0.0139	0.354	1.50	45	0.64	0.64	1.30
0.0117	0.297	1.75	50	0.48	0.48	1.78
0.0098	0.250	2.00	60	0.68	0.68	2.46
0.0083	0.210	2.25	70	1.02	1.02	3.49
0.0070	0.177	2.50	80	1.85	1.86	5.35
0.0059	0.149	2.75	100	2.81	2.82	8.17
0.0049	0.125	3.00	120	3.67	3.68	11.85
0.0041	0.105	3.25	140	4.20	4.22	16.07
0.0035	0.088	3.50	170	4.41	4.43	20.50
0.0029	0.074	3.75	200	4.39	4.41	24.90
0.0025	0.063	4.00	230	4.28	4.30	29.20
0.0021	0.053	4.25	270	4.16	4.18	33.38
0.00174	0.0442	4.50	325	4.03	4.05	37.42
0.00146	0.0372	4.75	400	3.94	3.96	41.38
0.00123	0.0313	5.00	450	3.83	3.85	45.22
0.000986	0.0250	5.32	500	3.67	3.68	48.91
0.000790	0.0201	5.64	635	4.41	4.43	53.34
0.000615	0.0156	6.00		4.18	4.20	57.53
0.000435	0.0110	6.50		4.57	4.59	62.12
0.000308	0.00781	7.00		6.33	6.36	68.48
0.000197	0.00500	7.65		5.95	5.97	74.45
0.000077	0.00195	9.00		6.64	6.67	81.12
0.000038	0.000977	10.00		10.10	10.14	91.26
0.000019	0.000488	11.00		5.36	5.38	96.64
0.000015	0.000375	11.38		3.35	3.36	100.00
TOTALS				**99.60**	**100.00**	**100.00**

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	2.45	0.0072	0.183
10	2.87	0.0054	0.136
16	3.25	0.0041	0.105
25	3.76	0.0029	0.074
40	4.66	0.0016	0.039
50	5.40	0.0009	0.024
60	6.27	0.0005	0.013
75	7.76	0.0002	0.005
84	9.28	0.0001	0.002
90	9.88	0.0000	0.001
95	10.70	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	5.40	5.40	5.40
Median, in.	0.0009	0.0009	0.0009
Median, mm	0.024	0.024	0.024
Mean, phi	4.67	6.27	5.98
Mean, in.	0.0015	0.0005	0.0006
Mean, mm	0.039	0.013	0.016
Sorting	4.002	3.019	2.758
Skewness	0.781	0.287	0.286
Kurtosis	0.256	0.365	0.844
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.66
Fine Sand	200	24.25
Silt	>0.005 mm	49.55
Clay	<0.005 mm	25.55
	Total	**100**

PTS File No: 47257
Client: The Source Group, Inc.
Report Date: 05/22/17

PTS Laboratories

ORGANIC CARBON DATA - TOC (foc)

(Methodology: Walkley-Black)

Project Name: Former Chemoil Refinery
Project No: 093-Chemoil-001 Task 6

SAMPLE ID.	DEPTH, ft.	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
AN-22-5	4.75-5.25	20170520	1005	SOIL	2760	2.76E-03
Blank	N/A	20170520	1005	BLANK	ND	ND
SRM D093-542	N/A	20170520	1005	SRM	5930	5.93E-03
				Reporting Limit:	100	1.00E-04

QC DATA

SRM ID/Lot No.	REC (%)	Control Limits	Certified Concentration mg/kg	QC Performance Acceptance Limits, mg/kg Lower	Upper
SRM D093-542	106	75-125	5590	4193	6988

ND = Not Detected

PTS Laboratories, Inc.

CHAIN OF CUSTODY RECORD

COMPANY: The Source Group

ADDRESS / CITY / ZIP CODE: 3478 Buskirk Ave, Suite 100, Pleasant Hill, CA 94523

PROJECT MANAGER: Kirsten Duey

PROJECT NAME: Former Chemoil Refinery

PHONE NUMBER: 925-951-6376

PROJECT NUMBER: 093-Chemoil-001 Task 6

FAX NUMBER:

SITE LOCATION: 2020 Walnut Avenue, Signal Hill, CA

SAMPLER SIGNATURE:

PO#:

TURNAROUND TIME: 24 HOURS ☐ 48 HOURS ☐ 72 HOURS ☒ 5 DAYS ☐ NORMAL ☐ OTHER: _____

SAMPLE INTEGRITY (CHECK): INTACT ____ ON ICE 65°F

PTS QUOTE NO.:

PTS FILE: 47257

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY PACKAGE	PORE FLUID SATURATIONS PACKAGE	TCEQ/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	PHOTOLOG: CORE PHOTOGRAPHY	MOISTURE CONTENT, ASTM D2216	POROSITY: TOTAL, API RP40	POROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA9100, API RP40, D5084	GRAIN SIZE DISTRIBUTION, ASTM D422/4464M	TOC: WALKLEY-BLACK	ATTERBERG LIMITS, ASTM D4318	Vapor Instrusion Package (Cal DTSC)				COMMENTS
AN-22-5	5/18/17	814	4.75 - 5.25	1																		X				Size: 2" x 6"

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY: SGI	COMPANY: PTS LABS	COMPANY:	COMPANY:
DATE: 05-18-17 TIME: 1215	DATE: 05-18-17 TIME: 12:15	DATE: TIME:	DATE: TIME:

PTS Laboratories, Inc. • 8100 Secura Way • Santa Fe Springs, CA 90670 • Phone (562) 347-2500 • Fax (562) 907-3610

TETRA TECH PHYSICAL SOIL PROPERTIES LABORATORY REPORTS

TABLE
Summary of Soil Analytical Results for Total Organic Carbon (SW-846)
Former Chemoil Refinr. Walnut Avenue 21st Street Signall Hill, CA 90755

Total Organic Carbon (SW-846). Method: (9060)

Sample ID	Units	SB1-051606-GT-4'
Sample Date		5/16/2006
Laboratory Job Number		37420
Carbon, Total Organic (TOC)	mg/Kg	**16,000**

1) "ND<X" INDICATES CONSTITUENT(S) NOT DETECTED AT OR ABOVE METHOD DETECTION LIMIT.
2) "J" INDICATES ANALYTE WAS DETECTED. HOWEVER, ANALYTE CONCENTRATION IS AN ESTIMATED VALUE WHICH IS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND THE PRACTICAL QUANTITATION LIMIT(PQL).
3) "D" INDICATES THE SAMPLE WAS DILUTED TO BRING THE ANALYTE CONCENTRATION WITHIN CALIBRATION RANGE.

File: SO_9060.xls

TABLE
Summary of Soil Analytical Results for Physical Properties
Former Chemoil Refinr. Walnut Avenue 21st Street Signall Hill, CA 90755

Physical Properties. Method: API-RP40

Sample ID	Units	SB1-051606-GT-4'
Sample Date		5/16/2006
Laboratory Job Number		37420
Bulk Density	g/cc	**1.72**

1) "ND<X" INDICATES CONSTITUENT(S) NOT DETECTED AT OR ABOVE METHOD DETECTION LIMIT.
2) "J" INDICATES ANALYTE WAS DETECTED. HOWEVER, ANALYTE CONCENTRATION IS AN ESTIMATED VALUE WHICH IS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND THE PRACTICAL QUANTITATION LIMIT(PQL).
3) "D" INDICATES THE SAMPLE WAS DILUTED TO BRING THE ANALYTE CONCENTRATION WITHIN CALIBRATION RANGE.

File: SO_APIRP40.xls

TABLE
Summary of Soil Analytical Results for Physical Properties
Former Chemoil Refinr. Walnut Avenue 21st Street Signall Hill, CA 90755

Physical Properties. Method: API-RP40

Sample ID	Units	SB1-051606-GT-4'
Sample Date		5/16/2006
Laboratory Job Number		37420
Porosity, Total	% Vb	**35.9**

1) "ND<X" INDICATES CONSTITUENT(S) NOT DETECTED AT OR ABOVE METHOD DETECTION LIMIT.
2) "J" INDICATES ANALYTE WAS DETECTED. HOWEVER, ANALYTE CONCENTRATION IS AN ESTIMATED VALUE WHICH IS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND THE PRACTICAL QUANTITATION LIMIT(PQL).
3) "D" INDICATES THE SAMPLE WAS DILUTED TO BRING THE ANALYTE CONCENTRATION WITHIN CALIBRATION RANGE.

File: SO_APIRP40_1.xls

TABLE
Summary of Soil Analytical Results for Moisture Content
Former Chemoil Refinr. Walnut Avenue 21st Street Signall Hill, CA 90755

Moisture Content. Method: ASTM-D2216

Sample ID	Units	SB1-051606-GT-4'
Sample Date		5/16/2006
Laboratory Job Number		37420
Moisture Content	% wt	12.9

1) "ND<X" INDICATES CONSTITUENT(S) NOT DETECTED AT OR ABOVE METHOD DETECTION LIMIT.
2) "J" INDICATES ANALYTE WAS DETECTED. HOWEVER, ANALYTE CONCENTRATION IS AN ESTIMATED VALUE WHICH IS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND THE PRACTICAL QUANTITATION LIMIT(PQL).
3) "D" INDICATES THE SAMPLE WAS DILUTED TO BRING THE ANALYTE CONCENTRATION WITHIN CALIBRATION RANGE.

File: SO_ASTMD2216.xls

American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Tetra Tech, Inc.
348 West Hospitality Lane
Suite 300
San Bernardino, CA 92408-3242

Telephone: (909) 381-1674
Attn: Ben Weink

Site

Former Chemoil Refinr.
Walnut Avenue & 21st Street
Signall Hill, CA 90755

Page 93
Project ID: 18116-01
Project Name: Former Chemoil Refinr.

AETL Job Number	Submitted	Client
37420	05/16/2006	T/TSB2

Analytes			Porosity, Total	Bulk Density	Moisture Content	Carbon, Total Organic (TOC)
Methods of Analyses			API-RP40	API-RP40	ASTM-D2216	(9060)
Date Prepared			05/31/2006	05/31/2006	05/17/2006	05/26/2006
Date Analyzed			05/31/2006	05/31/2006	05/18/2006	05/26/2006
Matrix			Soil	Soil	Soil	Soil
QC Batch Number						052606
Units			% Vb	g/cc	% wt	mg/Kg
Method Detection Limit			0.1	0.01	0.1	25
Practical Quantitation Limit			0.1	0.01	0.1	50
Dilution Factor			1	1	1	1
Lab ID	Sample ID	Sampled	Results	Results	Results	Results
37420.13	SB1-051606-GT-4'	05/16/2006	35.9	1.72	12.9	16,000
N/A	Method Blank	05/16/2006	ND	ND	NA	ND

American Environmental Testing Laboratory Inc.

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Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Tetra Tech, Inc.
348 West Hospitality Lane
Suite 300
San Bernardino, CA 92408-3242

Telephone: (909)381-1674
Attn: Ben Weink

Site

Former Chemoil Refinr.
Walnut Avenue & 21st Street
Signall Hill, CA 90755

Page: 101
Project ID: 18116-01
Project Name: Former Chemoil Refinr.

AETL Job Number	Submitted	Client
37420	05/16/2006	T/TSB2

Method: (9060), Total Organic Carbon (SW-846)

QUALITY CONTROL REPORT

QC Batch No: 052606 Sample Spiked: 052606 QC Prepared: 05/26/2006 QC Analyzed: 05/26/2006 Units: mg/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Carbon, Total Organic (TOC)	0.0	100.00	104.00	104	100.00	97.00	97	7.0	52-130	<12

QC Batch No: 052606 Sample Spiked: 052606 QC Prepared: 05/26/2006 QC Analyzed: 05/26/2006 Units: mg/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS/LCSD % Limit						
Carbon, Total Organic (TOC)	100.00	92.00	92	80-120						

PTS Laboratories

AETL
PTS File No: 36342

PHYSICAL PROPERTIES DATA

PROJECT NAME: N/A
PROJECT NO: 37420

METHODOLOGY: **API RP40**

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENT. (1)	BULK DENSITY (g/cc)	TOTAL POROSITY, % Vb (2)
37420.13A	4	V	1.72	35.9

(1) Sample Orientation: H = horizontal; V = vertical (2) Total Porosity = no pore fluids in place; all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids Vb = Bulk Volume, cc

PTS Laboratories, Inc.

AETL
PTS File No: 36342

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: N/A
PROJECT NO: 37420

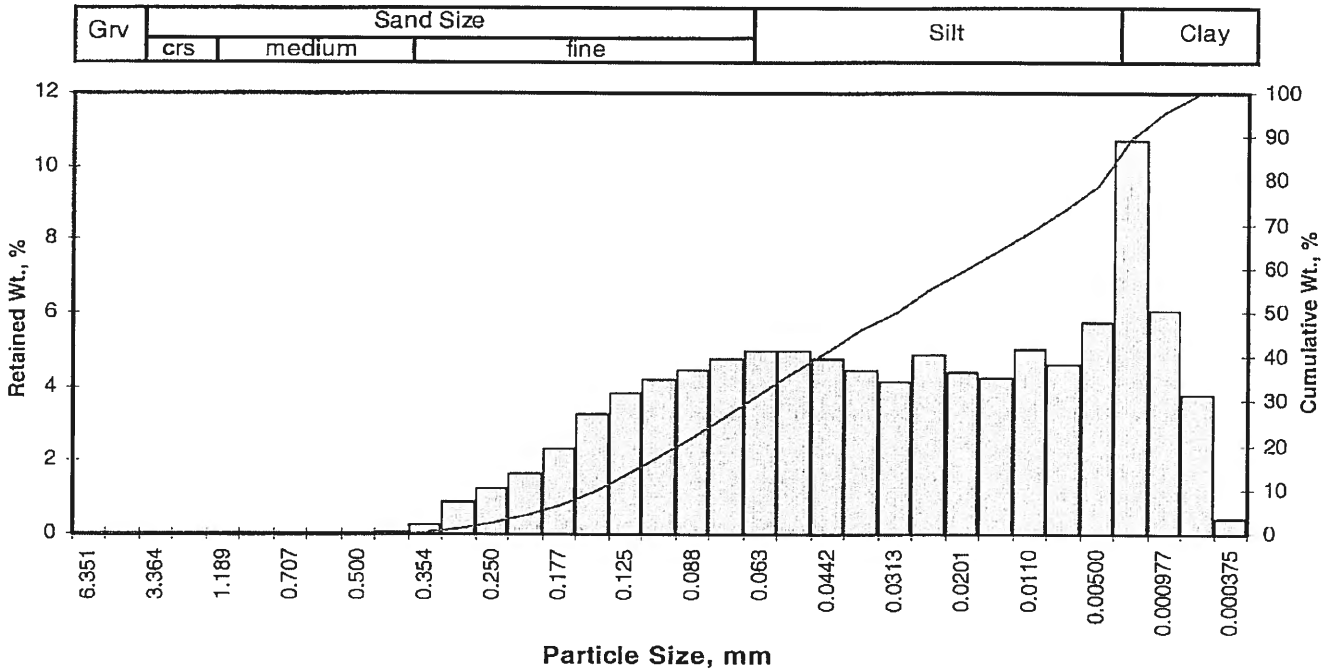
Sample ID	Depth, ft.	Mean Grain Size Description (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
37420.13A	4	Silt	0.031	0.00	0.00	0.05	26.83	52.20	20.92	73.12

(1) Based on Mean from Trask

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	AETL	**PTS File No:**	36342
Project:	N/A	**Sample ID:**	37420.13A
Project No:	37420	**Depth, ft:**	4



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.00	0.00	0.00
0.0197	0.500	1.00	35	0.00	0.00	0.00
0.0166	0.420	1.25	40	0.05	0.05	0.05
0.0139	0.354	1.50	45	0.25	0.25	0.30
0.0117	0.297	1.75	50	0.90	0.90	1.20
0.0098	0.250	2.00	60	1.22	1.22	2.42
0.0083	0.210	2.25	70	1.68	1.68	4.10
0.0070	0.177	2.50	80	2.35	2.35	6.45
0.0059	0.149	2.75	100	3.24	3.24	9.69
0.0049	0.125	3.00	120	3.82	3.82	13.51
0.0041	0.105	3.25	140	4.17	4.17	17.68
0.0035	0.088	3.50	170	4.44	4.44	22.12
0.0029	0.074	3.75	200	4.76	4.76	26.88
0.0025	0.063	4.00	230	4.96	4.96	31.84
0.0021	0.053	4.25	270	4.96	4.96	36.80
0.00174	0.0442	4.50	325	4.76	4.76	41.56
0.00146	0.0372	4.75	400	4.46	4.46	46.02
0.00123	0.0313	5.00	450	4.15	4.15	50.17
0.000986	0.0250	5.32	500	4.88	4.88	55.06
0.000790	0.0201	5.64	635	4.39	4.39	59.45
0.000615	0.0156	6.00		4.25	4.25	63.70
0.000435	0.0110	6.50		5.02	5.02	68.72
0.000308	0.00781	7.00		4.61	4.61	73.33
0.000197	0.00500	7.65		5.75	5.75	79.08
0.000077	0.00195	9.00		10.70	10.70	89.78
0.000038	0.000977	10.00		6.06	6.06	95.84
0.000019	0.000488	11.00		3.75	3.75	99.59
0.000015	0.000375	11.38		0.41	0.41	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	2.35	0.0077	0.197
10	2.77	0.0058	0.147
16	3.15	0.0044	0.113
25	3.65	0.0031	0.080
40	4.42	0.0018	0.047
50	4.99	0.0012	0.031
60	5.69	0.0008	0.019
75	7.19	0.0003	0.007
84	8.27	0.0001	0.003
90	9.04	0.0001	0.002
95	9.86	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	4.99	4.99	4.99
Median, in.	0.0012	0.0012	0.0012
Median, mm	0.031	0.031	0.031
Mean, phi	4.53	5.71	5.47
Mean, in.	0.0017	0.0008	0.0009
Mean, mm	0.043	0.019	0.023
Sorting	3.406	2.560	2.419
Skewness	0.742	0.281	0.289
Kurtosis	0.251	0.468	0.871
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.05
Fine Sand	200	26.83
Silt	>0.005 mm	52.20
Clay	<0.005 mm	20.92
	Total	100

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DATE PTS FILE# 36342 **CHAIN OF CUSTODY RECORD** PAGE 1 OF 1

COMPANY: AETL

ADDRESS: 2834 North Naomi st Burbank, CA, 91504

PROJECT MANAGER: Jim Lin

PROJECT NAME

PHONE NUMBER: (818) 845-8200

PROJECT NUMBER: 37420

FAX NUMBER: (818) 845-8840

SITE LOCATION

SAMPLER SIGNATURE

PO#

SPECIAL HANDLING

24 HOURS 5 DAYS
72 HOURS NORMAL
OTHER

SAMPLE CONDITIONS

RECEIVED ON ICE YES/NO
SEALED YES/NO
OTHER YES/NO

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YIELD ASTM D425	CAPILLARY PRESSURE, ASTM D425M	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	ATTERBERG LIMITS, ASTM D4318	TNRCC PROPERTIES PACKAGE					NUMBER OF SAMPLES	COMMENTS
37420.13A	5/16-06	1100	4'			X		X							X											P.O.# 10323

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY AETL	COMPANY PTS Laboratories	COMPANY	COMPANY
DATE 5/18/06 TIME	DATE 5-18-06 TIME 1523	DATE TIME	DATE TIME

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PTS GeoLabs, Inc. • 4342 W. 12th St. • Houston, TX 77055 • Phone (713) 680-2291 • Fax (713) 680-0763

Advanced Technology Laboratories

3275 Walnut Avenue
Signal Hill CA 90807
(562) 989-4045 Phone
(562) 989-4040 Fax

Fax Transmittal Sheet

To: Jim

From: Rachelle

RE: Results for 084490

Message:

Enclosed are the results for your project 37420. Thank you very much for your business and we are looking forward to being of service to you.

This message is intended for the use of the individual or entity to which it is addressed. This may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the above address. Thank you.

Advanced Technology Laboratories

Date: *31-May-06*

CLIENT:	American Environmental Testing Laborator	**Client Sample ID:**	37420.13C
Lab Order:	084490	**Tag Number:**	
Project:	37420	**Collection Date:**	5/17/2006 11:00:00 AM
Lab ID:	084490-001A	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON						
				EPA 415.1(M)		
RunID: TOC2_060526A	QC Batch: R63818				PrepDate:	Analyst: JT
Total Organic Carbon	16000	30		mg/Kg	1	5/26/2006

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 31-May-06

CLIENT: American Environmental Testing Laborator
Work Order: 084490
Project: 37420

ANALYTICAL QC SUMMARY REPORT

TestCode: 415.1_S

Sample ID: MB-R63818 | SampType: MBLK | TestCode: 415.1_S | Units: mg/Kg | Prep Date: | RunNo: 63818
Client ID: PBS | Batch ID: R63818 | TestNo: EPA 415.1(M) | Analysis Date: 5/26/2006 | SeqNo: 943878

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	30									

Sample ID: LCSR63818 | SampType: LCS | TestCode: 415.1_S | Units: mg/Kg | Prep Date: | RunNo: 63818
Client ID: LCSS | Batch ID: R63818 | TestNo: EPA 415.1(M) | Analysis Date: 5/26/2006 | SeqNo: 943879

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	921.000	30	1000	0	92.1	80	120				

Sample ID: 084654-002AMS | SampType: MS | TestCode: 415.1_S | Units: mg/Kg | Prep Date: | RunNo: 63818
Client ID: ZZZZZZ | Batch ID: R63818 | TestNo: EPA 415.1(M) | Analysis Date: 5/26/2006 | SeqNo: 943883

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	2490.000	30	1000	1446	104	52	130				

Sample ID: 084654-002AMSD | SampType: MSD | TestCode: 415.1_S | Units: mg/Kg | Prep Date: | RunNo: 63818
Client ID: ZZZZZZ | Batch ID: R63818 | TestNo: EPA 415.1(M) | Analysis Date: 5/26/2006 | SeqNo: 943884

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	2411.000	30	1000	1446	96.5	52	130	2490	3.22	12	

Qualifiers:
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interferenc
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out

CHAIN OF CUSTODY RECORD

Pg 1 of 1

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: 10322
Logged By: [signature] Date: 5/18/06

Method of Transport: Client ☑ ATL ☐ CA Over/N ☐ FEDEX ☐ Other:

Sample Condition Upon Receipt:
1. CHILLED Y☑ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☑ N☐
3. CONTAINER INTACT Y☑ N☐ 6. PRESERVED Y☐ N☐

Client: AETL
Attn: Jim Lin
Address: 2834 North Naomi st.
City: Burbank State: CA Zip Code: 91504
TEL: (818) 845-8200
FAX: (818) 845-8840

Project Name:
Project #: 37420
Sampler: (Printed Name) (Signature)

Relinquished by: (Signature and Printed Name) [signature] Date: 5/18/06 Time: 1215 Received by: (Signature and Printed Name) [signature] Date: 5/18/06 Time: 1215
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name: 5-17-06 Date
Signature: [signature]

Send Report To:
Attn: Jim Lin
Co:
Address:
City State Zip

Bill To:
Attn: Nilloo chaudhry
Co:
Address:
City State Zip

Special Instructions/Comments:

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.
Storage Fees (applies when storage is requested):
- Sample : $2.00 / sample / mo (after 45 days)
- Records: $1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested: 8081A (Pesticides), 8082 (PCB), 8260B (Volatiles), 8270C (BNA), 6010B (Total Metals), 8015B (GRO) / 8020 (BTEX), 8015B (DRO), 8021 (BTEX), TITLE 22 / CAM 17 (6010 / 7000), TOC 415.1

SPECIFY APPROPRIATE MATRIX: SOIL, WATER, GROUND WATER, WASTEWATER

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D. / Location	Date	Time	TOC 415.1	SOIL	TAT	Container(s) #	Type	PRESERVATION	REMARKS
1	084490-001	37420-13C	5/12-06	1100	X	X	E	1	J G	—	

QA/QC: RTNE ☐ CT ☐ SWRCB ☐ Logcode ____ OTHER ____

• TAT starts 6 a.m. following day if samples received after 3 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint (J=Jar) B=Tedlar (G=Glass) P=Plastic M=Metal

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report, Yellow to folder, Pink to originator

FROM (WED)MAY 31 2006 11:30/ST. 11:20/NO. 6326640202 P 4

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Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

Data Qualifier:

*:	In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
B:	Analyte was present in the Method Blank.
D:	Result is from a diluted analysis.
E:	Result is beyond calibration limits and is estimated.
H:	Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
J:	Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
M:	Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
S6:	Surrogate recovery is outside control limits due to matrix interference.
S8:	The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
X:	Results represent LCS and LCSD data.

Definition:

%Limi:	Percent acceptable limits.
%REC:	Percent recovery.
Con.L:	Acceptable Control Limits
Conce:	Added concentration to the sample.
LCS:	Laboratory Control Sample
MDL:	Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.
MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate

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Data Qualifiers and Descriptors

ND: Analyte was not detected in the sample at or above MDL.

PQL: Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.

Recov: Recovered concentration in the sample.

RPD: Relative Percent Difference

TETRA TECH, INC.
348 W. Hospitality Lane, Suite 300
San Bernardino, California 92408
Telephone: (909) 381-1674
FAX: (909) 889-1391

SHIP TO: AETL

CHAIN OF CUSTODY RECORD

~~#37420~~

DATE 5/16/06 PAGE 3 OF 4

CLIENT: GEM
PROJECT NAME: Former Chemoil
PROJECT MANAGER: Ben Weink
TC #: 18116-01
SAMPLERS (Signatures): Truong Phu Ngo

TURN-AROUND TIME: Standard

LINE ITEM	SAMPLE NO.	DATE	TIME	Geotechnical Testing	VOCs 8260+OXYS	FILTERED/UNFILTERED	MATRIX TYPE	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE	OBSERVATIONS/COMMENTS
1.	~~SBI-051606-GT-32'~~	5/16/06	~~10:40~~	X			~~S~~	~~P~~	~~1~~		~~37420.13.AG~~
2.	SBI-051606-GT-4'	↓	11:00	X			S	D	1		37420.13
3.	Trip Blanks	↓	14:25		X		W	G	2		37420.14
4.											
5.											
6.											
7.											
8.											
9.											
10.											

Geotechnical Testing:
Grain size
Porosity
Bulk density
Moisture content
Total organic carbon

FILTERING:
☐ FILTERED ☐ UNFILTERED

MATRIX TYPE:
S - Soil
M - Sediment
W - Water

CONTAINER TYPE:
G - Glass Bottle/Jar
SS - Stainless Steel Sleeve
SB - Brass Sleeve
P - Plastic Bottle/Jar

PRESERVATIVES: (Water Only)
HCL
NR (None required)
NaOH
H_2SO_4

RELINQUISHED BY	SIGNATURE		DATE	TIME	TOTAL NUMBER OF CONTAINERS ON THIS CHAIN OF CUSTODY: 3
Truong Phu Ngo	Truong Phu Ngo	TETRA TECH, INC.	5/16/06	1540	
RECEIVED BY: Argisht	SIGNATURE	COMPANY: AETL	DATE: 5/16-06	TIME: 1540	METHOD OF SHIPMENT/SHIPMENT NO: Courier
RELINQUISHED BY: Argisht	SIGNATURE	COMPANY: AETL	DATE: 5/16-06	TIME: 1700	Special Shipping/Handling/Storage Requirements
RECEIVED BY: Argisht	SIGNATURE	COMPANY: AETL	DATE: 5/16-06	TIME: 1700	

DISTRIBUTION: White and Pink = Tetra Tech, Inc. Canary = Laboratory

G COCRgen car

TABLE
Summary of Soil Analytical Results for Total Organic Carbon (SW-846)
Former Chemoil Refinr. Walnut Avenue 21st Street Signal Hill, CA 90755

Total Organic Carbon (SW-846). Method: (9060)

Sample ID	Units	SB2-051506-GT-24'	SB2-051506-GT-31'	SB2-051506-GT-6'
Sample Date		5/15/2006	5/15/2006	5/15/2006
Laboratory Job Number		37405	37405	37405
Carbon, Total Organic (TOC)	mg/Kg	**160**	**9,900**	**17,000**

1) "ND<X" INDICATES CONSTITUENT(S) NOT DETECTED AT OR ABOVE METHOD DETECTION LIMIT.
2) "J" INDICATES ANALYTE WAS DETECTED. HOWEVER, ANALYTE CONCENTRATION IS AN ESTIMATED VALUE WHICH IS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND THE PRACTICAL QUANTITATION LIMIT(PQL).
3) "D" INDICATES THE SAMPLE WAS DILUTED TO BRING THE ANALYTE CONCENTRATION WITHIN CALIBRATION RANGE.

File: SO_9060.xls

TABLE
Summary of Soil Analytical Results for Physical Properties
Former Chemoil Refinr. Walnut Avenue 21st Street Signal Hill, CA 90755

Physical Properties. Method: API-RP40

Sample ID	Units	SB2-051506-GT-24'	SB2-051506-GT-31'	SB2-051506-GT-6'
Sample Date		5/15/2006	5/15/2006	5/15/2006
Laboratory Job Number		37405	37405	37405
Bulk Density	g/cc	**1.50**	**1.69**	**1.66**

1) "ND<X" INDICATES CONSTITUENT(S) NOT DETECTED AT OR ABOVE METHOD DETECTION LIMIT.
2) "J" INDICATES ANALYTE WAS DETECTED. HOWEVER, ANALYTE CONCENTRATION IS AN ESTIMATED VALUE WHICH IS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND THE PRACTICAL QUANTITATION LIMIT(PQL).
3) "D" INDICATES THE SAMPLE WAS DILUTED TO BRING THE ANALYTE CONCENTRATION WITHIN CALIBRATION RANGE.

File: SO_APIRP40.xls

TABLE
Summary of Soil Analytical Results for Physical Properties
Former Chemoil Refinr. Walnut Avenue 21st Street Signal Hill, CA 90755

Physical Properties. Method: API-RP40

Sample ID	Units	SB2-051506-GT-24'	SB2-051506-GT-31'	SB2-051506-GT-6'
Sample Date		5/15/2006	5/15/2006	5/15/2006
Laboratory Job Number		37405	37405	37405
Porosity, Total	% Vb	**44.5**	**37.3**	**38.4**

1) "ND<X" INDICATES CONSTITUENT(S) NOT DETECTED AT OR ABOVE METHOD DETECTION LIMIT.
2) "J" INDICATES ANALYTE WAS DETECTED. HOWEVER, ANALYTE CONCENTRATION IS AN ESTIMATED VALUE WHICH IS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND THE PRACTICAL QUANTITATION LIMIT(PQL).
3) "D" INDICATES THE SAMPLE WAS DILUTED TO BRING THE ANALYTE CONCENTRATION WITHIN CALIBRATION RANGE.

File: SO_APIRP40_1.xls

TABLE
Summary of Soil Analytical Results for Moisture Content
Former Chemoil Refinr. Walnut Avenue 21st Street Signal Hill, CA 90755

Moisture Content. Method: ASTM-D2216

Sample ID	Units	SB2-051506-GT-24'	SB2-051506-GT-31'	SB2-051506-GT-6'
Sample Date		5/15/2006	5/15/2006	5/15/2006
Laboratory Job Number		37405	37405	37405
Moisture Content	% wt	**4.89**	**10.8**	**11.8**

1) "ND<X" INDICATES CONSTITUENT(S) NOT DETECTED AT OR ABOVE METHOD DETECTION LIMIT.
2) "J" INDICATES ANALYTE WAS DETECTED. HOWEVER, ANALYTE CONCENTRATION IS AN ESTIMATED VALUE WHICH IS BETWEEN THE METHOD DETECTION LIMIT (MDL) AND THE PRACTICAL QUANTITATION LIMIT(PQL).
3) "D" INDICATES THE SAMPLE WAS DILUTED TO BRING THE ANALYTE CONCENTRATION WITHIN CALIBRATION RANGE.

File: SO_ASTMD2216.xls

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ANALYTICAL RESULTS

Ordered By

Tetra Tech, Inc.
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Telephone: (909) 381-1674
Attn: Ben Weink

Site

Former Chemoil Refinr.
Walnut Avenue & 21st Street
Signal Hill, CA 90755

Page 52
Project ID: 18116-01
Project Name: Former Chemoil Refinr.

AETL Job Number	Submitted	Client
37405	05/15/2006	T/TSB2

Analytes			Porosity, Total	Bulk Density	Moisture Content	Carbon, Total Organic (TOC)
Methods of Analyses			API-RP40	API-RP40	ASTM-D2216	(9060)
Date Prepared			05/31/2006	05/31/2006	05/16/2006	05/17/2006
Date Analyzed			05/31/2006	05/31/2006	05/17/2006	05/17/2006
Matrix			Soil	Soil	Soil	Soil
QC Batch Number						051706
Units			% Vb	g/cc	% wt	mg/Kg
Method Detection Limit			0.1	0.01	0.1	25
Practical Quantitation Limit			0.1	0.01	0.1	50
Dilution Factor			1	1	1	1
Lab ID	Sample ID	Sampled	Results	Results	Results	Results
37405.17	SB2-051506-GT-6'	05/15/2006	38.4	1.66	11.8	17,000
37405.18	SB2-051506-GT-24'	05/15/2006	44.5	1.50	4.89	160
37405.19	SB2-051506-GT-31'	05/15/2006	37.3	1.69	10.8	9,900
N/A	Method Blank	05/15/2006	ND	ND	ND	ND

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ANALYTICAL RESULTS

Ordered By

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Site

Former Chemoil Refinr.
Walnut Avenue & 21st Street
Signal Hill, CA 90755

Page: 64
Project ID: 18116-01
Project Name: Former Chemoil Refinr.

AETL Job Number	Submitted	Client
37405	05/15/2006	T/TSB2

Method: (9060), Total Organic Carbon (SW-846)

QUALITY CONTROL REPORT

QC Batch No: 051706 Sample Spiked: 051706 QC Prepared: 05/17/2006 QC Analyzed: 05/17/2006 Units: mg/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Carbon, Total Organic (TOC)	0.0	100.00	79.00	79	100.00	90.00	90	13.0	52-130	<12

QC Batch No: 051706 Sample Spiked: 051706 QC Prepared: 05/17/2006 QC Analyzed: 05/17/2006 Units: mg/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS/LCSD % Limit						
Carbon, Total Organic (TOC)	100.00	97.00	97	80-120						

PHYSICAL PROPERTIES DATA

PROJECT NAME: N/A
PROJECT NO: 37405

METHODOLOGY: **API RP40**

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENT. (1)	BULK DENSITY (g/cc)	TOTAL POROSITY, % Vb (2)
37405.17A	6	V	1.66	38.4
37405.18A	24	V	1.50	44.5
37405.19A	31	V	1.69	37.3

(1) Sample Orientation: H = horizontal; V = vertical (2) Total Porosity = no pore fluids in place; all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids Vb = Bulk Volume, cc

PTS Laboratories, Inc.

AETL
PTS File No: 36338

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: N/A
PROJECT NO: 37405

Sample ID	Depth, ft.	Mean Grain Size Description (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
37405-17A	6	Silt	0.013	0.00	0.00	0.00	11.72	60.13	28.15	88.28
37405-18A	24	Fine sand	0.221	0.00	0.00	29.48	37.02	25.02	8.49	33.51
37405-19A	31	Fine sand	0.053	0.00	0.00	13.77	29.26	44.26	12.70	56.97

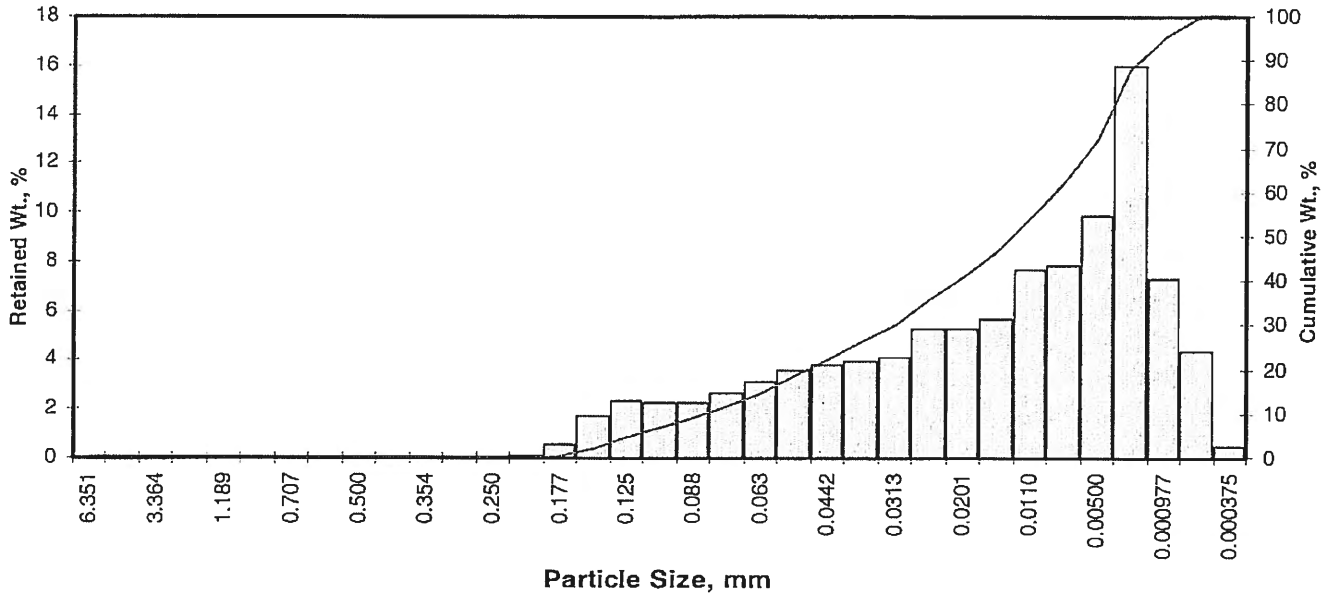
(1) Based on Mean from Trask

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	AETL	**PTS File No:**	36338
Project:	N/A	**Sample ID:**	37405-17A
Project No:	37405	**Depth, ft:**	6

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.00	0.00	0.00
0.0197	0.500	1.00	35	0.00	0.00	0.00
0.0166	0.420	1.25	40	0.00	0.00	0.00
0.0139	0.354	1.50	45	0.00	0.00	0.00
0.0117	0.297	1.75	50	0.00	0.00	0.00
0.0098	0.250	2.00	60	0.00	0.00	0.00
0.0083	0.210	2.25	70	0.06	0.06	0.06
0.0070	0.177	2.50	80	0.57	0.57	0.63
0.0059	0.149	2.75	100	1.71	1.71	2.34
0.0049	0.125	3.00	120	2.29	2.29	4.63
0.0041	0.105	3.25	140	2.25	2.25	6.88
0.0035	0.088	3.50	170	2.24	2.24	9.12
0.0029	0.074	3.75	200	2.60	2.60	11.72
0.0025	0.063	4.00	230	3.12	3.12	14.84
0.0021	0.053	4.25	270	3.55	3.55	18.39
0.00174	0.0442	4.50	325	3.82	3.82	22.20
0.00146	0.0372	4.75	400	3.99	3.99	26.19
0.00123	0.0313	5.00	450	4.09	4.09	30.28
0.000986	0.0250	5.32	500	5.30	5.30	35.58
0.000790	0.0201	5.64	635	5.28	5.28	40.86
0.000615	0.0156	6.00		5.66	5.66	46.52
0.000435	0.0110	6.50		7.69	7.69	54.21
0.000308	0.00781	7.00		7.80	7.80	62.01
0.000197	0.00500	7.65		9.84	9.84	71.85
0.000077	0.00195	9.00		16.00	16.00	87.84
0.000038	0.000977	10.00		7.30	7.30	95.14
0.000019	0.000488	11.00		4.38	4.38	99.52
0.000015	0.000375	11.38		0.48	0.48	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	3.04	0.0048	0.121
10	3.58	0.0033	0.083
16	4.08	0.0023	0.059
25	4.68	0.0015	0.039
40	5.59	0.0008	0.021
50	6.23	0.0005	0.013
60	6.87	0.0003	0.009
75	7.91	0.0002	0.004
84	8.67	0.0001	0.002
90	9.30	0.0001	0.002
95	9.98	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	6.23	6.23	6.23
Median, in.	0.0005	0.0005	0.0005
Median, mm	0.013	0.013	0.013
Mean, phi	5.53	6.38	6.33
Mean, in.	0.0009	0.0005	0.0005
Mean, mm	0.022	0.012	0.012
Sorting	3.071	2.296	2.200
Skewness	0.954	0.066	0.074
Kurtosis	0.214	0.511	0.879
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.00
Fine Sand	200	11.72
Silt	>0.005 mm	60.13
Clay	<0.005 mm	28.15
	Total	100

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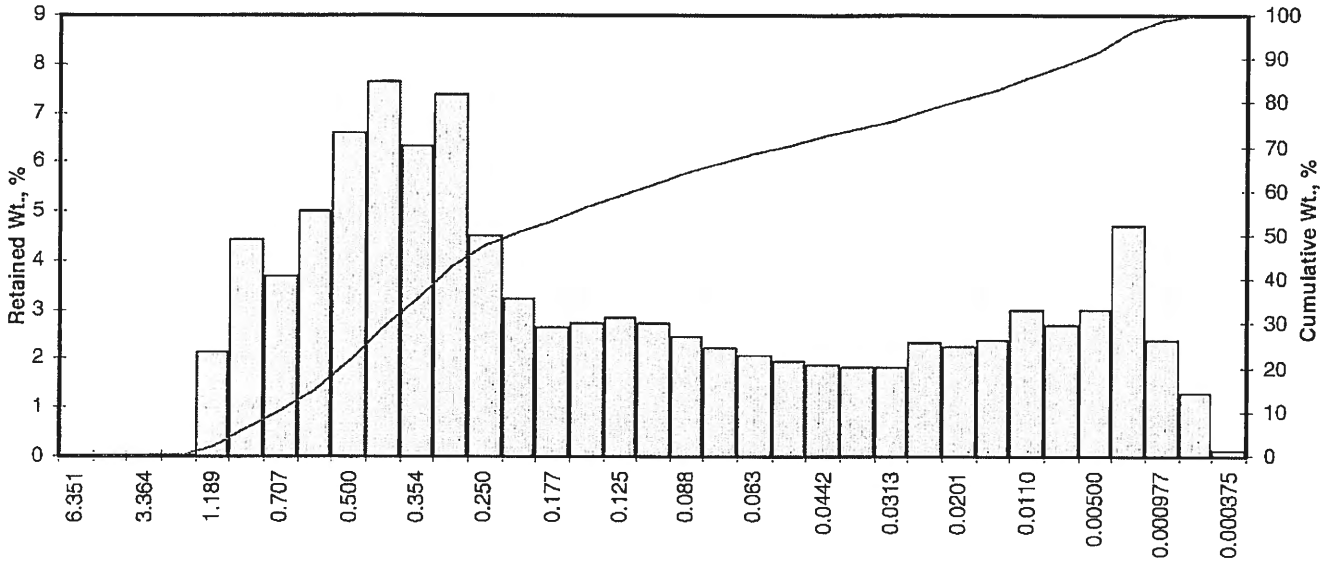
Phone: (562) 907-3607 Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	AETL	**PTS File No:**	36338
Project:	N/A	**Sample ID:**	37405-18A
Project No:	37405	**Depth, ft:**	24

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	2.13	2.13	2.13
0.0331	0.841	0.25	20	4.44	4.44	6.57
0.0278	0.707	0.50	25	3.70	3.70	10.27
0.0234	0.595	0.75	30	4.99	4.99	15.26
0.0197	0.500	1.00	35	6.59	6.59	21.85
0.0166	0.420	1.25	40	7.63	7.63	29.48
0.0139	0.354	1.50	45	6.32	6.32	35.80
0.0117	0.297	1.75	50	7.37	7.37	43.17
0.0098	0.250	2.00	60	4.51	4.51	47.68
0.0083	0.210	2.25	70	3.23	3.23	50.90
0.0070	0.177	2.50	80	2.65	2.65	53.55
0.0059	0.149	2.75	100	2.72	2.72	56.27
0.0049	0.125	3.00	120	2.82	2.82	59.09
0.0041	0.105	3.25	140	2.73	2.73	61.82
0.0035	0.088	3.50	170	2.46	2.46	64.28
0.0029	0.074	3.75	200	2.21	2.21	66.49
0.0025	0.063	4.00	230	2.04	2.04	68.53
0.0021	0.053	4.25	270	1.93	1.93	70.46
0.00174	0.0442	4.50	325	1.86	1.86	72.32
0.00146	0.0372	4.75	400	1.82	1.82	74.14
0.00123	0.0313	5.00	450	1.81	1.81	75.95
0.000986	0.0250	5.32	500	2.31	2.31	78.26
0.000790	0.0201	5.64	635	2.26	2.26	80.52
0.000615	0.0156	6.00		2.36	2.36	82.88
0.000435	0.0110	6.50		2.97	2.97	85.85
0.000308	0.00781	7.00		2.66	2.66	88.51
0.000197	0.00500	7.65		3.00	3.00	91.51
0.000077	0.00195	9.00		4.71	4.71	96.22
0.000038	0.000977	10.00		2.37	2.37	98.59
0.000019	0.000488	11.00		1.28	1.28	99.87
0.000015	0.000375	11.38		0.13	0.13	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.07	0.0374	0.950
10	0.48	0.0282	0.716
16	0.78	0.0230	0.583
25	1.10	0.0183	0.465
40	1.64	0.0126	0.320
50	2.18	0.0087	0.221
60	3.08	0.0046	0.118
75	4.87	0.0013	0.034
84	6.19	0.0005	0.014
90	7.32	0.0002	0.006
95	8.65	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	2.18	2.18	2.18
Median, in.	0.0087	0.0087	0.0087
Median, mm	0.221	0.221	0.221
Mean, phi	2.00	3.48	3.05
Mean, in.	0.0098	0.0035	0.0048
Mean, mm	0.250	0.089	0.121
Sorting	3.687	2.705	2.652
Skewness	0.572	0.482	0.495
Kurtosis	0.304	0.585	0.933
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	29.48
Fine Sand	200	37.02
Silt	>0.005 mm	25.02
Clay	<0.005 mm	8.49
	Total	100

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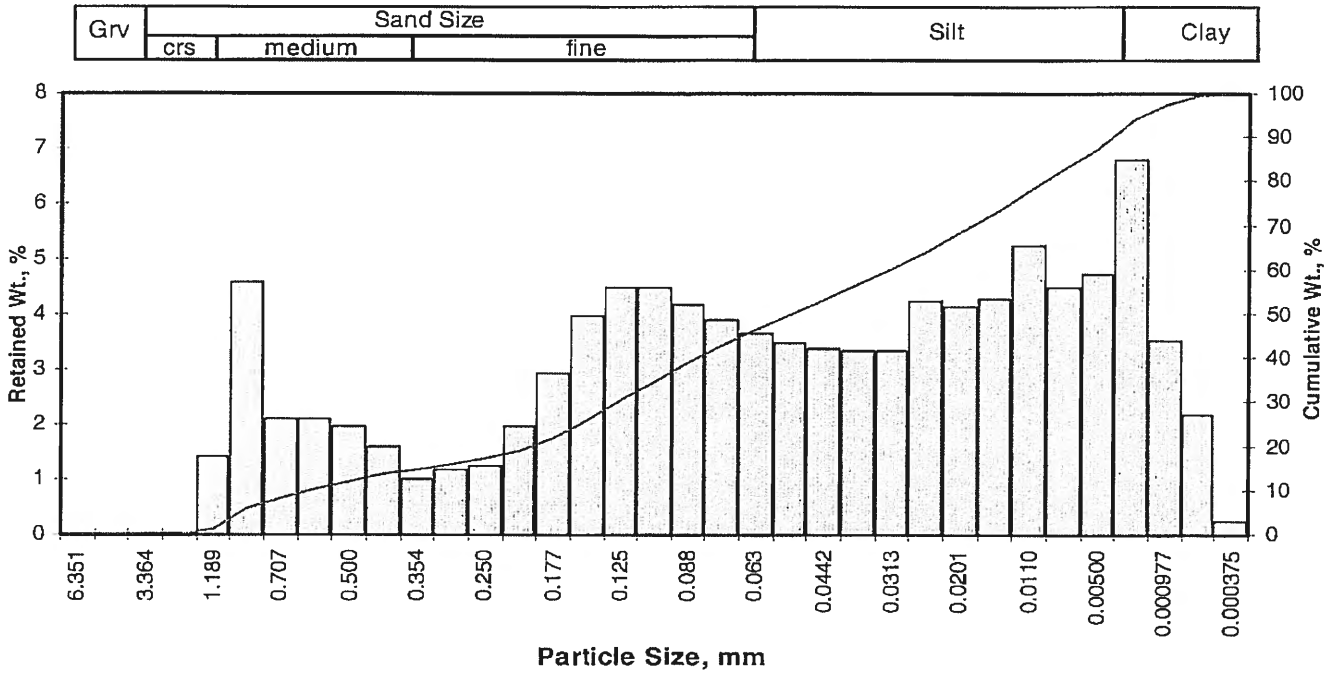
PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	AETL	**PTS File No:**	36338
Project:	N/A	**Sample ID:**	37405-19A
Project No:	37405	**Depth, ft:**	31



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
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0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	1.41	1.41	1.41
0.0331	0.841	0.25	20	4.57	4.57	5.98
0.0278	0.707	0.50	25	2.11	2.11	8.09
0.0234	0.595	0.75	30	2.10	2.10	10.19
0.0197	0.500	1.00	35	1.98	1.98	12.17
0.0166	0.420	1.25	40	1.60	1.60	13.77
0.0139	0.354	1.50	45	0.99	0.99	14.76
0.0117	0.297	1.75	50	1.16	1.16	15.92
0.0098	0.250	2.00	60	1.24	1.24	17.16
0.0083	0.210	2.25	70	1.95	1.95	19.11
0.0070	0.177	2.50	80	2.92	2.92	22.03
0.0059	0.149	2.75	100	3.98	3.98	26.01
0.0049	0.125	3.00	120	4.49	4.49	30.50
0.0041	0.105	3.25	140	4.48	4.48	34.98
0.0035	0.088	3.50	170	4.17	4.17	39.15
0.0029	0.074	3.75	200	3.88	3.88	43.03
0.0025	0.063	4.00	230	3.64	3.64	46.67
0.0021	0.053	4.25	270	3.47	3.47	50.15
0.00174	0.0442	4.50	325	3.37	3.37	53.52
0.00146	0.0372	4.75	400	3.33	3.33	56.85
0.00123	0.0313	5.00	450	3.33	3.33	60.18
0.000986	0.0250	5.32	500	4.24	4.24	64.42
0.000790	0.0201	5.64	635	4.14	4.14	68.56
0.000615	0.0156	6.00		4.28	4.28	72.84
0.000435	0.0110	6.50		5.25	5.25	78.09
0.000308	0.00781	7.00		4.48	4.48	82.57
0.000197	0.00500	7.65		4.73	4.73	87.30
0.000077	0.00195	9.00		6.78	6.78	94.08
0.000038	0.000977	10.00		3.51	3.51	97.59
0.000019	0.000488	11.00		2.18	2.18	99.77
0.000015	0.000375	11.38		0.23	0.23	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.14	0.0357	0.906
10	0.73	0.0238	0.604
16	1.77	0.0116	0.294
25	2.69	0.0061	0.155
40	3.55	0.0034	0.085
50	4.24	0.0021	0.053
60	4.99	0.0012	0.032
75	6.21	0.0005	0.014
84	7.20	0.0003	0.007
90	8.18	0.0001	0.003
95	9.26	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.24	4.24	4.24
Median, in.	0.0021	0.0021	0.0021
Median, mm	0.053	0.053	0.053
Mean, phi	3.57	4.48	4.40
Mean, in.	0.0033	0.0018	0.0019
Mean, mm	0.084	0.045	0.047
Sorting	3.386	2.715	2.739
Skewness	0.867	0.089	0.095
Kurtosis	0.118	0.680	1.062
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	13.77
Fine Sand	200	29.26
Silt	>0.005 mm	44.26
Clay	<0.005 mm	12.70
	Total	100

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DATE

PTS FILE# 36 338 CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

COMPANY: AETL

ADDRESS:

PROJECT MANAGER: JIM LIN

PROJECT NAME:

PHONE NUMBER: (818) 845-8200

PROJECT NUMBER: 37405

FAX NUMBER: (818) 845-8840

SITE LOCATION:

SAMPLER SIGNATURE:

PO# 10311

SPECIAL HANDLING: 24 HOURS / 5 DAYS / 72 HOURS / NORMAL / OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YIELD ASTM D425	CAPILLARY PRESSURE, ASTM D425M	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	ATTERBERG LIMITS, ASTM D4318	TNRCC PROPERTIES PACKAGE					NUMBER OF SAMPLES	COMMENTS
37405.17A	05/15/06		6 ft			X		X							X										1	
37405.18A	↓		24 ft			X		X							X										1	
37405.19A	↓		31 ft			X		X							X										1	

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY: AETL	COMPANY: PTS	COMPANY:	COMPANY:
DATE: 05/17/06 TIME: 1004	DATE: 5/17/06 TIME: 10:04	DATE: TIME:	DATE: TIME:

PTS GeoLabs, Inc. • 8100 Secura Way • Santa Fe Springs, CA 90670 • Phone (562) 907-3607 • Fax (562) 907-3610
PTS GeoLabs, Inc. • 4342 W. 12th St. • Houston, TX 77055 • Phone (713) 680-2291 • Fax (713) 680-0763

Advanced Technology Laboratories

3275 Walnut Avenue
Signal Hill CA 90807
(562) 989-4045 Phone
(562) 989-4040 Fax

Fax Transmittal Sheet

To: Jim

From: Rachelle

RE: Results for 084452

Message:

Enclosed are the results for your project 37405. Thank you very much for your business and we are looking forward to being of service to you.

This message is intended for the use of the individual or entity to which it is addressed. This may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the above address. Thank you.

Advanced Technology Laboratories

Date: *22-May-06*

CLIENT: American Environmental Testing Laborator
Project: 37405
Lab Order: 084452

Lab ID: 084452-001
Client Sample ID: 37405.17A
Collection Date: 5/15/2006
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON						
				EPA 415.1(M)		
RunID: TOC2_060517C	QC Batch: R63349			PrepDate:		Analyst: JT
Total Organic Carbon	17000	30		mg/Kg	1	5/17/2006

Lab ID: 084452-002
Client Sample ID: 37405.18A
Collection Date: 5/15/2006
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON						
				EPA 415.1(M)		
RunID: TOC2_060517C	QC Batch: R63349			PrepDate:		Analyst: JT
Total Organic Carbon	160	30		mg/Kg	1	5/17/2006

Lab ID: 084452-003
Client Sample ID: 37405.19A
Collection Date: 5/15/2006
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON						
				EPA 415.1(M)		
RunID: TOC2_060517C	QC Batch: R63349			PrepDate:		Analyst: JT
Total Organic Carbon	9900	30		mg/Kg	1	5/17/2006

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 22-May-06

CLIENT: American Environmental Testing Laborator
Work Order: 084452
Project: 37405

ANALYTICAL QC SUMMARY REPORT

TestCode: 415.1_S

Sample ID: MB-R63349 | SampType: MBLK | TestCode: 415.1_S | Units: mg/Kg | Prep Date: | RunNo: 63349
Client ID: PBS | Batch ID: R63349 | TestNo: EPA 415.1(M) | Analysis Date: 5/17/2006 | SeqNo: 938696

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	30									

Sample ID: LCSR63349 | SampType: LCS | TestCode: 415.1_S | Units: mg/Kg | Prep Date: | RunNo: 63349
Client ID: LCSS | Batch ID: R63349 | TestNo: EPA 415.1(M) | Analysis Date: 5/17/2006 | SeqNo: 938697

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	966.40	30	1000	0	96.6	80	120				

Sample ID: 084354-104AMS | SampType: MS | TestCode: 415.1_S | Units: mg/Kg | Prep Date: | RunNo: 63349
Client ID: ZZZZZZ | Batch ID: R63349 | TestNo: EPA 415.1(M) | Analysis Date: 5/17/2006 | SeqNo: 938700

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1986.00	30	1000	1200	78.6	52	130				

Sample ID: 084354-104AMSD | SampType: MSD | TestCode: 415.1_S | Units: mg/Kg | Prep Date: | RunNo: 63349
Client ID: ZZZZZZ | Batch ID: R63349 | TestNo: EPA 415.1(M) | Analysis Date: 5/17/2006 | SeqNo: 938701

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	2096.00	30	1000	1200	89.6	52	130	1986	5.39	12	

Qualifiers:
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out

CHAIN OF CUSTODY RECORD

Pg 1 of 1

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: 10310

Logged By: _____ Date: 05/16/06

Method of Transport: Client ☑ ATL ☐ CA OverN ☐ FEDEX ☐ Other: _____

Sample Condition Upon Receipt
1. CHILLED Y☑ N☐ 4. SEALED Y☐ N☑
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☑ N☐
3. CONTAINER INTACT Y☑ N☐ 6. PRESERVED Y☐ N☑

Client:
Attn: AETL
Address:
City State Zip Code
TEL: (818) 845-8200
FAX: (818) 845-8840

Project Name:
Project #: 37405
Sampler: (Printed Name) (Signature)

Relinquished by: (Signature and Printed Name) Date: 5/16-06 Time: 1525 Received by: (Signature and Printed Name) Date: 5/16/06 Time: 9:27
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: _____ 5-16-06
Print Name Date
Signature

Send Report To:
Attn: JIM LIN
Co:
Address
City State Zip

Bill To:
Attn: N. CHOWDHRY
Co:
Address
City State Zip

Special Instructions/Comments:

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.
Storage Fees (applies when storage is requested):
- Sample : $2.00 / sample / mo (after 45 days)
- Records : $1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

QA/QC: RTNE ☐ CT ☐ SWRCB ☐ Logcode ____ OTHER ____

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D. / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (SVOA)	6010B (Total Metal)	8015B (GRO)	8015B (DRO)	8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	TOC (415.1)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Type	PRESERVATION	REMARKS
	054452-001	37405.17A	05/15/06											X	X				E	1	T	P	C
	↓ -002	37405.18A	↓											X	X				↓	↓	↓	↓	↓
	-003	37405.19A												X	X								

• TAT starts 8 a.m. following day if samples received after 3 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=Zn(AC) O=NaOH

FROM (MON) MAY 22 2006 11:49/ST. 11:48/NO. 6326640033 P 4

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

Data Qualifier:

*:	In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
B:	Analyte was present in the Method Blank.
D:	Result is from a diluted analysis.
E:	Result is beyond calibration limits and is estimated.
H:	Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
J:	Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
M:	Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
S6:	Surrogate recovery is outside control limits due to matrix interference.
S8:	The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
X:	Results represent LCS and LCSD data.

Definition:

%Limi:	Percent acceptable limits.
%REC:	Percent recovery.
Con.L:	Acceptable Control Limits
Conce:	Added concentration to the sample.
LCS:	Laboratory Control Sample
MDL:	Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.
MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

ND: Analyte was not detected in the sample at or above MDL.

PQL: Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.

Recov: Recovered concentration in the sample.

RPD: Relative Percent Difference

TETRA TECH, INC.
348 W. Hospitality Lane, Suite 300
San Bernardino, California 92408
Telephone: (909) 381-1674
FAX: (909) 889-1391

SHIP TO: AETL

37405

CHAIN OF CUSTODY RECORD

DATE 5/15/06 PAGE 3 OF 3

CLIENT: GEM
PROJECT NAME: Former Chemoil
PROJECT MANAGER: Ben Weink.
TC #:
SAMPLERS (Signatures) Truong Phu Ngo

PARAMETERS

TURN-AROUND TIME: Standard

LINE ITEM	SAMPLE NO.	DATE	TIME	Geotechnical Testing	FILTERED/UNFILTERED	MATRIX TYPE	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE	OBSERVATIONS/COMMENTS
1.	SB2-051506-GT-6'	5/15/06	13:45	X		S	BS	1		Geotechnical Testing. Grain size Bulk density Moisture content Total Organic Carbon 37405.17
2.	SB2-051506-GT-24'	↓	13:47	X		S	↓	1		37405.18
3.	SB2-051506-GT-31'	↓	13:49	X		S	↓	1		37405.19
4.										
5.										
6.										
7.										
8.										
9.										
10.										

FILTERING: ☐ FILTERED ☐ UNFILTERED

MATRIX TYPE: S - Soil; M - Sediment; W - Water

CONTAINER TYPE: G - Glass Bottle/Jar; SS - Stainless Steel Sleeve; SB - Brass Sleeve; P - Plastic Bottle/Jar

PRESERVATIVES: (Water Only) HCL; NR (None required); NaOH; H_2SO_4

RELINQUISHED BY	SIGNATURE	TETRA TECH, INC.	DATE	TIME	TOTAL NUMBER OF CONTAINERS ON THIS CHAIN OF CUSTODY: 3
Truong Phu Ngo	Truong Phu Ngo		5/15/06	16:00	
RECEIVED BY	SIGNATURE	COMPANY	DATE	TIME	METHOD OF SHIPMENT/SHIPMENT NO
[illegible]	[illegible]	AETL	5/15/06	1600	Courier
RELINQUISHED BY	SIGNATURE	COMPANY	DATE	TIME	Special Shipping/Handling/Storage Requirements:
[illegible]	[illegible]	AETL	5/15/06	1730	
RECEIVED BY	SIGNATURE	COMPANY	DATE	TIME	
Argish	[illegible]	AETL	5/15/06	1730	

DISTRIBUTION: White and Pink = Tetra Tech, Inc. Canary = Laboratory

G:\COCRgen.cdr

ATTACHMENT D-3

OUTPUT OF JOHNSON AND ETTINGER MODEL FOR SUBSURFACE VAPOR INTRUSION INTO BUILDINGS FROM SOIL VAPOR

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Reset to Defaults

Soil Gas Concentration Data

	ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
1	71432	2.72E+05			Benzene
2	110827	2.48E+06			Cyclohexane
3	100414	2.08E+05			Ethylbenzene
4	108883	1.03E+05			4-Ethyltoluene
5	110543	8.20E+05			Heptane
6	110543	6.34E+05			Hexane
7	1634044	1.68E+03			MTBE (methyl-tert-butyl ether)
8	91203	3.15E+04			Naphthalene
9	108883	2.26E+04			Toluene
10	95636	1.67E+05			1,2,4-Trimethylbenzene
11	108678	9.34E+04			1,3,5-Trimethylbenzene
12	108383	9.55E+05			m-Xylene
13	95476	1.91E+05			o-Xylene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

Scenario: Residential

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.72E+05	9.3E-04	2.5E+02	2.6E-03	8.1E+01
2.48E+06	8.7E-04	2.1E+03	NA	3.4E-01
2.08E+05	7.8E-04	1.6E+02	1.4E-04	1.6E-01
1.03E+05	8.5E-04	8.8E+01	NA	2.8E-01
8.20E+05	8.2E-04	6.7E+02	NA	9.2E-01
6.34E+05	8.2E-04	5.2E+02	NA	7.1E-01
1.68E+03	8.3E-04	1.4E+00	1.3E-07	4.5E-04
3.15E+04	7.2E-04	2.3E+01	2.7E-04	7.2E+00
2.26E+04	8.5E-04	1.9E+01	NA	6.1E-02
1.67E+05	7.2E-04	1.2E+02	NA	1.6E+01
9.34E+04	7.1E-04	6.7E+01	NA	1.8E+00
9.55E+05	7.8E-04	7.5E+02	NA	7.1E+00
1.91E+05	7.8E-04	1.5E+02	NA	1.4E+00
			3.E-03	1.2E+02

Enter soil gas concentration above.

MORE ↓

ENTER Depth below grade #N/A of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas #N/A depth below grade, L_s (cm)	ENTER #N/A soil temperature, T_S (°C)	ENTER Vadose zone #N/A soil type (used to estimate soil vapor permeability)	#N/A OR	ENTER User-defined #N/A soil vapor permeability, k_v (cm^2)
15	152	24	SI		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SI	1.46	0.465	0.172	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	70	26	26	350	24	0.5
					(NEW)	(NEW)

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Reset to Defaults

Soil Gas Concentration Data

	ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
1	71432	2.72E+05			Benzene
2	110827	2.48E+06			Cyclohexane
3	100414	2.08E+05			Ethylbenzene
4	108883	1.03E+05			4-Ethyltoluene
5	110543	8.20E+05			Heptane
6	110543	6.34E+05			Hexane
7	1634044	1.68E+03			MTBE (methyl-tert-butyl ether)
8	91203	3.15E+04			Naphthalene
9	108883	2.26E+04			Toluene
10	95636	1.67E+05			1,2,4-Trimethylbenzene
11	108678	9.34E+04			1,3,5-Trimethylbenzene
12	108383	9.55E+05			m-Xylene
13	95476	1.91E+05			o-Xylene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

Scenario: Commercial

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.72E+05	4.7E-04	1.3E+02	3.0E-04	9.6E+00
2.48E+06	4.3E-04	1.1E+03	NA	4.1E-02
2.08E+05	3.9E-04	8.1E+01	1.7E-05	1.9E-02
1.03E+05	4.3E-04	4.4E+01	NA	3.3E-02
8.20E+05	4.1E-04	3.3E+02	NA	1.1E-01
6.34E+05	4.1E-04	2.6E+02	NA	8.4E-02
1.68E+03	4.2E-04	7.0E-01	1.5E-08	5.3E-05
3.15E+04	3.6E-04	1.1E+01	3.1E-05	8.6E-01
2.26E+04	4.3E-04	9.6E+00	NA	7.3E-03
1.67E+05	3.6E-04	6.0E+01	NA	2.0E+00
9.34E+04	3.6E-04	3.3E+01	NA	2.2E-01
9.55E+05	3.9E-04	3.7E+02	NA	8.5E-01
1.91E+05	3.9E-04	7.5E+01	NA	1.7E-01
			3.E-04	1.4E+01

MORE ↓

Enter soil gas concentration above.

ENTER Depth below grade #N/A of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas #N/A depth below grade, L_s (cm)	ENTER #N/A soil temperature, T_S (°C)	ENTER Vadose zone #N/A soil type (used to estimate soil vapor permeability)	#N/A OR	ENTER User-defined #N/A soil vapor permeability, k_v (cm^2)
15	152	24	SI		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SI	1.46	0.465	0.172	5

MORE ↓

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Commercial	70	25	25	250	8	1
					(NEW)	(NEW)

END

APPENDIX E

HUMAN HEALTH RISK ASSESSMENT FOR EAST PARCEL

(Appendix E located in separate binder)

APPENDIX E

HUMAN HEALTH RISK ASSESSMENT FOR EAST PARCEL

Former Chemoil Refinery
Site Cleanup Program Number 0453A
Site ID No. 2047W00
Global ID SL 2047W2348

2020 Walnut Avenue
Signal Hill, California

093-CHEMOIL-001

Prepared For:

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TABLE OF CONTENTS

PAGE

LIST OF FIGURES ..... **iv**
LIST OF TABLES ..... **iv**
LIST OF ATTACHMENTS ..... **iv**

EXECUTIVE SUMMARY ..... **v**

1.0 INTRODUCTION **1-1**

2.0 SITE DESCRIPTION AND BACKGROUND **2-1**
2.1 Site Description 2-1
2.2 Site Background 2-1
2.2.1 Refinery History 2-1
2.2.2 Surrounding Community/Properties 2-1
2.2.3 Regional and Local Geology 2-2
2.2.4 Regional and Local Hydrogeology 2-2
2.3 Surface Water 2-2

3.0 DATA EVALUATION **3-1**
3.1 Soil 3-2
3.2 Groundwater 3-3
3.3 Soil Vapor 3-3
3.4 Statistical Evaluation of Data 3-4

4.0 EXPOSURE ASSESSMENT **4-1**
4.1 Potential Source Evaluation 4-1
4.2 Exposure Setting and Land Use 4-1
4.3 Chemical Release Mechanisms and Identification of Transport Media 4-2
4.3.1 Volatilization of Chemical Vapors 4-2
4.3.2 Emission of Fugitive Dust 4-3
4.3.3 Leaching 4-3
4.3.4 Lateral Migration of Groundwater into Offsite Areas 4-4
4.3.5 Stormwater Runoff 4-4
4.4 Potential Human Receptors 4-4
4.5 Potential Exposure Points 4-4
4.6 Exposure Pathways Considered Potentially Complete and Significant 4-5
4.6.1 Hypothetical Future Onsite Construction/Utility Trench Worker Receptor 4-5
4.6.2 Hypothetical Future Onsite Commercial/Industrial Worker Receptor 4-6
4.7 Selection of Chemicals of Potential Concern 4-6
4.8 Average and Reasonable Maximum Exposures 4-6
4.9 Intake Assumptions Used to Estimate Exposure 4-7
4.9.1 Dermal Absorption Factor for Soil Contact 4-8
4.9.2 Particulate Emission Factor 4-8
4.10 Estimating Exposure Point Concentrations 4-8
4.10.1 Exposure Point Concentrations in Soil 4-8

TABLE OF CONTENTS

PAGE

4.10.2 Exposure Point Concentrations in Groundwater 4-9
4.10.3 Exposure Point Concentrations in Air 4-9
4.11 Estimating Chronic and Subchronic Daily Intakes 4-9
4.11.1 Direct Exposure to Soil 4-10
4.11.1.1 Incidental Ingestion of Soil 4-10
4.11.1.2 Dermal Contact with Soil 4-10
4.11.1.3 Inhalation of Outdoor Dust from Soil 4-11
4.11.2 Inhalation of Chemical Vapors Volatilizing from Groundwater into Indoor Air 4-11

5.0 TOXICITY ASSESSMENT 5-1
5.1 Oral Reference Doses and Inhalation Reference Concentrations 5-1
5.2 Oral Slope Factors and Inhalation Unit Risk Factors 5-3
5.3 Total Petroleum Hydrocarbons (TPH) 5-3
5.4 Lead 5-4
5.5 Chemicals without Toxicity Values 5-4

6.0 RISK CHARACTERIZATION 6-1
6.1 Arsenic 6-1
6.2 Lead 6-1
6.3 Estimated Adverse Noncancer Health Effects 6-1
6.4 Estimated Lifetime Excess Cancer Risk 6-2

7.0 UNCERTAINTY ANALYSIS 7-1
7.1 Data Collection and Evaluation 7-1
7.2 Selection of Chemicals of Potential Concern 7-2
7.3 Exposure Assessment 7-2
7.3.1 Exposure Pathways 7-2
7.3.2 Chemical Intake 7-2
7.3.3 Exposure Point Concentrations 7-3
7.3.4 Fate and Transport Models 7-3
7.4 Toxicity Assessment 7-3
7.4.1 Surrogates 7-4
7.4.2 Route-to-Route Extrapolation 7-4
7.4.3 Dermal Exposure 7-4
7.5 Risk Characterization 7-5
7.6 Summary of Risk Assessment Uncertainties 7-5

8.0 HUMAN HEALTH RISK ASSESSMENT RESULTS 8-1
8.1 Arsenic 8-1
8.2 Lead 8-2
8.3 Other COPCs 8-2
8.3.1 Hypothetical Onsite Construction/Utility Trench Worker Receptor 8-2
8.3.2 Hypothetical Onsite Commercial/Industrial Worker Receptor 8-3

TABLE OF CONTENTS

PAGE

9.0 CONCLUSIONS 9-1

10.0 REFERENCES 10-1

11.0 LIMITATIONS 11-1

LIST OF FIGURES

Figure E1-1 Site Location Map
Figure E2-1 Site Map
Figure E3-1 Site Plan, East Parcel
Figure E4-1 East Parcel Human Health Conceptual Site Model

LIST OF TABLES

Table E3-1 Statistical Summary of Soil (0 to 10 feet bgs) Analytical Data – East Area
Table E3-2 Statistical Summary of Groundwater Analytical Data – East Area
Table E3-3 Statistical Summary of Soil Vapor (5 feet bgs) Analytical Data – East Area
Table E4-1 Exposure Intake Assumptions for Hypothetical Onsite Construction/Utility Trench Worker Receptor
Table E4-2 Exposure Intake Assumptions for Hypothetical Onsite Commercial/Industrial Worker Receptor
Table E4-3 Chemical-Specific Dermal Absorption Factors (ABS)
Table E4-4 Exposure Point Concentrations for the Chemicals of Potential Concern (COPCs) in Soil (0 to 10 feet bgs)
Table E4-5 Exposure Point Concentrations for the Chemicals of Potential Concern (COPCs) in Groundwater and Indoor Air at Future Buildings
Table E5-1 Toxicity Values – Reference Doses/Reference Concentrations
Table E5-2 Chemical-Specific Gastrointestinal Absorption Factors (GIABS)
Table E5-3 Toxicity Values – Slope Factors/Inhalation Unit Risk Factors
Table E6-1 Summary of Noncancer Hazard Indices and Excess Cancer Risks

LIST OF ATTACHMENTS

Attachment E-1 Summary of Soil, Groundwater, and Soil Vapor Data
Attachment E-2 Soil Screening Evaluation for Protection of Groundwater
Attachment E-3 Fate and Transport Modeling
Attachment E-4 ProUCL Statistical Evaluation, Soil 0 to 10 feet bgs
Attachment E-5 Risk Characterization Tables

EXECUTIVE SUMMARY

A Human Health Risk Assessment (HHRA) was conducted for the East Parcel of the former Chemoil Refinery located at 2020 Walnut Avenue in Signal Hill, California (Site). Currently, the East Parcel is vacant and all aboveground storage tanks (ASTs) and support structures have been removed. The Site is owned by Signal Hill Enterprises, LLC (SHE) and negotiation is underway between SHE and RE | Solutions, LLC (RES) to transfer property ownership for redevelopment purposes. Future development plans include construction of new buildings for light industrial and commercial use. The East Parcel will be covered by future building footprints or concrete/asphalt paving. Future remedies for the East Parcel will include engineering controls to mitigate stormwater runoff into offsite areas.

The purpose of this HHRA is to quantify potential exposures to Site-related chemicals in the East Parcel, in order to identify the need for, and the possible extent of, remedial action activities to adequately protect human health or request no further action if human health risks are below risk management thresholds. The HHRA was based on previous Site investigations, which are documented in the *Report on Additional Subsurface Assessment* (TEC, 2001), *Environmental Due Diligence Site Assessment Results Report* (Tetra Tech, 2006), and *Site Investigation and Site Conceptual Model Report* (Apex-SGI, 2017). The methods used to conduct this risk assessment are consistent with U.S. Environmental Protection Agency (USEPA, 1989 and 1991) and California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC, 1992 and 2015) guidance. For the evaluation of potential indoor air impacts, DTSC (2011b) vapor intrusion guidance was used.

Based on previous Site investigations, the following chemical compounds were evaluated in this HHRA:

- Metals;
- Total petroleum hydrocarbons (TPH), including oxygenates and carbon ranges;
- Volatile organic compounds (VOCs); and
- Polycyclic aromatic hydrocarbons (PAHs).

Based on current and likely potential future uses at the East Parcel, the following hypothetical human receptors were evaluated in this HHRA:

- Hypothetical Onsite Construction/Utility Trench Worker Receptor; and
- Hypothetical Onsite Commercial/Industrial Worker Receptor.

However, it should be noted that although hypothetical construction/utility trench worker receptors are included in this HHRA, any hypothetical construction worker receptor will be performing activities consistent with a Site Management Plan (SMP) and a Site Health and Safety Plan (HASP). The SMP, HASP, and best management practices (BMPs) will protect construction worker receptors from exposure to Site-related contaminants.

All hypothetical human receptors were evaluated under a conservative reasonable maximum exposure (RME) scenario only. RME scenarios are conducted to account for potential impacts to the most (chemically) sensitive individuals within a hypothetical population. As a result, estimated health impacts presented in this report may exaggerate the actual adverse noncancer health effects and excess cancer risks.

USEPA guidance on risk and exposure levels considered protective of human health is presented to provide context for interpretation of the estimates of excess cancer risk and noncancer hazards presented in this HHRA. Hazard indices are compared to the USEPA and CalEPA recommended target HI of one (USEPA, 1989). Excess cancer risks are compared to CalEPA's risk management range of 1×10^{-6} to 1×10^{-4}. The CalEPA threshold value of one-in-one million (1×10^{-6}) represents the lower end (most stringent) of the CalEPA's risk management range and is the point of departure for risk management decisions for all receptors. An excess cancer risk of one-in-one hundred thousand (1×10^{-5}) is generally acceptable for occupational exposures.

The analysis of uncertainties associated with the HHRA indicates that adverse noncancer health effects and excess cancer risk estimates overestimate actual impacts to human health. The inherent conservativeness of this risk assessment is a direct result of using conservative and upper-bound input values to yield maximum, health-conservative estimates. The following sections summarize the results of the HHRA.

Arsenic

The 95-percent upper confidence limit of the mean concentration (95UCL) for arsenic in soil from 0 to 10 feet below ground surface (bgs) is 12 milligrams per kilogram (mg/kg), which is equal to the Southern California regional background arsenic concentration of 12 mg/kg. Arsenic was detected at a concentration above background in only 7 of the 27 soil samples. At these 7 locations, arsenic concentrations at 1 foot bgs were below 12 mg/kg. The arsenic concentrations above 12 mg/kg were at 5 and 10 feet bgs, indicating likely background concentrations. Generally, direct contact with soil will occur in the top foot of soil, except under construction exposure scenarios. Since arsenic concentrations above background are only detected at depth (i.e., greater than 5 feet bgs), arsenic in soil is likely background and not related to previous Site use and does not pose a risk above background to potential onsite receptors.

Lead

The maximum detected concentration of lead in soil does not exceed the Office of Environmental Health Hazard Assessment (OEHHA) commercial/industrial California Human Health Screening Level (CHHSL) of 320 mg/kg (OEHHA, 2009).

Other COPCs

For the remaining chemicals of potential concern (COPCs) in soil and soil vapor, the estimated hazard indices (HIs) and excess cancer risks for the potential human receptors are summarized in the following table:

Hypothetical Receptors			
Onsite Construction/Utility Trench Worker		Onsite Commercial/ Industrial Worker	
Hazard Index	Cancer Risk	Hazard Index	Cancer Risk
2	3×10^{-7}	0.3	7×10^{-6}

The following bullets summarize the soil and soil vapor COPCs contributing to HI and excess cancer risk estimates for each receptor.

Hypothetical Onsite Construction/Utility Trench Worker

- Although the total HI exceeds one, the individual HIs for each COPC in soil do not exceed one. Cobalt, nickel, thallium, and vanadium in soil are the primary contributors to the elevated HI. However, the primary critical effects of cobalt, nickel, thallium, and vanadium toxicity do not include the same target organ or system. Since individual HI estimates do not exceed one and the highest individual HIs are not associated with a primary critical effect on the same target organ or system, the COPCs do not pose adverse noncancer effects to the hypothetical onsite construction/utility worker receptor.
- The total excess cancer risk is less than the most stringent end of CalEPA's risk management range of 1×10^{-6} to 1×10^{-4} and is less than 1×10^{-5}, which is generally acceptable for occupational exposures. Therefore, COPCs do not pose a risk to the hypothetical onsite construction/utility trench worker receptor.

Hypothetical Onsite Commercial/Industrial Worker

- The total HI does not exceed one; therefore, the COPCs do not pose adverse noncancer effects to the hypothetical onsite commercial/industrial worker receptor.
- The total excess cancer risk is within CalEPA's risk management range and is less than 1×10^{-5}, which is generally acceptable for occupational exposures. Therefore, COPCs do not pose a risk to the hypothetical onsite commercial/industrial worker receptor.

Based on the exposure pathways evaluated and the conservative upper-bound assumptions used in this HHRA, potential exposure to Site-related COPCs do not pose an unacceptable human health risk to hypothetical onsite construction/utility trench worker and onsite commercial/industrial worker receptors.

Administrative and institutional controls will be implemented prior to development of the East Parcel, as required in the California Land Reuse and Revitalization Act Agreement (CLRRA) prepared for the Site. Expected controls include a land use covenant (LUC) and Site Management Plan (SMP). The LUC will prohibit use of underlying groundwater and prohibit unrestricted or sensitive land uses.

Based on results of the HHRA, combined with the administrative and institutional controls planned for the Site, remedial actions are not warranted at the East Parcel prior to development of the Site for industrial/commercial purposes.

1.0 INTRODUCTION

The Source Group, Inc. a division of Apex Companies, LLC (Apex-SGI) has prepared this Human Health Risk Assessment (HHRA) for the East Parcel on behalf of Signal Hill Enterprises, LLC (SHE) and RE | Solutions, LLC (RES). The East Parcel is one of three parcels that was occupied by the former Chemoil Refinery located at 2020 Walnut Avenue in Signal Hill, California (Site, Figure E1-1). The Site is currently owned by SHE and negotiation is underway between SHE and RES to transfer property ownership for redevelopment of all three parcels for light industrial and commercial purposes. This HHRA was prepared as an appendix to the Response Plan.

The purpose of this HHRA is to quantify potential exposures to Site-related chemicals in the East Parcel, in order to identify the need for, and the possible extent of, remedial action activities to adequately protect human health or request no further action if human health risks are below risk management thresholds. This HHRA focuses on the East Parcel of the Site. The remainder of the Site (Northwest and Southwest Parcels), including groundwater, will be remediated in accordance with the Response Plan upon approval from the Los Angeles Regional Water Quality Control Board (LARWQCB).

This HHRA uses specific equations and exposure factors to estimate doses for potentially exposed receptors via various exposure routes. The methods used to conduct this risk assessment are consistent with U.S. Environmental Protection Agency (USEPA, 1989 and 1991) and California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC, 1992 and 2015) guidance. For the evaluation of potential indoor air impacts, DTSC (2011b) guidance was used.

The general outline of this report is as follows:

- **Section 2 Site Description and Background:** A brief description of the Site and Site history.
- **Section 3 Data Evaluation:** A summary of data used in the HHRA to characterize the East Parcel and to identify Site-related chemicals of potential concern (COPCs).
- **Section 4 Exposure Assessment:** An assessment of potentially exposed hypothetical receptors and the most likely ways they might be exposed to chemicals at the Site, based on current and likely future Site uses. The conceptual site model (CSM) illustrates the chemical sources, chemical release and transport mechanisms, and exposure routes for human receptors.
- **Section 5 Toxicity Assessment:** A summary of information available to evaluate the toxicity of COPCs, which are used to characterize risk.
- **Section 6 Risk Characterization:** An incorporation of the results of the exposure assessment and toxicity assessment to estimate adverse noncancer health effects and excess cancer risks for potential human receptors.

- **Section 7 Uncertainty Analysis:** A presentation of potential sources of uncertainty and the degree of uncertainty associated with elements of the HHRA. These uncertainties are considered when evaluating the HHRA results for making risk management decisions for the Site.
- **Section 8 Human Health Risk Assessment Results**: A summary of the results of the HHRA for each potential human receptor.
- **Section 9 Conclusions.**

A list of references cited in this report and limitations are presented in Sections 10 and 11, respectively.

2.0 SITE DESCRIPTION AND BACKGROUND

2.1 Site Description

The property known as the former Chemoil Refinery is located at 2020 Walnut Avenue in Signal Hill, California (Figure E1-1). The Site was developed as an oil refinery in 1922. The MacMillan-Ring Free Oil Company owned and operated the facility from 1922 until 1988. Chemoil Corporation purchased the refinery in August 1988 and operated it until February 1994. From early 1994 to early 1997, the refinery was shut down with occasional operation of its waste water system. Operation of the waste water system was discontinued and all of the above-ground structures were dismantled in early 1997. It has been reported that known below-ground structures, including piping, sumps, footings, and foundations, were also removed at that time (S. Testa, verbal communication, October 2016). Since December 2013, the property owner of title has been Signal Hill Enterprises, LLC.

The Site is approximately 8.2 acres, located north of the intersection of East 20th Street, East Wesley Drive, Walnut Avenue, and Alamitos Avenue. The Site is divided into an East Parcel, situated immediately east of Walnut Avenue and Northwest and Southwest Parcels, situated immediately west of Walnut Avenue. The East Parcel encompasses approximately 2.4 acres and the West Parcels encompass approximately 5.8 acres. The West Parcels are subdivided into the Northwest and Southwest Parcels by East 21st Street. The division of the Site into the East Parcel, the Northwest Parcel, and the Southwest Parcel is shown on Figure E2-1.

2.2 Site Background

A detailed discussion of the Site background, history, previous investigations, ongoing remediation, and regional and local geology and hydrogeology is provided in Section 2 of the Response Plan. The Site background provided in the following sections generally focuses on the East Parcel of the Site.

2.2.1 Refinery History

The refinery and supporting structures were dismantled between 1997 and 1998. The East Parcel is somewhat a rectangular-shaped parcel except for its southern perimeter and was formerly occupied by six aboveground storage tanks (ASTs) as well as support structures (warehouse, offices, laboratory, and maintenance facilities). Currently the East Parcel is vacant, and does not contain any ASTs or known underground storage tanks (USTs).

2.2.2 Surrounding Community/Properties

Land use in the vicinity of the East Parcel includes commercial, office, and light industrial development to the north, light industrial development to the west, east, and south, and a former railroad corridor to the south, with residential properties located south and west of the former railway corridor.

2.2.3 Regional and Local Geology

The Site is located within the Los Angeles Coastal Plain (California Department of Water Resources [CDWR], 1961) of the Peninsular Ranges geomorphic province of southern California (Norris and Webb, 1990). The geologic structure beneath the Coastal Plain is referred to as the Los Angeles Basin and consists of undifferentiated, pre-Pleistocene bedrock overlain by approximately 2,200 feet of layered, semi-consolidated and unconsolidated water-bearing terrestrial and marine sediments.

The Site is generally underlain by deposits of unconsolidated, laterally discontinuous sequences of silt and fine to coarse-grained sand. Coarse-grained soils consist of sand (SP) and silty sand (SM); whereas, subordinate fine-grained soils consist of silt (ML and MH) and, to a lesser degree, clay (CL). In the East Parcel, soil consists primarily of coarse-grained sand and silty sand.

2.2.4 Regional and Local Hydrogeology

The Site is located within the West Coast Basin. Based on lateral distribution and varying hydrogeologic characteristics, five major aquifers have been identified in the geologic formations underlying the West Coast Basin (CDWR, 1961). The aquifers consist of (from oldest to youngest) the Silverado and Lynwood Aquifers of the San Pedro Formation, the Gage Aquifer of the Lakewood Formation, and the Gaspur and Semi-perched Aquifers of the recent Holocene-age Alluvium. In general, the older/deeper Silverado and Lynwood Aquifers are currently designated as drinking water sources and the younger/shallow aquifers (Gage, Gaspur, and Semi-perched) are not currently used for drinking water purposes due to low yield and/or generally poor quality. Shallow groundwater beneath the Site is encountered in the semi-perched Aquifer in the southern portion of the West Coast Basin. Groundwater quality within the Site vicinity is generally poor due to seawater intrusion and elevated salinity.

Depth to water in the East Parcel is approximately 30 feet below ground surface (bgs; wells MW-2 and MW-10). As of the December 2016 (Fourth Quarter) monitoring event, groundwater occurred at elevation of 1.82 feet relative to mean sea level (MSL) in well MW-10. Well MW-2 was most recently gauged in December 2015 (Fourth Quarter) monitoring event, with an observed groundwater elevation of 1.5 feet relative to MSL. The hydraulic gradient calculated based on Site-wide Fourth Quarter 2016 groundwater gauging data was 0.0013 foot/foot (Ami Adini & Associates, Inc. [AA&AI], 2017). Groundwater flow beneath the Site, including the East Parcel, is generally toward the south.

2.3 Surface Water

The nearest surface water body to the Site is the Los Angeles River, which is located 1.9 miles west of the Site. The section of the Los Angeles River west of the Site is contained in a north-south trending concrete lined flood control channel. The Los Angeles River accepts treated industrial discharge and stormwater runoff from the greater Los Angeles area.

3.0 DATA EVALUATION

Soil and underlying groundwater in the East Parcel are impacted by historic petroleum releases. Primary constituents of interest (COIs) for the Site include total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs; primarily aromatic constituents), and fuel oxygenates (including methyl tert-butyl ether [MtBE] and tertiary-butyl alcohol [TBA]. During previous Site investigations, samples were analyzed for one or more of the following classes of chemical compounds:

- Metals;
- TPH (including oxygenates and carbon ranges);
- VOCs; and
- Polycyclic aromatic hydrocarbons (PAHs).

For each media, only those chemicals detected in at least one sample were included in this HHRA.

The data used in this HHRA were based on the information for the East Parcel, as provided in the following Site investigation reports:

- *Report on Additional Subsurface Assessment* (Testa Environmental Corporation [TEC], 2001);

  TEC (2001) provided a summary of soil and groundwater assessments conducted in the East Parcel and summarized data from three different Site investigations as follows:

  - **Engineering Enterprises, Inc. (EEI) 1988 soil and groundwater investigation.** A copy of the report or its associated documents were not available for review by Apex-SGI. EEI data used for this HHRA were only available as presented in the *Report on Additional Subsurface Assessment* (TEC, 2001);
  - **The Source Group, Inc. (SGI) 1999 soil investigation.** A final site investigation report was not prepared by SGI and analytical laboratory reports or other associated documents were not available for review by Apex-SGI. SGI data used for this HHRA were only available as presented in the *Report on Additional Subsurface Assessment* (TEC, 2001); and
  - **TEC 2001 soil and groundwater investigation.** Results from this investigation are included in the *Report on Additional Subsurface Assessment* (TEC, 2001). Apex-SGI reviewed the tables, maps, and text from this report. The associated appendices for this report were not available for review by Apex-SGI.

  In the TEC (2001) report, there were errors and/or inconsistencies with the data reported, including mislabeled units, missing sampling dates, and missing analytical

methods. Any assumptions or data qualifiers regarding information presented in the TEC (2001) report were provided in the notes at the bottom of the data summary tables in Attachment E-1.

- *Environmental Due Diligence Site Assessment Results* Report (Tetra Tech, 2006); and
- *Site Investigation and Site Conceptual Model Report* (Apex-SGI, 2017).
- Groundwater data for the two monitoring wells located in the East Parcel, wells MW-2 and MW-10, were provided in groundwater monitoring reports from December 2012 to December 2016 (AA&AI, 2017; AA&AI, 2016; AA&AI, 2015; AA&AI, 2014; TEC, 2013).

For the purposes of this HHRA, Apex-SGI compiled the data reported by TEC (2001), Tetra Tech (2006), and Apex-SGI (2017) into tables, which are provided in Attachment E-1. Summaries of the soil, groundwater, and soil vapor data are provided in the following sections.

3.1 Soil

Soil data collected to date indicate that COIs are present in soil throughout the vadose zone in a relatively small portion of the northern part of the East Parcel. Based on a screening evaluation presented in the *Site Investigation and Site Conceptual Model Report* (Apex-SGI, 2017), TPH in the gasoline, diesel, and oil range as well as VOCs, including ethylbenzene, toluene, and xylenes, have been identified as COPCs in vadose zone soil at the Site.

During previous Site investigation activities, soil samples were collected from various depths ranging from 1 foot bgs to 40 feet bgs at the East Parcel. Future development at the East Parcel could involve mixing and redistribution of subsurface soils as deep as 10 feet bgs to the surface, as a result of construction activities (i.e., trenching for utilities). Based on groundwater gauging data from monitoring wells located in the East Parcel, wells MW-2 and MW-10, first encountered groundwater lies at approximately 30 feet bgs. Considering depth to groundwater and anticipated land use scenarios, all soil data collected from the surface to 10 feet bgs will be included in the HHRA. Although data for deeper soil (i.e., greater than 10 feet bgs) were not used in the HHRA, the analytical results for deeper soil are included in Attachment E-1.

Dependent on the chemical, up to 33 soil samples were collected from soil at 0 to 10 feet bgs. The soil data used in this HHRA are provided in Attachment E-1. For VOCs and PAHs, soil samples were analyzed for the full suite of analytes using the specified laboratory method but only the analytes that were detected above the detection limit (analytical method detection limit or the practical quantitation limit) were included in Attachment E-1. A summary of the soil data is provided in Table E3-1. The soil sample locations are shown on Figure E3-1.

The soil samples were analyzed for TPH mixtures representing various carbon ranges. Based on an evaluation of the available TPH data (Table E-1B), the TPH data were separated into the following three TPH carbon ranges for this HHRA:

- TPH C4-C12;
- TPH C13-C22; and
- TPH C23-C44.

If individual carbon data were available, the laboratory analytical carbon data within the specific TPH carbon ranges above were summed to represent a total TPH value for each carbon range. The TPH data were not fractionated into aliphatic and aromatic compounds; therefore, a 50-percent (%) aliphatic to 50% aromatic ratio was assumed. Consistent with DTSC (2015) guidance, the evaluation of petroleum hydrocarbons in this HHRA includes its components most likely to reflect risk (i.e., benzene, toluene, ethylbenzene, xylenes [BTEX], and naphthalene).

3.2 Groundwater

Groundwater data collected to date indicate that TPH as gasoline (TPHg), TPH in the C13 to C22 carbon range (similar carbon range to TPH as diesel [TPHd]), and a few VOCs, including naphthalene, are generally the COPCs detected in the highest concentration in groundwater at the Site, which is consistent with its historical use as a petroleum refinery.

Groundwater data is comprised of grab groundwater samples and groundwater monitoring data from wells MW-2 and MW-10. Groundwater samples from the East Parcel are sampled primarily from first encountered water at approximately 30 feet bgs. One grab groundwater sample was collected at 40 feet bgs by Tetra Tech (2006). On the East Parcel, groundwater data indicate non-detect to low concentrations of metals and VOCs. Based on the most recent groundwater monitoring events in December 2016 for well MW-10 and December 2015 for well MW-2, only five COPCs, including TPHg, TPHd, naphthalene, isopropylbenzene, and tert-butyl alcohol were detected in well MW-10 and no COPCs were detected in well MW-2 (AA&AI, 2017; AA&AI, 2016). The concentrations of COPCs detected in groundwater did not exceed applicable screening levels. The grab groundwater and monitoring well locations are shown on Figure E3-1.

Due to approximate depth to first encountered groundwater of 30 feet bgs, hypothetical receptors at the East Parcel are not expected to have direct contact with groundwater. Since only a single soil vapor sample was collected from the East Parcel, potential vapor intrusion exposure pathways from contaminants in the subsurface (soil, soil vapor, and groundwater) will be evaluated using groundwater data. The groundwater data used in this HHRA are provided in Attachment E-1. A summary of the groundwater data is provided in Table E3-2.

3.3 Soil Vapor

Soil vapor data was collected from a single point, E1, at a depth of 15 feet bgs in the northern portion of the East Parcel during the 2006 investigation by Tetra Tech. This soil vapor sample was analyzed

for VOCs. Only ethylbenzene was detected at a concentration above laboratory reporting limits. Due to limited soil vapor data (i.e., one soil vapor point) and to the age of the data (i.e., more than 10 years old) in the East Parcel, the vapor intrusion exposure pathway was evaluated using groundwater data from the East Parcel. The soil vapor sample location is shown on Figure E3-1. The soil vapor data are provided in Attachment E-1. A summary of the soil vapor data is provided in Table E3-3.

3.4 Statistical Evaluation of Data

Data were statistically analyzed and the following parameters were estimated separately for each chemical detected in soil, groundwater, and soil vapor:

- Number of samples analyzed;
- Number of samples in which chemicals were detected;
- Frequency of detection;
- Arithmetic mean (average);
- Standard deviation;
- Minimum detected concentration; and
- Maximum detected concentration.

Not all samples were analyzed for all chemicals; therefore, the total number of samples may vary by chemical.

4.0 EXPOSURE ASSESSMENT

This section describes the methods used to estimate exposures for potential human receptors in the East Parcel of the Site. The exposure assessment provides a scientifically defensible basis for the selection of potentially exposed hypothetical receptors and the most likely ways they might be exposed to chemicals at the Site. To develop a conceptual understanding of the Site, information regarding potential chemical source, chemical release and transport mechanisms, locations of potentially exposed human receptors, and potential exposure routes were assessed. This information is outlined schematically in a conceptual site model (CSM) shown on Figure E4-1. The CSM associates source of chemicals with potentially exposed human receptors and associated complete exposure pathways. In this way, the CSM assists in quantifying potential impacts to human health.

As defined by USEPA (1989), all of the following four components are necessary for a chemical exposure pathway to be considered complete and for chemical exposure to occur:

- A chemical source and a mechanism of chemical release to the environment;
- An environmental transport medium (e.g., soil) for the released chemical;
- A point of contact between the contaminated medium and the receptor (i.e., the exposure point); and
- An exposure route (e.g., dermal contact with chemically-impacted soils) at the exposure point.

The following sections describe these components and provide a basis for the CSM.

4.1 Potential Source Evaluation

The sources of potential contamination at a site are related to exposure setting (site characteristics and past and current site operations) and land and groundwater uses at the site and surrounding area. Environmental impacts beneath the East Parcel are a result of the Site's prior use as an oil refinery from 1922 until 1997. Former operations on the East Parcel included ASTs and support structures including a warehouse, laboratory, and maintenance facilities. Currently the East Parcel is vacant, and does not contain any ASTs or known USTs.

The primary sources for potential contamination at the East Parcel are related to former Site operations as a refinery and subsequent releases to onsite soil. Following a release to soil, secondary sources may include fugitive dust, soil vapor, ambient air, and groundwater.

4.2 Exposure Setting and Land Use

The Site is approximately 8.2-acres in size, with the East Parcel encompassing approximately 2.4 acres. Land use in the vicinity of the Site includes commercial, office, and light industrial development to the north, light industrial development to the west, east and south of the Site, and a former railroad corridor to the south, with residential properties located south and west of the former

railway corridor. There are five schools located within ¼-mile of the Site. Signal Hill Elementary School is located upgradient and north of the Site. Alvarado Elementary School and Jessie Elwin Nelson Academy Middle School are located crossgradient and east of the Site. Mary Butler Middle School and Renaissance High School for the Arts are located downgradient and south of the Site. There are two day care centers located within a ½-mile of the Site, Central Child Development Center to the west and LBCC Children Development Center to the south. No known hospitals are located within a ½-mile of the Site. There are no known active public water supply wells located within a mile radius of the Site. Groundwater quality within the Site vicinity is generally poor due to seawater intrusion and elevated salinity. Los Angeles County Department of Public Works (LADPW) maintains a well located approximately 850 feet south of the Site (LADPW Well 420); however, based on personal communication with the LADPW, this well is used only for groundwater monitoring purposes. The nearest surface water body to the Site is the Los Angeles River, which is located 1.9 miles west of the Site.

Currently the Site, including the East Parcel, is vacant, and all former refinery and supporting structures have been removed. In the future, as shown on Figure E3-1, the East Parcel will be redeveloped with four onsite buildings for light industrial and commercial land use. Administrative and institutional controls will be implemented prior to development of the East Parcel, as required in the California Land Reuse and Revitalization Act Agreement (CLRRA) prepared for the Site. Expected controls include a land use covenant (LUC) and Site Management Plan (SMP). The LUC will prohibit use of underlying groundwater and prohibit unrestricted or sensitive land uses.

4.3 Chemical Release Mechanisms and Identification of Transport Media

In this section, chemical properties of the COPCs and the physical characteristics of the East Parcel were reviewed to identify the factors that might allow the release of a chemical to the environment, and transport to or through soil, soil vapor, and groundwater.

Future planned redevelopment of the East Parcel will include commercial building(s) and concrete/asphalt paving across the East Parcel, which will limit direct contact with soil for potential onsite receptors. Although direct contact with soil is likely an incomplete exposure pathway for future onsite receptors, it was conservatively included as a potential exposure pathway. Further release of chemicals can potentially occur through volatilization, wind and/or mechanical erosion (i.e., during construction), migration of chemicals into the groundwater, lateral migration of chemicals in groundwater, or migration of chemicals via stormwater runoff. These types of releases may result in chemical vapor or dust (with sorbed chemicals) emissions in air, or the movement of chemicals downward into groundwater with infiltrating rain water (i.e., leaching from soil) or stormwater runoff into surface water and sediment. These potential release mechanisms are discussed in more detail below.

4.3.1 Volatilization of Chemical Vapors

Some of the chemicals detected in the East Parcel are VOCs. These chemicals typically have a low organic-carbon partition coefficient (K_{oc}), a low molecular weight, and a high Henry's Law constant,

indicating that these chemicals may volatilize. Therefore, volatilization of VOCs was considered a potential release mechanism for COPCs.

4.3.2 Emission of Fugitive Dust

Some of the chemicals detected in the East Parcel adsorb readily to dust particles (e.g., metals in soil). Chemicals adsorbed to soil particles can be blown into the air by wind and/or mechanical erosion. This is referred to as fugitive dust. Therefore, emission of fugitive dust was considered a significant release mechanism for COPCs.

4.3.3 Leaching

The evaluation of chemical concentrations in soil for groundwater protection (soil leaching) is designed to address the potential leaching of chemicals from vadose zone soils and their subsequent impact on groundwater. The potential for chemicals to leach from soil depends on the physical and chemical properties of the chemicals, soil type, pH (for metals), and other site-specific conditions. For example, chemicals with high water solubilities tend to leach more readily than chemicals with lower solubilities. In addition, a chemical's K_{oc} is important for assessing the degree of chemical sorption to soil particles; chemicals with a high sorption potential do not tend to leach as readily (i.e., metals). Site-specific conditions are also important for assessing whether leaching may occur, such as soil type (leaching occurs more readily in sandy soils than in clayey or silty soils), amount of rainfall, gradient, etc.

In addition, other competing migration pathways can affect the tendency of a chemical to leach. Because metals and PAHs are expected to sorb strongly to soil particles, and because VOCs are expected to volatilize, leaching is not expected to occur at the Site to any significant extent. Furthermore, over 90-percent of the East Parcel will be capped with buildings and an asphalt parking lot, which will further minimize the potential leaching to groundwater. Leaching potential of COPCs from vadose zone soil into groundwater may be a potential chemical release mechanism but not a significant release mechanism for COPCs.

This potentially complete but insignificant exposure pathway was not included in the HHRA but a screening evaluation of soil exposure point concentrations (EPC_{soil}) and Site-specific soil screening levels (SLs) for protection of groundwater is provided in Attachment E-2. Metals were not included in this screening evaluation because leaching of metals is variable based on metal speciation and physical chemical conditions of the soil. Metals are expected to sorb strongly to soil particles, limiting their leachability. Based on the screening evaluation for TPH, VOCs, and PAHs, the soil EPCs for TPH C5-C12, naphthalene, and chrysene exceeded the soil SLs for protection of groundwater. All other TPH (C13-C22 and C23-C44), VOCs, and PAHs were not detected above the laboratory reporting limit or were detected below the soil SLs for protection of groundwater. Although the soil EPC for TPH C5-C12 of 1,700 mg/kg exceeded the soil SL of 1,000 mg/kg, this TPH carbon range is generally evaluated by its components most likely to reflect risk; such as, benzene, toluene, ethylbenzene, and total xylenes (BTEX) and naphthalene. The soil EPCs for BTEX did not exceed their individual soil SLs for protection of groundwater. Soil EPCs for naphthalene and chrysene

slightly exceeded the soil SLs for protection of groundwater but these compounds are not expected to leach to any significant extent because of other competing migration pathways. In the future, the presence of a cap (i.e., buildings and pavement) across the East Parcel will effectively limit any leaching to groundwater.

4.3.4 Lateral Migration of Groundwater into Offsite Areas

The surrounding offsite area includes industrial and residential land use. Groundwater flow at the Site is generally to the south with a low horizontal hydraulic gradient. Due to the approximate depth to first encountered groundwater of 30 feet bgs in the East Parcel, hypothetical receptors in offsite areas are not expected to have direct contact with groundwater. However, any Site-related VOCs in groundwater may migrate offsite and potentially impact indoor air via vapor intrusion. The nearest offsite groundwater data were collected from grab groundwater sample GW-28 (sampled in 2012) and groundwater monitoring well MW-14 (most recently sampled in December 2016), which indicated no VOCs were detected above the laboratory reporting limit. Therefore, offsite migration of groundwater from the East Parcel was not considered a significant release mechanism for COPCs.

4.3.5 Stormwater Runoff

Stormwater runoff from areas of contaminated soil has the potential to transport contaminants bound to soil particles. There are no known surface water bodies within a ½-mile of the Site. Future redevelopment plans include commercial building(s) and concrete/asphalt paving across the East Parcel, and will include engineering controls related to stormwater runoff from the East Parcel. The potential chemical release via stormwater runoff is not identified as a significant chemical release mechanism.

4.4 Potential Human Receptors

The third component necessary for an exposure pathway to be complete is identification of potential receptors at the East Parcel. The following hypothetical human receptors were identified based on proposed activities that could possibly result in direct or indirect contact with Site-related chemicals, and anticipated land use.

- Future Onsite Construction/Utility Trench Worker Receptor; and
- Future Onsite Commercial/Industrial Worker Receptor.

4.5 Potential Exposure Points

The other portion of the third component necessary for an exposure pathway to be complete is a point of contact between the contaminated medium and the receptor (i.e., the exposure point). For the purposes of this CSM, it is assumed that access to the East Parcel is unrestricted and that onsite receptors may be exposed directly to contaminated soil and indirectly to soil vapor and groundwater. During redevelopment of the East Parcel, onsite construction/utility trench worker receptors may be

directly exposed to soil. For soil, the exposure point is assumed to be the area within the Site boundaries. Future planned redevelopment of the East Parcel will include four buildings and concrete/asphalt paving across the East Parcel, which will limit direct contact with soil for potential onsite receptors.

Any hypothetical onsite construction worker receptor will be performing activities consistent with a Site Management Plan (SMP) and a site-specific Health and Safety Plan (HASP). The HASP will require the use of proper personal protective equipment (PPE) and the best management practices (BMPs) will require dewatering to preclude any direct contact with groundwater for workers at the Site. Construction activities and utility trenching is not expected to exceed a depth of 10 feet bgs. With depth to groundwater at approximately 30 feet bgs in the East Parcel, direct contact with groundwater for onsite workers was not considered further.

Volatile compounds can be released from the subsurface into outdoor and indoor air resulting in an indirect exposure to contaminants in soil, soil vapor, and groundwater. Inhalation of VOCs in outdoor air is generally negligible due to dispersion in ambient air. For the volatilization pathway into indoor air, exposure to subsurface contamination is best characterized through the collection of soil vapor or groundwater samples. For onsite receptors, the exposure point for vapor intrusion into indoor air is assumed to be the soil vapor or groundwater beneath areas with proposed onsite commercial buildings. Due to limited soil vapor data (i.e., one soil vapor point) and to the age of the soil vapor data (i.e., more than 10 years old) in the East Parcel, the vapor intrusion exposure pathway was evaluated using groundwater data from the East Parcel.

Groundwater quality within the Site vicinity is generally poor due to seawater intrusion and elevated salinity. Shallow groundwater is not currently used and is not likely to be developed for beneficial use. Risk management measures can be implemented to ensure that groundwater is not used. Therefore, domestic use of groundwater was not considered a complete exposure point.

4.6 Exposure Pathways Considered Potentially Complete and Significant

The fourth and final component, a complete exposure pathway (i.e., route of exposure) is discussed in combination with the third component (i.e., presence of receptors at an exposure point) to define those exposure pathways considered to be complete and significant. The following sections summarize those pathways considered complete and significant for each receptor. This information is summarized schematically on Figure E4-1.

4.6.1 Hypothetical Future Onsite Construction/Utility Trench Worker Receptor

The hypothetical onsite construction/utility trench worker receptor is included in this HHRA in the event any construction or redevelopment occurs at the East Parcel. This receptor is expected to be a short-term outdoor worker (i.e., 2 weeks to 7 years [USEPA, 1989]) that spends 250 days per year performing construction projects at the East Parcel. The exposure duration for this receptor is one year. This receptor spends the workday outdoors performing construction-related tasks. This receptor is expected to encounter both surface and subsurface soils down to a depth of 10 feet bgs

and has a very high soil ingestion rate of 330 milligrams per day (mg/day). Inhalation of chemical vapors while indoors was not considered a complete and significant exposure pathway because this receptor is not expected to be working inside buildings. The exposure pathways assumed to be complete and significant for the hypothetical onsite construction/utility trench worker receptor are:

- Incidental ingestion of soil;
- Dermal contact with soil; and
- Inhalation of dust in outdoor air.

4.6.2 Hypothetical Future Onsite Commercial/Industrial Worker Receptor

The hypothetical onsite commercial/industrial worker receptor is included in this HHRA based on expected future land use. This receptor is a long-term receptor (i.e., greater than 7 years [USEPA, 1989]). This receptor is a full-time employee that is assumed to spend 250 days per year at work for 25 years. This receptor spends the workday (8 hours per day) conducting activities indoors and outdoors. Although inhalation of vapors in outdoor air may be complete, outdoor air concentrations are typically lower than indoor air concentrations due to dispersion; such relatively minor exposures are subsumed by the assumption that all exposure is from indoor air. The East Parcel is expected to be capped by buildings and concrete/asphalt paving, which would significantly limit any direct contact with soil. The exposure pathways assumed to be complete and significant for the hypothetical onsite commercial/industrial worker receptor are:

- Incidental ingestion of soil;
- Dermal contact with soil;
- Inhalation of dust in outdoor air; and
- Inhalation of vapors in indoor air.

4.7 Selection of Chemicals of Potential Concern

Typically, only the most toxic, persistent, and prevalent site-related chemicals detected at a site are fully evaluated in a risk assessment. In this way, the assessment can focus solely on those chemicals that are expected to account for the majority of the estimated health impacts at the Site. These selected chemicals are known as COPCs. In order to provide a conservative and more complete characterization of potential risks associated with exposures at the East Parcel, all detected inorganic and organic chemicals were retained as COPCs in this HHRA.

4.8 Average and Reasonable Maximum Exposures

Two types of exposure scenarios can be evaluated in a risk assessment: an average exposure scenario (central tendency exposure [CTE]) and an upper-bound exposure scenario (reasonable maximum exposure [RME]). The CTE scenario represents a more typical exposure and is based on average intake assumptions. The RME scenario represents the maximum exposure that is reasonably expected to occur (USEPA, 1989). The range of exposure estimates between the

average and upper-bound exposure scenarios provides a measure of the uncertainty inherent in these estimates. Where the upper-bound estimate of exposure may be above the range of possible exposures, the average estimate may be lower than exposures for a subset of a population. Therefore, USEPA guidance (1989) recommends evaluating a RME scenario, which is considered a conservative upper-bound exposure scenario. USEPA guidance (1989) recommends selecting intake assumptions for each exposure pathway so that the cumulative effect of all intake assumptions results in an estimate of the reasonable maximum exposure for that pathway. The RME scenarios evaluated in this HHRA estimate the exposures a receptor might receive using mostly conservative upper-bound intake assumptions (e.g., 90th or 95th percentile for nearly all intake assumptions) and upper-bound estimates of chemical concentrations. Under the RME scenario, USEPA (1989) recommends the use of the arithmetic average concentration for the exposure point concentration because long-term contact with the maximum concentration is not reasonable. Due to the uncertainties associated with estimating the average concentration, USEPA (1989) recommends using the lesser of the maximum detected concentration and 95-percent upper confidence limit of the mean concentration (95UCL) for the soil exposure point concentration (EPC). However, for exposure pathways associated with inhalation of vapors in indoor air, the maximum detected concentration was selected as the groundwater EPC (based on the assumption that a building may be located over maximum concentrations). Conservatively, only an RME scenario was evaluated in this HHRA.

4.9 Intake Assumptions Used to Estimate Exposure

The purpose of establishing exposure scenarios for a site is to allow quantification of potential exposures that may occur either currently or in the future. To quantify exposures, it is necessary to derive a chemical dose to which a receptor might be exposed. Such doses are estimates of the amount of a chemical that might be taken up into the body. The estimated doses are developed on the basis of the specific exposure scenarios, and are used along with chemical toxicity information (Section 5), in the risk characterization stage of the risk assessment (Section 6), to estimate possible adverse noncancer health effects and excess cancer risks associated with the COPCs.

Chemical doses were estimated based on a number of intake assumptions, also referred to as exposure factors, including EPCs, exposure frequencies, exposure durations, body weights, and other parameters. Some intake assumptions are common to all pathways, whereas others are chemical-specific or receptor-specific. Assumptions made for these exposure parameters may not be representative of any actual exposure situation because actual individual activity patterns and physiological response of individuals may vary considerably. However, the intake assumptions used in this risk assessment are intended to overestimate actual exposure and risk. All intake assumptions used to evaluate possible exposures for the hypothetical onsite construction/utility trench worker and onsite commercial/industrial worker receptors identified previously in Section 4.4 are presented in Tables E4-1 and E4-2.

In nearly all cases, the intake assumptions listed in Tables E4-1 and E4-2 represent default RME values recommended by DTSC (2014a) and USEPA (2009). As recommended by USEPA (2009),

if the inhalation exposure scenario is less than 24 hours per day, then the exposure time parameter should be used. For all the hypothetical receptors, the exposure time was assumed to be an 8-hour work day.

Some default intake assumptions are chemical-specific or receptor-specific, as discussed in the following sections.

4.9.1 Dermal Absorption Factor for Soil Contact

The amount of chemical that passes through the skin from a soil matrix is determined by the dermal absorption factor (ABS). The higher the ABS, the greater percentage of a given amount of chemical is expected to pass through the skin. As summarized on Table E4-3, the chemical-specific ABS values recommended by DTSC (2015 and 2014a) and USEPA (2016) were used in this risk assessment.

4.9.2 Particulate Emission Factor

The particulate emission factor (PEF) is used to evaluate the inhalation of soil as fugitive dust exposure pathway. DTSC (2014a) recommended PEF of 1.36 x 10^9 cubic meters per kilogram (m^3/kg) was used for the hypothetical onsite commercial/industrial worker exposure scenario. Due to greater dust emissions assumed under a construction worker exposure scenario, a PEF of 1.00 x 10^6 m^3/kg (DTSC, 2014a) was used for the hypothetical onsite construction/utility trench worker exposure scenarios. A PEF was used for all COPCs detected in soil.

4.10 Estimating Exposure Point Concentrations

The EPC represents the amount of a chemical to which a hypothetical receptor is assumed exposed. The EPC is a conservative estimate of the average chemical concentration in an environmental medium. For exposure pathways involving direct contact with soil, the EPCs are the measured soil concentrations. For indirect exposure pathways (i.e., inhalation), measured concentrations of volatile chemicals in groundwater were used as starting concentrations that were coupled with a mathematical model to estimate COPC concentrations in indoor air. The model is described in Attachment E-3. The methods used to estimate EPCs are summarized in the following sections.

4.10.1 Exposure Point Concentrations in Soil

Soil EPCs were used for evaluating the direct contact with soil exposure pathway. It is unlikely that a potential receptor will spend the entire exposure duration (one year for onsite construction/utility trench worker receptor and 25 years for onsite commercial/industrial worker receptor) residing over maximum detected concentrations in soil. Therefore, in this HHRA, it is relevant and appropriate to statistically evaluate the soil data on an area-wide basis. Consistent with USEPA (1989) procedures, when evaluating an RME scenario the lesser of the maximum detected concentration and the 95UCL was selected as the appropriate soil EPC. A USEPA software package, ProUCL Version 5.1.00, was used to estimate the upper confidence limit of the mean concentration (UCL; [typically the 95UCL, but sometimes the 97.5UCL or 99UCL, depending on the data set]). ProUCL and USEPA

(2015) guidance make recommendations for estimating UCLs and were developed as tools to support risk assessment. Due to limitations of certain datasets (i.e., limited number of samples or low detection frequency), ProUCL was not used to estimate a UCL. For those analytes with adequate datasets, the ProUCL output spreadsheets are presented in Attachment E-4. The soil EPCs (EPC_{soil}) used in this HHRA are summarized in Table E4-4.

4.10.2 Exposure Point Concentrations in Groundwater

The only complete exposure pathway associated with groundwater is inhalation of vapors in indoor air. Based on the assumption that a building may be located over maximum concentrations, the maximum detected concentration was selected as the groundwater EPC to be used in mathematical fate and transport models to estimate COPC concentrations in indoor air (Section 4.10.3). For onsite indoor exposures, the groundwater EPCs (EPC_{gw}) used in this HHRA are summarized in Table E4-5.

4.10.3 Exposure Point Concentrations in Air

For indirect exposure pathways (i.e., inhalation), measured concentrations in groundwater were used as starting concentrations that were coupled with mathematical models to estimate COPC concentrations in indoor air. Outdoor air EPCs resulting from inhalation of dust are not specifically presented, since the dose equations for direct contact with soil incorporate PEFs relating source concentrations in soil to those in fugitive dust (Section 4.11.1). Fate and transport modeling was used to estimate indoor air EPCs for volatile COPCs detected in groundwater. The fate and transport modeling involves incorporating Site-specific data and chemical-specific data into analytical models that simulate vapor migration of VOCs.

The Johnson and Ettinger (1991) model, recommended and provided by the DTSC (2014b), was used to estimate vapor emissions from groundwater into indoor air. This model estimates vapor concentrations in indoor air directly from concentrations in groundwater, accounting for advection and diffusion in the vadose zone and the effects of building foundation and mixing in the building interior. For onsite indoor exposures, model derived soil vapor EPCs ($EPC_{soil\ vapor}$) and indoor air EPCs ($EPC_{indoor\ air}$) from groundwater are summarized in Table E4-5. The conceptual approach to estimating indoor air concentrations, the equations and calculations used, and the modeling results are described in Attachment E-3.

4.11 Estimating Chronic and Subchronic Daily Intakes

Based on the exposure duration assumed under each potential human receptor, different types of chemical doses were estimated. For long-term exposures (referred to as chronic; exposures greater than seven years in duration), a chronic daily intake (CDI) was estimated. For shorter periods of time (between 30 days and seven years), a subchronic daily intake (SDI) was estimated. Therefore, SDIs were estimated for the hypothetical construction/utility trench worker receptor (exposure duration of one year). CDIs were estimated for the hypothetical commercial/industrial worker receptor (exposure duration of 25 years). This section presents the mathematical equations used to estimate CDIs and SDIs.

Chronic or subchronic daily intake (CDI/SDI; i.e., dose) is defined as the amount of chemical absorbed by the body over a given period of time. For noncarcinogenic effects, the CDI/SDI is averaged over the period of exposure (i.e., receptor-specific exposure duration). For carcinogenic effects, the CDI/SDI was averaged over a lifetime (i.e., 70 years).

The exposure pathway-specific equations used in this HHRA are presented in the following sections.

4.11.1 Direct Exposure to Soil

Direct exposure to soil includes the following three exposure pathways: incidental ingestion of soil, dermal contact with soil, and inhalation of fugitive dust from soil. The individual CDIs and SDIs for each of these exposure pathways are summarized below.

4.11.1.1 Incidental Ingestion of Soil

The CDI/SDI for incidental ingestion of soil was estimated using the following equation:

$$CDI / SDI = \frac{EPC_{soil} \times EF \times ED \times \left(\frac{IRs}{10^6\ mg/kg} \right)}{BW \times AT}$$

Where:

CDI	=	Chronic daily intake (milligram per kilogram body weight per day [mg/kg-day]);
SDI	=	Subchronic daily intake (mg/kg-day);
EPC_{soil}	=	EPC in soil (milligram per kilogram [mg/kg]);
EF	=	Exposure frequency (days/year);
ED	=	Exposure duration (years);
IRs	=	Soil ingestion rate (mg/day);
BW	=	Body weight (kilogram [kg]); and
AT	=	Averaging time (days).

4.11.1.2 Dermal Contact with Soil

The CDI/SDI for dermal contact with soil was estimated using the following equation:

$$CDI / SDI = \frac{EPC_{soil} \times EF \times ED \times \left(\frac{SA \times AF \times ABS}{10^6\ mg / kg} \right)}{BW \times AT}$$

Where:

CDI	=	Chronic daily intake (mg/kg-day);
SDI	=	Subchronic daily intake (mg/kg-day);
EPC_{soil}	=	EPC in soil (mg/kg);
EF	=	Exposure frequency (days/year);
ED	=	Exposure duration (years);
SA	=	Skin surface area (square centimeters [cm^2]);

AF	=	Soil adherence factor (milligrams per square centimeter [mg/cm^2-day]);
ABS	=	Dermal absorption factor (unitless);
BW	=	Body weight (kg); and
AT	=	Averaging time (days).

4.11.1.3 Inhalation of Outdoor Dust from Soil

The CDI/SDI for inhalation of dust was estimated using the following equation:

$$CDI / SDI = \frac{EPC_{soil} \times EF \times ED \times ET \times \frac{1\,day}{24\,hour} \times \left(\frac{1}{PEF}\right)}{AT}$$

Where:

CDI	=	Chronic daily intake (milligram per cubic meter [mg/m^3]);
SDI	=	Subchronic daily intake (mg/m^3);
EPC_{soil}	=	EPC in soil (mg/kg);
EF	=	Exposure frequency (days/year);
ED	=	Exposure duration (years);
ET	=	Exposure time (hours/day);
PEF	=	Particulate Emission Factor (for non-volatile compounds; m^3/kg); and
AT	=	Averaging time (days).

The CDIs and SDIs for each of these pathways described above are combined to evaluate multipathway direct exposures to soil. These exposure pathways were evaluated for the hypothetical onsite construction/utility trench worker and onsite commercial/industrial worker receptors.

4.11.2 Inhalation of Chemical Vapors Volatilizing from Groundwater into Indoor Air

The CDI for inhalation of chemical vapors volatilizing from soil vapor is estimated using the following equation:

$$CDI = \frac{EPC_{indoor\ air} \times EF \times ED \times ET \times \frac{1\,day}{24\,hour}}{AT}$$

Where:

CDI	=	Chronic daily intake (µg/m^3);
$EPC_{indoor\ air}$	=	EPC in indoor air from soil vapor (µg/m^3);
EF	=	Exposure frequency (days/year);
ED	=	Exposure duration (years);
ET	=	Exposure time (hours/day); and
AT	=	Averaging time (days).

The inhalation of vapors migrating from soil vapor into indoor air exposure pathway was evaluated for the hypothetical onsite commercial/industrial worker receptor.

5.0 TOXICITY ASSESSMENT

This section summarizes the methods used to evaluate the toxicity of COPCs. Toxicity values include oral reference doses (RfDs), inhalation reference concentrations (RfCs), oral slope factors (SFs), and inhalation unit risk factors (IURs), which are combined with exposure factors to estimate adverse noncancer health effects and excess cancer risks.

5.1 Oral Reference Doses and Inhalation Reference Concentrations

Noncancer health effects are evaluated using an oral RfD, which is expressed in units of milligrams per kilogram body weight per day (mg/kg-day) and an inhalation RfC, which is expressed in units of micrograms per cubic meter (µg/m^3). An RfD/RfC represents an agency-developed, estimated daily exposure level (dose) to which humans may be exposed without expectation of adverse health effects. USEPA assumes the existence of a threshold concentration for noncancer effects, below which toxic effects are not expected to occur (USEPA, 1989).

The following sources were used in this HHRA to identify appropriate RfDs and RfCs:

- CalEPA Office of Environmental Health Hazard Assessment's (OEHHA, 2017) toxicity values available from the on-line toxicity criteria database.
- DTSC (2016) toxicity values used for DTSC-modified screening levels. The DTSC HERO published toxicity values in the HERO HHRA Note Number 3.
- Integrated Risk Information System (IRIS; USEPA, 2017), an on-line database that contains USEPA-approved RfDs and RfCs.
- USEPA toxicity values used for USEPA Regional Screening Levels (RSLs; USEPA, 2016). Toxicity values were obtained from USEPA, CalEPA OEHHA, and Agency for Toxic Substances and Disease Registry (ATSDR) sources. The RSLs include provisional peer reviewed toxicity values (PPRTV) derived by USEPA's Superfund Health Risk Technical Support Center for the USEPA Superfund Program.
- Agency for Toxic Substances and Disease Registry (ATSDR, 2015) minimal risk levels (MRLs). For some chemicals, ATSDR presents chronic oral and inhalation MRLs, which are used as chronic RfDs and RfCs.
- USEPA Health Effects Assessment Summary Tables (HEAST; USEPA, 1997). HEAST provides a listing of provisional RfDs and RfCs that have undergone agency review, but that have not achieved agency-wide consensus. Unlike the sources listed above, HEAST is no longer updated.

For most chemicals, in the absence of a specific value for subchronic exposure, the chronic toxicity value was adopted as the subchronic toxicity value. For a few chemicals, the chronic toxicity value was modified using the subchronic to chronic uncertainty factor as provided by the USEPA IRIS online database. Unless noted otherwise, a unique subchronic toxicity value was only used for those chemicals with toxicity values sourced from USEPA IRIS and with published uncertainty factors

applied for the use of a subchronic study for chronic toxicity value derivation. Chronic and subchronic RfDs/RfCs used in this assessment are presented in Table E5-1.

RfDs/RfCs are often based on animal toxicity studies, for which data are then extrapolated to a chemical concentration considered "safe" for humans. The threshold of observed effects in test animals is divided by uncertainty factors (UFs) and possibly modifying factors (MFs). Separate UFs, each of which may be up to 10, are used to account for each of the following:

- Protection of sensitive individuals within the receptor population;
- Extrapolation of toxicity data from animals to humans;
- Extrapolation of subchronic toxicity data to chronic exposure durations; and
- Extrapolation from a lowest-observed adverse effect level (LOAEL) to a no-observed adverse effect level (NOAEL) to assess toxicity.

A MF of one to 10 (generally no higher than 3) is typically used to account for other considerations such as the perceived adequacy of the scientific data. The UFs and the MFs for a given chemical are then multiplied together to provide a total UF, which is then used to derive a chronic RfD/RfC (cRfD/cRfC). In order to derive an RfD/RfC protective of the most sensitive members of the human population, the UF may range from one to 10,000. The higher the total UF, the more uncertainty and the more conservative is the resultant cRfD/cRfC.

The cRfD/cRfC is the USEPA-established dose used to evaluate health effects associated with long-term (chronic) exposures of at least seven years (USEPA, 1989). These cRfD/cRfC values were used in this assessment to evaluate potential impacts to the hypothetical commercial/industrial worker receptor at the East Parcel. The subchronic RfD/RfC (sRfD/sRfC) is the dose used to evaluate health effects associated with exposures less than seven years (USEPA, 1989). These sRfD/sRfC values were used in this assessment to evaluate potential impacts to the hypothetical construction/utility trench worker receptor.

Oral and inhalation route-specific toxicity values (oral RfD and inhalation RfC) have been developed to evaluate adverse noncancer health effects. However, USEPA and CalEPA have not developed toxicity values to specifically evaluate possible impacts from dermal (skin) exposure. As recommended by USEPA (2004), to characterize risk from the dermal exposure pathway, the oral toxicity value should be adjusted to represent an absorbed dose rather than an administered dose. The USEPA recommended gastrointestinal absorption (GIABS) values are available in Exhibit 4-1 of the Risk Assessment Guidance for Superfund, Part E, Supplemental Guidance for Dermal Risk Assessment (USEPA, 2004). Organic chemicals are generally well absorbed across the gastrointestinal tract; therefore, USEPA (2004) recommends assuming 100% absorption. For inorganics, USEPA (2004) presents a wide range of absorption values for most inorganics. In the absence of an appropriate GIABS value, an assumption of 100% absorption was used. As recommended by USEPA (2004), oral RfDs multiplied by GIABS values were used to estimate possible noncancer health effects from dermal exposure. Chemical-specific GIABS values are presented in Table E5-2.

5.2 Oral Slope Factors and Inhalation Unit Risk Factors

USEPA has developed oral SFs and IURs for chemicals that are known or potential human carcinogens. USEPA (1989) defines an SF/IUR as a plausible upper-bound estimate of the probability of a carcinogenic response in human populations per unit intake of a chemical (averaged over an expected lifetime of 70 years). SFs/IURs are used to estimate excess cancer risks are expressed in units of risk per dose in mg/kg-day $(mg/kg\text{-}day)^{-1}$ for oral SF and $(\mu g/m^3)^{-1}$ for IUR.

The following sources were used in this HHRA to identify appropriate SFs and IURs:

- OEHHA (2017) toxicity values available from the on-line toxicity criteria database.
- DTSC (2016) toxicity values used for DTSC-modified screening levels. The DTSC HERO published toxicity values in the HERO HHRA Note Number 3.
- Integrated Risk Information System (IRIS; USEPA, 2017), an on-line database that contains USEPA-approved SFs and IURs.
- USEPA toxicity values used for USEPA RSLs (USEPA, 2016). Toxicity values were obtained from USEPA, CalEPA OEHHA, and ATSDR sources. The RSLs include PPRTV derived by USEPA's Superfund Health Risk Technical Support Center for the USEPA Superfund Program.

The SFs and IURs used in the HHRA are presented in Table E5-3.

Most SFs/IURs are based on a continuous exposure, linear non-threshold extrapolation model (generally the linearized multistage model) which is predicated on the assumption that any level of exposure to a carcinogen will result in some degree of carcinogenic risk, however minute (i.e., no threshold is assumed to exist). The extrapolation model derives a mathematical relationship between the generally high chemical doses and resulting effects measured in laboratory animals or epidemiological (human) studies, and applies that relationship to extrapolate effects for the generally lower doses that occur in the environment. This low-dose extrapolation is generally regarded as a very conservative (extremely health protective) approach. The resulting SF/IUR typically represents at least the upper 95th percentile of the measured dose-response relationship.

Oral and inhalation route-specific toxicity values (SF and IUR) have been developed to evaluate excess cancer risk. However, USEPA and CalEPA have not developed toxicity values to specifically evaluate possible impacts from dermal (skin) exposure. Similar to reference doses, oral slope factors were adjusted to represent an absorbed dose rather than an administered dose. As recommended by USEPA (2004), oral SFs were divided by GIABS values to estimate possible noncancer health effects from dermal exposure. Chemical-specific GIABS values are presented in Table E5-2.

5.3 Total Petroleum Hydrocarbons (TPH)

TPH carbon ranges C4-C12, C13-C22, and C23-C44 were included this HHRA. For each TPH carbon range, 50% of the TPH concentration was assumed to represent the aliphatic compounds and the other 50% was assumed to represent the aromatic compounds. DTSC's Preliminary

Endangerment Assessment Guidance Manual (DTSC, 2013) provides the toxicity values recommended to evaluate aliphatic and aromatic components of TPH. The TPH toxicity values used in the HHRA are presented in Tables E5-1 and E5-3.

5.4 Lead

Neither USEPA nor CalEPA publishes toxicity values for lead, which is classified as a "probable human carcinogen" by USEPA (2017). In the absence of toxicity values, noncarcinogenic risks for lead are evaluated by predicting blood lead concentrations using toxicokinetic modeling.

In 2011, the DTSC methodology for evaluating the potential adverse health effects associated with exposure to lead was revised. OEHHA toxicity evaluation of lead replaced the 10 micrograms per deciliter (µg/dL) threshold blood concentration previously used with a source-specific "benchmark change" of 1 µg/dL increase above ambient conditions. For industrial worker exposure scenarios, DTSC (2011c) recommends a modified version of USEPA's June 21, 2009 Adult Lead Model (ALM). This evaluation is discussed in Section 6.2.

5.5 Chemicals without Toxicity Values

If chemical-specific toxicity values were not available from the sources listed in Sections 5.1 and 5.2, the chemical was reviewed to assess whether an appropriate surrogate chemical could be identified to characterize toxicity. In this HHRA, there were two COPCs without published toxicity values. The following table summarizes the COPCs and their identified surrogates, based primarily on structural similarities.

COPC	Surrogate
Tertiary Butyl alcohol	sec-Butyl alcohol
Phenanthrene	Anthracene

The toxicity values for each identified surrogate were used to evaluate the compounds without published toxicity values.

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6.0 RISK CHARACTERIZATION

This section summarizes the approach used to estimate human noncancer adverse health effects and excess cancer risks from assumed exposure to COPCs in soil and groundwater. The risk characterization process incorporates data from the exposure and toxicity assessments. The exposure assessment information necessary to estimate noncancer adverse health effects and excess cancer risks includes the estimated chemical intakes, exposure modeling assumptions, and the exposure pathways assumed to contribute to the majority of exposure for each hypothetical receptor over a given time period (USEPA, 1989).

6.1 Arsenic

It is appropriate to evaluate arsenic concentrations in comparison to acceptable background concentrations. A Southern California regional background arsenic concentration of 12 mg/kg has been suggested as a useful risk management screening value by representatives of DTSC (Chernoff, D. et al.). With the exception of arsenic, this HHRA conservatively includes all detected metals as COPCs.

6.2 Lead

According to the DTSC website, the methodology for evaluating the potential adverse health effects associated with exposure to lead has been revised based on OEHHAs new toxicity evaluation of lead which replaced the 10 µg/dL threshold blood concentration previously used with a source-specific “benchmark change” of 1 µg/dL. For industrial worker exposure scenarios, DTSC (2011a) recommends a modified version of USEPA's June 21, 2009 ALM (DTSC, 2011c). The model calculates the concentration in exterior soil and interior dust that will result in a 90th percentile estimate of blood lead of 1 µg/dL among fetuses of adult pregnant workers. Based on this model, the revised commercial/industrial California Human Health Screening Level (CHHSL) for lead is 320 mg/kg (OEHHA, 2009).

6.3 Estimated Adverse Noncancer Health Effects

Noncarcinogenic effects are typically evaluated by comparing an exposure level over a specified time period, with an RfD/RfC based on a similar time period. To estimate noncancer effects, the intake is divided by the RfD/RfC. The resulting value is referred to as a hazard quotient (HQ).

The hazard index (HI) for each receptor from exposure to multiple chemicals was estimated by summing the HQs for each chemical for a given exposure pathway using the following equation:

$$HI_p = \sum_{i=1}^{n} HQ_{i,p}$$

Where:

HI_p	=	Hazard index for the receptor's exposure to *n* chemicals via pathway *p* (unitless);
n	=	Number of chemicals (i.e., all relevant COPCs); and
$HQ_{i,p}$	=	Hazard quotient for chemical *i* for pathway *p* (unitless).

A HI less than or equal to one indicates that no adverse noncancer health effects are expected to occur (USEPA, 1989).

6.4 Estimated Lifetime Excess Cancer Risk

SFs/IURs were used to estimate the potential excess cancer risk associated with exposure to individual COPCs. Consistent with USEPA (1989) risk assessment guidelines, the SF/IUR was multiplied by the chronic daily intake averaged over 70 years to estimate lifetime excess cancer risk. The resulting values are referred to as excess cancer risks. These potential excess cancer risks are compared to CalEPA's risk management range of 1×10^{-6} to 1×10^{-4}. The CalEPA threshold value of one-in-one million (1×10^{-6}) represents the lower end (most stringent) of the CalEPA's risk management range and is the point of departure for risk management decisions for all receptors. An excess cancer risk of one-in-one hundred thousand (1×10^{-5}) is generally acceptable for occupational exposures.

The excess cancer risk for each receptor from exposure to multiple chemicals was estimated by summing the excess cancer risks for each chemical for a given exposure pathway using the following equation:

$$CR_p = \sum_{i=1}^{n} CR_{i,p}$$

Where:

CR_p	=	Excess cancer risk for the receptor's exposure to *n* chemicals via pathway *p* (unitless);
n	=	Number of chemicals (i.e., all relevant COPCs); and
$CR_{i,p}$	=	Excess cancer risk for chemical *i* via pathway *p.*

The results of this risk characterization process for potential human receptors identified in Section 4.4 are summarized in Table E6-1. The risk characterization equations and tables for each potential receptor and exposure pathway are presented in Attachment E-5. The results are summarized in Section 8.0, following a discussion of uncertainties (Section 7.0) that may influence the results of the risk assessment.

7.0 UNCERTAINTY ANALYSIS

Quantifying uncertainty is an essential element of the risk assessment process. According to the USEPA Guidance on Risk Characterization for Risk Managers and Risk Assessors, point estimates of risk "do not fully convey the range of information considered and used in developing the assessment" (USEPA, 1992). This section presents the major sources of uncertainty and characterizes the degree of uncertainty associated with the HHRA.

Risk assessments are not intended to estimate actual risks to a receptor associated with exposure to chemicals in the environment. In fact, estimating actual risks is impossible because of the variability in the potentially exposed populations. In actuality, the risk assessment estimates the probability that an adverse health effect will occur in a receptor. The additive effect of using conservative assumptions in the risk assessment guards against underestimation of risks.

Risk estimates are calculated by combining site data, assumptions about individual receptor's exposures to impacted media, and toxicity data. The uncertainties in this HHRA are driven by variability in the following:

- The chemical monitoring data used to identify COPCs;
- The fate and transport models with which concentrations at receptor locations were estimated;
- The receptor intake parameters; and
- The accuracy of toxicity values used to characterize exposure, HIs, and excess cancer risks.

Additionally, uncertainties are introduced in the risk assessment when exposures to several substances across multiple pathways are summed.

Uncertainties are inherent in each of the following components of the risk assessment process:

- Data Collection and Evaluation;
- Selection of COPCs;
- Exposure Assessment;
- Toxicity Assessment; and
- Risk Characterization.

Key uncertainties associated with these components are described below.

7.1 Data Collection and Evaluation

The techniques used for data sampling and analysis, and the methods used for identifying chemicals for evaluation in this assessment, may result in a number of uncertainties. These uncertainties are itemized below in the form of assumptions.

- It was assumed that the nature and extent of chemical impacts on and near the Site have been adequately characterized. If this assumption is not valid, then potential health impacts may be over- or underestimated.

- It was assumed that the upper 10 feet of soil may be disturbed in the future during redevelopment. If this assumption is not valid, then potential health impacts may be slightly over- or underestimated.
- It was assumed that the data were accurate. Systematic or random errors in the chemical analyses may yield erroneous data. These types of errors may result in an over- or underestimation of risk.

As noted, each of these assumptions may result in an over- or underestimation of risk. However, the use of maximum detected and 95UCL concentrations as a conservative estimate of average site concentrations can compensate for potential deficiencies in sample size, systematic or random errors, or detection limits in the chemical analyses.

7.2 Selection of Chemicals of Potential Concern

With the exception of arsenic, all detected chemicals were evaluated as COPCs, including naturally occurring constituents. This may result in an overestimation of Site-related noncancer hazards and excess cancer risks for any metals detected below background concentrations or chemicals with a low frequency of detection (i.e., less than 5-percent).

7.3 Exposure Assessment

A number of uncertainties are associated with the exposure assessment, including identification of complete exposure pathways, assumptions used to estimate chemical intakes, estimation of EPCs, and fate and transport modeling. Key uncertainties associated with these components of the risk assessment are summarized below.

7.3.1 Exposure Pathways

The exposure pathways evaluated in this assessment are expected to represent the primary pathways of exposure, based on the results of the chemical analyses and the expected fate and transport of the COPCs in the environment. Minor or secondary pathways may also exist, but often cannot be identified or evaluated using the available data. The contribution of secondary pathways to the overall risk from the Site is not likely to be significant, but it does introduce a minor level of uncertainty to this risk assessment process. However, use of upper-bound intake assumptions, combined with conservative estimates of the mean concentrations, likely compensate for any underestimation of risk from exclusion of minor exposure pathways.

7.3.2 Chemical Intake

For estimating chemical intake, there are uncertainties associated with standard exposure assumptions, such as body weight, length of assumed exposure, life expectancy, population characteristics, and lifestyle. In reality, activity patterns and the physiological response of individuals may vary considerably. Therefore, assumptions made for these exposure parameters may not be representative of any actual exposure situation, but are intended to overestimate exposure and risk.

7.3.3 Exposure Point Concentrations

It is unlikely that a potential receptor will spend the entire exposure duration (one year for construction/utility trench worker receptor, 25 years for commercial/industrial worker receptor) at locations of maximum detected concentrations in soil and groundwater. In this HHRA, the soil data were statistically evaluated on a Parcel-wide basis. Consistent with USEPA (1989) procedures, the lesser of the maximum detected concentration and the recommended UCL was selected to develop soil EPCs. Based on the assumption that a building may be located over maximum concentrations, it is assumed that hypothetical commercial/industrial worker receptor resides over maximum detected concentrations in groundwater. Therefore, the maximum detected concentration was selected as the groundwater EPC. Using a single upperbound concentration to represent an entire area will likely result in an overestimate of exposures, particularly when some of these upperbound concentrations are above 95UCLs (e.g., 99UCL).

7.3.4 Fate and Transport Models

In the absence of direct measurements, mathematical models were used to estimate concentrations of contaminants in indoor air. EPCs for indoor air were derived from a complex model, and some of the associated uncertainties for the indoor air model include estimation of organic carbon content, characteristics of building foundations, and air exchange within a building. Although models cannot predict true EPCs at different times and locations or in different media, they tend to yield conservative EPC values.

The vapor intrusion model used for this risk assessment has been accepted by regulatory agencies and tends to overestimate the EPCs. Some examples of the inherent conservatism built into the model include:

- The model does not account for chemical losses such as biodegradation and vapor-phase adsorption;
- The model assumes a nondepleting, constant source, which results in an unlimited supply of contaminated vapor and an overestimation of vapor emissions to ambient air; and
- The model assumes vapor transport occurs under a single (vertical) dimension and ignores the potential for vapor migration in multiple directions away from the source area.

A more detailed discussion of uncertainties associated with the fate and transport models is presented in Attachment E-3.

7.4 Toxicity Assessment

Primary uncertainties associated with the toxicity assessment are related to the derivation of toxicity values for COPCs. Published RfDs and SFs established by OEHHA, DTSC, USEPA, and ATSDR were used to estimate potential adverse noncancer health effects and excess cancer risks from exposure to COPCs. The toxicity values are derived by applying conservative (health protective) assumptions and are intended to protect all potentially exposed individuals within a population.

Toxicity information for many chemicals is often limited. Consequently, there are varying degrees of uncertainty with the calculated toxicity values. Sources of uncertainty associated with toxicity values include:

- Using dose-response information from effects observed at high doses to predict the adverse effects that may occur following exposure to the low levels expected from human contact with the agent in the environment;
- Using dose-response information from short-term exposures to predict the effects of long-term exposures, and vice-versa;
- Using dose-response information from animal studies to predict effects in humans; and
- Using dose-response information from homogeneous animal populations or a small subset of human populations to predict the effects likely to be observed in the general population consisting of individuals with a wide range of sensitivities.

To compensate for these uncertainties, USEPA applies modifying and uncertainty factors in developing noncancer-based toxicity values and applies low-dose extrapolation in developing cancer-based toxicity values. Use of the USEPA toxicity values is intended to result in an overestimation of HIs and excess cancer risks.

7.4.1 Surrogates

Toxicity values were not available for some COPCs (Section 5.5). Based on structural similarities, an appropriate surrogate compound was identified to characterize toxicity. The toxicity values for each identified surrogate were used to evaluate the COPCs without published toxicity values, which may over- or underestimate risks.

7.4.2 Route-to-Route Extrapolation

Toxicity values for both the oral and inhalation routes of exposure were not available for certain COPCs. Noncancer adverse health effects and excess cancer risks can be assessed only when relevant toxicity values are available for the COPCs. For some compounds, DTSC (2016) recommends route-to-route extrapolation between the oral and inhalation exposure pathways where no toxicity value is available for the inhalation route of exposure but an oral toxicity value is available. Without route–specific toxicity values, the use of route-to-route extrapolation may over- or underestimate risks.

7.4.3 Dermal Exposure

The use of oral toxicity values to assess the dermal pathway introduces additional uncertainty into the results; risks may be over- or underestimated as a result. Adjusting the oral toxicity values by using the GIABS factor to estimate dermal toxicity values could underestimate risk, the magnitude of which being inversely proportional to the true oral absorption of the chemical in question.

7.5 Risk Characterization

Standard USEPA methods were used for the risk characterization step. Using USEPA methods, risks from exposure to multiple noncarcinogens and carcinogens were added to estimate the HI and total excess cancer risk, respectively. This approach assumes that the risks from COPCs that have different target organs are additive. That assumption contributes to the uncertainty in the risk assessment and may underestimate or overestimate risks, depending on whether synergistic or antagonistic interactions occur among COPCs at the site. Information about such interactions is generally not available, so possible interactions were not evaluated in this HHRA.

7.6 Summary of Risk Assessment Uncertainties

The analysis of uncertainties associated with the HHRA indicates that noncancer adverse health effects as well as excess cancer risk estimates will overestimate actual impacts to human health. Although many factors can contribute to the potential for over- or underestimating risk, a mixture of conservative and upper-bound input values were identified to estimate potential exposures. Compounding conservative and upper-bound input values in the risk assessment process is intended to yield health-protective and conservative estimates. A summary of uncertainties is presented in the following table.

Item	Potential to Overestimate Risk	Potential to Underestimate Risk	Comments
A single representative concentration for COPCs was used for the Site.	Moderate	Low	Using a single upperbound concentration to represent an entire site will likely result in an overestimate of exposures for the majority of the site.
Minor or secondary exposure pathways may exist but often cannot be identified or evaluated using the available data.	None	Low	Secondary pathways are unlikely to contribute significantly to the overall risk.
COPCs in soil and groundwater were considered at steady-state concentrations throughout the duration of the exposure.	Moderate	Low	Conservative intake assumptions are used, likely resulting in an overestimate of risks. No mass reduction over time is assumed.
EPCs in indoor air were modeled using a variety of conservative assumptions. These conservative assumptions included assuming porous soil types, shallow depths to affected soil, low building air exchange rates, and high amounts of foundation cracking.	High	Low	Assumptions used to address uncertainty are conservative and multiplicative.

Item	Potential to Overestimate Risk	Potential to Underestimate Risk	Comments
Default input parameters recommended by the regulatory agencies were used to estimate exposures. The input parameters may not represent actual receptor intakes.	Moderate-High	Low	Chronic daily intake likely does not accurately reflect actual exposure for most receptors.
Toxicity values were developed primarily from data on animals, for various exposure durations.	Moderate-High	Low	High uncertainty factors and modifying factors addressing various uncertainties compound conservatism.
Chemicals that have been assigned toxicity values were used as surrogates for chemicals without toxicity values.	Low	Low	Surrogate compounds are identified based on similar chemical structure. Surrogates allow for the evaluation of COPCs without published toxicity values.
In characterizing excess cancer risks, SFs derived from animal data were given the same weight-of-evidence as SFs derived from human data.	Moderate-High	Low	To compensate for these uncertainties, USEPA applies low-dose extrapolation when publishing a human toxicity value.
HQs from exposure to multiple noncarcinogens were added to estimate the HI. Similarly, excess cancer risks from exposure to carcinogens were added to estimate the total excess cancer risk. This approach assumes that the risks from COPCs that have different target organs are additive.	Moderate	Low	Compounding conservative and upper-bound input values in the risk assessment process is intended to yield maximum, health-conservative HI and excess cancer risk estimates.

Notes:

The potential for under- or overestimation of risk (low, moderate, high) associated with each uncertainty item is based on the professional judgment of the risk assessor.

8.0 HUMAN HEALTH RISK ASSESSMENT RESULTS

This section summarizes the results of the HHRA conducted for the East Parcel at the Former Chemoil Refinery site. Arsenic, even at low concentrations or background concentrations, can result in elevated estimated risks. Section 8.1 discusses the regional background arsenic screening level in comparison with Site-related arsenic concentrations. Lead was evaluated by comparing the lead concentrations with the commercial/industrial CHHSL of 320 mg/kg. The results of the lead evaluation are discussed in Section 8.2. Section 8.3 discusses the HHRA results for the remaining COPCs.

USEPA guidance on risk and exposure levels considered protective of human health is presented to provide context for interpretation of the HI and excess cancer risk estimates presented in this HHRA. Hazard indices are compared to the USEPA and CalEPA recommended target HI of one (USEPA, 1989). Excess cancer risks are compared to the CalEPA's risk management range of one-in-one-million (1×10^{-6}) to one-in-ten thousand (1×10^{-4}). The CalEPA threshold value of 1×10^{-6} represents the lower end (most stringent) of the CalEPA's risk management range and is the point of departure for risk management decisions for all receptors. An excess cancer risk of one-in-one hundred thousand (1×10^{-5}) is generally acceptable for occupational exposures. The USEPA target excess cancer risks represent the incremental probability of an individual developing cancer over a lifetime as a result of chemical exposure. This probability is considered an excess cancer risk because the incidence of cancer from all sources other than chemicals associated with a site (i.e., background) are substantial.

8.1 Arsenic

At many sites in California, arsenic is naturally occurring and detected at concentrations greater than a risk-based screening level. Therefore, it is appropriate to compare the maximum detected arsenic concentration with the appropriate ambient arsenic concentration. A Southern California regional background arsenic concentration of 12 mg/kg has been suggested as a useful risk management screening number by representatives of the DTSC (Chernoff, D. et.al.). Arsenic was detected at the East Parcel with a frequency of 100%, with concentrations in soil from 0 to 10 feet bgs ranging from 4.0 mg/kg to 18 mg/kg. The 95-percent upper confidence limit of the mean concentration (95UCL) for arsenic in soil is 12 mg/kg. Arsenic was detected at a concentration above 12 mg/kg in 7 of the 27 soil samples. These 7 soil samples were collected at 5 and 10 feet bgs. At these 7 locations at 1 foot bgs, arsenic concentrations were below 12 mg/kg. Generally direct contact with soil will occur in the top foot of soil, except under construction exposure scenarios. Since arsenic concentrations above background are only detected at depth (i.e., greater than 5 feet bgs), arsenic in soil is likely background. Therefore, arsenic in soil at the East Parcel does not pose a risk above background to potential onsite receptors.

8.2 Lead

For industrial worker exposure scenarios, DTSC (2011a) recommends a modified version of USEPA's June 21, 2009 ALM (DTSC, 2011c). The model calculates the concentration in exterior soil and interior dust that will result in a 90th percentile estimate of blood lead among fetuses of adult workers of 1 µg/dL. Based on this model, the commercial/industrial CHHSL is 320 mg/kg (OEHHA, 2009). Lead was detected at the East Parcel with a frequency of 96%, with concentrations in soil from 0 to 10 feet bgs ranging from 0.5 mg/kg to 100 mg/kg. The maximum detected lead concentration of 100 mg/kg is well below the commercial/industrial CHHSL of 320 mg/kg.

8.3 Other COPCs

The HHRA results for the all remaining COPCs are discussed in the following sections by hypothetical receptor.

8.3.1 Hypothetical Onsite Construction/Utility Trench Worker Receptor

The HI estimate exceeds the USEPA and CalEPA target level of one. The excess cancer risk estimate is below CalEPA's risk management range of 1×10^{-6} to 1×10^{-4}.

Exposure Pathway	Hazard Index (HI)	Excess Cancer Risk (CR)	Comments
Direct Contact with COPCs in Soil (0 to 10 feet bgs)	2	3×10^{-7}	HI exceeds USEPA/CalEPA target level. Individual HIs for all COPCs do not exceed 1. Cobalt HI = 0.4 (Target: Thyroid) Nickel HI = 0.3 (Target: Development) Thallium HI = 0.4 (Target: Skin) Vanadium HI = 0.2 (Target: Kidney) CR is less than CalEPA's risk management range.
TOTAL	**2**	**3×10^{-7}**	

No COPCs in soil have an individual HI exceeding the acceptable USEPA/CalEPA target level of one. Cobalt, nickel, thallium, and vanadium in soil are the primary contributors to the elevated HI. The individual HI estimates for direct contact with cobalt, nickel, thallium, and vanadium in soil account for 83% of the total HI. As shown in the table above, the primary critical effects of cobalt, nickel, thallium, and vanadium toxicity do not include the same target organ or system. Since individual HI estimates do not exceed one and the highest individual HIs are not associated with a primary critical effect on the same target organ or system, the COPCs do not pose adverse noncancer effects to the hypothetical onsite construction/utility worker receptor.

The total excess cancer risk of 3×10^{-7} is less than the most stringent end of CalEPA's risk management range of 1×10^{-6} to 1×10^{-4} and is less than 1×10^{-5}, which is generally acceptable for occupational exposures. Therefore, COPCs do not pose an excess cancer risk to the hypothetical onsite construction/utility trench worker receptor.

Individual, pathway-specific risk characterization results for this receptor, showing estimated HIs and excess cancer risks are presented in Table E-5A of Attachment E-5.

8.3.2 Hypothetical Onsite Commercial/Industrial Worker Receptor

The HI estimate does not exceed the USEPA and CalEPA target level of one and the excess cancer risk estimate is within CalEPA's risk management range of 1×10^{-6} to 1×10^{-4}.

Exposure Pathway	Hazard Index (HI)	Excess Cancer Risk (CR)	Comments
Direct Contact with COPCs in Soil (0 to 15 feet bgs)	0.3	2×10^{-8}	HI does not exceed USEPA/CalEPA target level. CR is less than CalEPA's risk management range.
Inhalation of COPCs Volatilizing from Groundwater into Indoor Air	0.009	7×10^{-6}	HI does not exceed USEPA/CalEPA target level. CR is within CalEPA's risk management range.
TOTAL	**0.3**	**7×10^{-6}**	

For direct contact with COPCs in soil, the COPCs do not pose adverse noncancer effects to the hypothetical onsite commercial/industrial worker receptor.

For inhalation of COPCs volatilizing from groundwater into indoor air, the total excess cancer risk of 7×10^{-6} is within CalEPA's risk management range and is less than 1×10^{-5}, which is generally acceptable for occupational exposures. Therefore, COPCs do not pose a risk to the hypothetical onsite commercial/industrial worker receptor.

Individual, pathway-specific risk characterization results for this receptor, showing estimated HIs and excess cancer risks are presented in Tables E-5B and E-5C of Attachment E-5.

9.0 CONCLUSIONS

Based on the results of the HHRA, estimated human health risks are below risk management thresholds for commercial/industrial land use. Remedial actions are not warranted at the East Parcel prior to redevelopment of the East Parcel for light industrial/commercial purposes.

Administrative and institutional controls will be implemented prior to development of the East Parcel, as required in the California Land Reuse and Revitalization Act Agreement (CLRRA) prepared for the Site. Expected controls include a land use covenant (LUC) and Site Management Plan (SMP). The LUC will prohibit use of underlying groundwater and prohibit unrestricted or sensitive land uses.

10.0 REFERENCES

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11.0 LIMITATIONS

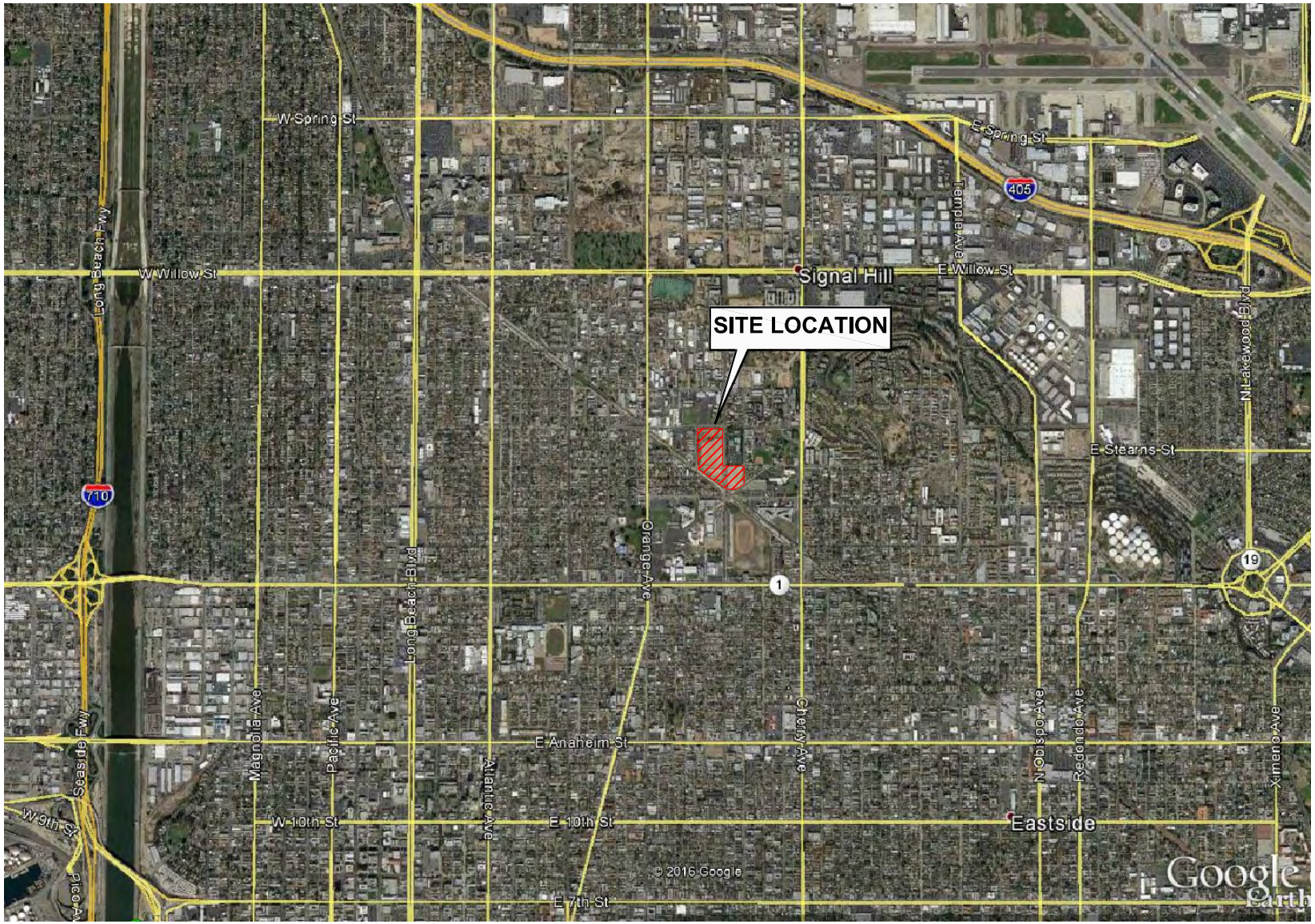
This document has been prepared for the exclusive use of SHE, RES, and their representatives as it pertains to the affected property as described above. Any interpretation of the data represents our professional opinions, and is based in part on information supplied by the client. These opinions and information are based on currently available data and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location.

The data presented in this transmittal are intended only for the purpose, site location, and project indicated. This report is not a definitive study of contamination at the site and should not be interpreted as such. The data reported are limited by the scope of the work as defined by the request of the client, the time, availability of access to the site, and information passed to Apex-SGI.

There are no representations or guarantees that the sampling points are representative of the entire site. Data collected in response to this work may reflect the conditions at specific locations at a specific point in time and does not reflect subsurface variations that may exist between sampling points. These variations cannot be anticipated nor can they be entirely accounted for even with exhaustive additional testing. No other interpretations, warranties, guarantees, expressed or implied, are included or intended in the contents of this transmittal.

As required, all proposed work will be performed under the direct supervision of a Professional Geologist or Registered Civil Engineer as defined in the Registered Geologist Act of the California Code of Regulations.

FIGURES



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299 WEST HILLCREST DR. SUITE 220
THOUSAND OAKS, CA 91360

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DR.BY:	APP. BY:
093-CHEMOIL-001	05/30/17	ZA	KD

SITE LOCATION MAP

0 2500 5000
HORIZONTAL SCALE IN FEET

N

FIGURE E1-1

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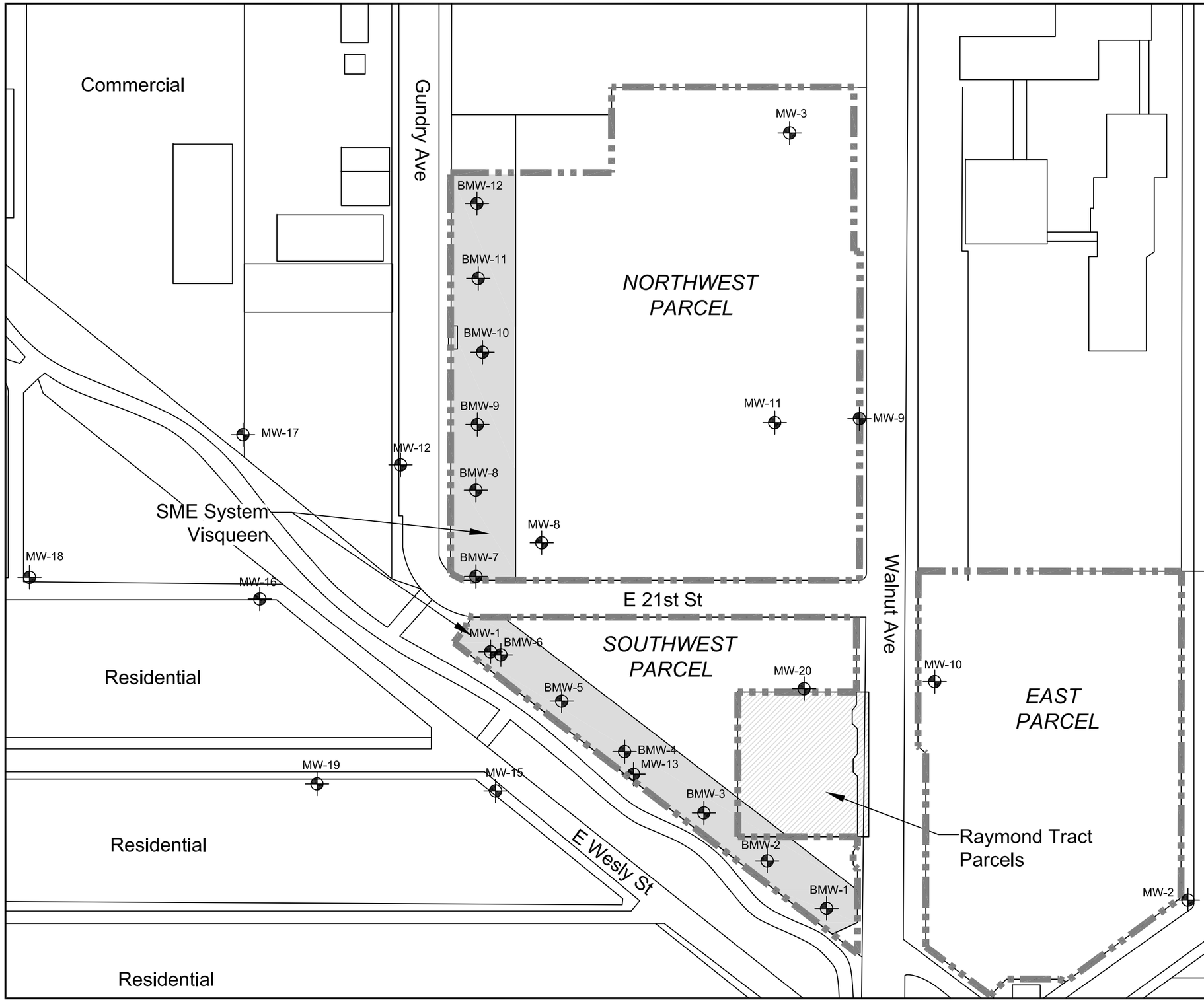

LEGEND

Site Boundary

MW-16 Groundwater Monitoring Well Locations

SME Subsurface Metabolic Enhancement

SITE MAP

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-CHEMOIL-001	02/08/17	ZA	KD

0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE E2-1

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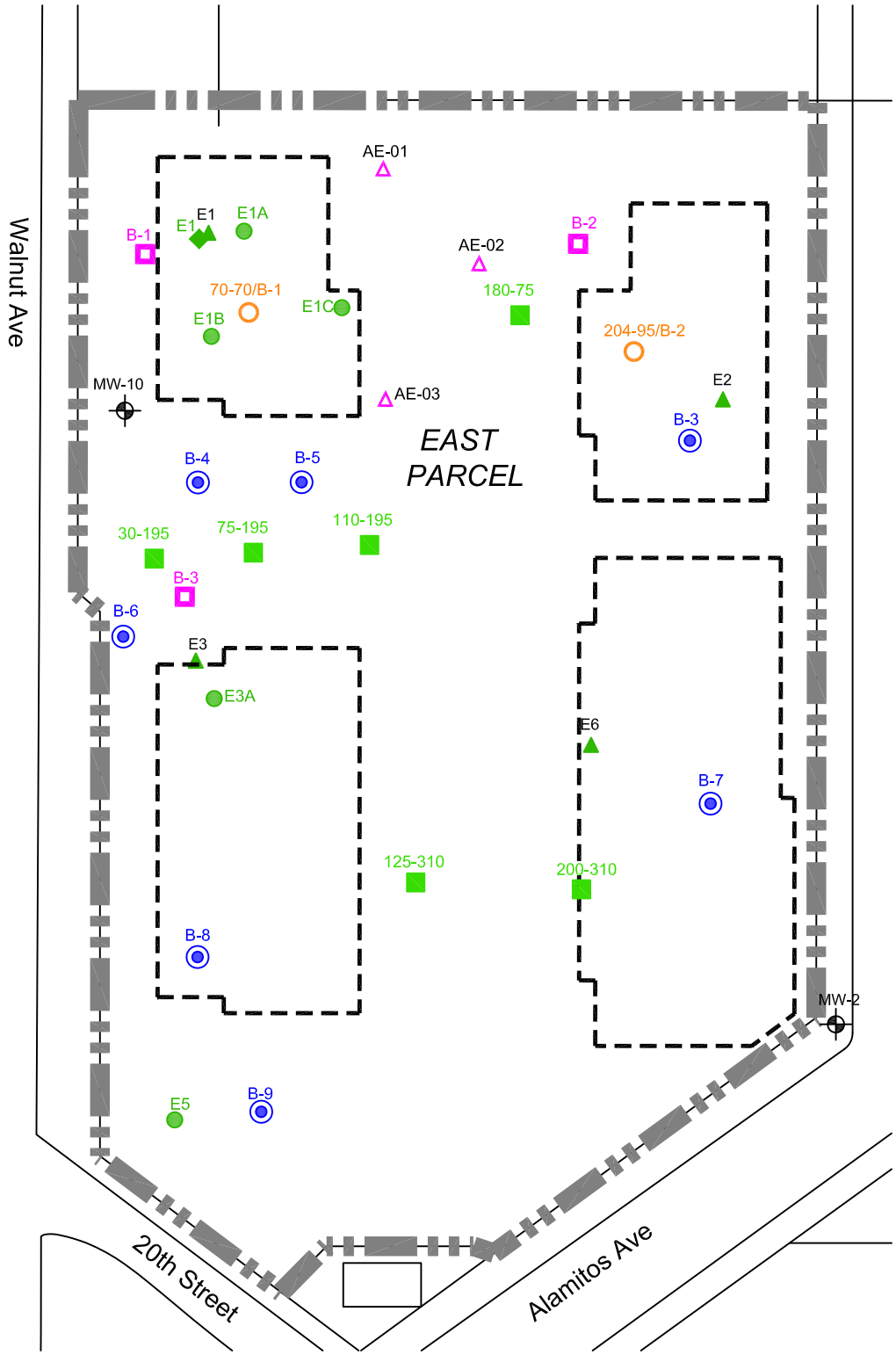

LEGEND

MW-10	Groundwater Monitoring Well Locations
E1	2006 ROST™ Boring Location (Tetratech, 2006)
AE-03	2016 UVOST™ Boring Location
E1B	Soil and Grab Groundwater Sample Locations (Tetratech, 2006)
E1	Soil Vapor Point (Tetratech, 2006)
UVOST	Ultra-Violet Optical Screening Tool
ROST	Rapid Optical Screening Tool
B-7	TEC Push-Drive Soil Boring (TEC, 2001)
B-3	Former EEI (1988) Soil Boring (TEC, 2001)
200-30	Former TSG (1999) Soil Boring (TEC, 2001)
11	Combined TSG/TEC Boring Location (TEC, 2001)
	Proposed Building Location

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FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DR.BY:	APP. BY:
093-CHEMOIL-001	05/03/17	ZA	KD

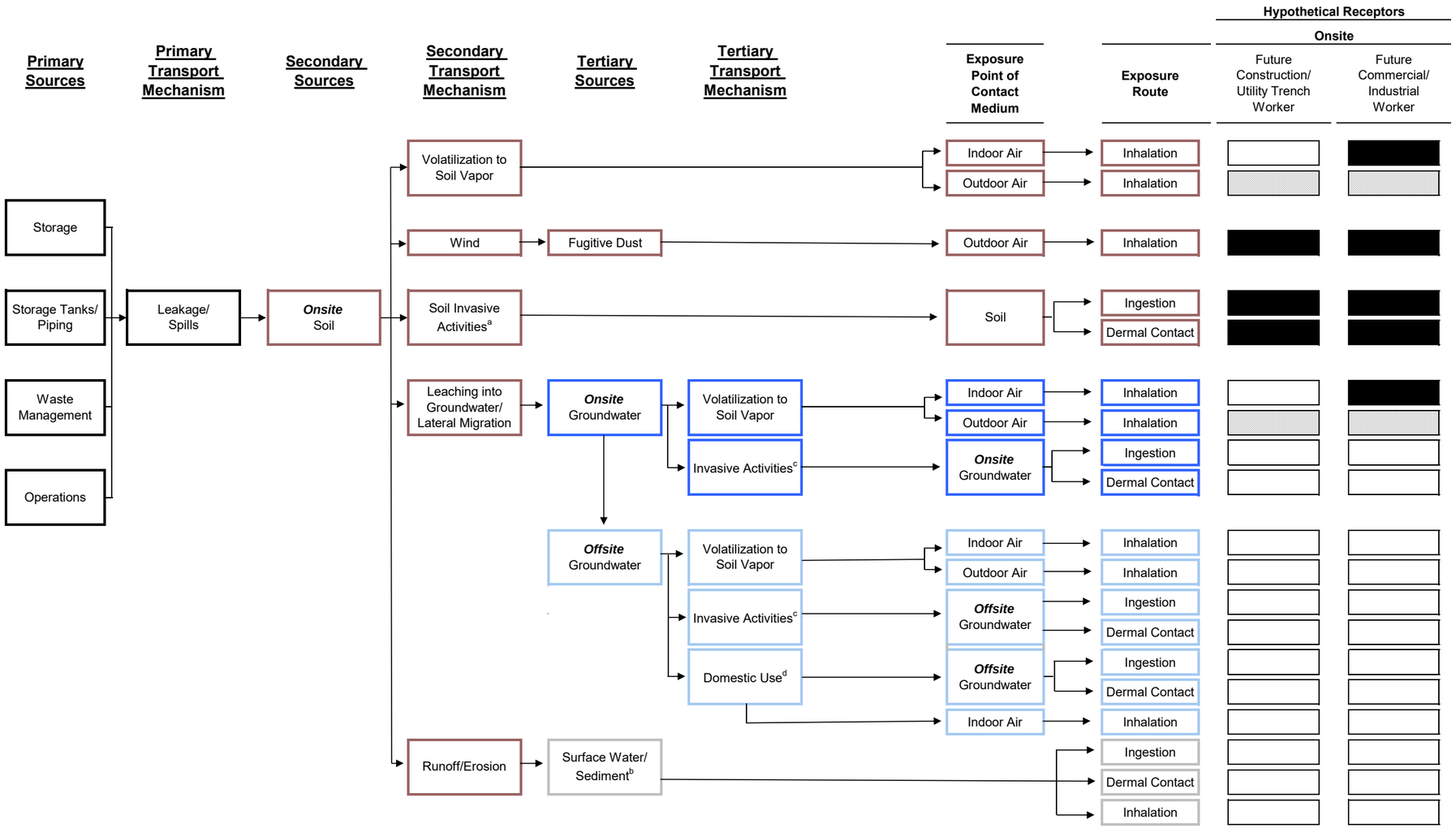
SITE PLAN
EAST PARCEL

0 60 100
HORIZONTAL SCALE IN FEET

N

FIGURE E3-1

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\App\App E\Figures\Fig.E3-1-Site Plan East Parcel.dwg, 6/12/2017 12:02:07 PM



CSM components related to soil.

CSM components related to onsite groundwater.

CSM components related to offsite groundwater.

CSM components related to surface water.

Receptor likely to be exposed via this route, so pathway is considered potentially complete.

Receptor may be exposed via this route, so pathway is considered potentially complete; however, pathway is considered minor.

Pathway is incomplete, no further evaluation required.

[a] Soil invasive activities may extend to 10 feet below ground surface (bgs) and include construction and development for commercial/industrial land use.

[b] No surface water bodies were identified within a one-half mile radius of the site.

[c] Surface invasive activities are not expected to extend beyond 10 feet bgs during construction and development. Due to Site topography, depth to water in existing monitoring wells on East Parcel is approximately 30 feet bgs.

[d] Groundwater quality within the Site vicinity is generally poor due to seawater intrusion and elevated salinity. Shallow groundwater is not currently used and is not likely to be developed for beneficial use. Risk management measures can be implemented to ensure that groundwater is not used. The nearest public water supply well is located downgradient approximately 850 feet south of the Site (Los Angeles County Department of Public Works Well 420), however is used for groundwater monitoring purposes only.

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CALIFORNIA

EAST PARCEL
HUMAN HEALTH
CONCEPTUAL SITE MODEL

PROJECT NO.	DATE	DRAWN BY	APP. BY
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THOUSAND OAKS, CA 91360

FIGURE E4-1

TABLES

Table E3-1
Statistical Summary of Soil (0 to 10 feet bgs) Analytical Data - East Area
Former ChemOil Refinery
Signal Hill, California

Chemical	Number of Samples	Number of Detections	Frequency of Detection	Arithmetic Mean of Detected (mg/kg)	Standard Deviation of Detected (mg/kg)	Minimum Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	95 Percent Upper Confidence Limit of the Arithmetic Mean (95UCL) (mg/kg)	Lesser of the Maximum Detected Concentration and the 95UCL (mg/kg)
Metals									
Antimony	27	26	96%	0.58	0.21	0.36	1.0	0.64	0.64
Arsenic	27	27	100%	10	4.7	4.0	18	12	12
Barium	27	27	100%	103	87	30	450	125	125
Beryllium	27	0	0%	ND	ND	ND	ND	NE	ND
Cadmium	27	0	0%	ND	ND	ND	ND	NE	ND
Chromium	27	27	100%	18	8.3	7.5	40	20	20
Cobalt	27	27	100%	8.1	3.3	3.5	14	9.2	9.2
Copper	27	27	100%	17	10	3.0	48	20	20
Lead	27	26	96%	6.9	19	0.50	100	22	22
Mercury	26	3	12%	1.1	1.7	0.11	3.0	0.44	0.44
Molybdenum	27	23	85%	0.43	0.1	0.26	0.50	0.44	0.44
Nickel	27	27	100%	15	12	4.5	64	18	18
Selenium	27	0	0%	ND	ND	ND	ND	NE	ND
Silver	27	0	0%	ND	ND	ND	ND	NE	ND
Thallium	27	26	96%	0.89	0.46	0.33	2.0	1.3	1.3
Vanadium	27	27	100%	35	21	15	120	43	43
Zinc	27	27	100%	44	33	22	200	56	56
TPH									
C5-C12	29	4	14%	235	399	7.4	830	216	216
C13-C22	29	8	28%	1,246	2,280	9.2	6,540	1,553	1,553
C23-C44	29	16	55%	650	1,320	5.3	3,880	1,561	1,561
VOCs									
Benzene	33	1	3%	NE	NE	0.057	0.057	NE	0.057
n-Butylbenzene	5	0	0%	ND	ND	ND	ND	NE	ND
sec-Butylbenzene	5	0	0%	ND	ND	ND	ND	NE	ND
tert-Butylbenzene	5	0	0%	ND	ND	ND	ND	NE	ND
Ethylbenzene	33	6	18%	0.23	0.35	0.0088	0.82	0.18	0.18
Isopropylbenzene	5	0	0%	ND	ND	ND	ND	NE	ND
Naphthalene	5	1	20%	NE	NE	0.0050	0.0050	NE	0.0050
Toluene	33	2	6%	0.15	0.20	0.0068	0.29	0.087	0.087
Total Xylenes	33	5	15%	0.73	1.5	0.014	3.4	0.82	0.82
PAHs									
Acenaphthene	1	1	100%	NE	NE	0.22	0.22	NE	0.22
Acenaphthylene	1	1	100%	NE	NE	ND	ND	NE	ND
Anthracene	1	1	100%	NE	NE	ND	ND	NE	ND
Benz(a)anthracene	1	1	100%	NE	NE	ND	ND	NE	ND
Benzo(a)pyrene	1	1	100%	NE	NE	ND	ND	NE	ND
Benzo(b)fluoranthene	1	1	100%	NE	NE	ND	ND	NE	ND
Benzo(k)fluoranthene	1	1	100%	NE	NE	ND	ND	NE	ND
Benzo(g,h,i)perylene	1	1	100%	NE	NE	ND	ND	NE	ND
Chrysene	1	1	100%	NE	NE	1.6	1.6	NE	1.6
Dibenz(a,h)anthracene	1	1	100%	NE	NE	ND	ND	NE	ND
Fluoranthene	1	1	100%	NE	NE	0.036	0.036	NE	0.036
Fluorene	1	1	100%	NE	NE	0.39	0.39	NE	0.39
Indeno(1,2,3-c,d)pyrene	1	1	100%	NE	NE	ND	ND	NE	ND
Naphthalene	1	1	100%	NE	NE	1.2	1.2	NE	1.2
Phenanthrene	1	1	100%	NE	NE	2.0	2.0	NE	2.0
Pyrene	1	1	100%	NE	NE	2.0	2.0	NE	2.0

Notes:
feet bgs = feet below ground surface.
mg/kg = milligrams per kilogram.
TPH = total petroleum hydrocarbons.
VOC = volatile organic compounds.
PAH = polycyclic aromatic hydrocarbons.
ND = Not detected.
NE = Not estimated due to limitations in database (i.e., not detected in more than one sample).

Table E3-2
Statistical Summary of Groundwater Analytical Data - East Area
Former ChemOil Refinery
Signal Hill, California

Chemical	Number of Samples	Number of Detections	Frequency of Detection	Arithmetic Mean of Detected (µg/L)	Standard Deviation of Detected (µg/L)	Minimum Detected Concentration (µg/L)	Maximum Detected Concentration (µg/L)
Metals							
Antimony	11	2	18%	0.0060	0.0013	0.0051	0.0069
Arsenic	11	11	100%	1.0	3.0	0.0067	10
Barium	11	11	100%	20	65	0.060	215
Beryllium	11	0	0%	ND	ND	ND	ND
Cadmium	11	0	0%	ND	ND	ND	ND
Chromium	11	10	91%	0.11	0.12	0.010	0.35
Cobalt	11	9	82%	0.062	0.083	0.010	0.27
Copper	11	11	100%	0.068	0.087	0.0072	0.30
Lead	11	3	27%	0.050	0.052	0.020	0.11
Mercury	11	0	0%	ND	ND	ND	ND
Molybdenum	11	10	91%	0.048	0.026	0.010	0.090
Nickel	11	9	82%	0.073	0.090	0.010	0.29
Selenium	11	0	0%	ND	ND	ND	ND
Silver	11	0	0%	ND	ND	ND	ND
Thallium	11	3	27%	0.013	0.0058	0.010	0.020
Vanadium	11	10	91%	0.15	0.16	0.0077	0.50
Zinc	11	11	100%	0.22	0.24	0.030	0.72
VOCs							
Bis (2-chloroethyl) ether	18	2	11%	800	990	100	1,500
tert-Butyl Alcohol	9	3	33%	122	103	15	220
sec-Butylbenzene	21	2	10%	1.7	0.071	1.6	1.7
Isopropylbenzene	21	4	19%	5.8	6.2	0.65	13
Naphthalene	21	4	19%	20	30	1.3	65
n-Propylbenzene	21	3	14%	7.8	6.5	0.51	13
o-Xylene	15	3	20%	1.9	1.2	0.65	3.0

Notes:
feet bgs = feet below ground surface.
µg/L = micrograms per liter.
VOC = volatile organic compounds.
ND = Not detected.
NE = Not estimated due to limitations in database (i.e., not detected in more than one sample).

Table E3-3
Statistical Summary of Soil Vapor (5 feet bgs) Analytical Data - East Area
Former ChemOil Refinery
Signal Hill, California

Chemical	Number of Samples	Number of Detections	Frequency of Detection	Arithmetic Mean of Detected ($\mu g/m^3$)	Standard Deviation of Detected ($\mu g/m^3$)	Minimum Detected Concentration ($\mu g/m^3$)	Maximum Detected Concentration ($\mu g/m^3$)
VOCs							
Benzene	1	0	0%	ND	ND	ND	ND
Ethylbenzene	1	1	100%	NE	NE	10,800	10,800
Methyl tert-Butyl Ether	1	0	0%	ND	ND	ND	ND
Toluene	1	0	0%	ND	ND	ND	ND
1,2,4-Trimethylbenzene	1	0	0%	ND	ND	ND	ND
1,3,5-Trimethylbenzene	1	0	0%	ND	ND	ND	ND
o-Xylene	1	0	0%	ND	ND	ND	ND
m,p-Xylenes	1	0	0%	ND	ND	ND	ND

Notes:
feet bgs = feet below ground surface.
$\mu g/m^3$ = micrograms per liter.
VOC = volatile organic compounds.
ND = Not detected.
NE = Not estimated due to limitations in database (i.e., not detected in more than one sample).

Table E4-1

Exposure Intake Assumptions for Hypothetical Onsite Construction/Utility Trench Worker Receptor

Former ChemOil Refinery
Signal Hill, California

Parameter	Acronym	Value	Unit	Source
Averaging Time - Carcinogens[1]	ATc	25,550	days	DTSC, 2014
Averaging Time - Noncarcinogens	ATn	365	days	DTSC, 2014
Lifetime	LT	70	years	DTSC, 2014
Exposure Frequency	EF	250	days/year	DTSC, 2014
Exposure Duration	ED	1	year	DTSC, 2014
Exposure Time	ET	8	hours/day	USEPA, 2009
Body Weight	BW	80	kg	DTSC, 2014
Soil Ingestion Rate	IRs	330	mg/day	DTSC, 2014
Skin Surface Area	SA	6,032	cm^2	DTSC, 2014
Soil Adherence Factor	AF	0.8	mg/cm^2-day	DTSC, 2014
Dermal Absorption Factor	ABS	Chemical-Specific	unitless	Table E4-3
Particulate Emission Factor	PEF	1.00E+06	m^3/kg	DTSC, 2014

Notes:

kg = kilograms.
mg/day = milligrams per day.
cm^2 = square centimeters.
[1] Based on a 70 year lifetime.
mg/cm^2-day = milligrams per square centimeter per day.
m^3/kg = cubic meters per kilogram.

References:

DTSC. 2014. Human Health Risk Assessment Note Number 1, Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Hazardous Waste Sites and Permitted Facilities. September 30.

USEPA. 2009. Supplemental Guidance for Inhalation Risk Assessment, or Part F of Volume I of Risk Assessment Guidance for Superfund, Human Health Evaluation Manual. Office of Solid Waste and Emergency Response. EPA-540-R-070-002. January.

Table E4-2
Exposure Intake Assumptions for Hypothetical Onsite Commercial/Industrial Worker Receptor
Former ChemOil Refinery
Signal Hill, California

Parameter	Acronym	Value	Unit	Source
Averaging Time (carcinogens)[1]	ATc	25,550	days	DTSC, 2014
Averaging Time (noncarcinogens)	ATn	9,125	days	DTSC, 2014
Lifetime	LF	70	years	DTSC, 2014
Exposure Frequency	EF	250	day/year	DTSC, 2014
Exposure Duration	ED	25	years	DTSC, 2014
Exposure Time	ET	8	hours/day	USEPA, 2009
Body Weight	BW	80	kg	DTSC, 2014
Soil Ingestion Rate	IRs	100	mg/day	DTSC, 2014
Skin Surface Area	SA	6,032	cm^2	DTSC, 2014
Soil Adherence Factor	AF	0.2	mg/cm^2-day	DTSC, 2014
Dermal Absorption Factor	ABS	Chemical-Specific	unitless	Table E4-3
Particulate Emission Factor	PEF	1.36E+09	m^3/kg	DTSC, 2014

Notes:
kg = kilograms.
mg/day = milligrams per day.
cm^2 = square centimeters.
[1] Based on a 70 year lifetime.
mg/cm^2-day = milligrams per square centimeter per day.
m^3/kg = cubic meters per kilogram.

References:
DTSC. 2014. Human Health Risk Assessment Note Number 1, Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Hazardous Waste Sites and Permitted Facilities. September 30.

USEPA. 2009. Supplemental Guidance for Inhalation Risk Assessment, or Part F of Volume I of Risk Assessment Guidance for Superfund, Human Health Evaluation Manual. Office of Solid Waste and Emergency Response. EPA-540-R-070-002. January.

Table E4-3
Chemical-Specific Dermal Absorption Factors (ABS)
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	ABS (unitless)	Source
Metals		
Antimony	0.01	DTSC, 2015
Arsenic	0.03	DTSC, 2015
Barium	0.01	DTSC, 2015
Chromium	0.01	DTSC, 2015
Cobalt	0.01	DTSC, 2015
Copper	0.01	DTSC, 2015
Lead	0.01	DTSC, 2015
Mercury	0.01	DTSC, 2015
Molybdenum	0.01	DTSC, 2015
Nickel	0.01	DTSC, 2015
Thallium	0.01	DTSC, 2015
Vanadium	0.01	DTSC, 2015
Zinc	0.01	DTSC, 2015
Total Petroleum Hydrocarbons (TPH)		
TPH (C4-C12) Aliphatic	0	USEPA, 2016
TPH (C4-C12) Aromatic	0	USEPA, 2016
TPH (C13-C22) Aliphatic	0	USEPA, 2016
TPH (C13-C22) Aromatic	0	USEPA, 2016
TPH (C23-C44) Aliphatic	0	USEPA, 2016
TPH (C23-C44) Aromatic	0.10	USEPA, 2016
Volatile Organic Compounds (VOCs)		
Benzene	0	DTSC, 2014
Ethylbenzene	0	DTSC, 2014
Naphthalene	0	DTSC, 2014
Toluene	0	DTSC, 2014
Total Xylenes	0	DTSC, 2014
Polycyclic Aromatic Hydrocarbons (PAHs)		
Acenaphthene	0.15	DTSC, 2015
Chrysene	0.15	DTSC, 2015
Fluoranthene	0.15	DTSC, 2015
Fluorene	0.15	DTSC, 2015
Phenanthrene	0.15	DTSC, 2015
Pyrene	0.15	DTSC, 2015

References:

DTSC. 2014. Human Health Risk Assessment Note Number 1, Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Hazardous Waste Sites and Permitted Facilities. September 30.

DTSC. 2015. Preliminary Endangerment Assessment Guidance Manual. October.

USEPA. 2016. Regional Screening Levels for Chemical Contaminants at Superfund Sites. USEPA Region 3, Region 6, and Region 9. May.

Table E4-4
Exposure Point Concentrations for the Chemicals of Potential Concern (COPCs) in Soil (0 to 10 feet bgs)
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	Soil		
	MDC (mg/kg)	95UCL[1] (mg/kg)	EPC_{soil}[2] (mg/kg)
Metals			
Antimony	1.0	0.64	0.64
Arsenic	18	12	12
Barium	450	125	125
Chromium	40	20	20
Cobalt	14	9.2	9.2
Copper	48	20	20
Lead	100	22	22
Mercury	3.0	0.44	0.44
Molybdenum	0.50	0.44	0.44
Nickel	64	18	18
Thallium	2.0	1.3	1.3
Vanadium	120	43	43
Zinc	200	56	56
TPH[4]			
C5-C12	830	216	216
TPH (C4-C12) Aliphatic	415	108	108
TPH (C4-C12) Aromatic	415	108	108
C13-C22	6,540	1,553	1,553
TPH (C13-C22) Aliphatic	3,270	777	777
TPH (C13-C22) Aromatic	3,270	777	777
C23-C44	3,880	1,561	1,561
TPH (C23-C44) Aliphatic	1,940	781	781
TPH (C23-C44) Aromatic	1,940	781	781
VOCs			
Benzene	0.057	NE	0.057
Ethylbenzene	0.82	0.18	0.18
Naphthalene	0.0050	NE	0.0050
Toluene	0.29	0.087	0.087
Total Xylenes	3.4	0.82	0.82
PAHs			
Acenaphthene	0.22	NE	0.22
Chrysene	1.6	NE	1.6
Fluoranthene	0.036	NE	0.036
Fluorene	0.39	NE	0.39
Naphthalene	1.2	NE	1.2
Phenanthrene	2.0	NE	2.0
Pyrene	2.0	NE	2.0

Notes:
MDC = maximum detected concentration.
95UCL = 95-percent upper confidence limit of the mean.
EPC = exposure point concentration.
mg/kg = milligrams per kilogram.
TPH = total petroleum hydrocarbons.
VOC = volatile organic compounds.
PAH = polycyclic aromatic hydrocarbons.
NE = not estimated (see Note 3).
ND = Not detected.

[1] A summary of the methods used to identify an appropriate 95UCL is provided in Attachment E-4.
[2] Represents the lesser of the maximum detected concentration and the 95UCL.
[3] Due to limitations of chemical dataset, ProUCL was unable to estimate a 95UCL.
[4] In the absence of fractionated TPH data, the TPH data were assumed to be 50 percent aliphatic and 50 percent aromatic.

Table E4-5
Exposure Point Concentrations for the Chemicals of Potential Concern (COPCs) in Groundwater and Indoor Air at Future Buildings
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	Groundwater - 30 feet bgs		Vapor Intrusion to Indoor Air[2]		
	MDC (µg/L)	EPC_{gw}[1] (µg/L)	$EPC_{soil\ vapor}$ (µg/m^3)	Soil Vapor to Indoor Air Attenuation Factor (unitless)	$EPC_{indoor\ air}$ (µg/m^3)
Volatile Organic Compounds (VOCs)					
Bis (2-chloroethyl) ether	1,500	1,500	969	1.2E-04	1.18E-01
tert-Butyl Alcohol	220	220	- -	- -	- -
sec-Butylbenzene	1.7	1.7	670	8.9E-05	5.97E-02
Isopropylbenzene	13	13	5,713	1.0E-04	5.75E-01
Naphthalene	65	65	1,091	1.0E-04	1.13E-01
n-Propylbenzene	13	13	5,253	1.0E-04	5.28E-01
o-Xylene	3.0	3.0	601	1.1E-04	6.85E-02

Notes:
feet bgs = feet below ground surface.
MDC = maximum detected concentration.
EPC = exposure point concentration.
µg/L = micrograms per liter.
µg/m^3 = micrograms per cubic meter.
- - = Not available. Chemical properties were not included in vapor intrusion model.

[1] Represents the maximum detected concentration.
[2] EPCs in groundwater (EPC_{gw}) were coupled with the vapor intrusion model to estimate EPCs in soil vapor, attenuation factors, and EPCs in indoor air (Attachment E-3).

Table E5-1
Toxicity Values - Reference Doses/Reference Concentrations[1]
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	Oral Reference Dose (RfDo)[2]					Inhalation Reference Concentration (RfCi)				
	Chronic (cRfDo)	Target Organ(s)/ System(s)	Source	Subchronic (sRfDo)	Source[3]	Chronic (cRfCi)	Target Organ(s)/ System(s)	Source	Subchronic (sRfCi)	Source[3]
	(mg/kg-day)			(mg/kg-day)		(µg/m^3)			(µg/m^3)	
Metals										
Antimony	4.00E-04	Blood	USEPA, 2017	4.00E-04	c	- -	- -	- -	- -	- -
Arsenic	3.50E-06	Reproductive-Development, Cardiovascular, Nervous, Lung, Skin	DTSC, 2016	3.50E-06	c	1.50E-02	Reproductive-Development, Cardiovascular, Nervous, Lung, Skin	DTSC, 2016	1.50E-02	c
Barium	2.00E-01	Kidney	USEPA, 2017	2.00E-01	c	5.00E-01	Reproductive	USEPA, 1997	5.00E+00	USEPA, 1997
Chromium	1.50E+00	None	USEPA, 2017	1.50E+00	c	- -	- -	- -	- -	- -
Cobalt	3.00E-04	Thyroid	USEPA, 2016	3.00E-04	c	6.00E-03	Respiratory	USEPA, 2016	6.00E-03	c
Copper	4.00E-02	Gastrointestinal	USEPA, 1997	4.00E-02	c	- -	- -	- -	- -	- -
Lead	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Mercury	1.60E-04	Nervous, Kidney, Development	DTSC, 2016	1.60E-04	c	3.00E-02	Nervous, Kidney, Development	DTSC, 2016	3.00E-02	c
Molybdenum	5.00E-03	Kidney	USEPA, 2017	5.00E-03	c	- -	- -	- -	- -	- -
Nickel	1.10E-02	Development	DTSC, 2016	1.10E-02	c	1.40E-02	Respiratory, Blood	DTSC, 2016	1.40E-02	c
Thallium	1.00E-05	Skin (hair follicle atrophy)	USEPA, 2016	1.00E-05	c	- -	- -	- -	- -	- -
Vanadium	5.00E-03	Kidney	USEPA, 2016	5.00E-03	c	1.00E-01	Respiratory	ATSDR, 2015	- -	- -
Zinc	3.00E-01	Blood, Immune	USEPA, 2017	3.00E-01	c	- -	- -	- -	- -	- -
TPH										
TPH (C4-C12) Aliphatic	4.00E-02	- -	DTSC, 2013	4.00E-02	c	7.00E+02	- -	DTSC, 2013	7.00E+02	c
[4] TPH (C4-C12) Aromatic	- -	- -	DTSC, 2013	- -	- -	- -	- -	DTSC, 2013	- -	- -
TPH (C13-C22) Aliphatic	1.00E-01	- -	DTSC, 2013	1.00E-01	c	3.00E+02	- -	DTSC, 2013	3.00E+02	c
TPH (C13-C22) Aromatic	3.00E-02	- -	DTSC, 2013	3.00E-02	c	5.00E+01	- -	DTSC, 2013	5.00E+01	c
[5] TPH (C23-C44) Aliphatic	2.00E+00	- -	DTSC, 2013	2.00E+00	c	- -	- -	DTSC, 2013	- -	- -
[5] TPH (C23-C44) Aromatic	4.00E-02	- -	DTSC, 2013	4.00E-02	c	- -	- -	DTSC, 2013	- -	- -
VOCs										
Benzene	4.00E-03	Immune	USEPA, 2017	1.20E-02	s	3.00E+00	Development, Nervous, Blood	DTSC, 2016	3.00E+00	c
Bis (2-chloroethyl) ether	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
[6] tert-Butyl Alcohol	1.00E-01	- -	USEPA, 2016	1.00E-01	c	- -	- -	- -	- -	- -
sec-Butylbenzene	1.00E-01	Kidney	USEPA, 2016	1.00E-01	c	4.00E+02	RTR	DTSC, 2016	4.00E+02	c
Ethylbenzene	1.00E-01	Liver, Kidney	USEPA, 2017	1.00E+00	s	1.00E+03	Development	USEPA, 2017	1.00E+03	c
Isopropylbenzene	1.00E-01	Kidney	USEPA, 2017	3.00E-01	s	4.00E+02	Endocrine, Kidney	USEPA, 2017	4.00E+03	s
Naphthalene	2.00E-02	Development	USEPA, 2017	2.00E-01	s	3.00E+00	Nervous, Respiratory	USEPA, 2017	3.00E+00	c
n-Propylbenzene	1.00E-01	- -	USEPA, 2016	1.00E-01	c	1.00E+03	- -	USEPA, 2016	1.00E+03	c
Toluene	8.00E-02	Kidney	USEPA, 2017	8.00E-01	s	3.00E+02	Nervous, Respiratory, Development	DTSC, 2016	3.00E+02	c
o-Xylene	2.00E-01	Development	USEPA, 2017	2.00E-01	c	1.00E+02	Nervous	USEPA, 2017	3.00E+02	s
Total Xylenes	2.00E-01	Development	USEPA, 2017	2.00E-01	c	1.00E+02	Nervous	USEPA, 2017	3.00E+02	s

Table E5-1
Toxicity Values - Reference Doses/Reference Concentrations[1]
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	Oral Reference Dose (RfDo)[2]					Inhalation Reference Concentration (RfCi)				
	Chronic (cRfDo)	Target Organ(s)/ System(s)	Source	Subchronic (sRfDo)	Source[3]	Chronic (cRfCi)	Target Organ(s)/ System(s)	Source	Subchronic (sRfCi)	Source[3]
	(mg/kg-day)			(mg/kg-day)		(µg/m^3)			(µg/m^3)	
PAHs										
Acenaphthene	6.00E-02	Liver	USEPA, 2017	6.00E-01	s	2.40E+02	RTR	DTSC, 2016	2.40E+02	c
Chrysene	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Fluoranthene	4.00E-02	Liver, Blood	USEPA, 2017	4.00E-02	c	1.40E+02	RTR	- -	1.40E+02	c
Fluorene	4.00E-02	Blood	USEPA, 2017	4.00E-01	s	1.60E+02	RTR	DTSC, 2016	1.60E+02	c
[7] Phenanthrene	3.00E-01	None	USEPA, 2017	3.00E-01	c	1.20E+03	RTR	DTSC, 2016	1.20E+03	c
Pyrene	3.00E-02	Kidney	USEPA, 2017	3.00E-01	s	1.20E+02	RTR	DTSC, 2016	1.20E+02	c

Notes:

mg/kg-day = milligrams per kilogram body weight per day.

µg/m^3 = micrograms per cubic meter.

RTR = route to route extrapolation.

TPH = total petroleum hydrocarbons.

VOC = volatile organic compounds.

PAH = polycyclic aromatic hydrocarbons.

"- -" = value was not available from the sources listed above or not applicable for this exposure route.

c = In the absence of specific values for subchronic exposure, the chronic toxicity value was adopted as the subchronic toxicity value.

s = In the absence of specific values for subchronic exposure, the chronic toxicity value was modified using the subchronic to chronic uncertainty factor used in developing the chronic value.

[1] Toxicity values were obtained from the following sources of information: OEHHA, 2017; DTSC, 2016; USEPA, 2017, 2016; DTSC, 2013; ATSDR, 2015; USEPA, 1997.

[2] In the absence of dermal toxicity values the oral reference doses were multiplied by the gastrointestinal absorption (GIABS) factor and used to evaluate dermal exposure.

[3] For most chemicals, in the absence of a specific value for subchronic exposure, the chronic toxicity value was adopted as the subchronic toxicity value. For a few chemicals, the chronic toxicity value was modified using the subchronic to chronic uncertainty factor as provided by the USEPA IRIS online database. Unless noted otherwise, a unique subchronic toxicity value was only used for those chemicals with toxicity values sourced from USEPA IRIS and with published uncertainty factors applied for the use of a subchronic study for chronic toxicity value derivation.

[4] The aromatic fraction of this hydrocarbon range is evaluated by its more toxic components (i.e., benzene, toluene, ethylbenzene, and xylenes [BTEX]; DTSC, 2013).

[5] Inhalation exposure not evaluated due to low volatility of COPCs in this hydrocarbon range (DTSC, 2013).

[6] In the absence of toxicity values for tertiary-butyl alcohol, values for sec-butyl alcohol were used.

[7] In the absence of toxicity values for phenanthrene, values for anthracene were used.

References:

ATSDR. 2015. Minimal Risk Levels (MRLs). September.

DTSC. 2013. Preliminary Endangerment Assessment Guidance Manual. October.

DTSC. 2016. Human Health Risk Assessment Note Number 3: DTSC-modified Screening Levels. June.

OEHHA. 2017. Toxicity Criteria Database. On-line computer database. Last accessed May.

USEPA. 1997. Health Effects Assessment Summary Tables (HEAST) FY 1997 Update. Office of Solid Waste and Emergency Response. July.

USEPA. 2016. Regional Screening Levels for Chemical Contaminants at Superfund Sites. USEPA Region 3, Region 6, and Region 9. May.

USEPA. 2017. Integrated Risk Information System (IRIS). On-line computer database. Last accessed May.

Table E5-2
Chemical-Specific Gastrointestinal Absorption Factors (GIABS)
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	GIABS (unitless)	Source
Metals		
Antimony	0.15	USEPA, 2004
Arsenic	1	USEPA, 2004
Barium	0.07	USEPA, 2004
Chromium	0.013	USEPA, 2004
Cobalt	1	USEPA, 2004
Copper	1	USEPA, 2004
Lead	1	USEPA, 2004
Mercury	1	USEPA, 2004
Molybdenum	1	USEPA, 2004
Nickel	0.04	USEPA, 2004
Thallium	1	USEPA, 2004
Vanadium	0.026	USEPA, 2004
Zinc	1	USEPA, 2004
Total Petroleum Hydrocarbons (TPH)		
TPH (C4-C12) Aliphatic	1	USEPA, 2004
TPH (C4-C12) Aromatic	1	USEPA, 2004
TPH (C13-C22) Aliphatic	1	USEPA, 2004
TPH (C13-C22) Aromatic	1	USEPA, 2004
TPH (C23-C44) Aliphatic	1	USEPA, 2004
TPH (C23-C44) Aromatic	1	USEPA, 2004
Volatile Organic Compounds (VOCs)		
Benzene	1	USEPA, 2004
Bis (2-chloroethyl) ether	1	USEPA, 2004
[1] tert-Butyl Alcohol	1	USEPA, 2004
sec-Butylbenzene	1	USEPA, 2004
Ethylbenzene	1	USEPA, 2004
Isopropylbenzene	1	USEPA, 2004
Naphthalene	1	USEPA, 2004
n-Propylbenzene	1	USEPA, 2004
Toluene	1	USEPA, 2004
o-Xylene	1	USEPA, 2004
Total Xylenes	1	USEPA, 2004
Polycyclic Aromatic Hydrocarbons (PAHs)		
Acenaphthene	1	USEPA, 2004
Chrysene	1	USEPA, 2004
Fluoranthene	1	USEPA, 2004
Fluorene	1	USEPA, 2004
[2] Phenanthrene	1	USEPA, 2004
Pyrene	1	USEPA, 2004

Notes:
[1] In the absence of a GIABS value for tertiary-butyl alcohol, the value for sec-butyl alcohol were used.
[2] In the absence of a GIABS value for phenanthrene, the value for anthracene were used.

Reference:
USEPA. 2004. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment). Final. Office of Superfund Remediation and Technology Innovation. July.

Table E5-3
Toxicity Values - Slope Factors/Inhalation Unit Risk Factors [1]
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	Oral Slope Factor (SFo)[2] (mg/kg-day)$^{-1}$		Inhalation Unit Risk Factor (IUR) (µg/m^3)$^{-1}$	
	Value	Source	Value	Source
Metals				
Antimony	- -	- -	- -	- -
Arsenic	9.50E+00	DTSC, 2016	3.30E-03	DTSC, 2016
Barium	- -	- -	- -	- -
Chromium	- -	- -	- -	- -
Cobalt	- -	- -	9.00E-03	USEPA, 2016
Copper	- -	- -	- -	- -
Lead	- -	- -	- -	- -
Mercury	- -	- -	- -	- -
Molybdenum	- -	- -	- -	- -
Nickel	- -	- -	2.60E-04	OEHHA, 2017
Thallium	- -	- -	- -	- -
Vanadium	- -	- -	- -	- -
Zinc	- -	- -	- -	- -
Total Petroleum Hydrocarbons (TPH)				
TPH (C4-C12) Aliphatic	- -	DTSC, 2013	- -	DTSC, 2013
[3] TPH (C4-C12) Aromatic	- -	DTSC, 2013	- -	DTSC, 2013
TPH (C13-C22) Aliphatic	- -	DTSC, 2013	- -	DTSC, 2013
TPH (C13-C22) Aromatic	- -	DTSC, 2013	- -	DTSC, 2013
[4] TPH (C23-C44) Aliphatic	- -	DTSC, 2013	- -	DTSC, 2013
[4] TPH (C23-C44) Aromatic	- -	DTSC, 2013	- -	DTSC, 2013
Volatile Organic Compounds (VOCs)				
Benzene	1.00E-01	DTSC, 2016	2.90E-05	DTSC, 2016
Bis (2-chloroethyl) ether	2.50E+00	OEHHA, 2017	7.10E-04	OEHHA, 2017
[5] tert-Butyl Alcohol	- -	- -	- -	- -
sec-Butylbenzene	- -	- -	- -	- -
Ethylbenzene	1.10E-02	OEHHA, 2017	2.50E-06	OEHHA, 2017
Isopropylbenzene	- -	- -	- -	- -
Naphthalene	1.20E-01	OEHHA, 2017	3.40E-05	OEHHA, 2017
n-Propylbenzene	- -	- -	- -	- -
Toluene	- -	- -	- -	- -
o-Xylene	- -	- -	- -	- -
Total Xylenes	- -	- -	- -	- -
Polycyclic Aromatic Hydrocarbons (PAHs)				
Acenaphthene	- -	- -	- -	- -
Chrysene	7.30E-03	USEPA, 2016	1.10E-05	OEHHA, 2017
Fluoranthene	- -	- -	- -	- -
Fluorene	- -	- -	- -	- -
[6] Phenanthrene	- -	- -	- -	- -
Pyrene	- -	- -	- -	- -

Table E5-3
Toxicity Values - Slope Factors/Inhalation Unit Risk Factors [1]
Former ChemOil Refinery
Signal Hill, California

Notes:
mg/kg-day = milligrams per kilogram body weight per day.
$\mu g/m^3$ = micrograms per cubic meter.
"- -" = value was not available from the sources listed above or not applicable for this exposure route.

[1] Toxicity values were obtained from the following sources of information: OEHHA, 2017; DTSC, 2016; USEPA, 2017, 2016; DTSC, 2013.
[2] In the absence of dermal toxicity values the oral slope factors were divided by the gastrointestinal absorption (GIABS) factor and used to evaluate dermal exposure.
[3] The aromatic fraction of this hydrocarbon range is evaluated by its more toxic components (i.e., benzene, toluene, ethylbenzene, and xylenes [BTEX]; DTSC, 2013).
[4] Inhalation exposure not evaluated due to low volatility of COPCs in this hydrocarbon range (DTSC, 2013).
[5] In the absence of toxicity values for tertiary-butyl alcohol, values for sec-butyl alcohol were used.
[6] In the absence of toxicity values for phenanthrene, values for anthracene were used.

References:
DTSC. 2013. Preliminary Endangerment Assessment Guidance Manual. October.
DTSC. 2016. Human Health Risk Assessment Note Number 3: DTSC-modified Screening Levels. October.
OEHHA. 2017. Toxicity Criteria Database. On-line computer database. Last accessed May.
USEPA. 2016. Regional Screening Levels for Chemical Contaminants at Superfund Sites. USEPA Region 3, Region 6, and Region 9. June (Revised).
USEPA. 2017. Integrated Risk Information System (IRIS). On-line computer database. Last accessed May.

Table E6-1
Summary of Noncancer Hazard Indices and Excess Cancer Risks
Former ChemOil Refinery
Signal Hill, California

Exposure Pathway	Hazard Index (HI)	Excess Cancer Risk (CR)	Comments
Hypothetical Onsite Construction/Utility Worker Receptor - Future Construction/Development Scenario			
Direct Exposure to COPCs in Soil (0 to 10 feet bgs)	2	3 E-07	The total HI exceeds the USEPA/CalEPA target level of one. Individual HI estimates for each COPC do not exceed the USEPA/CalEPA target level of one. The individual HI estimates for cobalt, nickel, thallium, and vanadium in soil account for 83% of the total HI. However, their individual HIs do not exceed one and are not associated with an effect on the same primary critical target organ or system. Therefore, the COPCs do not pose adverse noncancer effects to the hypothetical onsite construction/utility worker receptor. The CR is within CalEPA's risk management range and is less than 1 x 10^{-5}, which is generally acceptable for occupational exposures. Therefore, COPCs do not pose a risk to the hypothetical onsite construction/utility worker receptor.
Total	**2**	**3 E-07**	
Hypothetical Onsite Commercial/Industrial Worker Receptor - Future Building Scenario			
Direct Exposure to COPCs in Soil	0.3	2 E-08	The HI does not exceed USEPA/CalEPA target level of one. Therefore, the COPCs do not pose adverse noncancer effects to the hypothetical onsite commercial/industrial worker receptor. The CR is below the most stingent end of CalEPA's risk management range of 1 x 10^{-6} to 1 x 10^{-4} and is less than 1 x 10^{-5}, which is generally acceptable for occupational exposures. Therefore, COPCs do not pose a risk to the hypothetical onsite commercial/industrial worker receptor.
Inhalation of COPCs Volatilizing from Groundwater into Indoor Air	0.009	7 E-06	The HI does not exceed USEPA/CalEPA target level of one. Therefore, the COPCs do not pose adverse noncancer effects to the hypothetical onsite commercial/industrial worker receptor. The CR is within CalEPA's risk management range and is less than 1 x 10^{-5}, which is generally acceptable for occupational exposures. Therefore, COPCs do not pose a risk to the hypothetical onsite commercial/industrial worker receptor.
Total	**0.3**	**7 E-06**	

Notes:
HI = hazard index.
CR = cancer risk.
feet bgs = feet below ground surface
COPC = chemical of potential concern
USEPA = U.S. Environmental Protection Agency
CalEPA = California Environmental Protection Agency

ATTACHMENT E-1

SUMMARY OF SOIL, GROUNDWATER, AND SOIL VAPOR DATA

SOIL

Table E-1A
Summary of Analytical Results for Metals in Soil, East Parcel
Former ChemOil Refinery
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	Sample Depth	U.S. EPA Method 6010B - Metals																
					Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
B-1-1	TEC	(a) (b) (c) (d)	2001	1	0.50	4.5	50	ND<0.15	ND<0.15	10	4.0	8.0	2.0	ND<0.10	ND<0.25	5.0	ND<0.25	ND<0.15	0.42	17	23
B-1-5	TEC	(a) (b) (c) (d)	2001	5	0.50	13	92	ND<0.15	ND<0.15	20	11	21	4.0	ND<0.10	0.36	17	ND<0.25	ND<0.15	0.50	46	46
B-1-10	TEC	(a) (b) (c) (d)	2001	10	0.50	12	86	ND<0.15	ND<0.15	20	10	19	ND<0.25	3.0	ND<0.25	17	ND<0.25	ND<0.15	0.50	38	41
B-2-1	TEC	(a) (b) (c) (d)	2001	1	1.0	9.5	120	ND<0.15	ND<0.15	40	7.0	48	100	--	0.50	64	ND<0.25	ND<0.15	0.50	120	200
B-2-5	TEC	(a) (b) (c) (d)	2001	5	0.50	10	450	ND<0.15	ND<0.15	18	10	15	3.0	0.11	ND<0.25	18	ND<0.25	ND<0.15	1.0	31	38
B-2-10	TEC	(a) (b) (c) (d)	2001	10	0.50	8.0	56	ND<0.15	ND<0.15	8.5	4.5	9.0	1.5	ND<0.10	ND<0.25	7.5	ND<0.25	ND<0.15	0.33	20	27
B-3-1	TEC	(a) (b) (c) (d)	2001	1	0.39	5.0	58	ND<0.15	ND<0.15	9.5	4.5	8.0	1.5	ND<0.10	0.33	6.0	ND<0.25	ND<0.15	0.50	18	22
B-3-5	TEC	(a) (b) (c) (d)	2001	5	0.50	12	100	ND<0.15	ND<0.15	19	10	16	3.0	ND<0.10	0.41	14	ND<0.25	ND<0.15	1.0	41	41
B-3-10	TEC	(a) (b) (c) (d)	2001	10	1.0	16	150	ND<0.15	ND<0.15	25	12	26	4.5	ND<0.10	0.50	20	ND<0.25	ND<0.15	1.5	48	48
B-4-1	TEC	(a) (b) (c) (d)	2001	1	0.50	10	76	ND<0.15	ND<0.15	18	8.0	16	3.0	ND<0.10	0.36	12	ND<0.25	ND<0.15	1.0	36	41
B-4-5	TEC	(a) (b) (c) (d)	2001	5	0.50	18	90	ND<0.15	ND<0.15	28	13	31	4.5	ND<0.10	0.50	22	ND<0.25	ND<0.15	2.0	53	56
B-4-10	TEC	(a) (b) (c) (d)	2001	10	ND<0.25	4.5	44	ND<0.15	ND<0.15	8.0	4.0	7.5	1.0	ND<0.10	0.26	6.5	ND<0.25	ND<0.15	ND<0.25	16	23
B-5-1	TEC	(a) (b) (c) (d)	2001	1	0.50	4.5	54	ND<0.15	ND<0.15	10	4.5	7.0	2.0	ND<0.10	0.42	6.0	ND<0.25	ND<0.15	1.0	17	24
B-5-5	TEC	(a) (b) (c) (d)	2001	5	0.50	9.0	73	ND<0.15	ND<0.15	15	8.0	12	2.5	ND<0.10	0.50	12	ND<0.25	ND<0.15	1.0	30	38
B-5-10	TEC	(a) (b) (c) (d)	2001	10	0.50	18	140	ND<0.15	ND<0.15	32	13	31	5.5	0.12	0.50	23	ND<0.25	ND<0.15	1.5	52	57
B-6-1	TEC	(a) (b) (c) (d)	2001	1	0.36	4.0	30	ND<0.15	ND<0.15	7.5	3.5	3.0	0.50	ND<0.10	0.35	5.5	ND<0.25	ND<0.15	0.50	15	22
B-6-5	TEC	(a) (b) (c) (d)	2001	5	0.50	10	68	ND<0.15	ND<0.15	16	8.0	14	3.0	ND<0.10	0.42	12	ND<0.25	ND<0.15	1.0	32	45
B-6-10	TEC	(a) (b) (c) (d)	2001	10	0.50	17	310	ND<0.15	ND<0.15	25	12	26	5.0	ND<0.10	0.50	20	ND<0.25	ND<0.15	1.0	48	48
B-7-1	TEC	(a) (b) (c) (d)	2001	1	0.45	5.0	56	ND<0.15	ND<0.15	9.0	4.5	7.5	3.0	ND<0.10	0.35	5.5	ND<0.25	ND<0.15	0.50	16	23
B-7-5	TEC	(a) (b) (c) (d)	2001	5	0.50	9.0	88	ND<0.15	ND<0.15	16	6.5	12	3.0	ND<0.10	0.49	10	ND<0.25	ND<0.15	0.50	27	38
B-7-10	TEC	(a) (b) (c) (d)	2001	10	1.0	18	98	ND<0.15	ND<0.15	26	14	31	6.0	ND<0.10	0.50	22	ND<0.25	ND<0.15	1.5	52	54
B-8-1	TEC	(a) (b) (c) (d)	2001	1	0.50	4.5	47	ND<0.15	ND<0.15	9.5	4.5	6.5	1.5	ND<0.10	0.49	4.5	ND<0.25	ND<0.15	0.50	17	22
B-8-5	TEC	(a) (b) (c) (d)	2001	5	0.50	12	73	ND<0.15	ND<0.15	22	10	17	3.5	ND<0.10	0.42	15	ND<0.25	ND<0.15	1.5	40	50
B-8-10	TEC	(a) (b) (c) (d)	2001	10	1.0	16	76	ND<0.15	ND<0.15	25	12	28	4.5	ND<0.10	0.50	20	ND<0.25	ND<0.15	1.5	48	50
B-9-1	TEC	(a) (b) (c) (d)	2001	1	0.50	7.0	72	ND<0.15	ND<0.15	12	6.0	12	5.5	ND<0.10	0.47	8.0	ND<0.25	ND<0.15	0.50	22	39
B-9-5	TEC	(a) (b) (c) (d)	2001	5	1.0	9.0	84	ND<0.15	ND<0.15	16	7.5	12	3.0	ND<0.10	0.46	11	ND<0.25	ND<0.15	0.50	29	40
B-9-10	TEC	(a) (b) (c) (d)	2001	10	0.50	7.0	140	ND<0.15	ND<0.15	10	7.0	12	3.0	ND<0.10	0.37	10	ND<0.25	ND<0.15	1.0	19	26
Number of Samples					27	27	27	27	27	27	27	27	27	26	27	27	27	27	27	27	27
Number of Detections					26	27	27	0	0	27	27	27	26	3	23	27	0	0	26	27	27
Frequency of Detection					96%	100%	100%	0%	0%	100%	100%	100%	96%	12%	85%	100%	0%	0%	96%	100%	100%
Mean					0.58	10.09	103.00	ND	ND	17.59	8.11	16.87	6.90	1.08	0.43	14.57	ND	ND	0.89	35.11	43.78
Standard Deviation					0.21	4.67	87.43	ND	ND	8.29	3.29	10.39	19.04	1.67	0.07	11.56	ND	ND	0.46	21.49	33.29
Minimum Detected Concentration					0.36	4	30	ND	ND	7.5	3.5	3	0.5	0.11	0.26	4.5	ND	ND	0.33	15	22
Maximum Detected Concentration					1.0	18.0	450.0	ND	ND	40.0	14.0	48.0	100.0	3.0	0.5	64.0	ND	ND	2.0	120.0	200.0

Table E-1A
Summary of Analytical Results for Metals in Soil, East Parcel
Former ChemOil Refinery
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	Sample Depth	U.S. EPA Method 6010B - Metals																
					Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
B-1-15	TEC	(a) (b) (c) (d)	2001	15	0.41	5.0	54	ND<0.15	ND<0.15	5.5	3.6	6.0	1.0	ND<0.10	ND<0.25	5.0	ND<0.25	ND<0.15	ND<0.25	12	18
B-1-20	TEC	(a) (b) (c) (d)	2001	20	ND<0.25	3.0	15	ND<0.15	ND<0.15	5.0	1.5	1.5	0.50	ND<0.10	ND<0.25	2.5	ND<0.25	ND<0.15	ND<0.25	9.5	10
B-1-25	TEC	(a) (b) (c) (d)	2001	25	ND<0.25	5.0	22	ND<0.15	ND<0.15	7.0	3.5	3.0	0.50	ND<0.10	0.50	4.5	ND<0.25	5.0	0.50	15	18
B-1-30	TEC	(a) (b) (c) (d)	2001	30	ND<0.25	5.0	24	ND<0.15	ND<0.15	8.0	3.0	3.5	0.50	ND<0.10	0.37	4.5	ND<0.25	ND<0.15	0.48	16	18
B-1-35	TEC	(a) (b) (c) (d)	2001	35	0.42	10	26	ND<0.15	ND<0.15	7.0	3.5	6.5	1.0	ND<0.10	0.50	5.0	ND<0.25	ND<0.15	0.45	20	22
B-2-15	TEC	(a) (b) (c) (d)	2001	15	0.50	9.5	63	ND<0.15	ND<0.15	16	8.0	12	2.0	ND<0.10	0.50	12	ND<0.25	0.50	1.0	32	36
B-2-20	TEC	(a) (b) (c) (d)	2001	20	0.38	6.0	50	ND<0.15	ND<0.15	10	6.0	10	1.5	ND<0.10	0.44	8.0	ND<0.25	ND<0.15	0.50	24	29
B-2-25	TEC	(a) (b) (c) (d)	2001	25	ND<0.25	2.5	24	ND<0.15	ND<0.15	6.5	3.0	5.5	1.0	ND<0.10	0.29	4.5	ND<0.25	ND<0.15	0.25	12	16
B-2-30	TEC	(a) (b) (c) (d)	2001	30	0.47	8.0	35	ND<0.15	ND<0.15	9.0	4.5	4.5	1.0	ND<0.10	0.30	5.5	ND<0.25	ND<0.15	0.50	18	25
B-2-35	TEC	(a) (b) (c) (d)	2001	35	0.32	5.5	28	ND<0.15	ND<0.15	8.0	4.5	4.0	0.50	ND<0.10	0.34	5.0	ND<0.25	ND<0.15	0.45	18	26
B-2-40	TEC	(a) (b) (c) (d)	2001	40	0.50	5.5	32	ND<0.15	ND<0.15	9.0	5.5	5.0	0.50	ND<0.10	0.31	6.0	ND<0.25	ND<0.15	0.50	20	30
B-3-15	TEC	(a) (b) (c) (d)	2001	15	0.39	3.5	38	ND<0.15	ND<0.15	6.5	3.5	6.0	1.0	ND<0.10	0.27	5.5	ND<0.25	ND<0.15	0.36	14	16
B-3-20	TEC	(a) (b) (c) (d)	2001	20	0.43	5.5	50	ND<0.15	ND<0.15	10	5.5	10	1.5	ND<0.10	ND<0.25	8.0	ND<0.25	ND<0.15	0.50	22	26
B-3-25	TEC	(a) (b) (c) (d)	2001	25	0.26	5.0	29	ND<0.15	ND<0.15	9.5	4.5	3.5	1.0	ND<0.10	0.50	6.0	ND<0.25	ND<0.15	0.50	16	25
B-3-33	TEC	(a) (b) (c) (d)	2001	33	0.42	8.0	34	ND<0.15	ND<0.15	8.0	5.0	5.0	0.50	ND<0.10	ND<0.25	5.5	ND<0.25	ND<0.15	0.50	19	28
B-4-15	TEC	(a) (b) (c) (d)	2001	15	0.42	4.5	43	ND<0.15	ND<0.15	9.0	4.5	7.0	3.0	ND<0.10	0.46	5.0	ND<0.25	ND<0.15	0.50	18	21
B-4-20	TEC	(a) (b) (c) (d)	2001	20	0.34	3.5	33	ND<0.15	ND<0.15	6.0	2.5	5.5	1.0	ND<0.10	0.29	4.0	ND<0.25	ND<0.15	ND<0.25	13	14
B-4-25	TEC	(a) (b) (c) (d)	2001	25	0.38	4.0	36	ND<0.15	ND<0.15	7.0	3.5	3.0	2.0	ND<0.10	ND<0.25	5.0	ND<0.25	ND<0.15	0.50	14	20
B-5-15	TEC	(a) (b) (c) (d)	2001	15	0.45	6.0	82	ND<0.15	ND<0.15	10	6.0	11	1.5	ND<0.10	ND<0.25	8.5	ND<0.25	ND<0.15	0.50	21	29
B-5-20	TEC	(a) (b) (c) (d)	2001	20	ND<0.25	3.0	20	ND<0.15	ND<0.15	5.0	2.0	4.0	1.0	ND<0.10	0.30	3.5	ND<0.25	ND<0.15	0.28	10	12
B-5-25	TEC	(a) (b) (c) (d)	2001	25	0.40	4.0	29	ND<0.15	ND<0.15	6.5	3.5	3.0	0.50	ND<0.10	0.38	4.5	ND<0.25	ND<0.15	0.41	14	20
B-6-15	TEC	(a) (b) (c) (d)	2001	15	0.31	6.0	40	ND<0.15	ND<0.15	8.5	5.0	12	8.0	ND<0.10	0.26	8.0	ND<0.25	ND<0.15	0.49	18	28
B-6-20	TEC	(a) (b) (c) (d)	2001	20	0.25	5.0	27	ND<0.15	ND<0.15	5.5	3.0	5.0	1.0	ND<0.10	ND<0.25	3.5	ND<0.25	ND<0.15	0.34	12	14
B-6-25	TEC	(a) (b) (c) (d)	2001	25	ND<0.25	3.0	23	ND<0.15	ND<0.15	7.0	2.0	3.5	1.5	ND<0.10	0.25	2.5	ND<0.25	ND<0.15	ND<0.25	9.5	12
B-7-15	TEC	(a) (b) (c) (d)	2001	15	0.46	7.5	61	ND<0.15	ND<0.15	11	6.5	15	2.5	0.12	0.40	10	ND<0.25	ND<0.15	0.50	24	32
B-7-20	TEC	(a) (b) (c) (d)	2001	20	0.50	6.5	62	ND<0.15	ND<0.15	12	6.5	13	3.0	ND<0.10	0.26	9.5	ND<0.25	ND<0.15	0.50	24	31
B-7-25	TEC	(a) (b) (c) (d)	2001	25	0.36	4.5	34	ND<0.15	ND<0.15	8.0	4.0	3.0	1.0	ND<0.10	0.30	55	ND<0.25	ND<0.15	0.47	15	20
B-8-15	TEC	(a) (b) (c) (d)	2001	15	0.50	7.5	62	ND<0.15	ND<0.15	12	7.5	14	2.0	ND<0.10	ND<0.25	11	ND<0.25	ND<0.15	1.0	26	37
B-8-20	TEC	(a) (b) (c) (d)	2001	20	0.50	4.5	29	ND<0.15	ND<0.15	5.0	2.5	4.0	1.0	ND<0.10	ND<0.25	3.5	ND<0.25	ND<0.15	ND<0.25	12	13
B-8-25	TEC	(a) (b) (c) (d)	2001	25	1.0	12	100	ND<0.15	ND<0.15	25	14	24	5.0	ND<0.10	0.37	20	ND<0.25	ND<0.15	1.5	32	62
B-9-15	TEC	(a) (b) (c) (d)	2001	15	0.50	7.0	66	ND<0.15	ND<0.15	10	6.0	10	2.0	ND<0.10	0.38	8.5	ND<0.25	ND<0.15	0.50	22	26
B-9-20	TEC	(a) (b) (c) (d)	2001	20	0.50	4.5	26	ND<0.15	ND<0.15	5.5	2.5	5.0	1.5	0.12	ND<0.25	3.5	ND<0.25	ND<0.15	0.31	12	14
Number of Samples					32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Number of Detections					26	32	32	0	0	32	32	32	32	2	22	32	0	2	27	32	32
Frequency of Detection					81%	100%	100%	0%	0%	100%	100%	100%	100%	6%	69%	100%	0%	6%	84%	100%	100%
Mean					0.44	5.63	40.53	ND	ND	8.69	4.58	7.13	1.61	0.12	0.36	7.91	ND	2.75	0.53	17.63	23.38
Standard Deviation					0.14	2.18	19.53	ND	ND	3.86	2.37	4.81	1.51	0.00	0.09	9.27	ND	3.18	0.25	5.95	10.15
Minimum Detected Concentration					0.25	2.5	15	ND	ND	5	1.5	1.5	0.5	0.12	0.25	2.5	ND	0.5	0.25	9.5	10
Maximum Detected Concentration					1.0	12.0	100.0	ND	ND	25.0	14.0	24.0	8.0	0.1	0.5	55.0	ND	5.0	1.5	32.0	62.0

Table E-1A
Summary of Analytical Results for Metals in Soil, East Parcel
Former ChemOil Refinery
Signal Hill, California

Notes:
mg/kg = milligram per kilogram.
bgs = below ground surface.
U.S. EPA = United States Environmental Protection Agency.
ND = not detected.
ND< = less than analytical detection limit listed.
TEC = Testa Environmental Corporation
-- = sample not analyzed for compound.
Data qualifiers from TEC, 2001:
(a) Sample date is unknown. The date listed is the date reported.
(b) Table 5-2 in TEC, 2001 does not indicate the whether this is soil or groundwater data. The units listed on the table indicate this is groundwater data (milligrams per liter), but the report text indicates this table is soil data.
The table is inferred to be soil data based on the report text and the units are assumed to be milligrams per kilogram.
(c) The consultant is inferred from the report text and figures.
(d) No analytical method is listed on Table 5-2 in TEC, 2001. The report text lists the analytical method for soil as U.S. EPA Method 6010B; therefore, it is assumed this is the correct listed method.
References:
TEC. 2001. Report on Additional Subsurface Assessment, Former Chemoil Refinery - Eastern Parcel, Signal Hill, California. December 14.

Table E-1B
Summary of Analytical Results for Total Petroleum Hydrocarbons (TPH) in Soil, East Parcel
Former ChemOil Refinery
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	Sample Depth	TPHg	TPHd	U. S. EPA Method 8015 - TPH																	Total TPH[1]		
							C06-C08	C08-C10	C10-C12	C12-C14	C14-C16	C16-C18	C18-C20	C20-C22	C22-C24	C24-C26	C26-C28	C28-C32	C32-C34	C34-C38	C38-C40	C40-C44	Total	C5-C12 (Note 2)	C13-C22 (Note 3)	C23-C44 (Note 4)
				feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
B-1	EEI	(a) (b) (c)	1988	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-1	EEI	(a) (b) (c) (d)	1988	10	--	ND<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-2	EEI	(a) (b) (c)	1988	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-2	EEI	(a) (b) (c)	1988	10	--	**11,000 ***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	2	**2,000**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	10	--	**1,100**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	10	--	**410 ***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
110-95-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**13**	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**13**	ND<1	ND<1	**6.5**
110-95-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**8.8**	ND<1	ND<1	ND<1	**2.6**	ND<1	**11**	ND<1	ND<1	**11.4**
110-95-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
125-310-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**11**	**14**	**27**	**24**	**24**	**25**	**7.4**	**11**	ND<1	ND<1	**143**	ND<1	**25**	**104.9**
125-310-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**15**	ND<1	ND<1	**1.9**	ND<1	ND<1	ND<1	ND<1	**17**	ND<1	ND<1	**9.4**
125-310-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
180-75-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
180-75-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
180-75-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
200-310-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**15**	ND<1	ND<1	**1.9**	ND<1	ND<1	ND<1	ND<1	**17**	ND<1	ND<1	**9.4**
200-310-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
200-310-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
204-95-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	**42**	**91**	**180**	**240**	**450**	**270**	**220**	**430**	**200**	**2,123**	ND<20	**42**	**2,036**
204-95-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**14**	ND<1	ND<1	ND<1	**3.0**	**4.8**	**22**	ND<1	ND<1	**21.8**
204-95-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**28**	ND<1	ND<1	ND<1	**4.0**	**2.1**	**34**	ND<1	ND<1	**34.1**
30-195-1	TSG	(a) (b) (c) (d) (e) (g)	1999	1	**24**	--	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
30-195-5	TSG	(a) (b) (c) (d) (e) (g)	1999	5	**30**	--	ND<1	**6.3**	**3.0**	ND<1	ND<1	**3.5**	**3.9**	**1.8**	**1.2**	ND<1	**7.1**	ND<1	**1.1**	ND<1	ND<1	ND<1	**28**	**9.3**	**9.2**	**8.8**
30-195-10	TSG	(a) (b) (c) (d) (e) (g)	1999	10	**8.8**	--	ND<1	**6.1**	**1.3**	ND<1	ND<1	**5.3**	**6.9**	**2.8**	**2.9**	**1.7**	**2.1**	ND<1	ND<1	ND<1	ND<1	ND<1	**29**	**7.4**	**15.0**	**5.3**
70-70-1	TSG	(a) (b) (c) (d) (e)	1999	1	**10**	--	ND<20	ND<20	ND<20	ND<20	**510**	**820**	**650**	**320**	**220**	**260**	**590**	**960**	**550**	**470**	**700**	**240**	**6,290**	ND<20	**2,300**	**3,880**
70-70-5	TSG	(a) (b) (c) (d) (e)	1999	5	**7.2**	--	ND<10	ND<10	ND<10	**50**	**310**	**270**	**170**	**59**	**76**	**53**	**56**	**110**	**85**	**52**	**74**	**22**	**1,387**	ND<10	**834**	**490**
70-70-10	TSG	(a) (b) (c) (d) (e)	1999	10	**370**	--	ND<10	**230**	**310**	**580**	**2,300**	**2,300**	**1,300**	**350**	**290**	**470**	**570**	**890**	**470**	**400**	**550**	**170**	**11,180**	**830**	**6,540**	**3,665**
75-195-1	TSG	(a) (b) (c) (d) (e)	1999	1	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**10**	ND<1	ND<1	**7**	ND<1	ND<1	ND<1	ND<1	**17**	ND<1	ND<1	**12**
75-195-5	TSG	(a) (b) (c) (d) (e)	1999	5	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	**10**	ND<1	**7.7**	ND<1	ND<1	ND<1	**2.0**	**1.1**	**21**	ND<1	ND<1	**15.8**
75-195-10	TSG	(a) (b) (c) (d) (e)	1999	10	ND<1	--	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
B-6-1	TEC	(a) (b) (c)	2001	1	--	**45**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-6-10	TEC	(a) (b) (c)	2001	10	--	**10**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-8-1	TEC	(a) (b) (c)	2001	1	--	**46**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-9-1	TEC	(a) (b) (c)	2001	1	--	**220**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1B	Tetra Tech		06/01/06	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
E1C	Tetra Tech		06/01/06	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**94**	**201**	**92**
E3A	Tetra Tech		06/01/06	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
E5	Tetra Tech		06/01/06	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
E5	Tetra Tech		06/01/06	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
Number of Samples																								**29**	**29**	**29**
Number of Detections																								**4**	**8**	**16**
Frequency of Detection																								**14%**	**28%**	**55%**
Mean																								**235**	**1,246**	**650**
Standard Deviation																								**399**	**2,280**	**1,320**
Minimum Detected Concentration																								**7.4**	**9.2**	**5.3**
Maximum Detected Concentration																								**830**	**6,540**	**3,880**
70-70-15	TSG	(a) (b) (c) (d) (e)	1999	15	**370**	--	66	980	2,200	3,300	2,900	2,400	1,700	860	1,200	910	720	740	120	350	88	78	18,612	**4896**	**9,510**	**3,606**
70-70-20	TSG	(a) (b) (c) (d) (e)	1999	20	**760**	--	ND<5	1,800	3,300	8,100	4,300	3,400	2,700	1,400	1,800	1,100	1,300	960	210	480	93	120	31,063	**9150**	**15,850**	**5,163**
70-70-25	TSG	(a) (b) (c) (d) (e)	1999	25	ND<1	--	ND<1	1.2	4.7	11	10	9.1	12	11	16	11	12	8.6	3.7	5.4	2.5	ND<1	118	**11.4**	**47.6**	**51.2**
B-2-40	TEC	(a) (b) (c) (d)	2001	40	--	ND<10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-9-15	TEC	(a) (b) (c)	2001	15	--	**27**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-9-20	TEC	(a) (b) (c)	2001	20	--	**17**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1B	Tetra Tech		06/01/06	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
E1B	Tetra Tech		06/01/06	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.72**	**7.59 J**	**5.04 J**
E1C	Tetra Tech		06/01/06	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1,829**	**2,540**	**2,162**
E1C	Tetra Tech		06/01/06	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4,999**	**13,030**	**8,238**
E5	Tetra Tech		06/01/06	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
E5	Tetra Tech		06/01/06	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND<4.5	ND<25	ND<48
Number of Samples																								**9**	**9**	**9**
Number of Detections																								**6**	**6**	**6**
Frequency of Detection																								**67%**	**67%**	**67%**
Mean																								**3,482**	**6,831**	**3,204**
Standard Deviation																								**3,558**	**6,898**	**3,181**
Minimum Detected Concentration																								**5.7**	**7.6**	**5.0**
Maximum Detected Concentration																								**9,150**	**15,850**	**8,238**

Table E-1B
Summary of Analytical Results for Total Petroleum Hydrocarbons (TPH) in Soil, East Parcel
Former ChemOil Refinery
Signal Hill, California

Notes:
mg/kg = milligrams per kilogram.
bgs = below ground surface.
U.S. EPA = United States Environmental Protection Agency.
TPH = Total Petroleum Hydrocarbons.
TPHg = total petroleum hydrocarbons as gasoline.
TPHd = total petroleum hydrocarbons as diesel.
ND = not detected.
ND< = less than the laboratory reporting limit in data from Tetra Tech, 2006 samples or analytical detection limit in data from Testa, 2001.
* = Carbon range C8-C30
Consultant listed is the consultant that collected the data. Data from EEI, TSG, and TEC are recorded from TEC, 2001 report.
EEI = Engineering Enterprises, Inc.
TSG = The Source Group, Inc.
TEC = Testa Environmental Corporation
-- = sample not analyzed for compound.
- = Data not presented herein. Refer to Tetra Tech, 2006.
[1] For use in the risk assessment, laboratory analytical results for carbon data within the specific TPH carbon ranges were summed to represent a total TPH value for each carbon range.
[2] TPH (C5-C12) was calculated based on summing detected results from C6-C8, C8-C10, and C10-C12.
[3] TPH (C13-C22) was calculated based on summing detected results of one half C12-C14 and the results between C14 and C22.
[4] TPH (C23-C44) was calculated based on summing the results of one half C22-C24 and the results between C24 and C44.
Data qualifiers from TEC, 2001:
(a) Sample date is unknown. The date listed is the date reported.
(b) Table 5-3 in TEC, 2001 does not indicate the whether this is soil or groundwater data. The table is inferred to be soil data based on the report text.
(c) Table 5-3 in TEC, 2001 does not indicate what units these data are presented in. Units are inferred from the report text.
(d) <1 was not defined in this table. All <1 symbols were assumed to indicate "not detected above the analytical detection limit".
(e)The sum totals of TPH presented in TEC, 2001 did not sum up and were recalculated for this report.
(f) The carbon ranges for TPHg and TPHd were not defined except where indicated.
(g) TSG boring 130-195 is not shown on any figure in TEC, 2001. It is assumed to be boring 130-95 on all figures in TEC, 2001.
References:
TEC. 2001. Report on Additional Subsurface Assessment, Former Chemoil Refinery - Eastern Parcel, Signal Hill, California. December 14.
Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

Table E-1C
Summary of Analytical Results for Volatile Organic Compounds (VOCs) in Soil, East Parcel
Former ChemOil Refiney
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	Sample Depth	U.S. EPA Method 8260B - VOCs								
					Benzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Ethylbenzene	Isopropylbenzene	Naphthalene	Toluene	Total Xylenes
				feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
B-1	EEI	(a) (b) (c)	1988	2	--	--	--	--	--	--	--	--	--
B-1	EEI	(a) (b) (c)	1988	10	--	--	--	--	--	--	--	--	--
B-2	EEI	(a) (b) (c)	1988	2	--	--	--	--	--	--	--	--	--
B-2	EEI	(a) (b) (c)	1988	10	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	2	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	10	--	--	--	--	--	--	--	--	--
B-3	EEI	(a) (b) (c)	1988	10	--	--	--	--	--	--	--	--	--
110-95-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
110-95-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
110-95-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
125-310-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
125-310-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
125-310-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
180-75-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
180-75-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
180-75-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
200-310-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
200-310-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
200-310-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
204-95-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
204-95-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
204-95-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
30-195-1	TSG	(a) (b) (c) (e)	1999	1	ND<0.005	--	--	--	**0.017**	--	--	ND<0.005	**0.014**
30-195-5	TSG	(a) (b) (c) (e)	1999	5	ND<0.005	--	--	--	**0.52**	--	--	**0.0068**	**0.13**
30-195-10	TSG	(a) (b) (c) (e)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
70-70-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	**0.024**	--	--	ND<0.005	**0.045**
70-70-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	**0.013**	--	--	ND<0.005	**0.058**
70-70-10	TSG	(a) (b) (c)	1999	10	**0.057**	--	--	--	**0.82**	--	--	**0.29**	**3.4**
75-195-1	TSG	(a) (b) (c)	1999	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
75-195-5	TSG	(a) (b) (c)	1999	5	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
75-195-10	TSG	(a) (b) (c)	1999	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-6-1	TEC	(a) (b) (c)	2001	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-6-10	TEC	(a) (b) (c)	2001	10	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-8-1	TEC	(a) (b) (c)	2001	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-9-1	TEC	(a) (b) (c)	2001	1	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
E1B	Tetra Tech		06/01/06	5	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E1C	Tetra Tech		06/01/06	5	ND<0.002	ND<0.005	ND<0.005	ND<0.005	**0.0088 J**	ND<0.005	**0.0050 J**	ND<0.002	ND<0.002
E3A	Tetra Tech		06/01/06	10	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E5	Tetra Tech		06/01/06	5	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E5	Tetra Tech		06/01/06	10	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
Number of Samples					**33**	**5**	**5**	**5**	**33**	**5**	**5**	**33**	**33**
Number of Detections					**1**	**0**	**0**	**0**	**6**	**0**	**1**	**2**	**5**
Frequency of Detection					**3%**	**0%**	**0%**	**0%**	**18%**	**0%**	**20%**	**6%**	**15%**
Mean					**NE**	**ND**	**ND**	**ND**	**0**	**ND**	**NE**	**0**	**1**
Standard Deviation					**NE**	**ND**	**ND**	**ND**	**0**	**ND**	**NE**	**0**	**1**
Minimum Detected Concentration					**0.057**	**ND**	**ND**	**ND**	**0.0088**	**ND**	**0.005**	**0.0068**	**0.014**
Maximum Detected Concentration					**0.057**	**ND**	**ND**	**ND**	**0.82**	**ND**	**0.005**	**0.29**	**3.4**

Table E-1C
Summary of Analytical Results for Volatile Organic Compounds (VOCs) in Soil, East Parcel
Former ChemOil Refiney
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	Sample Depth (feet bgs)	U.S. EPA Method 8260B - VOCs								
					Benzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Ethylbenzene	Isopropylbenzene	Naphthalene	Toluene	Total Xylenes
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
70-70-15	TSG	(a) (b) (c)	1999	15	ND<0.005	--	--	--	**0.33**	--	--	**0.33**	**4.2**
70-70-20	TSG	(a) (b) (c)	1999	20	ND<0.005	--	--	--	**0.25**	--	--	**0.80**	**8.1**
70-70-25	TSG	(a) (b) (c)	1999	25	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-2-40	TEC	(a) (b) (c) (d)	2001	40	ND<0.005	**5.1**	**10**	--	ND<0.005	--	--	ND<0.005	**7.2**
B-9-15	TEC	(a) (b) (c)	2001	15	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
B-9-20	TEC	(a) (b) (c)	2001	20	ND<0.005	--	--	--	ND<0.005	--	--	ND<0.005	ND<0.01
E1B	Tetra Tech		06/01/06	15	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E1B	Tetra Tech		06/01/06	25	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E1C	Tetra Tech		06/01/06	15	ND<0.012	**1.100**	**3.100**	**0.175**	ND<0.012	**2.600**	**4.320**	**0.114**	ND<0.012
E1C	Tetra Tech		06/01/06	25	ND<0.012	**1.190**	**4.760**	**0.281**	**0.0594 J**	**4.020**	**9.080**	**0.136**	**0.0458 J**
E5	Tetra Tech		06/01/06	15	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
E5	Tetra Tech		06/01/06	20	ND<0.002	ND<0.005	ND<0.005	ND<0.005	ND<0.002	ND<0.005	ND<0.005	ND<0.002	ND<0.002
Number of Samples					12	7	7	6	12	6	6	12	12
Number of Detections					0	3	3	2	3	2	2	4	4
Frequency of Detection					0%	43%	43%	33%	25%	33%	33%	33%	33%
Mean					ND	2	6	0	0	3	7	0	5
Standard Deviation					ND	2	4	0	0	1	3	0	4
Minimum Detected Concentration					ND	1.1	3.1	0.175	0.0594	2.6	4.32	0.114	0.0458
Maximum Detected Concentration					ND	5.1	10	0.281	0.33	4.02	9.08	0.80	8.1

Notes:
mg/kg = milligram per kilogram.
bgs = below ground surface.
U.S. EPA = United States Environmental Protection Agency.
VOCs = volatile organic compounds.
ND = not detected.
ND< = less than the laboratory reporting limit in data from Tetra Tech, 2006 samples or analytical detection limit in data from TEC, 2001.
Consultant listed is the consultant that collected the data. Data from EEI, TSG, and TEC are recorded from TEC, 2001 report.
EEI = Engineering Enterprises, Inc.
TSG = The Source Group, Inc.
TEC = Testa Environmental Corporation
-- = sample not analyzed for compound.
J = analyte was detected; however, analyte concentration is an estimated value between the method detection limit and the practical quantitation limit.

Data qualifiers from TEC, 2001:
(a) Sample date is unknown. The date listed is the date reported.
(b) The analytical method for benzene, toluene, ethylbenzene and xylenes (BTEX) is unknown for all samples reported in TEC, 2001. Table 5-1 lists the method for as U.S. EPA Method 8020; however, the report text states the method is U.S. EPA Method 8260B. It is assumed the analytical method used is U.S. EPA Method 8260B.
(c) The analytical method for n-Butylbenzene and sec-butylbenzene are unknown. The report text indicates the analytical method for VOCs is U.S. EPA Method 8260 for all samples collected by TEC, 2001, so it is assumed that this is the actual analytical method used to analyze VOCs.
(d) Two concentrations are listed for xylenes in sample B-2-40. The higher concentration was assumed to be correct and is listed in this table.
(e)TSG boring 130-195 is not shown on any figure in TEC, 2001. It is assumed to be boring 130-95 on all figures in TEC, 2001.

References:
TEC. 2001. Report on Additional Subsurface Assessment, Former Chemoil Refinery - Eastern Parcel, Signal Hill, California. December 14.
Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

Table E-1D
Summary of Analytical Results for Polycyclic Aromatic Hydrocarbons (PAHs) in Soil, East Parcel
Former ChemOil Refinery
Signal Hill, California

Boring	Sample Date	Sample Depth	U.S. EPA Method 8270C - PAHs															
			Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
		feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
E1B	6/1/2006	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1B	6/1/2006	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1B	6/1/2006	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1C	6/1/2006	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E1C	6/1/2006	15	**0.221**	ND	ND	ND	ND	ND	ND	ND	**1.59**	ND	**0.036**	**0.387**	ND	**1.19**	**1.95**	**1.95**
E1C	6/1/2006	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E3A	6/1/2006	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E5	6/1/2006	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E5	6/1/2006	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E5	6/1/2006	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
E5	6/1/2006	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Number of Samples			1	1	1	1	1	1	1	1	1	1	1	1.00	1	1.0	1.00	1
Number of Detections			1	1	1	1	1	1	1	1	1	1	1	1.00	1	1.0	1.00	1
Frequency of Detection			100%	1	1	1	1	1	1	1	1	1	1	1.00	1	1.0	1.00	1
Mean			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Standard Deviation			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Minimum Detected Concentration			0.22	ND	ND	ND	ND	ND	ND	ND	1.6	ND	0.036	0.39	ND	1.2	2.0	2.0
Maximum Detected Concentration			0.22	ND	ND	ND	ND	ND	ND	ND	1.6	ND	0.036	0.39	ND	1.2	2.0	2.0

Notes:
mg/kg = milligram per kilogram.
ft bgs = feet below ground surface.
PAHs = Polycyclic aromatic hydrocarbons.
U.S. EPA = United States Environmental Protection Agency.
ND = Not detected at laboratory reporting limit. See Tetra Tech, 2006 for laboratory reporting limit.
-- = Not analyzed.

References:
Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

GROUNDWATER

Table E-1E
Summary of Analytical Results for Metals in Groundwater
Former Chemoil Refinery
Signal Hill, California

Sample ID	Consultant	Data Qualifiers	Sample Date	U.S EPA Method 6010B - Metals																
				Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Thallium µg/L	Vanadium µg/L	Zinc µg/L
MW-2	unknown	(a) (b) (c) (d) (e)	unknown	ND<0.0050	**0.0067**	**0.090**	ND<0.0030	ND<0.0030	**0.030**	ND<0.0030	**0.010**	ND<0.0050	ND<0.0020	ND<0.0050	ND<0.0030	ND<0.0050	ND<0.0030	ND<0.0050	**0.0077**	**0.030**
MW-10	unknown	(a) (b) (c) (d) (e)	unknown	ND<0.0050	**0.26**	**0.060**	ND<0.0030	ND<0.0030	ND<0.0030	ND<0.0030	**0.0072**	ND<0.0050	ND<0.0020	**0.010**	ND<0.0030	ND<0.0050	ND<0.0030	ND<0.0050	ND<0.0030	**0.030**
B-1	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.12**	**0.26**	ND<0.0030	ND<0.0030	**0.050**	**0.010**	**0.030**	ND<0.0050	ND<0.0020	**0.080**	**0.020**	ND<0.0050	ND<0.0030	ND<0.0050	**0.070**	**0.10**
B-2	TEC	(a) (b) (c) (d) (e)	2001	**0.0069**	**0.14**	**0.65**	ND<0.0030	ND<0.0030	**0.21**	**0.090**	**0.12**	**0.020**	ND<0.0020	**0.060**	**0.11**	ND<0.0050	ND<0.0030	**0.010**	**0.32**	**0.54**
B-3	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**10.03**	**0.19**	ND<0.0030	ND<0.0030	**0.030**	**0.020**	**0.020**	ND<0.0050	ND<0.0020	**0.030**	**0.020**	ND<0.0050	ND<0.0030	ND<0.0050	**0.070**	**0.10**
B-4	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.11**	**0.50**	ND<0.0030	ND<0.0030	**0.060**	**0.020**	**0.030**	ND<0.0050	ND<0.0020	**0.090**	**0.040**	ND<0.0050	ND<0.0030	ND<0.0050	**0.10**	**0.21**
B-5	TEC	(a) (b) (c) (d) (e)	2001	**0.0051**	**0.23**	**2.9**	ND<0.0030	ND<0.0030	**0.35**	**0.27**	**0.30**	**0.11**	ND<0.0020	**0.040**	**0.29**	ND<0.0050	ND<0.0030	**0.020**	**0.50**	**0.72**
B-6	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.030**	**0.31**	ND<0.0030	ND<0.0030	**0.030**	**0.050**	**0.040**	ND<0.0050	ND<0.0020	**0.020**	**0.030**	ND<0.0050	ND<0.0030	ND<0.0050	**0.070**	**0.070**
B-7	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.10**	**0.69**	ND<0.0030	ND<0.0030	**0.23**	**0.070**	**0.12**	**0.020**	ND<0.0020	**0.060**	**0.11**	ND<0.0050	ND<0.0030	**0.010**	**0.26**	**0.43**
B-8	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.040**	**0.33**	ND<0.0030	ND<0.0030	**0.060**	**0.020**	**0.050**	ND<0.0050	ND<0.0020	**0.060**	**0.030**	ND<0.0050	ND<0.0030	ND<0.0050	**0.080**	**0.13**
B-9	TEC	(a) (b) (c) (d) (e)	2001	ND<0.0050	**0.0091**	**215**	ND<0.0030	ND<0.0030	**0.010**	**0.010**	**0.020**	ND<0.0050	ND<0.0020	**0.030**	**0.010**	ND<0.0050	ND<0.0030	ND<0.0050	**0.030**	**0.050**
Number of Samples				11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detections				2	11	11	0	0	10	9	11	3	0	10	9	0	0	3	10	11
Frequency of Detection				18%	100%	100%	0%	0%	91%	82%	100%	27%	0%	91%	82%	0%	0%	27%	91%	100%
Mean				0.0060	1.0	20	ND	ND	0.11	0.062	0.068	0.050	ND	0.048	0.073	ND	ND	0.013	0.15	0.22
Standard Deviation				0.0013	3.0	65	ND	ND	0.12	0.083	0.087	0.052	ND	0.026	0.090	ND	ND	0.0058	0.16	0.24
Minimum Detected Concentration				0.0051	0.0067	0.060	ND	ND	0.010	0.010	0.0072	0.020	ND	0.010	0.010	ND	ND	0.010	0.0077	0.030
Maximum Detected Concentration				0.0069	10	215	ND	ND	0.35	0.27	0.30	0.11	ND	0.090	0.29	ND	ND	0.020	0.50	0.72

Notes:
µg/L = micrograms per liter.
U.S. EPA = United States Environmental Protection Agency.
ND = not detected.
ND< = Less than analytical detection limit listed.
TEC = Testa Environmental Corporation.
Data qualifiers from TEC, 2001:
MW-1, MW-10, and B-1 through B-9 are reported in TEC, 2001.
(a) Sample date is unknown. The date listed is the date reported.
(b) The consultant is unknown. Data collected for borings B-1 through B-9 are assumed to be collected by TEC, 2001, as it is stated in the report text 9 borings were installed as part of their investigation with the same naming convention.
(c) The sample depth is unknown.
(d) No analytical method is listed in Table 6-2. The report text lists the analytical method for soil as U.S. EPA Method 6010B; therefore, it is assumed this is the correct listed method.
(e) No units are listed in Table 6-2 or in the report text. The units are assumed to be µg/L.
References:
TEC. 2001. Report on Additional Subsurface Assessment, Former Chemoil Refinery - Eastern Parcel, Signal Hill, California. December 14.

Table E-1F
Summary of Analytical Results for Volatile Organic Compounds (VOCs) in Groundwater, East Parcel
Former ChemOil Refinery
Signal Hill, California

Sample ID	Consultant	Sample Date	U.S. EPA Method 8015B		U.S. EPA Method 8020B	U.S EPA Method 8260B - VOCs					
			TPHg mg/L	TPHd mg/L	Bis (2-chloroethyl) ether µg/L	tert-Butyl Alcohol µg/L	sec-Butylbenzene µg/L	Isopropylbenzene µg/L	Naphthalene µg/L	n-Propylbenzene µg/L	o-Xylene µg/L
MW-2	AA&AI	12/9/2012	ND<0.05	**0.48**	ND<10	ND<10	ND<0.50	ND<0.50	ND<1	ND<0.50	ND<0.50
MW-2	AA&AI	12/27/2013	ND<0.05	ND<0.5	ND<10	ND<10	ND<1	ND<1	ND<3	ND<1	--
MW-2	AA&AI	12/7/2014	ND<0.05	ND<0.5	ND<10	ND<10	ND<1	ND<1	ND<3	ND<1	--
MW-2	AA&AI	12/10/2015	ND<0.05	ND<0.5	ND<10	ND<10	ND<1	ND<1	ND<3	ND<1	--
MW-10	AA&AI	12/9/2012	**0.080**	**2.5**	ND<10	**220**	ND<0.50	**0.71**	**1.3**	**0.51**	**0.65**
MW-10	AA&AI	12/27/2013	ND<0.05	ND<0.5	ND<10	**130**	ND<1	ND<1	ND<3	ND<1	--
MW-10	AA&AI	12/7/2014	ND<0.050	ND<0.5	ND<10	ND<10	ND<1	ND<1	ND<3	ND<1	--
MW-10	AA&AI	12/10/2015	ND<0.050	**0.911**	ND<10	ND<10	ND<1	ND<1	ND<3	ND<1	--
MW-10	AA&AI	12/15/2016	**0.079**	**1.03**	ND<9.5	**15**	ND<1.0	**0.65**	**1.5**	ND<0.50	ND<0.50
B-1	TEC	2001	ND<0.20	--	**1,500**	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**2.1**
B-2	TEC	2001	ND<0.20	--	ND<110	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-3	TEC	2001	ND<0.20	--	ND<110	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-4	TEC	2001	ND<0.20	--	**100**	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**3.0**
B-5	TEC	2001	ND<0.20	--	ND<110	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-6	TEC	2001	ND<0.20	--	ND<11	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-7	TEC	2001	ND<0.20	--	ND<11	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-8	TEC	2001	ND<0.20	--	ND<11	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B-9	TEC	2001	ND<0.20	--	ND<11	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
E1A	Tetra Tech	6/1/2006	--	--	--	--	**1.6**	**8.7**	**11.6**	**9.6**	ND<0.5
E1A	Tetra Tech	6/1/2006	--	--	--	--	**1.7**	**13.3**	**64.7**	**13.2**	ND<0.5
E5	Tetra Tech	6/1/2006	--	--	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Number of Samples					18	9	21	21	21	21	15
Number of Detections					2	3	2	4	4	3	3
Frequency of Detection					11%	33%	10%	19%	19%	14%	20%
Mean					800	122	1.7	5.8	20	7.8	1.9
Standard Deviation					990	103	0.071	6.2	30	6.5	1.2
Minimum Detected Concentration					100	15	1.6	0.65	1.3	0.51	0.65
Maximum Detected Concentration					1,500	220	1.7	13	65	13	3.0

Notes:
mg/L = milligram per liter.
µg/L = microgram per liter.
U.S. EPA = United States Environmental Protection Agency.
TPHg = total petroleum hydrocarbons as gasoline.
TPHd - total petroleum hydrocarbons as diesel.
VOCs = volatile organic compounds.
ND = not detected.
ND< = less than the laboratory reporting limit in data from Tetra Tech, 2006 samples or analytical detection limit in data from TEC, 2001.
Data qualifiers from TEC, 2001:
B-1 through B-9 are reported in TEC, 2001.
(a) Sample date is unknown. The date listed is the date reported.
(b) The consultant is unknown. Data collected for borings B-1 through B-9 are assumed to be collected by TEC, 2001, as it is stated in the report text 9 borings were installed as part of their investigation with the same naming convention.
(c) The sample depth is unknown.

References:

Ami Amini & Adini, Inc. (AA&AI). 2017. Groundwater Monitoring Report – Fourth Quarter 2016, Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, California. January 15.
AA&AI. 2016. Groundwater Monitoring Report – Fourth Quarter 2015, Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, California. January 15.
AA&AI. 2015. Groundwater Monitoring Report – Fourth Quarter 2014, Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, California. January 15.
AA&AI. 2014. Groundwater Monitoring Report – Fourth Quarter 2013, Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, California. January 15.
TEC. 2013. Report on Groundwater Quality Monitoring Program January 2013, Former Chemoil Refinery, Slic No. 453A, Signal Hill, California. January 15.
TEC. 2001. Report on Additional Subsurface Assessment, Former Chemoil Refinery - Eastern Parcel, Signal Hill, California. December 14.
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SOIL VAPOR

Table E-1G

Summary of Analytical Results for Volatile Organic Compounds (VOCs) in Soil Vapor, East Parcel

Former ChemOil Refinery

Signal Hill, California

Boring	Sample Date	Depth	U.S EPA Method TO-15 - VOCs							
			Benzene	Toluene	Ethylbenzene	o-Xylene	m,p-Xylenes	Methyl tert-Butyl Ether	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene
		feet bgs	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
E1	6/2/2006	15	<796	<796	**10,800**	<796	<1,592	<796	<1,194	<1,194
Number of Samples			1	1	1	1	1	1	1	1
Number of Detections			0	0	1	0	0	0	0	0
Frequency of Detection			0%	0%	100%	0%	0%	0%	0%	0%
Mean			ND	ND	NE	ND	ND	ND	ND	ND
Standard Deviation			ND	ND	NE	ND	ND	ND	ND	ND
Minimum Detected Concentration			ND	ND	10,800	ND	ND	ND	ND	ND
Maximum Detected Concentration			ND	ND	10,800	ND	ND	ND	ND	ND

Notes:

µg/m^3 = microgram per cubic meter.

bgs = below ground surface.

ND = not detected.

ND< = less than the laboratory reporting limit in data from Tetra Tech, 2006 samples or analytical detection limit in data from TEC, 2001.

References:

Tetra Tech. 2006. Environmental Due Diligence Site Assessment Results, Former Chemoil Refinery Property, Signal Hill, California. August 8.

ATTACHMENT E-2

SOIL SCREENING EVALUATION FOR PROTECTION OF GROUNDWATER

TABLE OF CONTENTS

PAGE
LIST OF TABLES ii
LIST OF ATTACHMENTS ii

1.0 INTRODUCTION 1-1

2.0 REFERENCES 2-1

TABLE

Table E-2A Protection of Groundwater Screening Level Evaluation for the Chemicals of Potential Concern (COPCs) in Soil (0 to 30 feet bgs)

ATTACHMENT

Attachment E-2A ProUCL Statistical Evaluation, Soil 0 to 30 feet bgs

1.0 INTRODUCTION

In support of the human health risk assessment (HHRA) for the East Parcel, this appendix presents the soil screening evaluation for the protection of groundwater pathway. The evaluation of chemical concentrations in soil for groundwater protection (soil leaching) is designed to address the potential leaching of chemicals from vadose zone soils and their subsequent impact on groundwater. The potential for chemicals to leach from soil depends on the physical and chemical properties of the chemicals, soil type, pH (for metals), and other site-specific conditions. For example, chemicals with high water solubilities tend to leach more readily than chemicals with lower solubilities. In addition, a chemical's organic-carbon partition coefficient (K_{oc}) is important for assessing the degree of chemical sorption to soil particles; chemicals with a high sorption potential do not tend to leach as readily (i.e., metals and polycyclic aromatic hydrocarbons [PAHs]). Site-specific conditions are also important for assessing whether leaching may occur, such as presence of a cap or cover at the site, soil type (leaching occurs more readily in sandy soils than in clayey or silty soils), amount of rainfall, gradient, etc. Based on the proposed development plans, over 90-percent of the East Parcel will be capped with buildings and an asphalt parking lot, which will further minimize the potential leaching of groundwater.

On the East Parcel, soil samples were collected from soil at 1 to 40 feet below ground surface (bgs). These samples were analyzed for metals, total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), and PAHs. Leaching of metals is variable based on metal speciation and physical chemical conditions of the soil. In general, metals tend to adsorb readily to soil particles and do not leach as readily. For these reasons, metals were not included in this screening evaluation. All detected TPH, VOCs, and PAHs in soil were included in this screening level evaluation.

The following soil screening levels (SLs) for protection of groundwater were used in this screening evaluation:

For TPH and VOCs

- Los Angeles – Regional Water Quality Control Board (LARWQCB) SLs for soil (LARWQCB, 1996). The Site-specific LARWQCB SLs were developed for the protection of groundwater, as described in *Site Investigation and Site Conceptual Model Report* (Apex-SGI, 2017).

For PAHs

The lowest SL from the following sources,

- San Francisco Bay - Regional Water Quality Control Board (SFRWQCB) environmental screening levels (ESLs) for soil leaching to groundwater (SFRWQCB, 2016); and

- U.S. Environmental Protection Agency (USEPA) regional screening levels (RSLs) for soil leaching to groundwater (USEPA, 2016).

The SFRWQCB ESLs and USEPA RSLs for protection of groundwater were developed for potential leaching of chemicals from vadose-zone soil and subsequent migration to groundwater. The SLs are based on a target groundwater screening levels for groundwater use as a non-drinking water resource. Table E-2A summarizes the soil SLs for protection of groundwater.

As discussed in the HHRA for the East Parcel, it is relevant and appropriate to statistically evaluate the soil data on an area-wide basis. Consistent with USEPA (1989) procedures, when evaluating an RME scenario the lesser of the maximum detected concentration and the 95-percent upper confidence limit of the mean concentration (95UCL) was selected as the appropriate soil exposure point concentration (EPC) for the vadose zone (0 to 30 feet bgs). A USEPA software package, ProUCL Version 5.1.00, was used to estimate the upper confidence limit of the mean concentration (UCL; [typically the 95UCL, but sometimes the 97.5UCL or 99UCL, depending on the data set]). ProUCL and USEPA (2015) guidance make recommendations for estimating UCLs and were developed as tools to support risk assessment. Due to limitations of certain datasets (i.e., limited number of samples or low detection frequency), ProUCL was not used to estimate a UCL. For those analytes with adequate datasets, the ProUCL output spreadsheets are presented in Attachment E-2A. The soil EPCs (EPC_{soil}) used in this HHRA are summarized in Table E-2A.

Based on the screening evaluation for TPH, VOCs, and PAHs, the soil EPCs for TPH C5-C12, naphthalene, and chrysene exceeded the protection of groundwater soil SLs (Table E-2A). Each of these exceedances is discussed in the following bullets:

- The soil EPC for TPH C5-C12 of 1,700 milligrams per kilogram (mg/kg) exceeded the soil SL of 1,000 mg/kg. This low end TPH carbon range is generally evaluated by its components most likely to reflect risk; such as, benzene, toluene, ethylbenzene, and total xylenes (BTEX) and naphthalene. The soil EPCs for BTEX and naphthalene did not exceed their individual protection of groundwater SLs.

- The soil EPC for naphthalene of 3.1 mg/kg exceeded the soil SL of 1.7 mg/kg. The soil EPC of 3.1 mg/kg represents the 95UCL of 11 soil samples analyzed for VOCs by EPA Method 8260B. Naphthalene was only detected at one sample location, E1C, at 5, 15, and 25 feet bgs at concentrations of 0.0050 mg/kg, 4.3 mg/kg, and 9.1 mg/kg, respectively. Soil sample E1C at 15 feet bgs was also analyzed for PAHs by EPA Method 8270C. In this soil sample, naphthalene was detected at 1.2 mg/kg, which is below the soil SL of 1.7 mg/kg. Naphthalene has been detected at the location of E1C at concentrations above and below the soil SL, depending on depth of sample and analytical analysis. Due to low naphthalene concentrations detected in vadose zone soil, high K_{oc} relative to VOCs, and tendency for PAHs to sorb strongly to soil particles, leaching of naphthalene is not expected to occur at the Site to any significant extent.

- The soil EPC for chrysene of 1.6 mg/kg slightly exceeded the soil SL of 1.2 mg/kg. Similar to naphthalene, low chrysene concentration detected in vadose zone soil, high K_{oc} relative to VOCs, and tendency for PAHs to sorb strongly to soil particles, indicates leaching of chrysene is not expected to occur at the Site to any significant extent.

All other TPH (C13-C22 and C23-C44), VOCs, and PAHs were not detected above the laboratory reporting limit or the soil EPCs were below the protection of groundwater soil SLs.

To summarize, although leaching potential of chemicals of potential concern (COPCs) from vadose zone soil into groundwater may be a potential chemical release mechanism, it is not a significant release mechanism for COPCs because of other competing migration pathways (i.e., metals and PAHs are expected to sorb strongly to soil particles and VOCs are expected to volatilize) and the presence of a cap (i.e., buildings and pavement) across the East Parcel in the future.

2.0 REFERENCES

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TABLE

Table E-2A
Protection of Groundwater Screening Level Evaluation
for the Chemicals of Potential Concern (COPCs) in Soil (0 to 30 feet bgs)
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	Soil				Does EPC_{soil} exceed SSL? (Yes/No)
	MDC (mg/kg)	95UCL[1] (mg/kg)	EPC_{soil}[2] (mg/kg)	Protection of Groundwater Soil Screening Level (SL)[3] (mg/kg)	
Metals					
Antimony	1.0	0.53	0.53	- -[4]	- -
Arsenic	18	10	10	- -	- -
Barium	450	81	81	- -	- -
Beryllium	ND	NE	ND	- -	- -
Cadmium	ND	NE	ND	- -	- -
Chromium	40	17	17	- -	- -
Cobalt	14	7.0	7.0	- -	- -
Copper	48	14	14	- -	- -
Lead	100	3.8	3.8	- -	- -
Mercury	3.0	0.39	0.39	- -	- -
Molybdenum	0.50	0.39	0.39	- -	- -
Nickel	64	17	17	- -	- -
Selenium	ND	NE	ND	- -	- -
Silver	ND	0.74	0.74	- -	- -
Thallium	2.0	0.90	0.90	- -	- -
Vanadium	120	36	36	- -	- -
Zinc	200	37	37	- -	- -
TPH[6]					
C5-C12	9,150	1,700	1,700	1,000	**Yes**
TPH (C4-C12) Aliphatic	4,575	850	850		
TPH (C4-C12) Aromatic	4,575	850	850		
C13-C22	15,850	3,361	3,361	10,000	No
TPH (C13-C22) Aliphatic	7,925	1,681	1,681		
TPH (C13-C22) Aromatic	7,925	1,681	1,681		
C23-C44	8,238	2,638	2,638	50,000	No
TPH (C23-C44) Aliphatic	4,119	1,319	1,319		
TPH (C23-C44) Aromatic	4,119	1,319	1,319		
VOCs					
Benzene	0.057	NE	0.057	0.15	No
n-Butylbenzene	5.1	1.5	1.5	26	No
sec-Butylbenzene	10	3.4	3.4	26	No
tert-Butylbenzene	0.28	0.18	0.18	26	No
Ethylbenzene	0.82	0.13	0.13	32	No
Isopropylbenzene	4.0	54	4.0	77	No
Naphthalene	9.1	3.1	3.1	1.7	**Yes**
Toluene	0.80	0.076	0.076	16	No
Total Xylenes	8.1	1.5	1.5	180	No
PAHs					
Acenaphthene	0.22	NE	0.22	5.5	No
Acenaphthylene	ND	NE	ND	5.5	No
Anthracene	ND	NE	ND	2.8	No
Benz(a)anthracene	ND	NE	ND	0.0042	No
Benzo(b)fluoranthene	ND	NE	ND	0.041	No
Benzo(k)fluoranthene	ND	NE	ND	0.4	No
Benzo(g,h,i)perylene	ND	NE	ND	27	No
Benzo(a)pyrene	ND	NE	ND	0.004	No
Chrysene	1.6	NE	1.6	1.2	**Yes**
Dibenz(a,h)anthracene	ND	NE	ND	0.013	No
Fluoranthene	0.036	NE	0.036	60	No
Fluorene	0.39	NE	0.39	5.4	No
Indeno(1,2,3-c,d)pyrene	ND	NE	ND	0.13	No
Naphthalene	1.2	NE	1.2	1.7	No
Phenanthrene	2.0	NE	2.0	11	No
Pyrene	2.0	NE	2.0	13	No

Table E-2A
Protection of Groundwater Screening Level Evaluation
for the Chemicals of Potential Concern (COPCs) in Soil (0 to 30 feet bgs)
Former ChemOil Refinery
Signal Hill, California

Notes:
95UCL = 95-percent upper confidence limit of the mean.
MDC = maximum detected concentration.
EPC = exposure point concentration.
mg/kg = milligrams per kilogram.
TPH = total petroleum hydrocarbons.
VOC = volatile organic compounds.
PAH = polycyclic aromatic hydrocarbons.
- - = not available (see Note 4).
NE = not estimated (see Note 5).

[1] A summary of the methods used to identify an appropriate 95UCL is provided in Attachment E-2A.
[2] Represents the lesser of the maximum detected concentration and the 95UCL.

[3] Protection of groundwater soil screening levels (SLs) represent Site-specific soil SLs developed using the Los Angeles Regional Water Quality Control Board guidance . Site-specific soil SLs were not available for PAHs; therefore, the lesser of the San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels and U.S. Environmental Protection Agency Regional Screening Levels for protection of groundwater, as a non-drinking water source were used.

[4] Metals were not included in this screening evaluation because leaching of metals is variable based on metal speciation and physical chemical conditions of the soil. In general, metals tend to bind tightly to soil particles.
[5] Due to limitations of chemical dataset, ProUCL was unable to estimate a 95UCL.
[6] In the absence of fractionated TPH data, the TPH data were assumed to be 50 percent aliphatic and 50 percent aromatic.

ATTACHMENT E-2A

PROUCL STATISTICAL EVALUATION, SOIL 0 TO 30 FEET BGS

METALS

ProUCL Statistical Evaluation of Antimony (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	17
Number of Detects	52	Number of Non-Detects	7
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	0.25	Minimum Non-Detect	0.25
Maximum Detect	1	Maximum Non-Detect	0.25
Variance Detects	0.0363	Percent Non-Detects	11.86%
Mean Detects	0.511	SD Detects	0.19
Median Detects	0.5	CV Detects	0.373
Skewness Detects	1.852	Kurtosis Detects	2.82
Mean of Logged Detects	-0.725	SD of Logged Detects	0.314

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.677	**Normal GOF Test on Detected Observations Only**
5% Shapiro Wilk P Value	5.407E-14	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.408	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.122	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.48	KM Standard Error of Mean	0.0258
KM SD	0.196	95% KM (BCA) UCL	0.525
95% KM (t) UCL	0.523	95% KM (Percentile Bootstrap) UCL	0.527
95% KM (z) UCL	0.522	95% KM Bootstrap t UCL	0.531
90% KM Chebyshev UCL	0.557	95% KM Chebyshev UCL	0.592
97.5% KM Chebyshev UCL	0.641	99% KM Chebyshev UCL	0.737

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	5.177	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.75	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.368	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.123	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	9.516	k star (bias corrected MLE)	8.98
Theta hat (MLE)	0.0537	Theta star (bias corrected MLE)	0.0569
nu hat (MLE)	989.6	nu star (bias corrected)	933.9
Mean (detects)	0.511		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.135	Mean	0.474
Maximum	1	Median	0.5
SD	0.206	CV	0.434
k hat (MLE)	6.018	k star (bias corrected MLE)	5.723
Theta hat (MLE)	0.0788	Theta star (bias corrected MLE)	0.0829
nu hat (MLE)	710.1	nu star (bias corrected)	675.3
Adjusted Level of Significance (β)	0.0459		
Approximate Chi Square Value (675.35, α)	616.1	Adjusted Chi Square Value (675.35, β)	614.6
95% Gamma Approximate UCL (use when n>=50)	0.52	95% Gamma Adjusted UCL (use when n<50)	0.521

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.48	SD (KM)	0.196
Variance (KM)	0.0385	SE of Mean (KM)	0.0258
k hat (KM)	5.988	k star (KM)	5.695
nu hat (KM)	706.6	nu star (KM)	672
theta hat (KM)	0.0802	theta star (KM)	0.0843
80% gamma percentile (KM)	0.636	90% gamma percentile (KM)	0.749
95% gamma percentile (KM)	0.851	99% gamma percentile (KM)	1.067

ProUCL Statistical Evaluation of Antimony (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (672.03, α)	612.9	Adjusted Chi Square Value (672.03, β)	611.5
95% Gamma Approximate KM-UCL (use when n>=50)	0.526	95% Gamma Adjusted KM-UCL (use when n<50)	0.528

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.807	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	8.5444E-9	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.344	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.122	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.48	Mean in Log Scale	-0.802
SD in Original Scale	0.198	SD in Log Scale	0.365
95% t UCL (assumes normality of ROS data)	0.523	95% Percentile Bootstrap UCL	0.524
95% BCA Bootstrap UCL	0.531	95% Bootstrap t UCL	0.528
95% H-UCL (Log ROS)	0.521		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.803	KM Geo Mean	0.448
KM SD (logged)	0.362	95% Critical H Value (KM-Log)	1.751
KM Standard Error of Mean (logged)	0.0476	95% H-UCL (KM -Log)	0.52
KM SD (logged)	0.362	95% Critical H Value (KM-Log)	1.751
KM Standard Error of Mean (logged)	0.0476		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.465	Mean in Log Scale	-0.886
SD in Original Scale	0.218	SD in Log Scale	0.531
95% t UCL (Assumes normality)	0.513	95% H-Stat UCL	0.543

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.523	KM H-UCL	0.52
95% KM (BCA) UCL	0.525		

ProUCL Statistical Evaluation of Arsenic (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	20
		Number of Missing Observations	0
Minimum	2.5	Mean	7.669
Maximum	18	Median	6
SD	4.165	Std. Error of Mean	0.542
Coefficient of Variation	0.543	Skewness	1.148

Normal GOF Test

Shapiro Wilk Test Statistic	0.856	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	1.7067E-7	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.164	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.576	95% Adjusted-CLT UCL (Chen-1995)	8.648
		95% Modified-t UCL (Johnson-1978)	8.589

Gamma GOF Test

A-D Test Statistic	1.141	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.141	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.116	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.992	k star (bias corrected MLE)	3.8
Theta hat (MLE)	1.921	Theta star (bias corrected MLE)	2.018
nu hat (MLE)	471	nu star (bias corrected)	448.4
MLE Mean (bias corrected)	7.669	MLE Sd (bias corrected)	3.934
		Approximate Chi Square Value (0.05)	400.3
Adjusted Level of Significance	0.0459	Adjusted Chi Square Value	399.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	8.591	95% Adjusted Gamma UCL (use when n<50)	8.615

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	0.0385	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.128	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	0.916	Mean of logged Data	1.907
Maximum of Logged Data	2.89	SD of logged Data	0.508

Assuming Lognormal Distribution

95% H-UCL	8.688	90% Chebyshev (MVUE) UCL	9.235
95% Chebyshev (MVUE) UCL	9.957	97.5% Chebyshev (MVUE) UCL	10.96
99% Chebyshev (MVUE) UCL	12.93		

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	8.561	95% Jackknife UCL	8.576
95% Standard Bootstrap UCL	8.549	95% Bootstrap-t UCL	8.683
95% Hall's Bootstrap UCL	8.649	95% Percentile Bootstrap UCL	8.576
95% BCA Bootstrap UCL	8.695		
90% Chebyshev(Mean, Sd) UCL	9.296	95% Chebyshev(Mean, Sd) UCL	10.03
97.5% Chebyshev(Mean, Sd) UCL	11.06	99% Chebyshev(Mean, Sd) UCL	13.07

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	10.03

ProUCL Statistical Evaluation of Barium (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	45
		Number of Missing Observations	0
Minimum	15	Mean	69.12
Maximum	450	Median	54
SD	67.94	Std. Error of Mean	8.845
Coefficient of Variation	0.983	Skewness	3.933

Normal GOF Test

Shapiro Wilk Test Statistic	0.606	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.223	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	83.9	95% Adjusted-CLT UCL (Chen-1995)	88.51
		95% Modified-t UCL (Johnson-1978)	84.66

Gamma GOF Test

A-D Test Statistic	1.448	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.762	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.11	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.117	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.155	k star (bias corrected MLE)	2.056
Theta hat (MLE)	32.08	Theta star (bias corrected MLE)	33.61
nu hat (MLE)	254.3	nu star (bias corrected)	242.7
MLE Mean (bias corrected)	69.12	MLE Sd (bias corrected)	48.2
		Approximate Chi Square Value (0.05)	207.6
Adjusted Level of Significance	0.0459	Adjusted Chi Square Value	206.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	80.79	95% Adjusted Gamma UCL (use when n<50)	81.11

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	0.126	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0703	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.115	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.708	Mean of logged Data	3.986
Maximum of Logged Data	6.109	SD of logged Data	0.654

Assuming Lognormal Distribution

95% H-UCL	79.2	90% Chebyshev (MVUE) UCL	84.82
95% Chebyshev (MVUE) UCL	93.16	97.5% Chebyshev (MVUE) UCL	104.7
99% Chebyshev (MVUE) UCL	127.5		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	83.67	95% Jackknife UCL	83.9
95% Standard Bootstrap UCL	83.95	95% Bootstrap-t UCL	95.14
95% Hall's Bootstrap UCL	159.4	95% Percentile Bootstrap UCL	85.08
95% BCA Bootstrap UCL	90.17		
90% Chebyshev(Mean, Sd) UCL	95.65	95% Chebyshev(Mean, Sd) UCL	107.7
97.5% Chebyshev(Mean, Sd) UCL	124.4	99% Chebyshev(Mean, Sd) UCL	157.1

Suggested UCL to Use

95% Approximate Gamma UCL	80.79

ProUCL Statistical Evaluation of Chromium (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	24
		Number of Missing Observations	0
Minimum	5	Mean	12.76
Maximum	40	Median	10
SD	7.666	Std. Error of Mean	0.998
Coefficient of Variation	0.601	Skewness	1.468

Normal GOF Test

Shapiro Wilk Test Statistic	0.828	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	4.8381E-9	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.251	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	14.43	95% Adjusted-CLT UCL (Chen-1995)	14.61
		95% Modified-t UCL (Johnson-1978)	14.46

Gamma GOF Test

A-D Test Statistic	1.903	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.755	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.213	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.116	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.557	k star (bias corrected MLE)	3.387
Theta hat (MLE)	3.588	Theta star (bias corrected MLE)	3.768
nu hat (MLE)	419.7	nu star (bias corrected)	399.7
MLE Mean (bias corrected)	12.76	MLE Sd (bias corrected)	6.935
		Approximate Chi Square Value (0.05)	354.4
Adjusted Level of Significance	0.0459	Adjusted Chi Square Value	353.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	14.4	95% Adjusted Gamma UCL (use when n<50)	14.44

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.932	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	0.00334	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.183	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.609	Mean of logged Data	2.399
Maximum of Logged Data	3.689	SD of logged Data	0.528

Assuming Lognormal Distribution

95% H-UCL	14.46	90% Chebyshev (MVUE) UCL	15.39
95% Chebyshev (MVUE) UCL	16.63	97.5% Chebyshev (MVUE) UCL	18.37
99% Chebyshev (MVUE) UCL	21.77		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	14.4	95% Jackknife UCL	14.43
95% Standard Bootstrap UCL	14.4	95% Bootstrap-t UCL	14.75
95% Hall's Bootstrap UCL	14.63	95% Percentile Bootstrap UCL	14.49
95% BCA Bootstrap UCL	14.55		
90% Chebyshev(Mean, Sd) UCL	15.76	95% Chebyshev(Mean, Sd) UCL	17.11
97.5% Chebyshev(Mean, Sd) UCL	19	99% Chebyshev(Mean, Sd) UCL	22.69

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	17.11

ProUCL Statistical Evaluation of Cobalt (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	20
		Number of Missing Observations	0
Minimum	1.5	Mean	6.197
Maximum	14	Median	5
SD	3.317	Std. Error of Mean	0.432
Coefficient of Variation	0.535	Skewness	0.886

Normal GOF Test

Shapiro Wilk Test Statistic	0.893	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	1.9408E-5	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.17	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	6.918	95% Adjusted-CLT UCL (Chen-1995)	6.96
		95% Modified-t UCL (Johnson-1978)	6.927

Gamma GOF Test

A-D Test Statistic	0.679	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.135	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.116	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.771	k star (bias corrected MLE)	3.591
Theta hat (MLE)	1.643	Theta star (bias corrected MLE)	1.726
nu hat (MLE)	445	nu star (bias corrected)	423.7
MLE Mean (bias corrected)	6.197	MLE Sd (bias corrected)	3.27
		Approximate Chi Square Value (0.05)	377
Adjusted Level of Significance	0.0459	Adjusted Chi Square Value	375.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	6.965	95% Adjusted Gamma UCL (use when n<50)	6.985

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	0.227	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.107	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.115	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	0.405	Mean of logged Data	1.686
Maximum of Logged Data	2.639	SD of logged Data	0.537

Assuming Lognormal Distribution

95% H-UCL	7.132	90% Chebyshev (MVUE) UCL	7.595
95% Chebyshev (MVUE) UCL	8.221	97.5% Chebyshev (MVUE) UCL	9.088
99% Chebyshev (MVUE) UCL	10.79		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	6.907	95% Jackknife UCL	6.918
95% Standard Bootstrap UCL	6.906	95% Bootstrap-t UCL	7.019
95% Hall's Bootstrap UCL	6.939	95% Percentile Bootstrap UCL	6.908
95% BCA Bootstrap UCL	6.934		
90% Chebyshev(Mean, Sd) UCL	7.492	95% Chebyshev(Mean, Sd) UCL	8.079
97.5% Chebyshev(Mean, Sd) UCL	8.893	99% Chebyshev(Mean, Sd) UCL	10.49

Suggested UCL to Use

95% Approximate Gamma UCL	6.965

ProUCL Statistical Evaluation of Copper (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	28
		Number of Missing Observations	0
Minimum	1.5	Mean	11.58
Maximum	48	Median	9
SD	9.203	Std. Error of Mean	1.198
Coefficient of Variation	0.794	Skewness	1.698

Normal GOF Test

Shapiro Wilk Test Statistic	0.832	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	8.0090E-9	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.177	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	13.59	95% Adjusted-CLT UCL (Chen-1995)	13.84
		95% Modified-t UCL (Johnson-1978)	13.63

Gamma GOF Test

A-D Test Statistic	0.708	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.763	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0876	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.117	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.968	k star (bias corrected MLE)	1.879
Theta hat (MLE)	5.888	Theta star (bias corrected MLE)	6.166
nu hat (MLE)	232.2	nu star (bias corrected)	221.7
MLE Mean (bias corrected)	11.58	MLE Sd (bias corrected)	8.452
		Approximate Chi Square Value (0.05)	188.2
Adjusted Level of Significance	0.0459	Adjusted Chi Square Value	187.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	13.64	95% Adjusted Gamma UCL (use when n<50)	13.7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	0.527	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0836	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.115	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	0.405	Mean of logged Data	2.175
Maximum of Logged Data	3.871	SD of logged Data	0.753

Assuming Lognormal Distribution

95% H-UCL	14.36	90% Chebyshev (MVUE) UCL	15.41
95% Chebyshev (MVUE) UCL	17.13	97.5% Chebyshev (MVUE) UCL	19.52
99% Chebyshev (MVUE) UCL	24.21		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	13.56	95% Jackknife UCL	13.59
95% Standard Bootstrap UCL	13.55	95% Bootstrap-t UCL	13.96
95% Hall's Bootstrap UCL	13.99	95% Percentile Bootstrap UCL	13.47
95% BCA Bootstrap UCL	13.86		
90% Chebyshev(Mean, Sd) UCL	15.18	95% Chebyshev(Mean, Sd) UCL	16.81
97.5% Chebyshev(Mean, Sd) UCL	19.07	99% Chebyshev(Mean, Sd) UCL	23.51

Suggested UCL to Use

95% Approximate Gamma UCL	13.64

ProUCL Statistical Evaluation of Lead (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	15
Number of Detects	58	Number of Non-Detects	1
Number of Distinct Detects	14	Number of Distinct Non-Detects	1
Minimum Detect	0.5	Minimum Non-Detect	0.25
Maximum Detect	100	Maximum Non-Detect	0.25
Variance Detects	167.3	Percent Non-Detects	1.695%
Mean Detects	3.983	SD Detects	12.94
Median Detects	2	CV Detects	3.248
Skewness Detects	7.425	Kurtosis Detects	56.01
Mean of Logged Detects	0.637	SD of Logged Detects	0.92

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.221	**Normal GOF Test on Detected Observations Only**
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.404	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.116	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.919	KM Standard Error of Mean	1.671
KM SD	12.72	95% KM (BCA) UCL	7.356
95% KM (t) UCL	6.713	95% KM (Percentile Bootstrap) UCL	7.258
95% KM (z) UCL	6.668	95% KM Bootstrap t UCL	20.64
90% KM Chebyshev UCL	8.932	95% KM Chebyshev UCL	11.2
97.5% KM Chebyshev UCL	14.35	99% KM Chebyshev UCL	20.55

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	5.015	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.79	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.236	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.121	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.797	k star (bias corrected MLE)	0.767
Theta hat (MLE)	4.998	Theta star (bias corrected MLE)	5.192
nu hat (MLE)	92.43	nu star (bias corrected)	88.98
Mean (detects)	3.983		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	3.915
Maximum	100	Median	2
SD	12.83	CV	3.278
k hat (MLE)	0.735	k star (bias corrected MLE)	0.709
Theta hat (MLE)	5.329	Theta star (bias corrected MLE)	5.525
nu hat (MLE)	86.7	nu star (bias corrected)	83.63
Adjusted Level of Significance (β)	0.0459		
Approximate Chi Square Value (83.63, α)	63.55	Adjusted Chi Square Value (83.63, β)	63.11
95% Gamma Approximate UCL (use when n>=50)	5.152	95% Gamma Adjusted UCL (use when n<50)	5.188

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.919	SD (KM)	12.72
Variance (KM)	161.9	SE of Mean (KM)	1.671
k hat (KM)	0.0949	k star (KM)	0.101
nu hat (KM)	11.2	nu star (KM)	11.96
theta hat (KM)	41.3	theta star (KM)	38.67
80% gamma percentile (KM)	2.773	90% gamma percentile (KM)	10.49
95% gamma percentile (KM)	22.73	99% gamma percentile (KM)	61.84

ProUCL Statistical Evaluation of Lead (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (11.96, α)	5.202	Adjusted Chi Square Value (11.96, β)	5.09
95% Gamma Approximate KM-UCL (use when n>=50)	9.013	95% Gamma Adjusted KM-UCL (use when n<50)	9.211

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.9	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	5.5694E-5	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.107	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.116	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.918	Mean in Log Scale	0.598
SD in Original Scale	12.83	SD in Log Scale	0.96
95% t UCL (assumes normality of ROS data)	6.711	95% Percentile Bootstrap UCL	7.213
95% BCA Bootstrap UCL	9.184	95% Bootstrap t UCL	20.29
95% H-UCL (Log ROS)	3.852		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.602	KM Geo Mean	1.827
KM SD (logged)	0.942	95% Critical H Value (KM-Log)	2.276
KM Standard Error of Mean (logged)	0.124	95% H-UCL (KM -Log)	3.77
KM SD (logged)	0.942	95% Critical H Value (KM-Log)	2.276
KM Standard Error of Mean (logged)	0.124		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.917	Mean in Log Scale	0.591
SD in Original Scale	12.83	SD in Log Scale	0.979
95% t UCL (Assumes normality)	6.71	95% H-Stat UCL	3.927

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	3.77

ProUCL Statistical Evaluation of Mercury (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	58	Number of Distinct Observations	4
		Number of Missing Observations	1
Number of Detects	5	Number of Non-Detects	53
Number of Distinct Detects	3	Number of Distinct Non-Detects	1
Minimum Detect	0.11	Minimum Non-Detect	0.1
Maximum Detect	3	Maximum Non-Detect	0.1
Variance Detects	1.662	Percent Non-Detects	91.38%
Mean Detects	0.694	SD Detects	1.289
Median Detects	0.12	CV Detects	1.857
Skewness Detects	2.236	Kurtosis Detects	5
Mean of Logged Detects	-1.494	SD of Logged Detects	1.45

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.555	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.472	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.151	KM Standard Error of Mean	0.0554
KM SD	0.377	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.244	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.242	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.317	95% KM Chebyshev UCL	0.393
97.5% KM Chebyshev UCL	0.497	99% KM Chebyshev UCL	0.702

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.294	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.708	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.504	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.371	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.554	k star (bias corrected MLE)	0.355
Theta hat (MLE)	1.253	Theta star (bias corrected MLE)	1.955
nu hat (MLE)	5.54	nu star (bias corrected)	3.549
Mean (detects)	0.694		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.069
Maximum	3	Median	0.01
SD	0.393	CV	5.692
k hat (MLE)	0.396	k star (bias corrected MLE)	0.387
Theta hat (MLE)	0.174	Theta star (bias corrected MLE)	0.178
nu hat (MLE)	45.97	nu star (bias corrected)	44.93
Adjusted Level of Significance (β)	0.0459		
Approximate Chi Square Value (44.93, α)	30.55	Adjusted Chi Square Value (44.93, β)	30.25
95% Gamma Approximate UCL (use when n>=50)	0.101	95% Gamma Adjusted UCL (use when n<50)	0.102

ProUCL Statistical Evaluation of Mercury (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.151	SD (KM)	0.377
Variance (KM)	0.142	SE of Mean (KM)	0.0554
k hat (KM)	0.161	k star (KM)	0.164
nu hat (KM)	18.62	nu star (KM)	18.99
theta hat (KM)	0.942	theta star (KM)	0.923
80% gamma percentile (KM)	0.176	90% gamma percentile (KM)	0.453
95% gamma percentile (KM)	0.817	99% gamma percentile (KM)	1.857

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (18.99, α)	10.11	Adjusted Chi Square Value (18.99, β)	9.948
95% Gamma Approximate KM-UCL (use when n>=50)	0.284	95% Gamma Adjusted KM-UCL (use when n<50)	0.289

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.574	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.467	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0616	Mean in Log Scale	-8.934
SD in Original Scale	0.394	SD in Log Scale	4.054
95% t UCL (assumes normality of ROS data)	0.148	95% Percentile Bootstrap UCL	0.165
95% BCA Bootstrap UCL	0.264	95% Bootstrap t UCL	1.067
95% H-UCL (Log ROS)	22.4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.233	KM Geo Mean	0.107
KM SD (logged)	0.443	95% Critical H Value (KM-Log)	1.857
KM Standard Error of Mean (logged)	0.0651	95% H-UCL (KM -Log)	0.132
KM SD (logged)	0.443	95% Critical H Value (KM-Log)	1.857
KM Standard Error of Mean (logged)	0.0651		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.106	Mean in Log Scale	-2.866
SD in Original Scale	0.387	SD in Log Scale	0.573
95% t UCL (Assumes normality)	0.191	95% H-Stat UCL	0.0777

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.393

ProUCL Statistical Evaluation of Molybdenum (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	20
Number of Detects	45	Number of Non-Detects	14
Number of Distinct Detects	20	Number of Distinct Non-Detects	1
Minimum Detect	0.25	Minimum Non-Detect	0.25
Maximum Detect	0.5	Maximum Non-Detect	0.25
Variance Detects	0.00754	Percent Non-Detects	23.73%
Mean Detects	0.398	SD Detects	0.0868
Median Detects	0.4	CV Detects	0.218
Skewness Detects	-0.195	Kurtosis Detects	-1.381
Mean of Logged Detects	-0.945	SD of Logged Detects	0.23

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.875	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.945	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.165	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.131	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.363	KM Standard Error of Mean	0.0129
KM SD	0.098	95% KM (BCA) UCL	0.386
95% KM (t) UCL	0.385	95% KM (Percentile Bootstrap) UCL	0.384
95% KM (z) UCL	0.384	95% KM Bootstrap t UCL	0.385
90% KM Chebyshev UCL	0.402	95% KM Chebyshev UCL	0.419
97.5% KM Chebyshev UCL	0.444	99% KM Chebyshev UCL	0.492

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.564	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.748	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.161	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.132	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	20.26	k star (bias corrected MLE)	18.93
Theta hat (MLE)	0.0197	Theta star (bias corrected MLE)	0.0211
nu hat (MLE)	1824	nu star (bias corrected)	1703
Mean (detects)	0.398		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.163	Mean	0.359
Maximum	0.5	Median	0.36
SD	0.105	CV	0.292
k hat (MLE)	11.31	k star (bias corrected MLE)	10.74
Theta hat (MLE)	0.0318	Theta star (bias corrected MLE)	0.0334
nu hat (MLE)	1334	nu star (bias corrected)	1268
Adjusted Level of Significance (β)	0.0459		
Approximate Chi Square Value (N/A, α)	1186	Adjusted Chi Square Value (N/A, β)	1184
95% Gamma Approximate UCL (use when n>=50)	0.384	95% Gamma Adjusted UCL (use when n<50)	0.385

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.363	SD (KM)	0.098
Variance (KM)	0.00961	SE of Mean (KM)	0.0129
k hat (KM)	13.73	k star (KM)	13.04
nu hat (KM)	1620	nu star (KM)	1539
theta hat (KM)	0.0265	theta star (KM)	0.0279
80% gamma percentile (KM)	0.444	90% gamma percentile (KM)	0.497
95% gamma percentile (KM)	0.543	99% gamma percentile (KM)	0.637

ProUCL Statistical Evaluation of Molybdenum (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	1449	Adjusted Chi Square Value (N/A, β)	1446
95% Gamma Approximate KM-UCL (use when n>=50)	0.386	95% Gamma Adjusted KM-UCL (use when n<50)	0.386

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.876	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.945	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.155	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.131	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.36	Mean in Log Scale	-1.064
SD in Original Scale	0.103	SD in Log Scale	0.3
95% t UCL (assumes normality of ROS data)	0.383	95% Percentile Bootstrap UCL	0.382
95% BCA Bootstrap UCL	0.383	95% Bootstrap t UCL	0.384
95% H-UCL (Log ROS)	0.386		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.05	KM Geo Mean	0.35
KM SD (logged)	0.273	95% Critical H Value (KM-Log)	1.704
KM Standard Error of Mean (logged)	0.036	95% H-UCL (KM -Log)	0.386
KM SD (logged)	0.273	95% Critical H Value (KM-Log)	1.704
KM Standard Error of Mean (logged)	0.036		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.334	Mean in Log Scale	-1.214
SD in Original Scale	0.14	SD in Log Scale	0.526
95% t UCL (Assumes normality)	0.364	95% H-Stat UCL	0.389

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.385	KM H-UCL	0.386
95% KM (BCA) UCL	0.386		

ProUCL Statistical Evaluation of Nickel (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	24
		Number of Missing Observations	0
Minimum	2.5	Mean	10.96
Maximum	64	Median	8
SD	10.82	Std. Error of Mean	1.408
Coefficient of Variation	0.987	Skewness	3.32

Normal GOF Test

Shapiro Wilk Test Statistic	0.64	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.224	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	13.31	95% Adjusted-CLT UCL (Chen-1995)	13.92
		95% Modified-t UCL (Johnson-1978)	13.41

Gamma GOF Test

A-D Test Statistic	1.925	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.763	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.154	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.117	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.949	k star (bias corrected MLE)	1.861
Theta hat (MLE)	5.623	Theta star (bias corrected MLE)	5.888
nu hat (MLE)	230	nu star (bias corrected)	219.6
MLE Mean (bias corrected)	10.96	MLE Sd (bias corrected)	8.032
		Approximate Chi Square Value (0.05)	186.3
Adjusted Level of Significance	0.0459	Adjusted Chi Square Value	185.5

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	12.92	95% Adjusted Gamma UCL (use when n<50)	12.97

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	0.0154	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.137	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	0.916	Mean of logged Data	2.116
Maximum of Logged Data	4.159	SD of logged Data	0.695

Assuming Lognormal Distribution

95% H-UCL	12.72	90% Chebyshev (MVUE) UCL	13.64
95% Chebyshev (MVUE) UCL	15.06	97.5% Chebyshev (MVUE) UCL	17.02
99% Chebyshev (MVUE) UCL	20.88		

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	13.27	95% Jackknife UCL	13.31
95% Standard Bootstrap UCL	13.3	95% Bootstrap-t UCL	14.72
95% Hall's Bootstrap UCL	22.41	95% Percentile Bootstrap UCL	13.49
95% BCA Bootstrap UCL	14.24		
90% Chebyshev(Mean, Sd) UCL	15.18	95% Chebyshev(Mean, Sd) UCL	17.1
97.5% Chebyshev(Mean, Sd) UCL	19.75	99% Chebyshev(Mean, Sd) UCL	24.97

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	17.1

ProUCL Statistical Evaluation of Silver (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	3
Number of Detects	2	Number of Non-Detects	57
Number of Distinct Detects	2	Number of Distinct Non-Detects	1
Minimum Detect	0.5	Minimum Non-Detect	0.15
Maximum Detect	5	Maximum Non-Detect	0.15
Variance Detects	10.13	Percent Non-Detects	96.61%
Mean Detects	2.75	SD Detects	3.182
Median Detects	2.75	CV Detects	1.157
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	0.458	SD of Logged Detects	1.628

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only
Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.238	KM Standard Error of Mean	0.115
KM SD	0.627	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.431	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.428	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.584	95% KM Chebyshev UCL	0.741
97.5% KM Chebyshev UCL	0.959	99% KM Chebyshev UCL	1.387

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	1.038	k star (bias corrected MLE)	N/A
Theta hat (MLE)	2.648	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	4.154	nu star (bias corrected)	N/A
Mean (detects)	2.75		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.238	SD (KM)	0.627
Variance (KM)	0.393	SE of Mean (KM)	0.115
k hat (KM)	0.144	k star (KM)	0.148
nu hat (KM)	17.03	nu star (KM)	17.49
theta hat (KM)	1.65	theta star (KM)	1.606
80% gamma percentile (KM)	0.257	90% gamma percentile (KM)	0.705
95% gamma percentile (KM)	1.314	99% gamma percentile (KM)	3.084

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0459
Approximate Chi Square Value (17.49, α)	9.027	Adjusted Chi Square Value (17.49, β)	8.874
95% Gamma Approximate KM-UCL (use when n>=50)	0.462	95% Gamma Adjusted KM-UCL (use when n<50)	0.469

Lognormal GOF Test on Detected Observations Only
Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0939	Mean in Log Scale	-17.28
SD in Original Scale	0.653	SD in Log Scale	7.971
95% t UCL (assumes normality of ROS data)	0.236	95% Percentile Bootstrap UCL	0.255
95% BCA Bootstrap UCL	0.357	95% Bootstrap t UCL	19.22
95% H-UCL (Log ROS)	1.173E+12		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.817	KM Geo Mean	0.162
KM SD (logged)	0.476	95% Critical H Value (KM-Log)	1.878
KM Standard Error of Mean (logged)	0.0876	95% H-UCL (KM -Log)	0.205
KM SD (logged)	0.476	95% Critical H Value (KM-Log)	1.878
KM Standard Error of Mean (logged)	0.0876		

ProUCL Statistical Evaluation of Silver (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.166	Mean in Log Scale	-2.487
SD in Original Scale	0.643	SD in Log Scale	0.596
95% t UCL (Assumes normality)	0.306	95% H-Stat UCL	0.116

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use	
95% KM (Chebyshev) UCL	0.741

ProUCL Statistical Evaluation of Thallium (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	16
Number of Detects	53	Number of Non-Detects	6
Number of Distinct Detects	16	Number of Distinct Non-Detects	1
Minimum Detect	0.25	Minimum Non-Detect	0.25
Maximum Detect	2	Maximum Non-Detect	0.25
Variance Detects	0.167	Percent Non-Detects	10.17%
Mean Detects	0.708	SD Detects	0.409
Median Detects	0.5	CV Detects	0.577
Skewness Detects	1.365	Kurtosis Detects	1.025
Mean of Logged Detects	-0.48	SD of Logged Detects	0.502

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.762	**Normal GOF Test on Detected Observations Only**
5% Shapiro Wilk P Value	6.246E-11	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.374	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.121	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.662	KM Standard Error of Mean	0.0536
KM SD	0.408	95% KM (BCA) UCL	0.753
95% KM (t) UCL	0.751	95% KM (Percentile Bootstrap) UCL	0.752
95% KM (z) UCL	0.75	95% KM Bootstrap t UCL	0.761
90% KM Chebyshev UCL	0.823	95% KM Chebyshev UCL	0.895
97.5% KM Chebyshev UCL	0.997	99% KM Chebyshev UCL	1.195

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	4.702	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.754	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.361	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.123	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.873	k star (bias corrected MLE)	3.666
Theta hat (MLE)	0.183	Theta star (bias corrected MLE)	0.193
nu hat (MLE)	410.5	nu star (bias corrected)	388.6
Mean (detects)	0.708		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.644
Maximum	2	Median	0.5
SD	0.433	CV	0.672
k hat (MLE)	1.903	k star (bias corrected MLE)	1.818
Theta hat (MLE)	0.338	Theta star (bias corrected MLE)	0.354
nu hat (MLE)	224.6	nu star (bias corrected)	214.5
Adjusted Level of Significance (β)	0.0459		
Approximate Chi Square Value (214.51, α)	181.6	Adjusted Chi Square Value (214.51, β)	180.9
95% Gamma Approximate UCL (use when n>=50)	0.761	95% Gamma Adjusted UCL (use when n<50)	0.764

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.662	SD (KM)	0.408
Variance (KM)	0.167	SE of Mean (KM)	0.0536
k hat (KM)	2.629	k star (KM)	2.507
nu hat (KM)	310.3	nu star (KM)	295.8
theta hat (KM)	0.252	theta star (KM)	0.264
80% gamma percentile (KM)	0.964	90% gamma percentile (KM)	1.222
95% gamma percentile (KM)	1.464	99% gamma percentile (KM)	1.994

ProUCL Statistical Evaluation of Thallium (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (295.83, α)	257	Adjusted Chi Square Value (295.83, β)	256.1
95% Gamma Approximate KM-UCL (use when n>=50)	0.762	95% Gamma Adjusted KM-UCL (use when n<50)	0.764

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.85	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	5.2673E-7	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.344	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.121	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.658	Mean in Log Scale	-0.591
SD in Original Scale	0.416	SD in Log Scale	0.584
95% t UCL (assumes normality of ROS data)	0.748	95% Percentile Bootstrap UCL	0.752
95% BCA Bootstrap UCL	0.758	95% Bootstrap t UCL	0.761
95% H-UCL (Log ROS)	0.762		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.572	KM Geo Mean	0.565
KM SD (logged)	0.545	95% Critical H Value (KM-Log)	1.92
KM Standard Error of Mean (logged)	0.0717	95% H-UCL (KM -Log)	0.752
KM SD (logged)	0.545	95% Critical H Value (KM-Log)	1.92
KM Standard Error of Mean (logged)	0.0717		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.649	Mean in Log Scale	-0.642
SD in Original Scale	0.426	SD in Log Scale	0.681
95% t UCL (Assumes normality)	0.742	95% H-Stat UCL	0.795

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.895

ProUCL Statistical Evaluation of Vanadium (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	29
		Number of Missing Observations	0
Minimum	9.5	Mean	25.63
Maximum	120	Median	20
SD	17.41	Std. Error of Mean	2.267
Coefficient of Variation	0.679	Skewness	3.064

Normal GOF Test

Shapiro Wilk Test Statistic	0.728	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	4.419E-14	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.198	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	29.42	95% Adjusted-CLT UCL (Chen-1995)	30.32
		95% Modified-t UCL (Johnson-1978)	29.57

Gamma GOF Test

A-D Test Statistic	1.551	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.756	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.148	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.116	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.476	k star (bias corrected MLE)	3.311
Theta hat (MLE)	7.372	Theta star (bias corrected MLE)	7.741
nu hat (MLE)	410.2	nu star (bias corrected)	390.7
MLE Mean (bias corrected)	25.63	MLE Sd (bias corrected)	14.08
		Approximate Chi Square Value (0.05)	345.9
Adjusted Level of Significance	0.0459	Adjusted Chi Square Value	344.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	28.95	95% Adjusted Gamma UCL (use when n<50)	29.04

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	0.0269	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.117	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.251	Mean of logged Data	3.093
Maximum of Logged Data	4.787	SD of logged Data	0.52

Assuming Lognormal Distribution

95% H-UCL	28.73	90% Chebyshev (MVUE) UCL	30.56
95% Chebyshev (MVUE) UCL	33	97.5% Chebyshev (MVUE) UCL	36.39
99% Chebyshev (MVUE) UCL	43.05		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	29.36	95% Jackknife UCL	29.42
95% Standard Bootstrap UCL	29.35	95% Bootstrap-t UCL	31.01
95% Hall's Bootstrap UCL	33.21	95% Percentile Bootstrap UCL	29.68
95% BCA Bootstrap UCL	30.61		
90% Chebyshev(Mean, Sd) UCL	32.43	95% Chebyshev(Mean, Sd) UCL	35.51
97.5% Chebyshev(Mean, Sd) UCL	39.78	99% Chebyshev(Mean, Sd) UCL	48.18

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	35.51

ProUCL Statistical Evaluation of Zinc (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	59	Number of Distinct Observations	34
		Number of Missing Observations	0
Minimum	10	Mean	32.71
Maximum	200	Median	26
SD	25.63	Std. Error of Mean	3.337
Coefficient of Variation	0.784	Skewness	4.952

Normal GOF Test

Shapiro Wilk Test Statistic	0.583	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.193	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.115	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	38.29	95% Adjusted-CLT UCL (Chen-1995)	40.5
		95% Modified-t UCL (Johnson-1978)	38.65

Gamma GOF Test

A-D Test Statistic	1.046	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.756	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.107	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.116	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.409	k star (bias corrected MLE)	3.247
Theta hat (MLE)	9.597	Theta star (bias corrected MLE)	10.08
nu hat (MLE)	402.2	nu star (bias corrected)	383.1
MLE Mean (bias corrected)	32.71	MLE Sd (bias corrected)	18.16
		Approximate Chi Square Value (0.05)	338.7
Adjusted Level of Significance	0.0459	Adjusted Chi Square Value	337.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	37	95% Adjusted Gamma UCL (use when n<50)	37.11

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk P Value	0.121	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0674	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.115	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.303	Mean of logged Data	3.334
Maximum of Logged Data	5.298	SD of logged Data	0.514

Assuming Lognormal Distribution

95% H-UCL	36.4	90% Chebyshev (MVUE) UCL	38.7
95% Chebyshev (MVUE) UCL	41.77	97.5% Chebyshev (MVUE) UCL	46.03
99% Chebyshev (MVUE) UCL	54.38		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	38.2	95% Jackknife UCL	38.29
95% Standard Bootstrap UCL	38.24	95% Bootstrap-t UCL	42.7
95% Hall's Bootstrap UCL	62.54	95% Percentile Bootstrap UCL	38.44
95% BCA Bootstrap UCL	42.44		
90% Chebyshev(Mean, Sd) UCL	42.72	95% Chebyshev(Mean, Sd) UCL	47.26
97.5% Chebyshev(Mean, Sd) UCL	53.55	99% Chebyshev(Mean, Sd) UCL	65.92

Suggested UCL to Use

95% Approximate Gamma UCL	37

TOTAL PETROLEUM HYDROCARBONS (TPH)

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C5-C12) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	38	Number of Distinct Observations	14
		Number of Missing Observations	14
Number of Detects	10	Number of Non-Detects	28
Number of Distinct Detects	10	Number of Distinct Non-Detects	4
Minimum Detect	5.72	Minimum Non-Detect	1
Maximum Detect	9150	Maximum Non-Detect	20
Variance Detects	9895973	Percent Non-Detects	73.68%
Mean Detects	2183	SD Detects	3146
Median Detects	462	CV Detects	1.441
Skewness Detects	1.462	Kurtosis Detects	1.421
Mean of Logged Detects	5.332	SD of Logged Detects	3.052

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.753	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.266	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	575.4	KM Standard Error of Mean	309.1
KM SD	1807	95% KM (BCA) UCL	1131
95% KM (t) UCL	1097	95% KM (Percentile Bootstrap) UCL	1102
95% KM (z) UCL	1084	95% KM Bootstrap t UCL	1513
90% KM Chebyshev UCL	1503	95% KM Chebyshev UCL	1923
97.5% KM Chebyshev UCL	2506	99% KM Chebyshev UCL	3651

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.604	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.816	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.234	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.288	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.294	k star (bias corrected MLE)	0.272
Theta hat (MLE)	7435	Theta star (bias corrected MLE)	8020
nu hat (MLE)	5.873	nu star (bias corrected)	5.444
Mean (detects)	2183		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	574.5
Maximum	9150	Median	0.01
SD	1832	CV	3.189
k hat (MLE)	0.0976	k star (bias corrected MLE)	0.107
Theta hat (MLE)	5885	Theta star (bias corrected MLE)	5346
nu hat (MLE)	7.42	nu star (bias corrected)	8.167
Adjusted Level of Significance (β)	0.0434		
Approximate Chi Square Value (8.17, α)	2.832	Adjusted Chi Square Value (8.17, β)	2.703
95% Gamma Approximate UCL (use when n>=50)	1657	95% Gamma Adjusted UCL (use when n<50)	1736

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	575.4	SD (KM)	1807
Variance (KM)	3267041	SE of Mean (KM)	309.1
k hat (KM)	0.101	k star (KM)	0.111
nu hat (KM)	7.701	nu star (KM)	8.426
theta hat (KM)	5678	theta star (KM)	5189
80% gamma percentile (KM)	459.1	90% gamma percentile (KM)	1591
95% gamma percentile (KM)	3313	99% gamma percentile (KM)	8675

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C5-C12) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (8.43, α)	2.984	Adjusted Chi Square Value (8.43, β)	2.851
95% Gamma Approximate KM-UCL (use when n>=50)	1625	95% Gamma Adjusted KM-UCL (use when n<50)	1700

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.848	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.229	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	574.6	Mean in Log Scale	-2.427
SD in Original Scale	1832	SD in Log Scale	5.94
95% t UCL (assumes normality of ROS data)	1076	95% Percentile Bootstrap UCL	1073
95% BCA Bootstrap UCL	1272	95% Bootstrap t UCL	1540
95% H-UCL (Log ROS)	7.391E+10		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.43	KM Geo Mean	4.18
KM SD (logged)	2.774	95% Critical H Value (KM-Log)	4.926
KM Standard Error of Mean (logged)	0.476	95% H-UCL (KM -Log)	1856
KM SD (logged)	2.774	95% Critical H Value (KM-Log)	4.926
KM Standard Error of Mean (logged)	0.476		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	575.9	Mean in Log Scale	1.448
SD in Original Scale	1832	SD in Log Scale	2.927
95% t UCL (Assumes normality)	1077	95% H-Stat UCL	3703

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use	
Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	1700

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C13-C22) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	38	Number of Distinct Observations	16
		Number of Missing Observations	14
Number of Detects	14	Number of Non-Detects	24
Number of Distinct Detects	14	Number of Distinct Non-Detects	3
Minimum Detect	7.59	Minimum Non-Detect	1
Maximum Detect	15850	Maximum Non-Detect	25
Variance Detects	29328150	Percent Non-Detects	63.16%
Mean Detects	3639	SD Detects	5416
Median Detects	517.5	CV Detects	1.488
Skewness Detects	1.427	Kurtosis Detects	0.783
Mean of Logged Detects	5.891	SD of Logged Detects	2.894

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.726	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.295	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1342	KM Standard Error of Mean	609.6
KM SD	3621	95% KM (BCA) UCL	2552
95% KM (t) UCL	2370	95% KM (Percentile Bootstrap) UCL	2322
95% KM (z) UCL	2344	95% KM Bootstrap t UCL	3203
90% KM Chebyshev UCL	3171	95% KM Chebyshev UCL	3999
97.5% KM Chebyshev UCL	5149	99% KM Chebyshev UCL	7407

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.63	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.833	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.216	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.248	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.299	k star (bias corrected MLE)	0.282
Theta hat (MLE)	12176	Theta star (bias corrected MLE)	12885
nu hat (MLE)	8.369	nu star (bias corrected)	7.909
Mean (detects)	3639		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1341
Maximum	15850	Median	0.01
SD	3670	CV	2.737
k hat (MLE)	0.102	k star (bias corrected MLE)	0.112
Theta hat (MLE)	13141	Theta star (bias corrected MLE)	12023
nu hat (MLE)	7.754	nu star (bias corrected)	8.476
Adjusted Level of Significance (β)	0.0434		
Approximate Chi Square Value (8.48, α)	3.013	Adjusted Chi Square Value (8.48, β)	2.88
95% Gamma Approximate UCL (use when n>=50)	3771	95% Gamma Adjusted UCL (use when n<50)	3946

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1342	SD (KM)	3621
Variance (KM)	13112803	SE of Mean (KM)	609.6
k hat (KM)	0.137	k star (KM)	0.144
nu hat (KM)	10.43	nu star (KM)	10.94
theta hat (KM)	9773	theta star (KM)	9318
80% gamma percentile (KM)	1411	90% gamma percentile (KM)	3954
95% gamma percentile (KM)	7442	99% gamma percentile (KM)	17649

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C13-C22) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (10.94, α)	4.54	Adjusted Chi Square Value (10.94, β)	4.369
95% Gamma Approximate KM-UCL (use when n>=50)	3234	95% Gamma Adjusted KM-UCL (use when n<50)	3361

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.889	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.187	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1341	Mean in Log Scale	0.432
SD in Original Scale	3670	SD in Log Scale	5.191
95% t UCL (assumes normality of ROS data)	2346	95% Percentile Bootstrap UCL	2344
95% BCA Bootstrap UCL	2669	95% Bootstrap t UCL	3242
95% H-UCL (Log ROS)	2.023E+9		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.243	KM Geo Mean	9.42
KM SD (logged)	3.285	95% Critical H Value (KM-Log)	5.732
KM Standard Error of Mean (logged)	0.558	95% H-UCL (KM -Log)	45847
KM SD (logged)	3.285	95% Critical H Value (KM-Log)	5.732
KM Standard Error of Mean (logged)	0.558		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1343	Mean in Log Scale	2.386
SD in Original Scale	3669	SD in Log Scale	3.422
95% t UCL (Assumes normality)	2348	95% H-Stat UCL	108029

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use	
Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	3361

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C23-C44) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	38	Number of Distinct Observations	24
		Number of Missing Observations	14
Number of Detects	22	Number of Non-Detects	16
Number of Distinct Detects	21	Number of Distinct Non-Detects	3
Minimum Detect	5.04	Minimum Non-Detect	1
Maximum Detect	8238	Maximum Non-Detect	48
Variance Detects	5009281	Percent Non-Detects	42.11%
Mean Detects	1347	SD Detects	2238
Median Detects	42.65	CV Detects	1.662
Skewness Detects	1.828	Kurtosis Detects	3.107
Mean of Logged Detects	4.678	SD of Logged Detects	2.707

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.672	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.911	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.347	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.184	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	781.4	KM Standard Error of Mean	297.4
KM SD	1791	95% KM (BCA) UCL	1308
95% KM (t) UCL	1283	95% KM (Percentile Bootstrap) UCL	1296
95% KM (z) UCL	1271	95% KM Bootstrap t UCL	1506
90% KM Chebyshev UCL	1674	95% KM Chebyshev UCL	2078
97.5% KM Chebyshev UCL	2638	99% KM Chebyshev UCL	3740

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.76	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.859	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.254	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.202	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.277	k star (bias corrected MLE)	0.269
Theta hat (MLE)	4870	Theta star (bias corrected MLE)	5004
nu hat (MLE)	12.17	nu star (bias corrected)	11.84
Mean (detects)	1347		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	781.8
Maximum	8238	Median	9.1
SD	1815	CV	2.322
k hat (MLE)	0.138	k star (bias corrected MLE)	0.144
Theta hat (MLE)	5682	Theta star (bias corrected MLE)	5419
nu hat (MLE)	10.46	nu star (bias corrected)	10.96
Adjusted Level of Significance (β)	0.0434		
Approximate Chi Square Value (10.96, α)	4.553	Adjusted Chi Square Value (10.96, β)	4.382
95% Gamma Approximate UCL (use when n>=50)	1883	95% Gamma Adjusted UCL (use when n<50)	1956

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	781.4	SD (KM)	1791
Variance (KM)	3207742	SE of Mean (KM)	297.4
k hat (KM)	0.19	k star (KM)	0.193
nu hat (KM)	14.47	nu star (KM)	14.66
theta hat (KM)	4105	theta star (KM)	4052
80% gamma percentile (KM)	1010	90% gamma percentile (KM)	2362
95% gamma percentile (KM)	4064	99% gamma percentile (KM)	8777

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C23-C44) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (14.66, α)	7.023	Adjusted Chi Square Value (14.66, β)	6.804
95% Gamma Approximate KM-UCL (use when n>=50)	1631	95% Gamma Adjusted KM-UCL (use when n<50)	1683

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.849	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.911	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.179	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.184	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	781.4	Mean in Log Scale	2.473
SD in Original Scale	1815	SD in Log Scale	3.604
95% t UCL (assumes normality of ROS data)	1278	95% Percentile Bootstrap UCL	1267
95% BCA Bootstrap UCL	1359	95% Bootstrap t UCL	1607
95% H-UCL (Log ROS)	316189		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.979	KM Geo Mean	19.66
KM SD (logged)	2.917	95% Critical H Value (KM-Log)	5.15
KM Standard Error of Mean (logged)	0.496	95% H-UCL (KM -Log)	16365
KM SD (logged)	2.917	95% Critical H Value (KM-Log)	5.15
KM Standard Error of Mean (logged)	0.496		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	784.3	Mean in Log Scale	3.19
SD in Original Scale	1814	SD in Log Scale	2.967
95% t UCL (Assumes normality)	1281	95% H-Stat UCL	25407

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use	
97.5% KM (Chebyshev) UCL	2638

VOLATILE ORGANIC COMPOUNDS (VOCs)

ProUCL Statistical Evaluation of n-Butylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	12	Number of Distinct Observations	4
		Number of Missing Observations	40
Number of Detects	3	Number of Non-Detects	9
Number of Distinct Detects	3	Number of Distinct Non-Detects	1
Minimum Detect	1.1	Minimum Non-Detect	0.005
Maximum Detect	5.1	Maximum Non-Detect	0.005
Variance Detects	5.216	Percent Non-Detects	75%
Mean Detects	2.463	SD Detects	2.284
Median Detects	1.19	CV Detects	0.927
Skewness Detects	1.729	Kurtosis Detects	N/A
Mean of Logged Detects	0.633	SD of Logged Detects	0.864

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.767	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.767	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.378	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.62	KM Standard Error of Mean	0.5
KM SD	1.415	95% KM (BCA) UCL	N/A
95% KM (t) UCL	1.518	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	1.443	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	2.121	95% KM Chebyshev UCL	2.8
97.5% KM Chebyshev UCL	3.744	99% KM Chebyshev UCL	5.598

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	2.012	k star (bias corrected MLE)	N/A
Theta hat (MLE)	1.225	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	12.07	nu star (bias corrected)	N/A
Mean (detects)	2.463		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.623
Maximum	5.1	Median	0.01
SD	1.476	CV	2.368
k hat (MLE)	0.251	k star (bias corrected MLE)	0.244
Theta hat (MLE)	2.48	Theta star (bias corrected MLE)	2.554
nu hat (MLE)	6.033	nu star (bias corrected)	5.858
Adjusted Level of Significance (β)	0.029		
Approximate Chi Square Value (5.86, α)	1.568	Adjusted Chi Square Value (5.86, β)	1.255
95% Gamma Approximate UCL (use when n>=50)	2.329	95% Gamma Adjusted UCL (use when n<50)	N/A

ProUCL Statistical Evaluation of n-Butylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.62	SD (KM)	1.415
Variance (KM)	2.002	SE of Mean (KM)	0.5
k hat (KM)	0.192	k star (KM)	0.199
nu hat (KM)	4.601	nu star (KM)	4.784
theta hat (KM)	3.232	theta star (KM)	3.108
80% gamma percentile (KM)	0.815	90% gamma percentile (KM)	1.874
95% gamma percentile (KM)	3.195	99% gamma percentile (KM)	6.835

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (4.78, α)	1.054	Adjusted Chi Square Value (4.78, β)	0.815
95% Gamma Approximate KM-UCL (use when n>=50)	2.813	95% Gamma Adjusted KM-UCL (use when n<50)	3.635

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.788	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.369	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.68	Mean in Log Scale	-2.284
SD in Original Scale	1.453	SD in Log Scale	2.223
95% t UCL (assumes normality of ROS data)	1.434	95% Percentile Bootstrap UCL	1.412
95% BCA Bootstrap UCL	1.833	95% Bootstrap t UCL	3.12
95% H-UCL (Log ROS)	46.53		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.816	KM Geo Mean	0.022
KM SD (logged)	2.592	95% Critical H Value (KM-Log)	6.273
KM Standard Error of Mean (logged)	0.917	95% H-UCL (KM -Log)	85.45
KM SD (logged)	2.592	95% Critical H Value (KM-Log)	6.273
KM Standard Error of Mean (logged)	0.917		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.618	Mean in Log Scale	-4.335
SD in Original Scale	1.479	SD in Log Scale	3.019
95% t UCL (Assumes normality)	1.384	95% H-Stat UCL	900.5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	1.518

ProUCL Statistical Evaluation of sec-Butylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	12	Number of Distinct Observations	4
		Number of Missing Observations	40
Number of Detects	3	Number of Non-Detects	9
Number of Distinct Detects	3	Number of Distinct Non-Detects	1
Minimum Detect	3.1	Minimum Non-Detect	0.005
Maximum Detect	10	Maximum Non-Detect	0.005
Variance Detects	12.97	Percent Non-Detects	75%
Mean Detects	5.953	SD Detects	3.601
Median Detects	4.76	CV Detects	0.605
Skewness Detects	1.327	Kurtosis Detects	N/A
Mean of Logged Detects	1.665	SD of Logged Detects	0.593

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.918	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.296	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.492	KM Standard Error of Mean	1.049
KM SD	2.966	95% KM (BCA) UCL	N/A
95% KM (t) UCL	3.375	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	3.217	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	4.638	95% KM Chebyshev UCL	6.063
97.5% KM Chebyshev UCL	8.04	99% KM Chebyshev UCL	11.93

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	4.354	k star (bias corrected MLE)	N/A
Theta hat (MLE)	1.367	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	26.12	nu star (bias corrected)	N/A
Mean (detects)	5.953		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.496
Maximum	10	Median	0.01
SD	3.096	CV	2.07
k hat (MLE)	0.212	k star (bias corrected MLE)	0.215
Theta hat (MLE)	7.057	Theta star (bias corrected MLE)	6.973
nu hat (MLE)	5.087	nu star (bias corrected)	5.149
Adjusted Level of Significance (β)	0.029		
Approximate Chi Square Value (5.15, α)	1.222	Adjusted Chi Square Value (5.15, β)	0.957
95% Gamma Approximate UCL (use when n>=50)	6.305	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.492	SD (KM)	2.966
Variance (KM)	8.796	SE of Mean (KM)	1.049
k hat (KM)	0.253	k star (KM)	0.245
nu hat (KM)	6.075	nu star (KM)	5.889
theta hat (KM)	5.895	theta star (KM)	6.081
80% gamma percentile (KM)	2.152	90% gamma percentile (KM)	4.484
95% gamma percentile (KM)	7.262	99% gamma percentile (KM)	14.68

ProUCL Statistical Evaluation of sec-Butylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (5.89, α)	1.584	Adjusted Chi Square Value (5.89, β)	1.269
95% Gamma Approximate KM-UCL (use when n>=50)	5.549	95% Gamma Adjusted KM-UCL (use when n<50)	6.925

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.237	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.852	Mean in Log Scale	-0.48
SD in Original Scale	2.936	SD in Log Scale	1.631
95% t UCL (assumes normality of ROS data)	3.374	95% Percentile Bootstrap UCL	3.321
95% BCA Bootstrap UCL	3.749	95% Bootstrap t UCL	5.952
95% H-UCL (Log ROS)	18.22		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.558	KM Geo Mean	0.0285
KM SD (logged)	3.025	95% Critical H Value (KM-Log)	7.247
KM Standard Error of Mean (logged)	1.069	95% H-UCL (KM -Log)	2052
KM SD (logged)	3.025	95% Critical H Value (KM-Log)	7.247
KM Standard Error of Mean (logged)	1.069		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.49	Mean in Log Scale	-4.077
SD in Original Scale	3.099	SD in Log Scale	3.472
95% t UCL (Assumes normality)	3.097	95% H-Stat UCL	40054

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use	
95% KM (t) UCL	3.375

ProUCL Statistical Evaluation of tert-Butylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	11	Number of Distinct Observations	3
		Number of Missing Observations	41
Number of Detects	2	Number of Non-Detects	9
Number of Distinct Detects	2	Number of Distinct Non-Detects	1
Minimum Detect	0.175	Minimum Non-Detect	0.005
Maximum Detect	0.281	Maximum Non-Detect	0.005
Variance Detects	0.00562	Percent Non-Detects	81.82%
Mean Detects	0.228	SD Detects	0.075
Median Detects	0.228	CV Detects	0.329
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-1.506	SD of Logged Detects	0.335

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only
Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0455	KM Standard Error of Mean	0.0379
KM SD	0.0889	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.114	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.108	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.159	95% KM Chebyshev UCL	0.211
97.5% KM Chebyshev UCL	0.282	99% KM Chebyshev UCL	0.423

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	18.17	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.0126	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	72.67	nu star (bias corrected)	N/A
Mean (detects)	0.228		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0455	SD (KM)	0.0889
Variance (KM)	0.00791	SE of Mean (KM)	0.0379
k hat (KM)	0.262	k star (KM)	0.251
nu hat (KM)	5.771	nu star (KM)	5.53
theta hat (KM)	0.174	theta star (KM)	0.181
80% gamma percentile (KM)	0.0663	90% gamma percentile (KM)	0.137
95% gamma percentile (KM)	0.22	99% gamma percentile (KM)	0.442

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0278
Approximate Chi Square Value (5.53, α)	1.405	Adjusted Chi Square Value (5.53, β)	1.096
95% Gamma Approximate KM-UCL (use when n>=50)	0.179	95% Gamma Adjusted KM-UCL (use when n<50)	0.23

Lognormal GOF Test on Detected Observations Only
Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0723	Mean in Log Scale	-3.178
SD in Original Scale	0.0842	SD in Log Scale	1.111
95% t UCL (assumes normality of ROS data)	0.118	95% Percentile Bootstrap UCL	0.116
95% BCA Bootstrap UCL	0.129	95% Bootstrap t UCL	0.182
95% H-UCL (Log ROS)	0.239		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.609	KM Geo Mean	0.00996
KM SD (logged)	1.466	95% Critical H Value (KM-Log)	3.959
KM Standard Error of Mean (logged)	0.625	95% H-UCL (KM -Log)	0.183
KM SD (logged)	1.466	95% Critical H Value (KM-Log)	3.959
KM Standard Error of Mean (logged)	0.625		

ProUCL Statistical Evaluation of tert-Butylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0435	Mean in Log Scale	-5.176
SD in Original Scale	0.0942	SD in Log Scale	1.817
95% t UCL (Assumes normality)	0.095	95% H-Stat UCL	0.449

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.114	KM H-UCL	0.183
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

ProUCL Statistical Evaluation of Ethylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	45	Number of Distinct Observations	12
		Number of Missing Observations	7
Number of Detects	9	Number of Non-Detects	36
Number of Distinct Detects	9	Number of Distinct Non-Detects	3
Minimum Detect	0.0088	Minimum Non-Detect	0.002
Maximum Detect	0.82	Maximum Non-Detect	0.012
Variance Detects	0.0819	Percent Non-Detects	80%
Mean Detects	0.227	SD Detects	0.286
Median Detects	0.0594	CV Detects	1.261
Skewness Detects	1.319	Kurtosis Detects	1.015
Mean of Logged Detects	-2.561	SD of Logged Detects	1.744

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.803	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.276	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.047	KM Standard Error of Mean	0.0238
KM SD	0.151	95% KM (BCA) UCL	0.0852
95% KM (t) UCL	0.087	95% KM (Percentile Bootstrap) UCL	0.0869
95% KM (z) UCL	0.0861	95% KM Bootstrap t UCL	0.132
90% KM Chebyshev UCL	0.118	95% KM Chebyshev UCL	0.151
97.5% KM Chebyshev UCL	0.196	99% KM Chebyshev UCL	0.284

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.486	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.765	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.226	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.293	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.577	k star (bias corrected MLE)	0.458
Theta hat (MLE)	0.394	Theta star (bias corrected MLE)	0.495
nu hat (MLE)	10.38	nu star (bias corrected)	8.252
Mean (detects)	0.227		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0088	Mean	0.0534
Maximum	0.82	Median	0.01
SD	0.15	CV	2.816
k hat (MLE)	0.501	k star (bias corrected MLE)	0.483
Theta hat (MLE)	0.106	Theta star (bias corrected MLE)	0.111
nu hat (MLE)	45.13	nu star (bias corrected)	43.46
Adjusted Level of Significance (β)	0.0447		
Approximate Chi Square Value (43.46, α)	29.34	Adjusted Chi Square Value (43.46, β)	28.95
95% Gamma Approximate UCL (use when n>=50)	0.0791	95% Gamma Adjusted UCL (use when n<50)	0.0801

ProUCL Statistical Evaluation of Ethylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.047	SD (KM)	0.151
Variance (KM)	0.0227	SE of Mean (KM)	0.0238
k hat (KM)	0.0974	k star (KM)	0.106
nu hat (KM)	8.769	nu star (KM)	9.518
theta hat (KM)	0.482	theta star (KM)	0.444
80% gamma percentile (KM)	0.0353	90% gamma percentile (KM)	0.128
95% gamma percentile (KM)	0.272	99% gamma percentile (KM)	0.726

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (9.52, α)	3.643	Adjusted Chi Square Value (9.52, β)	3.523
95% Gamma Approximate KM-UCL (use when n>=50)	0.123	95% Gamma Adjusted KM-UCL (use when n<50)	0.127

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.898	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.194	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0458	Mean in Log Scale	-8.465
SD in Original Scale	0.153	SD in Log Scale	4.055
95% t UCL (assumes normality of ROS data)	0.0841	95% Percentile Bootstrap UCL	0.0865
95% BCA Bootstrap UCL	0.105	95% Bootstrap t UCL	0.142
95% H-UCL (Log ROS)	51.37		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.483	KM Geo Mean	0.00416
KM SD (logged)	1.636	95% Critical H Value (KM-Log)	3.173
KM Standard Error of Mean (logged)	0.259	95% H-UCL (KM -Log)	0.0347
KM SD (logged)	1.636	95% Critical H Value (KM-Log)	3.173
KM Standard Error of Mean (logged)	0.259		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0472	Mean in Log Scale	-5.449
SD in Original Scale	0.152	SD in Log Scale	1.682
95% t UCL (Assumes normality)	0.0853	95% H-Stat UCL	0.0402

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use	
djusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	0.127

ProUCL Statistical Evaluation of Isopropylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	11	Number of Distinct Observations	3
		Number of Missing Observations	41
Number of Detects	2	Number of Non-Detects	9
Number of Distinct Detects	2	Number of Distinct Non-Detects	1
Minimum Detect	2.6	Minimum Non-Detect	0.005
Maximum Detect	4.02	Maximum Non-Detect	0.005
Variance Detects	1.008	Percent Non-Detects	81.82%
Mean Detects	3.31	SD Detects	1.004
Median Detects	3.31	CV Detects	0.303
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	1.173	SD of Logged Detects	0.308

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only
Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.606	KM Standard Error of Mean	0.559
KM SD	1.31	95% KM (BCA) UCL	N/A
95% KM (t) UCL	1.618	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	1.525	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	2.282	95% KM Chebyshev UCL	3.041
97.5% KM Chebyshev UCL	4.095	99% KM Chebyshev UCL	6.165

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	21.4	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.155	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	85.58	nu star (bias corrected)	N/A
Mean (detects)	3.31		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.606	SD (KM)	1.31
Variance (KM)	1.717	SE of Mean (KM)	0.559
k hat (KM)	0.214	k star (KM)	0.216
nu hat (KM)	4.705	nu star (KM)	4.755
theta hat (KM)	2.833	theta star (KM)	2.803
80% gamma percentile (KM)	0.83	90% gamma percentile (KM)	1.831
95% gamma percentile (KM)	3.058	99% gamma percentile (KM)	6.393

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0278
Approximate Chi Square Value (4.76, α)	1.041	Adjusted Chi Square Value (4.76, β)	0.79
95% Gamma Approximate KM-UCL (use when n>=50)	2.768	95% Gamma Adjusted KM-UCL (use when n<50)	3.647

Lognormal GOF Test on Detected Observations Only
Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.11	Mean in Log Scale	-0.365
SD in Original Scale	1.194	SD in Log Scale	1.023
95% t UCL (assumes normality of ROS data)	1.763	95% Percentile Bootstrap UCL	1.675
95% BCA Bootstrap UCL	1.875	95% Bootstrap t UCL	2.598
95% H-UCL (Log ROS)	3.133		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.122	KM Geo Mean	0.0162
KM SD (logged)	2.498	95% Critical H Value (KM-Log)	6.307
KM Standard Error of Mean (logged)	1.065	95% H-UCL (KM -Log)	53.5
KM SD (logged)	2.498	95% Critical H Value (KM-Log)	6.307
KM Standard Error of Mean (logged)	1.065		

ProUCL Statistical Evaluation of Isopropylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.604	Mean in Log Scale	-4.689
SD in Original Scale	1.375	SD in Log Scale	2.9
95% t UCL (Assumes normality)	1.355	95% H-Stat UCL	476.6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	1.618	KM H-UCL	53.5
95% KM (BCA) UCL	N/A		

Warning: One or more Recommended UCL(s) not available!

ProUCL Statistical Evaluation of Naphthalene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	11	Number of Distinct Observations	3
		Number of Missing Observations	41
Number of Detects	3	Number of Non-Detects	8
Number of Distinct Detects	3	Number of Distinct Non-Detects	1
Minimum Detect	0.005	Minimum Non-Detect	0.005
Maximum Detect	9.08	Maximum Non-Detect	0.005
Variance Detects	20.61	Percent Non-Detects	72.73%
Mean Detects	4.468	SD Detects	4.539
Median Detects	4.32	CV Detects	1.016
Skewness Detects	0.147	Kurtosis Detects	N/A
Mean of Logged Detects	-0.543	SD of Logged Detects	4.135

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.999	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.18	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.222	KM Standard Error of Mean	1.025
KM SD	2.774	95% KM (BCA) UCL	N/A
95% KM (t) UCL	3.079	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	2.908	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	4.296	95% KM Chebyshev UCL	5.688
97.5% KM Chebyshev UCL	7.621	99% KM Chebyshev UCL	11.42

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	0.332	k star (bias corrected MLE)	N/A
Theta hat (MLE)	13.44	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	1.994	nu star (bias corrected)	N/A
Mean (detects)	4.468		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.005	Mean	1.226
Maximum	9.08	Median	0.01
SD	2.908	CV	2.372
k hat (MLE)	0.199	k star (bias corrected MLE)	0.205
Theta hat (MLE)	6.16	Theta star (bias corrected MLE)	5.97
nu hat (MLE)	4.378	nu star (bias corrected)	4.517
Adjusted Level of Significance (β)	0.0278		
Approximate Chi Square Value (4.52, α)	0.936	Adjusted Chi Square Value (4.52, β)	0.703
95% Gamma Approximate UCL (use when n>=50)	5.916	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.222	SD (KM)	2.774
Variance (KM)	7.698	SE of Mean (KM)	1.025
k hat (KM)	0.194	k star (KM)	0.202
nu hat (KM)	4.27	nu star (KM)	4.439
theta hat (KM)	6.298	theta star (KM)	6.058
80% gamma percentile (KM)	1.618	90% gamma percentile (KM)	3.697
95% gamma percentile (KM)	6.284	99% gamma percentile (KM)	13.39

ProUCL Statistical Evaluation of Naphthalene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (4.44, α)	0.902	Adjusted Chi Square Value (4.44, β)	0.676
95% Gamma Approximate KM-UCL (use when n>=50)	6.013	95% Gamma Adjusted KM-UCL (use when n<50)	8.029

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.823	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.353	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.219	Mean in Log Scale	-12.51
SD in Original Scale	2.912	SD in Log Scale	9.535
95% t UCL (assumes normality of ROS data)	2.81	95% Percentile Bootstrap UCL	2.83
95% BCA Bootstrap UCL	3.695	95% Bootstrap t UCL	2362
95% H-UCL (Log ROS)	5.644E+44		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.001	KM Geo Mean	0.0183
KM SD (logged)	2.756	95% Critical H Value (KM-Log)	6.912
KM Standard Error of Mean (logged)	1.018	95% H-UCL (KM -Log)	336.5
KM SD (logged)	2.756	95% Critical H Value (KM-Log)	6.912
KM Standard Error of Mean (logged)	1.018		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.22	Mean in Log Scale	-4.506
SD in Original Scale	2.911	SD in Log Scale	3.146
95% t UCL (Assumes normality)	2.811	95% H-Stat UCL	3769

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use	
95% KM (t) UCL	3.079

ProUCL Statistical Evaluation of Toluene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	45	Number of Distinct Observations	8
		Number of Missing Observations	7
Number of Detects	6	Number of Non-Detects	39
Number of Distinct Detects	6	Number of Distinct Non-Detects	2
Minimum Detect	0.0068	Minimum Non-Detect	0.002
Maximum Detect	0.8	Maximum Non-Detect	0.005
Variance Detects	0.0792	Percent Non-Detects	86.67%
Mean Detects	0.279	SD Detects	0.281
Median Detects	0.213	CV Detects	1.007
Skewness Detects	1.527	Kurtosis Detects	2.695
Mean of Logged Detects	-1.955	SD of Logged Detects	1.643

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.862	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.262	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.039	KM Standard Error of Mean	0.0217
KM SD	0.133	95% KM (BCA) UCL	0.0762
95% KM (t) UCL	0.0755	95% KM (Percentile Bootstrap) UCL	0.075
95% KM (z) UCL	0.0747	95% KM Bootstrap t UCL	0.0955
90% KM Chebyshev UCL	0.104	95% KM Chebyshev UCL	0.134
97.5% KM Chebyshev UCL	0.175	99% KM Chebyshev UCL	0.255

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.259	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.718	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.198	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.342	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.865	k star (bias corrected MLE)	0.543
Theta hat (MLE)	0.323	Theta star (bias corrected MLE)	0.514
nu hat (MLE)	10.37	nu star (bias corrected)	6.52
Mean (detects)	0.279		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0068	Mean	0.0459
Maximum	0.8	Median	0.01
SD	0.133	CV	2.887
k hat (MLE)	0.537	k star (bias corrected MLE)	0.516
Theta hat (MLE)	0.0856	Theta star (bias corrected MLE)	0.0891
nu hat (MLE)	48.29	nu star (bias corrected)	46.4
Adjusted Level of Significance (β)	0.0447		
Approximate Chi Square Value (46.40, α)	31.77	Adjusted Chi Square Value (46.40, β)	31.37
95% Gamma Approximate UCL (use when n>=50)	0.0671	95% Gamma Adjusted UCL (use when n<50)	0.0679

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.039	SD (KM)	0.133
Variance (KM)	0.0177	SE of Mean (KM)	0.0217
k hat (KM)	0.0859	k star (KM)	0.095
nu hat (KM)	7.734	nu star (KM)	8.552
theta hat (KM)	0.454	theta star (KM)	0.41
80% gamma percentile (KM)	0.0251	90% gamma percentile (KM)	0.101
95% gamma percentile (KM)	0.227	99% gamma percentile (KM)	0.635

ProUCL Statistical Evaluation of Toluene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (8.55, α)	3.059	Adjusted Chi Square Value (8.55, β)	2.951
95% Gamma Approximate KM-UCL (use when n>=50)	0.109	95% Gamma Adjusted KM-UCL (use when n<50)	0.113

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.872	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.281	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0382	Mean in Log Scale	-8.636
SD in Original Scale	0.135	SD in Log Scale	4.008
95% t UCL (assumes normality of ROS data)	0.072	95% Percentile Bootstrap UCL	0.0751
95% BCA Bootstrap UCL	0.0889	95% Bootstrap t UCL	0.122
95% H-UCL (Log ROS)	32.69		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.647	KM Geo Mean	0.00353
KM SD (logged)	1.548	95% Critical H Value (KM-Log)	3.053
KM Standard Error of Mean (logged)	0.253	95% H-UCL (KM -Log)	0.0239
KM SD (logged)	1.548	95% Critical H Value (KM-Log)	3.053
KM Standard Error of Mean (logged)	0.253		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0391	Mean in Log Scale	-5.636
SD in Original Scale	0.134	SD in Log Scale	1.604
95% t UCL (Assumes normality)	0.0728	95% H-Stat UCL	0.0275

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.0755

ProUCL Statistical Evaluation of Total Xylenes (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	45	Number of Distinct Observations	12
		Number of Missing Observations	7
Number of Detects	9	Number of Non-Detects	36
Number of Distinct Detects	9	Number of Distinct Non-Detects	3
Minimum Detect	0.014	Minimum Non-Detect	0.002
Maximum Detect	8.1	Maximum Non-Detect	0.012
Variance Detects	10.86	Percent Non-Detects	80%
Mean Detects	2.577	SD Detects	3.296
Median Detects	0.13	CV Detects	1.279
Skewness Detects	0.863	Kurtosis Detects	-0.949
Mean of Logged Detects	-0.957	SD of Logged Detects	2.579

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.777	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.327	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.517	KM Standard Error of Mean	0.274
KM SD	1.73	95% KM (BCA) UCL	0.982
95% KM (t) UCL	0.977	95% KM (Percentile Bootstrap) UCL	0.958
95% KM (z) UCL	0.967	95% KM Bootstrap t UCL	1.258
90% KM Chebyshev UCL	1.338	95% KM Chebyshev UCL	1.709
97.5% KM Chebyshev UCL	2.225	99% KM Chebyshev UCL	3.238

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.813	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.798	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.286	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.3	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.353	k star (bias corrected MLE)	0.309
Theta hat (MLE)	7.306	Theta star (bias corrected MLE)	8.334
nu hat (MLE)	6.349	nu star (bias corrected)	5.566
Mean (detects)	2.577		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.523
Maximum	8.1	Median	0.01
SD	1.747	CV	3.339
k hat (MLE)	0.224	k star (bias corrected MLE)	0.224
Theta hat (MLE)	2.337	Theta star (bias corrected MLE)	2.338
nu hat (MLE)	20.15	nu star (bias corrected)	20.14
Adjusted Level of Significance (β)	0.0447		
Approximate Chi Square Value (20.14, α)	10.96	Adjusted Chi Square Value (20.14, β)	10.73
95% Gamma Approximate UCL (use when n>=50)	0.962	95% Gamma Adjusted UCL (use when n<50)	0.982

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.517	SD (KM)	1.73
Variance (KM)	2.992	SE of Mean (KM)	0.274
k hat (KM)	0.0893	k star (KM)	0.0982
nu hat (KM)	8.04	nu star (KM)	8.837
theta hat (KM)	5.788	theta star (KM)	5.265
80% gamma percentile (KM)	0.349	90% gamma percentile (KM)	1.365
95% gamma percentile (KM)	3.004	99% gamma percentile (KM)	8.288

ProUCL Statistical Evaluation of Total Xylenes (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (8.84, α)	3.229	Adjusted Chi Square Value (8.84, β)	3.117
95% Gamma Approximate KM-UCL (use when n>=50)	1.415	95% Gamma Adjusted KM-UCL (use when n<50)	1.466

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.836	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.246	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.516	Mean in Log Scale	-9.457
SD in Original Scale	1.75	SD in Log Scale	5.843
95% t UCL (assumes normality of ROS data)	0.954	95% Percentile Bootstrap UCL	0.965
95% BCA Bootstrap UCL	1.121	95% Bootstrap t UCL	1.4
95% H-UCL (Log ROS)	10480683		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.163	KM Geo Mean	0.00572
KM SD (logged)	2.367	95% Critical H Value (KM-Log)	4.227
KM Standard Error of Mean (logged)	0.374	95% H-UCL (KM -Log)	0.426
KM SD (logged)	2.367	95% Critical H Value (KM-Log)	4.227
KM Standard Error of Mean (logged)	0.374		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.519	Mean in Log Scale	-4.748
SD in Original Scale	1.749	SD in Log Scale	2.299
95% t UCL (Assumes normality)	0.957	95% H-Stat UCL	0.508

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	1.466

ATTACHMENT E-3

FATE AND TRANSPORT MODELING

TABLE OF CONTENTS

PAGE

LIST OF ATTACHMENTS ..... **ii**

1.0 INTRODUCTION **1-1**

2.0 CONCEPTUAL MODEL **2-1**
- 2.1 Sources of VOC Vapors 2-1
- 2.2 Chemical Transport Mechanisms 2-1
  - 2.2.1 Chemical Partitioning Between Phases 2-2
  - 2.2.2 Vapor Migration from Groundwater to Soil Surface 2-2
  - 2.2.3 Mixing of Vapor Emissions with Indoor Air 2-2

3.0 CALCULATIONS **3-1**
- 3.1 Source Concentrations 3-2
- 3.2 Site-Specific Properties 3-2
- 3.3 Chemical-Specific Properties 3-2

4.0 UNCERTAINTY ANALYSIS **4-1**
- 4.1 Model Formulation 4-1
- 4.2 Model Input Data 4-2
- 4.3 Conceptualization of Site Conditions 4-2

5.0 RESULTS **5-1**

6.0 REFERENCES **6-1**

LIST OF ATTACHMENTS

Attachment E-3A	Soil Boring Logs
Attachment E-3B	Output of Johnson and Ettinger Model for Subsurface Vapor Intrusion into Buildings From Groundwater

1.0 INTRODUCTION

In support of the human health risk assessment (HHRA) for the East Parcel, this appendix presents the methodology for fate and transport modeling used to estimate exposure point concentrations (EPCs) in indoor air resulting from volatilization of volatile organic compounds (VOCs) from subsurface sources. According to the U.S. Environmental Protection Agency (USEPA, 2016), a compound is assumed to be volatile if it has a Henry's Law constant greater than 1×10^{-5} and a molecular weight less than 200 grams per mole (g/mole).

The fate and transport modeling incorporates site-specific data into analytical models that simulate vapor migration of VOCs. The Johnson and Ettinger (1991) vapor intrusion model, recommended and provided by the Department of Toxic Substances Control (DTSC, 2014), was used to estimate vapor emissions from groundwater into indoor air. The conceptual approach to modeling, the calculations, and the modeling results are described in the following sections.

2.0 CONCEPTUAL MODEL

Volatile compounds can be released from the subsurface into indoor air resulting in an indirect exposure to contaminants in soil, soil vapor, and groundwater. The modeling addressed chemical sources in soil vapor for a reasonable maximum exposure (RME) scenario. Specifically, the modeling included calculations for the following exposure pathway:

- Volatilization of chemicals from groundwater, migration of vapors to the soil surface, and mixing with indoor air for the hypothetical commercial/industrial worker receptor.

Soil vapor data was collected from a single point, E1, at a depth of 15 feet below ground surface (bgs) in the northern portion of the East Parcel during the 2006 investigation by Tetra Tech. Due to limited soil vapor data (i.e., one soil vapor point) and to the age of the data (i.e., more than 10 years old) in the East Parcel, the vapor intrusion exposure pathway was evaluated using groundwater data from the East Parcel. Groundwater data is comprised of grab groundwater samples and groundwater monitoring data from wells MW-2 and MW-10. Groundwater samples from the East Parcel are sampled primarily from first encountered groundwater at approximately 30 feet bgs. The groundwater data used in this HHRA are presented in Attachment E-1 of the HHRA. The groundwater sample locations are shown in Figure E3-1 of the HHRA.

Using the groundwater EPCs, the fate and transport modeling was performed and a concentration in indoor air for each VOC detected was estimated. Site conditions were generalized to create a simplified conceptual model to estimate vapor concentrations in indoor air. Details of the approach and assumptions used for each hypothetical source and transport mechanism are discussed below.

2.1 Sources of VOC Vapors

Vapor sources were modeled based on the following assumptions:

- VOCs are uniformly distributed in groundwater; and
- The concentrations of VOCs remain constant over time.

These assumptions are highly conservative because the distribution of VOCs is likely more limited than was assumed, and because the mass of the source will deplete over time as natural attenuation processes occur, thereby lowering actual concentrations in the source over time.

2.2 Chemical Transport Mechanisms

The models simulate the following transport mechanisms:

- Chemical partitioning between phases;
- Vapor migration from groundwater to the soil surface; and
- Mixing of vapor emissions with indoor air.

2.2.1 Chemical Partitioning Between Phases

Chemicals are assumed to partition between groundwater (EPC_{gw}), soil vapor ($EPC_{soil\ vapor}$), and ambient air under equilibrium conditions.

2.2.2 Vapor Migration from Groundwater to Soil Surface

Vertical migration of chemicals in groundwater to the soil surface was assumed to occur by steady-state diffusion induced by a chemical concentration gradient between the soil-vapor source and the soil surface. The indoor air pathway analysis accounted for the effects of steady-state advection induced by an assumed pressure differential between the exterior and interior of the building. Chemical diffusion of soil vapor through the vadose zone and building foundations (indoor only) was characterized by effective diffusion coefficients, D_s^{eff} (vadose zone) and D_f^{eff} (building foundations). Advection of chemicals dissolved in soil moisture was assumed to be negligible. This assumption is conservative because soil moisture tends to migrate downward, decreasing the overall flux of chemical toward the surface. Chemical and biological transformations were conservatively assumed not to occur during migration to the surface.

2.2.3 Mixing of Vapor Emissions with Indoor Air

The analysis of indoor air simulated vapor-phase advection and diffusion of chemicals near the building foundation. Vapor diffusion of chemicals upward was assumed to occur through a foundation. Advective transport through a region generated by the pressure differential between inside (lower pressure) and outside (higher pressure) of the building was simulated. Such underpressurization is generally induced by temperature differentials, wind loading, and operation of devices such as furnaces and exhaust fans. Underpressurization is highly variable over time, but was conservatively assumed to be constant in modeling. This approach is highly conservative for periods when structures are neutrally or positively pressurized, as these conditions will inhibit migration of soil vapor into the building. The mixing of vapor-phase chemicals with ambient indoor air was simulated using a building of volume (V_b) that is ventilated at a constant exchange rate (ER), resulting in an indoor air concentration ($C_{building}$ *or* $EPC_{indoor\ air}$).

3.0 CALCULATIONS

This section presents the equations, variables, and model assumptions used as inputs to calculate vapor emissions from groundwater to indoor air. Using the DTSC version of the Johnson and Ettinger (1991) model (DTSC, 2014), vapor concentrations in indoor air from groundwater were estimated for the hypothetical commercial/industrial worker receptor. This model accounts for advection and diffusion in the vadose zone and building foundation and mixing in the building interior.

As presented by USEPA (2004), for vapor migration from groundwater to indoor air, concentrations in indoor air were estimated based on the following equations:

$$C_{building} = C_{source} \times \propto \qquad \text{or} \qquad EPC_{indoor\ air} = EPC_{gw} \times H' \times \propto$$

where:

$$\alpha = \frac{\left[\left(\frac{D_T^{eff} \times A_B}{Q_{building} \times L_T}\right) \times \exp\left(\frac{Q_{soil} \times L_{crack}}{D_{crack} \times A_{crack}}\right)\right]}{\left[\exp\left(\frac{Q_{soil} \times L_{crack}}{D_{crack} \times A_{crack}}\right) + \left(\frac{D_T^{eff} \times A_B}{Q_{building} \times L_T}\right) + \left(\frac{D_T^{eff} \times A_B}{Q_{soil} \times L_T}\right) \times \left[\exp\left(\frac{Q_{soil} \times L_{crack}}{D_{crack} \times A_{crack}}\right) - 1\right]\right]}$$

where:

$C_{building}/EPC_{indoor\ air}$ = EPC in indoor air (microgram per cubic meter [μg/m^3]);
C_{source} = Vapor concentration at source of contamination (μg/m^3);
For groundwater, C_{source} = EPC_{gw} *x H';*
EPC_{gw} EPC in groundwater (μg/L x 1,000 L/m^3));
H' = Dimensionless Henry's law constant (chemical-specific);
α = Steady-state attenuation coefficient (unitless);
D_T^{eff} = Total overall effective diffusion coefficient (square centimeter per second [cm^2/s]);
A_B = Area of enclosed space below grade (square centimeter [cm^2]);
$Q_{building}$ = Building ventilation rate (cubic centimeter per second [cm^3/s]);
L_T = Source-building separation (centimeter [cm]);
Q_{soil} = Volumetric flow rate of soil vapor into the enclosed space (cm^3/s);
L_{crack} = Enclosed space foundation or slab thickness (cm);
A_{crack} = Area of total cracks (cm^2); and
D_{crack} = Effective diffusion coefficient through the cracks (cm^2/s)
(assumed equivalent to D_i^{eff} of soil layer (i) in contact with the floor).

A more detailed description of the equations and input parameters used in this model are provided in the User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings (USEPA, 2004).

The following sections discuss the input parameters used in the fate and transport modeling for vapor migration from groundwater to indoor air.

3.1 Source Concentrations

Vapor emissions were modeled for the Site using source concentrations from groundwater (EPC_{gw}). Groundwater EPCs are summarized in Table E4-5 of the HHRA, respectively. Source concentrations in groundwater represent the maximum detected concentration. Based on the model, the soil vapor EPCs ($EPC_{soil\ vapor}$) and indoor air EPCs ($EPC_{indoor\ air}$) are presented in Table E4-5 of the HHRA.

3.2 Site-Specific Properties

The Site is generally underlain by deposits of unconsolidated, laterally discontinuous sequences of silt and fine to coarse-grained sand. Coarse-grained soils consist of sand (SP) and silty sand (SM); whereas, subordinate fine-grained soils consist of silt (ML and MH) and, to a lesser degree, clay (CL). First encountered groundwater occurs at approximately 30 feet bgs. Based on Tetra Tech's soil boring logs for the East Parcel (Tetra Tech, 2006), vadose zone soil consists primarily of coarse-grained sand and silty sand. Soil boring logs are provided in Attachment E-3A.

Since the predominant soil type within the vadose zone is essentially sand, DTSC (2014) default soil properties for "sand" were used in the fate and transport model for vapor migration from soil vapor to outdoor air.

3.3 Chemical-Specific Properties

The values for the dimensionless Henry's Law constant, organic carbon-water partition coefficient (K_{oc}), and molecular diffusion coefficients in air and water, D_i and D_w, for each VOC were obtained from DTSC (2014).

The properties used in the fate and transport model (DTSC, 2014) for vapor migration from soil vapor to indoor air are summarized in the table below.

Equation Variables – Vapor Migration from Soil Gas or Groundwater to Indoor Air		
Properties	**Symbol**	**Assumed Value**
Depth Below Grade to Bottom of Enclosed Space Floor	L_F	15 cm
Depth Below Grade to Water Table	L_{WT}	914.4 cm (30 feet)
SCS Soil Type Directly Above Water Table Vadose Zone SCS Soil Type	- -	Sand (S)
Average Soil/Groundwater Temperature	T_s	24°C
Average Vapor Flow Rate into Building	Q_{Soil}	5 L/m
Vadose Zone SCS soil type (used to estimate soil vapor permeability	- -	Sand (S)

Equation Variables – Vapor Migration from Soil Gas or Groundwater to Indoor Air		
Properties	**Symbol**	**Assumed Value**
Vadose Zone Soil Dry Bulk Density	ρ_b	1.66 g/cm^3
Vadose Zone Soil Total porosity	θ_T	0.375
Vadose Zone Soil Water-filled porosity	θ_w	0.054
Vadose Zone Soil Air-filled porosity	θ_a	0.321

The spreadsheets containing the input parameters and results of the Johnson and Ettinger (1991) model, for subsurface vapor intrusion into buildings (DTSC, 2014) are provided in Attachment E-3B.

The results are summarized in Section 5.0, following a discussion of uncertainties (Section 4.0), which may have influenced the estimation of vapor emission estimates and corresponding EPCs and health risks.

4.0 UNCERTAINTY ANALYSIS

The procedures used in evaluating vapor migration and estimating EPCs are subject to various degrees of uncertainty. A significant amount of conservatism has been incorporated into the fate and transport modeling process to address this uncertainty. Specifically, the Johnson and Ettinger (1991) model employs a series of simplified, analytical solutions to chemical transport, often resulting in overestimation of EPCs. The conservatism inherent to the formulation of these models is supplemented by additional conservatism associated with selection of model input data and conceptualization of site conditions imposed by model users. As a result of this multilevel conservatism, actual EPCs and corresponding health risks are likely to be significantly lower than were estimated for the inhalation exposure pathway. These conservative aspects of the fate and transport modeling process are further discussed below.

4.1 Model Formulation

The conservative aspects of the vapor migration models include simplified representation or complete omission of the following processes that affect transport, for example:

- Loss mechanisms - The absence of loss mechanisms such as biodegradation and vapor-phase adsorption result in overestimation of vapor emissions to indoor air, yielding higher EPCs.
- Depleting contaminant source - The use of a nondepleting, constant source results in an unlimited supply of contaminated vapor and an overestimation of vapor emissions to indoor air, yielding higher EPCs.
- Water movement - The assumed absence of water (and dissolved chemical) movement through unsaturated soil results in an overestimation of chemical mass in vapor-phase available for transport to indoor air, yielding higher EPCs.
- Neutral or positive pressurization - The assumption of continuously under-pressurized buildings neglects significant periods where neutral or positive pressurized conditions exist, thereby over-estimating advective transport of contaminated vapors to indoor air, yielding higher EPCs.
- One-dimensional transport - The assumption of vapor transport under a single (vertical) dimension ignores the potential for vapor migration in multiple directions away from the source area, resulting in an over-estimation of vapor emissions and higher EPCs.

Under actual field conditions, the combined effect of these processes typically results in significantly lower EPCs than those estimated in this HHRA.

4.2 Model Input Data

As previously indicated, various model input data characterizing soil physical properties and building parameters used in this analysis correspond to conservative default values adopted by DTSC (2014). Use of conservative default values for the above-mentioned parameters also likely results in over-estimation of vapor emissions to indoor air, maximizing estimates of EPCs.

4.3 Conceptualization of Site Conditions

As previously indicated, site conditions were generalized to create a simplified conceptual model for simulation of vapor emissions at the Site. As a result, many components of this conceptualization are based on highly conservative assumptions, including:

- Outdoor and indoor points of exposure are assumed to directly overlie locations of maximum detected VOC concentrations in groundwater.
- VOCs are assumed to be uniformly distributed in groundwater, with no spatial and temporal changes in concentrations.

As a result of this conservative conceptualization, estimated vapor emissions to indoor air are maximized, yielding higher EPCs. As stated in Hers, et al. (2003), "If there is information only on contamination depth, the range in [vapor attenuation] can vary 3-4 orders of magnitude. When information on soil properties is also available, the uncertainty…is reduced resulting in [vapor attenuation] that vary over two orders of magnitude. When good quality site-specific data is available for both soil properties (e.g., moisture content) and building properties (e.g., ventilation rate, mixing height), it may be possible to reduce the uncertainty…to approximately one order of magnitude."

5.0 RESULTS

The groundwater EPCs and their respective indoor air concentrations were used to estimate hazard indices and excess cancer risks from assumed exposure to VOCs migrating from groundwater to indoor air. The groundwater and indoor air EPCs are presented in Table E4-5 of the HHRA. The spreadsheets containing the results of the Johnson and Ettinger (1991) model, for subsurface vapor intrusion into buildings (DTSC, 2014) from soil vapor are provided in Attachment E-3B.

6.0 REFERENCES

Department of Toxic Substances Control (DTSC). 2014. DTSC Screening-Level Model for Groundwater Contamination. California Environmental Protection Agency (CalEPA). Last Modified December.

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USEPA. 2016. Regional Screening Levels for Chemical Contaminants at Superfund Sites. USEPA Region 3, Region 6, and Region 9. May.

ATTACHMENT E-3A

SOIL BORING LOGS

Tetra Tech, Inc
348 W. Hospitality Ln. Suite 100
San Bernardino, CA 92408
Telephone: (909) 381-1674
Telefax (909) 889-1391

SOIL BORING LOG

BORING/WELL ID: E-1

CLIENT: GEM, Inc.
PROJECT NUMBER: 18116-04
LOCATION: Signal Hill

GEOLOGIST: D. Bertolacci
REVIEWED BY:
DATE(S) DRILLED:
DRILLING COMPANY:

TOTAL DEPTH:
BOREHOLE DIA.:
DRILLING METHOD:
SAMPLING METHOD:

Depth (ft. bgs)	Sample Recovery	Blow Counts	Sample Number	Sampling Time	FID/PID Soil (ppm)	FID/PID Breathing Zone (ppm)	Lithologic Contact (ft. bgs)	GROUP SYMBOL	GROUP NAME / GEOLOGIC DESCRIPTION / ADDITIONAL MODIFIERS (Color, Moisture, % Gravel, % Sand, % Non-plastic Fines, % Plastic Fines, Grading, Plasticity (Fines), Angularity (Sand / Gravel), Grain Size Range (Sand), Grain Size Range (Gravel), Max. Grain Size (Gravel))	Comments / Well Construction
									See CPT logs	
5										
10										
							↓ (15)		Soil vapor probe @ 15' bgs	
15										
				0932					begin purging 7 - volumes	
				0934					end purge	
			E1-060206-SV-15'	0934					Start sampling	
				1014					Finish sampling	

Notes:

GROUP SYMBOL	Color	Moisture	% Gravel	% Sand	% Non-plastic Fines	% Plastic Fines	Grading	Plasticity (Fines)	Angularity	Grain Size Range (Sand)	Grain Size Range (Gravel)	Max. Grain Size	Comments
See USCS flow Chart	Use Munsell color chart	Dry Moist Wet	> 1/4 Inch	visible -1/4 in.	visible with hand lens	not visible	W G U P	high med low non	A Sa Sr R	V. Fine Fine Med Coarse	V. Fine Fine Med Coarse	Inches	odor, staining, mineralogy, stucture, cementation, HCl reaction

<5-5%=trace, 10%=few, 15-25%=little, 30-45%=some, 50+%=mostly (cobbles only)
Well Graded - 5 consecutive seive sizes, % decreases with each decreasing particle size
Poorly Graded - one or more particle sizes missing (Gap Graded), or
all particles basically same size (Uniformly Graded)

subsurface exploration log 2.2.xls
Rev. 10/28/2005

Tetra Tech, Inc.
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Telefax (909) 889-1391

SOIL BORING LOG

BORING/WELL ID: E-1A

CLIENT: GEM, Inc.
PROJECT NUMBER: 18116-01
LOCATION: Former Chemoil Refinery

GEOLOGIST: D. Bertolacci
REVIEWED BY:
DATE(S) DRILLED: 06/01/2006
DRILLING COMPANY: Grogg Drilling, Inc.

TOTAL DEPTH
BOREHOLE DIA: 1.25"
DRILLING METHOD: CPT/DP
SAMPLING METHOD: ~~Acetate~~ Sleeve

Depth (ft bgs)	Sample Recovery	Blow Counts	Sample Number	Sampling Time	Soil (ppm) FID/PID	Breathing Zone (ppm)	Lithologic Contact (ft bgs)	GROUP SYMBOL	Color	Moisture	% Gravel	% Sand	% Non-plastic Fines	% Plastic Fines	Grading	Plasticity (Fines)	Angularity (Sand / Gravel)	Grain Size Range (Sand)	Grain Size Range (Gravel)	Max Grain Size (Gravel)	Comments / Well Construction
									See CPT logs												
5																					
10																					
15																					
20																					
25																					
30																					
35	X		E1A-060106 Gw1	1235	—	0.0															
40	X		E1A 060106 Gw2	1410	—	0.0															

GROUP NAME / GEOLOGIC DESCRIPTION / ADDITIONAL MODIFIERS

Notes

See USCS flow Chart	Use Munsell color chart	Dry Moist Wet	> 1/4 inch	visible - 1/4 in	visible with hand lens	not visible	W G U F	high med low non	A Sa Sr R	V Fine Fine Med Coarse	V Fine Fine Med Coarse	Inches	odor, staining, mineralogy, structure, cementation, HCl reaction

<5%=trace, 10%=few, 15-25%=little, 30-45%=some, 50+%=mostly (cobbles only)
Well Graded - 5 consecutive sieve sizes, % decreases with each decreasing particle size
Poorly Graded - one or more particle sizes missing (Gap Graded), or
all particles basically same size (Uniformly Graded)

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SOIL BORING LOG

BORING/WELL ID: E-1B

CLIENT: GEM, Inc.
PROJECT NUMBER: 18116-04
LOCATION: Former Chemoil Refinery

GEOLOGIST: D. Bertolacci
REVIEWED BY:
DATE(S) DRILLED: 06/01 / 2006
DRILLING COMPANY: Gregg Drilling, Inc

TOTAL DEPTH: 26'
BOREHOLE DIA.: 1.25"
DRILLING METHOD: CPT/DP
SAMPLING METHOD: ~~Acetate~~ Brass Sleeve

Depth (ft bgs)	Sample Recovery	Blow Counts	Sample Number	Sampling Time	Soil (ppm) FID/PID	Breathing Zone (ppm) FID/PID	Lithologic Contact (ft. bgs)	GROUP SYMBOL	Color	Moisture	% Gravel	% Sand	% Non-plastic Fines	% Plastic Fines	Grading	Plasticity (Fines)	Angularity (Sand / Gravel)	Grain Size Range (Sand)	Grain Size Range (Gravel)	Max Grain Size (Gravel)	Comments / Well Construction
									GROUP NAME / GEOLOGIC DESCRIPTION / ADDITIONAL MODIFIERS												
5	X		E1B-060106-5'	1500	156 +	0.0		SM	dk br	slight M	–	60	35	5	P	NP	non-low	VF	–	–	slight odor no staining
10																					
15	X		E1B-060106-15'	1515	140 +	0.0		SP	Gray	dry	–	100	–	–	P	–	Sr	VF-F	–	–	start staining
20																					
25	X		E1B-060106-25'	1530	100 +	0.0		SP	Gray	As above											strong odor + staining
30																					
35																					
40																					

Notes

See USCS flow Chart	Use Munsell color chart	Dry Moist Wet	> 1/4 inch	visible - 1/4 in.	visible with hand lens	not visible	W G U P	high med low non	A Sa Sr R	V. Fine Fine Med Coarse	V. Fine Fine Med Coarse	Inches	odor, staining, mineralogy, stucture, cementation, HCl reaction

<5-5%=trace, 10%=few, 15-25%=little, 30-45%=some, 50-75%=mostly (cobbles only)
Well Graded - 5 consecutive sieve sizes, % decreases with each decreasing particle size
Poorly Graded - one or more particle sizes missing (Gap Graded), or
all particles basically same size (Uniformly Graded)

Tetra Tech, Inc
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SOIL BORING LOG

BORING/WELL ID: E-1C

GEOLOGIST: D. Bertolacci
REVIEWED BY:
DATE(S) DRILLED: 06/01 / 2006
DRILLING COMPANY: Gregg Drilling, Inc

TOTAL DEPTH:
BOREHOLE DIA: 7.25"
DRILLING METHOD: CPT/DP
SAMPLING METHOD: ~~Acetate~~ Brass Sleeve

CLIENT: GEM, Inc.
PROJECT NUMBER: 18116-04
LOCATION: Former Chemoil Refinery

Depth (ft. bgs)	Sample Recovery	Blow Counts	Sample Number	Sampling Time	Soil (ppm) FID/PID	Breathing Zone (ppm)	Lithologic Contact (ft. bgs)	GROUP SYMBOL	Color	Moisture	% Gravel	% Sand	% Non-plastic Fines	% Plastic Fines	Grading	Plasticity (Fines)	Angularity (Sand / Gravel)	Grain Size Range (Sand)	Grain Size Range (Gravel)	Max. Grain Size (Gravel)	Comments / Well Construction
									GROUP NAME / GEOLOGIC DESCRIPTION / ADDITIONAL MODIFIERS												
5	X		E1C 060106 5'	1550	21.3	0.0		SM	3Y 6/2	M	–	70	30	–	P	non	Sr	vf-f	–	–	Strong odor
10																					
15	X		E1C 060106 15'	1605	173 *	0.0		SP	2.5 Y 6/2 light gray	M	–	100	–	–	P	–	Sr	F (+ vF)	–	–	Nickel odor, very strong odor & staining (black product)
20																					
25	X		E1C 060106 25'	1605	4.0 *	0.0		SP	2.5 Y	Saturated											Very strong odor + staining
30																					
35																					
40																					
Notes								See USCS flow Chart	Use Munsell color chart	Dry Moist Wet	> 1/4 inch	visible - 1/4 in.	visible with hand lens	not visible	W G U P	high med low non	A Sa Sr R	V. Fine Fine Med Coarse	V. Fine Fine Med Coarse	Inches	odor, staining, mineralogy, stucture, cementation, HCl reaction

<5-5%=trace, 10%=few, 15-25%=little, 30-45%=some, 50+%=mostly (particles only)
Well Graded - 5 consecutive sieve sizes, % decreases with each decreasing particle size
Poorly Graded - one or more particle sizes missing (Gap Graded), or
all particles basically same size (Uniformly Graded)

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SOIL BORING LOG

BORING/WELL ID: E-3A

CLIENT: GEM, Inc.
PROJECT NUMBER: 18116-04
LOCATION: Former Chemoil Refinery

GEOLOGIST: D. Bertolacci
REVIEWED BY:
DATE(S) DRILLED: 06/01/2006
DRILLING COMPANY: Gregg Drilling, Inc.

TOTAL DEPTH: ~~E-3A~~ 11'
BOREHOLE DIA.: 1.25"
DRILLING METHOD: CPT/DP
SAMPLING METHOD: ~~Acetate~~ Sleeve

Depth (ft bgs)	Sample Recovery	Blow Counts	Sample Number	Sampling Time	Soil (ppm) FID/PID	Breathing Zone (ppm) FID/PID	Lithologic Contact (ft. bgs)	GROUP SYMBOL	Color	Moisture	% Gravel	% Sand	% Non-plastic Fines	% Plastic Fines	Grading	Plasticity (Fines)	Angularity (Sand / Gravel)	Grain Size Range (Sand)	Grain Size Range (Gravel)	Max Grain Size (Gravel)	Comments / Well Construction
									GROUP NAME / GEOLOGIC DESCRIPTION / ADDITIONAL MODIFIERS												
5																					
10	X		E-3A-0601 8-10'	1150	53+	0.0		SP-SM	dk br	M	–	90	10	<5	P	non-low	Sr	F-M	–	–	no odor or staining

Notes

See USCS flow Chart	Use Munsell color chart	Dry Moist Wet	> 1/4 inch	visible -1/4 in	visible with hand lens	not visible	W G U P	high med low non	A Sa Sr R	V. Fine Fine Med Coarse	V. Fine Fine Med Coarse	Inches	odor staining, mineralogy, stucture cementation, HCl reaction

<5-5%=trace, 10%=few, 15-25%=little, 30-45%=some, 50+%=mostly (cobbles only)
Well Graded - 5 consecutive sieve sizes, % decreases with each decreasing particle size
Poorly Graded - one or more particle sizes missing (Gap Graded), or
all particles basically same size (Uniformly Graded)

subsurface exploration log 2.2.xls
Rev 5/12/2006

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SOIL BORING LOG

BORING/WELL ID: E-5

CLIENT: GEM, Inc
PROJECT NUMBER: 18116-04
LOCATION: Former Chemoil Refinery

GEOLOGIST: D. Bertolacci
REVIEWED BY:
DATE(S) DRILLED: 06/01/2006
DRILLING COMPANY: Gregg Drilling, Inc.

TOTAL DEPTH: 50'
BOREHOLE DIA.: 1.25"
DRILLING METHOD: CPT/DP
SAMPLING METHOD: ~~Acetate~~ Brass Sleeve

Depth (ft. bgs)	Sample Recovery	Blow Counts	Sample Number	Sampling Time	Soil (ppm) FID	Breathing Zone (ppm) PID	Lithologic Contact (ft. bgs)	GROUP SYMBOL	Color	Moisture	% Gravel	% Sand	% Non-plastic Fines	% Plastic Fines	Grading	Plasticity (Fines)	Angularity (Sand / Gravel)	Grain Size Range (Sand)	Grain Size Range (Gravel)	Max Grain Size (Gravel)	Comments / Well Construction
			hand auger					SP-SM	dk red brown	dry	N/A	90	10	—	P	non	Sr	VF-F	—	—	no odor, no stain
									Poorly graded sand w/ silt												
5	X		E5-060106-5'	1040	0.0	0.0		SM	dk br	slight M	—	80	20	—	P	non	Sr	VF	—	—	no odor or staining
10	X		E5-060106-10'	1055	5.3	0.0		SM	As above												no odor or staining
15	X		E5-060106-15'	1110	21.2 +	0.0		SP	dk yel. br	dry	-	100	<5	-	P	non	Sr	VF-F	-	-	no odor or staining
			GW@20'																		
20	X		E5-060106-20'		56.2 +	0.0		SP	As above, saturated, light grey to brown												no odor
	X		E5-060106-GW1	1010	—	0.0															
25																					
30																					
35																					
40																					

GROUP NAME / GEOLOGIC DESCRIPTION / ADDITIONAL MODIFIERS

Notes: 50 to 50' in CPT boring

See USCS flow Chart	Use Munsell color chart	Dry Moist Wet	> 1/4 inch	visible - 1/4 in	visible with hand lens	not visible	W G U P	high med low non	A Sa Sr R	V. Fine Fine Med Coarse	V. Fine Fine Med Coarse	Inches	odor, staining, mineralogy, stucture, cementation, HCl reaction

<5-5%=trace, 10%=few, 15-25%=little, 30-45%=some, 50+%=mostly (cobbles only)
Well Graded - 5 consecutive seive sizes, % decreases with each decreasing particle size
Poorly Graded - one or more particle sizes missing (Gap Graded) or
all particles basically same size (Uniformly Graded)

subsurface exploration log 2.2.xls
Rev 5/12/2006

ATTACHMENT E-3B

OUTPUT OF JOHNSON AND ETTINGER MODEL FOR SUBSURFACE VAPOR INTRUSION INTO BUILDINGS FROM GROUNDWATER

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **Bis(2-chloroethyl)ether**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) (µg/m^3)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) (µg/m^3)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} (µg/L)	Noncancer HQ = 1 (µg/L)
9.69E+02	1.2E-04	1.2E-01	6.9E-06	NA	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
111444	1.50E+03	Bis(2-chloroethyl)ether

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	914.4	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
S			S	1.66	0.375	0.054

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)$^{-1}$
NEW=> Commercial	1.0E-06	1	70	25	25	250	8	1
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **sec-Butylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) (µg/m^3)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) (µg/m^3)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} (µg/L)	Noncancer HQ = 1 (µg/L)
6.70E+02	8.9E-05	6.0E-02	NA	3.4E-05	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
135988	1.70E+00	sec-Butylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	914.4	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
S			S	1.66	0.375	0.054

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)$^{-1}$
NEW=> Commercial	1.0E-06	1	70	25	25	250	8	1
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **Cumene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) (µg/m^3)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) (µg/m^3)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} (µg/L)	Noncancer HQ = 1 (µg/L)
5.71E+03	1.0E-04	5.8E-01	NA	3.3E-04	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
98828	1.30E+01	**Cumene**

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	914.4	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
S			S	1.66	0.375	0.054

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)$^{-1}$
NEW=> Commercial	1.0E-06	1	70	25	25	250	8	1
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **Naphthalene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu g/m^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk $= 10^{-6}$ ($\mu g/L$)	Noncancer HQ = 1 ($\mu g/L$)
1.09E+03	1.0E-04	1.1E-01	3.1E-07	8.6E-03	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W ($\mu g/L$)	Chemical
91203	6.50E+01	Naphthalene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	914.4	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
S			S	1.66	0.375	0.054

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Commercial	1.0E-06	1	70	25	25	250	8	1
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **n-Propylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) (µg/m^3)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) (µg/m^3)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} (µg/L)	Noncancer HQ = 1 (µg/L)
5.25E+03	1.0E-04	5.3E-01	NA	1.2E-04	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
103651	1.30E+01	n-Propylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	914.4	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
S			S	1.66	0.375	0.054

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)$^{-1}$
NEW=> Commercial	1.0E-06	1	70	25	25	250	8	1
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **o-Xylene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) (µg/m^3)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) (µg/m^3)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} (µg/L)	Noncancer HQ = 1 (µg/L)
6.01E+02	1.1E-04	6.8E-02	NA	1.6E-04	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
95476	3.00E+00	o-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	914.4	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
S			S	1.66	0.375	0.054

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)$^{-1}$
NEW=> Commercial	1.0E-06	1	70	25	25	250	8	1
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

ATTACHMENT E-4

PROUCL STATISTICAL EVALUATION, SOIL 0 TO 10 FEET BGS

METALS

ProUCL Statistical Evaluation of Antimony (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	27	Number of Distinct Observations	6
Number of Detects	26	Number of Non-Detects	1
Number of Distinct Detects	5	Number of Distinct Non-Detects	1
Minimum Detect	0.36	Minimum Non-Detect	0.25
Maximum Detect	1	Maximum Non-Detect	0.25
Variance Detects	0.0439	Percent Non-Detects	3.704%
Mean Detects	0.585	SD Detects	0.21
Median Detects	0.5	CV Detects	0.358
Skewness Detects	1.536	Kurtosis Detects	0.666
Mean of Logged Detects	-0.586	SD of Logged Detects	0.302

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.592	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.464	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.572	KM Standard Error of Mean	0.0415
KM SD	0.211	95% KM (BCA) UCL	0.64
95% KM (t) UCL	0.643	95% KM (Percentile Bootstrap) UCL	0.642
95% KM (z) UCL	0.64	95% KM Bootstrap t UCL	0.659
90% KM Chebyshev UCL	0.697	95% KM Chebyshev UCL	0.753
97.5% KM Chebyshev UCL	0.831	99% KM Chebyshev UCL	0.985

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	5.171	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.744	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.457	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.171	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	10.31	k star (bias corrected MLE)	9.144
Theta hat (MLE)	0.0567	Theta star (bias corrected MLE)	0.0639
nu hat (MLE)	536	nu star (bias corrected)	475.5
Mean (detects)	0.585		

Gamma ROS Statistics using Imputed Non-Detects

Minimum	0.238	Mean	0.572
Maximum	1	Median	0.5
SD	0.216	CV	0.378
k hat (MLE)	8.697	k star (bias corrected MLE)	7.755
Theta hat (MLE)	0.0657	Theta star (bias corrected MLE)	0.0737
nu hat (MLE)	469.6	nu star (bias corrected)	418.8
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (418.78, α)	372.3	Adjusted Chi Square Value (418.78, β)	369.6
95% Gamma Approximate UCL (use when n>=50)	0.643	95% Gamma Adjusted UCL (use when n<50)	0.648

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.572	SD (KM)	0.211
Variance (KM)	0.0447	SE of Mean (KM)	0.0415
k hat (KM)	7.332	k star (KM)	6.542
nu hat (KM)	395.9	nu star (KM)	353.2
theta hat (KM)	0.078	theta star (KM)	0.0875
80% gamma percentile (KM)	0.747	90% gamma percentile (KM)	0.871
95% gamma percentile (KM)	0.983	99% gamma percentile (KM)	1.216

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (353.25, α)	310.7	Adjusted Chi Square Value (353.25, β)	308.1
95% Gamma Approximate KM-UCL (use when n>=50)	0.651	95% Gamma Adjusted KM-UCL (use when n<50)	0.656

ProUCL Statistical Evaluation of Antimony (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.646	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.446	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.574	Mean in Log Scale	-0.609
SD in Original Scale	0.213	SD in Log Scale	0.319
95% t UCL (assumes normality of ROS data)	0.644	95% Percentile Bootstrap UCL	0.643
95% BCA Bootstrap UCL	0.648	95% Bootstrap t UCL	0.663
95% H-UCL (Log ROS)	0.642		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.616	KM Geo Mean	0.54
KM SD (logged)	0.328	95% Critical H Value (KM-Log)	1.839
KM Standard Error of Mean (logged)	0.0643	95% H-UCL (KM -Log)	0.642
KM SD (logged)	0.328	95% Critical H Value (KM-Log)	1.839
KM Standard Error of Mean (logged)	0.0643		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.568	Mean in Log Scale	-0.641
SD in Original Scale	0.224	SD in Log Scale	0.413
95% t UCL (Assumes normality)	0.641	95% H-Stat UCL	0.669

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.643	KM H-UCL	0.642
95% KM (BCA) UCL	0.64		

ProUCL Statistical Evaluation of Barium (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	27	Number of Distinct Observations	23
		Number of Missing Observations	0
Minimum	30	Mean	103
Maximum	450	Median	76
SD	87.43	Std. Error of Mean	16.83
Coefficient of Variation	0.849	Skewness	3.067

Normal GOF Test

Shapiro Wilk Test Statistic	0.618	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.291	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	131.7	95% Adjusted-CLT UCL (Chen-1995)	141.3
		95% Modified-t UCL (Johnson-1978)	133.4

Gamma GOF Test

A-D Test Statistic	1.527	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.216	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.17	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.727	k star (bias corrected MLE)	2.448
Theta hat (MLE)	37.78	Theta star (bias corrected MLE)	42.07
nu hat (MLE)	147.2	nu star (bias corrected)	132.2
MLE Mean (bias corrected)	103	MLE Sd (bias corrected)	65.83
		Approximate Chi Square Value (0.05)	106.6
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	105.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	127.7	95% Adjusted Gamma UCL (use when n<50)	129.5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.916	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.164	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.401	Mean of logged Data	4.44
Maximum of Logged Data	6.109	SD of logged Data	0.57

Assuming Lognormal Distribution

95% H-UCL	125.2	90% Chebyshev (MVUE) UCL	133.4
95% Chebyshev (MVUE) UCL	149	97.5% Chebyshev (MVUE) UCL	170.6
99% Chebyshev (MVUE) UCL	213.1		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	130.7	95% Jackknife UCL	131.7
95% Standard Bootstrap UCL	129.7	95% Bootstrap-t UCL	172.2
95% Hall's Bootstrap UCL	270.6	95% Percentile Bootstrap UCL	134
95% BCA Bootstrap UCL	145.4		
90% Chebyshev(Mean, Sd) UCL	153.5	95% Chebyshev(Mean, Sd) UCL	176.3
97.5% Chebyshev(Mean, Sd) UCL	208.1	99% Chebyshev(Mean, Sd) UCL	270.4

Suggested UCL to Use

95% H-UCL	125.2

ProUCL Statistical Evaluation of Chromium (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	27	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	7.5	Mean	17.59
Maximum	40	Median	16
SD	8.289	Std. Error of Mean	1.595
Coefficient of Variation	0.471	Skewness	0.833

Normal GOF Test

Shapiro Wilk Test Statistic	0.919	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.153	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	20.31	95% Adjusted-CLT UCL (Chen-1995)	20.49
		95% Modified-t UCL (Johnson-1978)	20.36

Gamma GOF Test

A-D Test Statistic	0.526	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.171	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.169	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.881	k star (bias corrected MLE)	4.363
Theta hat (MLE)	3.604	Theta star (bias corrected MLE)	4.032
nu hat (MLE)	263.6	nu star (bias corrected)	235.6
MLE Mean (bias corrected)	17.59	MLE Sd (bias corrected)	8.422
		Approximate Chi Square Value (0.05)	201.1
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	199

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	20.61	95% Adjusted Gamma UCL (use when n<50)	20.82

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.168	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.167	Data Not Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.015	Mean of logged Data	2.762
Maximum of Logged Data	3.689	SD of logged Data	0.472

Assuming Lognormal Distribution

95% H-UCL	21.19	90% Chebyshev (MVUE) UCL	22.6
95% Chebyshev (MVUE) UCL	24.85	97.5% Chebyshev (MVUE) UCL	27.99
99% Chebyshev (MVUE) UCL	34.15		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	20.22	95% Jackknife UCL	20.31
95% Standard Bootstrap UCL	20.25	95% Bootstrap-t UCL	20.68
95% Hall's Bootstrap UCL	20.81	95% Percentile Bootstrap UCL	20.22
95% BCA Bootstrap UCL	20.31		
90% Chebyshev(Mean, Sd) UCL	22.38	95% Chebyshev(Mean, Sd) UCL	24.55
97.5% Chebyshev(Mean, Sd) UCL	27.56	99% Chebyshev(Mean, Sd) UCL	33.47

Suggested UCL to Use

95% Student's-t UCL	20.31

ProUCL Statistical Evaluation of Cobalt (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	27	Number of Distinct Observations	13
		Number of Missing Observations	0
Minimum	3.5	Mean	8.111
Maximum	14	Median	8
SD	3.286	Std. Error of Mean	0.632
Coefficient of Variation	0.405	Skewness	0.207

Normal GOF Test

Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.16	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.19	95% Adjusted-CLT UCL (Chen-1995)	9.178
		95% Modified-t UCL (Johnson-1978)	9.194

Gamma GOF Test

A-D Test Statistic	0.74	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.175	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.168	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.953	k star (bias corrected MLE)	5.316
Theta hat (MLE)	1.363	Theta star (bias corrected MLE)	1.526
nu hat (MLE)	321.5	nu star (bias corrected)	287.1
MLE Mean (bias corrected)	8.111	MLE Sd (bias corrected)	3.518
		Approximate Chi Square Value (0.05)	248.8
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	246.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	9.358	95% Adjusted Gamma UCL (use when n<50)	9.444

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.917	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.173	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.167	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.253	Mean of logged Data	2.007
Maximum of Logged Data	2.639	SD of logged Data	0.434

Assuming Lognormal Distribution

95% H-UCL	9.625	90% Chebyshev (MVUE) UCL	10.25
95% Chebyshev (MVUE) UCL	11.21	97.5% Chebyshev (MVUE) UCL	12.53
99% Chebyshev (MVUE) UCL	15.14		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	9.151	95% Jackknife UCL	9.19
95% Standard Bootstrap UCL	9.148	95% Bootstrap-t UCL	9.203
95% Hall's Bootstrap UCL	9.106	95% Percentile Bootstrap UCL	9.13
95% BCA Bootstrap UCL	9.037		
90% Chebyshev(Mean, Sd) UCL	10.01	95% Chebyshev(Mean, Sd) UCL	10.87
97.5% Chebyshev(Mean, Sd) UCL	12.06	99% Chebyshev(Mean, Sd) UCL	14.4

Suggested UCL to Use

95% Student's-t UCL	9.19

ProUCL Statistical Evaluation of Copper (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	27	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	3	Mean	16.87
Maximum	48	Median	14
SD	10.39	Std. Error of Mean	1.999
Coefficient of Variation	0.616	Skewness	1.214

Normal GOF Test

Shapiro Wilk Test Statistic	0.891	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.163	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	20.28	95% Adjusted-CLT UCL (Chen-1995)	20.66
		95% Modified-t UCL (Johnson-1978)	20.36

Gamma GOF Test

A-D Test Statistic	0.389	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.752	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.12	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.169	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.953	k star (bias corrected MLE)	2.649
Theta hat (MLE)	5.713	Theta star (bias corrected MLE)	6.368
nu hat (MLE)	159.4	nu star (bias corrected)	143.1
MLE Mean (bias corrected)	16.87	MLE Sd (bias corrected)	10.36
		Approximate Chi Square Value (0.05)	116.4
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	114.9

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	20.73	95% Adjusted Gamma UCL (use when n<50)	21.01

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.102	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.099	Mean of logged Data	2.647
Maximum of Logged Data	3.871	SD of logged Data	0.625

Assuming Lognormal Distribution

95% H-UCL	22.15	90% Chebyshev (MVUE) UCL	23.54
95% Chebyshev (MVUE) UCL	26.49	97.5% Chebyshev (MVUE) UCL	30.6
99% Chebyshev (MVUE) UCL	38.66		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	20.16	95% Jackknife UCL	20.28
95% Standard Bootstrap UCL	20.12	95% Bootstrap-t UCL	20.81
95% Hall's Bootstrap UCL	20.85	95% Percentile Bootstrap UCL	20.3
95% BCA Bootstrap UCL	20.56		
90% Chebyshev(Mean, Sd) UCL	22.87	95% Chebyshev(Mean, Sd) UCL	25.58
97.5% Chebyshev(Mean, Sd) UCL	29.35	99% Chebyshev(Mean, Sd) UCL	36.76

Suggested UCL to Use

95% Student's-t UCL	20.28

ProUCL Statistical Evaluation of Lead (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	27	Number of Distinct Observations	14
Number of Detects	26	Number of Non-Detects	1
Number of Distinct Detects	13	Number of Distinct Non-Detects	1
Minimum Detect	0.5	Minimum Non-Detect	0.25
Maximum Detect	100	Maximum Non-Detect	0.25
Variance Detects	362.6	Percent Non-Detects	3.704%
Mean Detects	6.904	SD Detects	19.04
Median Detects	3	CV Detects	2.758
Skewness Detects	5.052	Kurtosis Detects	25.67
Mean of Logged Detects	1.161	SD of Logged Detects	0.905

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.264	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.48	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.657	KM Standard Error of Mean	3.605
KM SD	18.37	95% KM (BCA) UCL	13.87
95% KM (t) UCL	12.81	95% KM (Percentile Bootstrap) UCL	13.77
95% KM (z) UCL	12.59	95% KM Bootstrap t UCL	58.93
90% KM Chebyshev UCL	17.47	95% KM Chebyshev UCL	22.37
97.5% KM Chebyshev UCL	29.17	99% KM Chebyshev UCL	42.52

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	4.182	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.783	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.356	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.178	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.773	k star (bias corrected MLE)	0.709
Theta hat (MLE)	8.931	Theta star (bias corrected MLE)	9.731
nu hat (MLE)	40.2	nu star (bias corrected)	36.89
Mean (detects)	6.904		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	6.649
Maximum	100	Median	3
SD	18.72	CV	2.816
k hat (MLE)	0.645	k star (bias corrected MLE)	0.598
Theta hat (MLE)	10.3	Theta star (bias corrected MLE)	11.11
nu hat (MLE)	34.86	nu star (bias corrected)	32.32
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (32.32, α)	20.32	Adjusted Chi Square Value (32.32, β)	19.71
95% Gamma Approximate UCL (use when n>=50)	10.57	95% Gamma Adjusted UCL (use when n<50)	10.9

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.657	SD (KM)	18.37
Variance (KM)	337.3	SE of Mean (KM)	3.605
k hat (KM)	0.131	k star (KM)	0.141
nu hat (KM)	7.095	nu star (KM)	7.64
theta hat (KM)	50.67	theta star (KM)	47.06
80% gamma percentile (KM)	6.893	90% gamma percentile (KM)	19.56
95% gamma percentile (KM)	37.04	99% gamma percentile (KM)	88.4

ProUCL Statistical Evaluation of Lead (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (7.64, α)	2.528	Adjusted Chi Square Value (7.64, β)	2.344
95% Gamma Approximate KM-UCL (use when n>=50)	20.12	95% Gamma Adjusted KM-UCL (use when n<50)	21.7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.798	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.204	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.17	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.665	Mean in Log Scale	1.088
SD in Original Scale	18.71	SD in Log Scale	0.965
95% t UCL (assumes normality of ROS data)	12.81	95% Percentile Bootstrap UCL	13.87
95% BCA Bootstrap UCL	17.94	95% Bootstrap t UCL	59.7
95% H-UCL (Log ROS)	7.559		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.067	KM Geo Mean	2.905
KM SD (logged)	0.995	95% Critical H Value (KM-Log)	2.515
KM Standard Error of Mean (logged)	0.195	95% H-UCL (KM -Log)	7.787
KM SD (logged)	0.995	95% Critical H Value (KM-Log)	2.515
KM Standard Error of Mean (logged)	0.195		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	6.653	Mean in Log Scale	1.041
SD in Original Scale	18.72	SD in Log Scale	1.085
95% t UCL (Assumes normality)	12.8	95% H-Stat UCL	8.932

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	22.37

ProUCL Statistical Evaluation of Mercury (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	26	Number of Distinct Observations	4
		Number of Missing Observations	1
Number of Detects	3	Number of Non-Detects	23
Number of Distinct Detects	3	Number of Distinct Non-Detects	1
Minimum Detect	0.11	Minimum Non-Detect	0.1
Maximum Detect	3	Maximum Non-Detect	0.1
Variance Detects	2.774	Percent Non-Detects	88.46%
Mean Detects	1.077	SD Detects	1.666
Median Detects	0.12	CV Detects	1.547
Skewness Detects	1.732	Kurtosis Detects	N/A
Mean of Logged Detects	-1.076	SD of Logged Detects	1.884

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.753	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.767	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.384	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.213	KM Standard Error of Mean	0.134
KM SD	0.557	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.441	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.433	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.614	95% KM Chebyshev UCL	0.796
97.5% KM Chebyshev UCL	1.049	99% KM Chebyshev UCL	1.545

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	0.545	k star (bias corrected MLE)	N/A
Theta hat (MLE)	1.976	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	3.27	nu star (bias corrected)	N/A
Mean (detects)	1.077		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.133
Maximum	3	Median	0.01
SD	0.585	CV	4.399
k hat (MLE)	0.314	k star (bias corrected MLE)	0.303
Theta hat (MLE)	0.424	Theta star (bias corrected MLE)	0.439
nu hat (MLE)	16.32	nu star (bias corrected)	15.77
Adjusted Level of Significance (β)	0.0398		
Approximate Chi Square Value (15.77, α)	7.8	Adjusted Chi Square Value (15.77, β)	7.43
95% Gamma Approximate UCL (use when n>=50)	0.269	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.213	SD (KM)	0.557
Variance (KM)	0.311	SE of Mean (KM)	0.134
k hat (KM)	0.146	k star (KM)	0.154
nu hat (KM)	7.569	nu star (KM)	8.029
theta hat (KM)	1.461	theta star (KM)	1.377
80% gamma percentile (KM)	0.237	90% gamma percentile (KM)	0.633
95% gamma percentile (KM)	1.164	99% gamma percentile (KM)	2.695

ProUCL Statistical Evaluation of Mercury (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (8.03, α)	2.752	Adjusted Chi Square Value (8.03, β)	2.552
95% Gamma Approximate KM-UCL (use when n>=50)	0.621	95% Gamma Adjusted KM-UCL (use when n<50)	0.669

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.77	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.377	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.125	Mean in Log Scale	-11.47
SD in Original Scale	0.587	SD in Log Scale	6.051
95% t UCL (assumes normality of ROS data)	0.321	95% Percentile Bootstrap UCL	0.352
95% BCA Bootstrap UCL	0.475	95% Bootstrap t UCL	3.399
95% H-UCL (Log ROS)	6.369E+8		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.161	KM Geo Mean	0.115
KM SD (logged)	0.653	95% Critical H Value (KM-Log)	2.106
KM Standard Error of Mean (logged)	0.157	95% H-UCL (KM -Log)	0.188
KM SD (logged)	0.653	95% Critical H Value (KM-Log)	2.106
KM Standard Error of Mean (logged)	0.157		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.168	Mean in Log Scale	-2.774
SD in Original Scale	0.578	SD in Log Scale	0.822
95% t UCL (Assumes normality)	0.362	95% H-Stat UCL	0.127

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use	
95% KM (t) UCL	0.441

ProUCL Statistical Evaluation of Molybdenum (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	27	Number of Distinct Observations	12
Number of Detects	23	Number of Non-Detects	4
Number of Distinct Detects	11	Number of Distinct Non-Detects	1
Minimum Detect	0.26	Minimum Non-Detect	0.25
Maximum Detect	0.5	Maximum Non-Detect	0.25
Variance Detects	0.0052	Percent Non-Detects	14.81%
Mean Detects	0.433	SD Detects	0.0721
Median Detects	0.46	CV Detects	0.167
Skewness Detects	-0.746	Kurtosis Detects	-0.453
Mean of Logged Detects	-0.852	SD of Logged Detects	0.182

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.849	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.914	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.22	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.18	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.406	KM Standard Error of Mean	0.0181
KM SD	0.092	95% KM (BCA) UCL	0.434
95% KM (t) UCL	0.437	95% KM (Percentile Bootstrap) UCL	0.434
95% KM (z) UCL	0.436	95% KM Bootstrap t UCL	0.434
90% KM Chebyshev UCL	0.46	95% KM Chebyshev UCL	0.485
97.5% KM Chebyshev UCL	0.519	99% KM Chebyshev UCL	0.586

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.399	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.742	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.22	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.181	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	33.85	k star (bias corrected MLE)	29.47
Theta hat (MLE)	0.0128	Theta star (bias corrected MLE)	0.0147
nu hat (MLE)	1557	nu star (bias corrected)	1355
Mean (detects)	0.433		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.26	Mean	0.413
Maximum	0.5	Median	0.42
SD	0.0828	CV	0.2
k hat (MLE)	23.95	k star (bias corrected MLE)	21.31
Theta hat (MLE)	0.0172	Theta star (bias corrected MLE)	0.0194
nu hat (MLE)	1293	nu star (bias corrected)	1151
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (N/A, α)	1073	Adjusted Chi Square Value (N/A, β)	1068
95% Gamma Approximate UCL (use when n>=50)	0.443	95% Gamma Adjusted UCL (use when n<50)	0.445

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.406	SD (KM)	0.092
Variance (KM)	0.00847	SE of Mean (KM)	0.0181
k hat (KM)	19.46	k star (KM)	17.32
nu hat (KM)	1051	nu star (KM)	935.3
theta hat (KM)	0.0209	theta star (KM)	0.0234
80% gamma percentile (KM)	0.485	90% gamma percentile (KM)	0.535
95% gamma percentile (KM)	0.579	99% gamma percentile (KM)	0.667

ProUCL Statistical Evaluation of Molybdenum (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (935.28, α)	865.3	Adjusted Chi Square Value (935.28, β)	861
95% Gamma Approximate KM-UCL (use when n>=50)	0.439	95% Gamma Adjusted KM-UCL (use when n<50)	0.441

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.833	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.914	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.212	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.18	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.412	Mean in Log Scale	-0.907
SD in Original Scale	0.0836	SD in Log Scale	0.216
95% t UCL (assumes normality of ROS data)	0.44	95% Percentile Bootstrap UCL	0.438
95% BCA Bootstrap UCL	0.437	95% Bootstrap t UCL	0.438
95% H-UCL (Log ROS)	0.445		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.931	KM Geo Mean	0.394
KM SD (logged)	0.251	95% Critical H Value (KM-Log)	1.789
KM Standard Error of Mean (logged)	0.0494	95% H-UCL (KM -Log)	0.444
KM SD (logged)	0.251	95% Critical H Value (KM-Log)	1.789
KM Standard Error of Mean (logged)	0.0494		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.387	Mean in Log Scale	-1.034
SD in Original Scale	0.13	SD in Log Scale	0.475
95% t UCL (Assumes normality)	0.43	95% H-Stat UCL	0.477

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.437	KM H-UCL	0.444
95% KM (BCA) UCL	0.434		

ProUCL Statistical Evaluation of Nickel (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	27	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	4.5	Mean	14.57
Maximum	64	Median	12
SD	11.56	Std. Error of Mean	2.225
Coefficient of Variation	0.793	Skewness	3.135

Normal GOF Test

Shapiro Wilk Test Statistic	0.681	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.196	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	18.37	95% Adjusted-CLT UCL (Chen-1995)	19.67
		95% Modified-t UCL (Johnson-1978)	18.59

Gamma GOF Test

A-D Test Statistic	0.597	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.122	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.17	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.636	k star (bias corrected MLE)	2.368
Theta hat (MLE)	5.53	Theta star (bias corrected MLE)	6.156
nu hat (MLE)	142.3	nu star (bias corrected)	127.8
MLE Mean (bias corrected)	14.57	MLE Sd (bias corrected)	9.472
		Approximate Chi Square Value (0.05)	102.7
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	101.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	18.14	95% Adjusted Gamma UCL (use when n<50)	18.39

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.107	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.504	Mean of logged Data	2.478
Maximum of Logged Data	4.159	SD of logged Data	0.619

Assuming Lognormal Distribution

95% H-UCL	18.58	90% Chebyshev (MVUE) UCL	19.75
95% Chebyshev (MVUE) UCL	22.21	97.5% Chebyshev (MVUE) UCL	25.63
99% Chebyshev (MVUE) UCL	32.34		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	18.23	95% Jackknife UCL	18.37
95% Standard Bootstrap UCL	18.18	95% Bootstrap-t UCL	20.77
95% Hall's Bootstrap UCL	34.96	95% Percentile Bootstrap UCL	18.61
95% BCA Bootstrap UCL	19.8		
90% Chebyshev(Mean, Sd) UCL	21.25	95% Chebyshev(Mean, Sd) UCL	24.27
97.5% Chebyshev(Mean, Sd) UCL	28.47	99% Chebyshev(Mean, Sd) UCL	36.71

Suggested UCL to Use

95% Adjusted Gamma UCL	18.39

ProUCL Statistical Evaluation of Thallium (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	27	Number of Distinct Observations	7
Number of Detects	26	Number of Non-Detects	1
Number of Distinct Detects	6	Number of Distinct Non-Detects	1
Minimum Detect	0.33	Minimum Non-Detect	0.25
Maximum Detect	2	Maximum Non-Detect	0.25
Variance Detects	0.21	Percent Non-Detects	3.704%
Mean Detects	0.894	SD Detects	0.458
Median Detects	1	CV Detects	0.512
Skewness Detects	0.71	Kurtosis Detects	-0.434
Mean of Logged Detects	-0.238	SD of Logged Detects	0.514

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.848	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.267	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.87	KM Standard Error of Mean	0.0897
KM SD	0.457	95% KM (BCA) UCL	1.015
95% KM (t) UCL	1.023	95% KM (Percentile Bootstrap) UCL	1.019
95% KM (z) UCL	1.018	95% KM Bootstrap t UCL	1.04
90% KM Chebyshev UCL	1.14	95% KM Chebyshev UCL	1.262
97.5% KM Chebyshev UCL	1.431	99% KM Chebyshev UCL	1.763

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.741	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.748	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.279	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.172	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.122	k star (bias corrected MLE)	3.672
Theta hat (MLE)	0.217	Theta star (bias corrected MLE)	0.244
nu hat (MLE)	214.3	nu star (bias corrected)	190.9
Mean (detects)	0.894		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.121	Mean	0.866
Maximum	2	Median	1
SD	0.473	CV	0.547
k hat (MLE)	3.225	k star (bias corrected MLE)	2.891
Theta hat (MLE)	0.268	Theta star (bias corrected MLE)	0.299
nu hat (MLE)	174.2	nu star (bias corrected)	156.1
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (156.14, α)	128.3	Adjusted Chi Square Value (156.14, β)	126.6
95% Gamma Approximate UCL (use when n>=50)	1.054	95% Gamma Adjusted UCL (use when n<50)	1.067

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.87	SD (KM)	0.457
Variance (KM)	0.209	SE of Mean (KM)	0.0897
k hat (KM)	3.624	k star (KM)	3.246
nu hat (KM)	195.7	nu star (KM)	175.3
theta hat (KM)	0.24	theta star (KM)	0.268
80% gamma percentile (KM)	1.23	90% gamma percentile (KM)	1.518
95% gamma percentile (KM)	1.786	99% gamma percentile (KM)	2.365

ProUCL Statistical Evaluation of Thallium (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (175.28, α)	145.7	Adjusted Chi Square Value (175.28, β)	143.9
95% Gamma Approximate KM-UCL (use when n>=50)	1.047	95% Gamma Adjusted KM-UCL (use when n<50)	1.06

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.868	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.273	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.87	Mean in Log Scale	-0.283
SD in Original Scale	0.467	SD in Log Scale	0.557
95% t UCL (assumes normality of ROS data)	1.023	95% Percentile Bootstrap UCL	1.017
95% BCA Bootstrap UCL	1.028	95% Bootstrap t UCL	1.041
95% H-UCL (Log ROS)	1.097		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.28	KM Geo Mean	0.755
KM SD (logged)	0.54	95% Critical H Value (KM-Log)	2.006
KM Standard Error of Mean (logged)	0.106	95% H-UCL (KM -Log)	1.081
KM SD (logged)	0.54	95% Critical H Value (KM-Log)	2.006
KM Standard Error of Mean (logged)	0.106		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.866	Mean in Log Scale	-0.306
SD in Original Scale	0.473	SD in Log Scale	0.616
95% t UCL (Assumes normality)	1.021	95% H-Stat UCL	1.145

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	1.262

ProUCL Statistical Evaluation of Vanadium (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	27	Number of Distinct Observations	21
		Number of Missing Observations	0
Minimum	15	Mean	35.11
Maximum	120	Median	31
SD	21.49	Std. Error of Mean	4.136
Coefficient of Variation	0.612	Skewness	2.424

Normal GOF Test

Shapiro Wilk Test Statistic	0.759	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.175	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	42.17	95% Adjusted-CLT UCL (Chen-1995)	43.98
		95% Modified-t UCL (Johnson-1978)	42.49

Gamma GOF Test

A-D Test Statistic	0.713	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.128	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.169	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.792	k star (bias corrected MLE)	3.395
Theta hat (MLE)	9.259	Theta star (bias corrected MLE)	10.34
nu hat (MLE)	204.8	nu star (bias corrected)	183.4
MLE Mean (bias corrected)	35.11	MLE Sd (bias corrected)	19.05
		Approximate Chi Square Value (0.05)	153
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	151.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	42.07	95% Adjusted Gamma UCL (use when n<50)	42.56

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.924	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.128	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.708	Mean of logged Data	3.421
Maximum of Logged Data	4.787	SD of logged Data	0.517

Assuming Lognormal Distribution

95% H-UCL	42.76	90% Chebyshev (MVUE) UCL	45.61
95% Chebyshev (MVUE) UCL	50.53	97.5% Chebyshev (MVUE) UCL	57.34
99% Chebyshev (MVUE) UCL	70.73		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	41.91	95% Jackknife UCL	42.17
95% Standard Bootstrap UCL	41.85	95% Bootstrap-t UCL	45.79
95% Hall's Bootstrap UCL	72.44	95% Percentile Bootstrap UCL	42.3
95% BCA Bootstrap UCL	45.3		
90% Chebyshev(Mean, Sd) UCL	47.52	95% Chebyshev(Mean, Sd) UCL	53.14
97.5% Chebyshev(Mean, Sd) UCL	60.94	99% Chebyshev(Mean, Sd) UCL	76.26

Suggested UCL to Use

95% Adjusted Gamma UCL	42.56

ProUCL Statistical Evaluation of Zinc (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	27	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	22	Mean	43.78
Maximum	200	Median	40
SD	33.29	Std. Error of Mean	6.407
Coefficient of Variation	0.761	Skewness	4.211

Normal GOF Test

Shapiro Wilk Test Statistic	0.509	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.309	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	54.71	95% Adjusted-CLT UCL (Chen-1995)	59.87
		95% Modified-t UCL (Johnson-1978)	55.57

Gamma GOF Test

A-D Test Statistic	1.683	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.202	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.169	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.846	k star (bias corrected MLE)	3.443
Theta hat (MLE)	11.38	Theta star (bias corrected MLE)	12.71
nu hat (MLE)	207.7	nu star (bias corrected)	185.9
MLE Mean (bias corrected)	43.78	MLE Sd (bias corrected)	23.59
		Approximate Chi Square Value (0.05)	155.4
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	153.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	52.38	95% Adjusted Gamma UCL (use when n<50)	52.99

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.83	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.162	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.091	Mean of logged Data	3.644
Maximum of Logged Data	5.298	SD of logged Data	0.467

Assuming Lognormal Distribution

95% H-UCL	50.92	90% Chebyshev (MVUE) UCL	54.3
95% Chebyshev (MVUE) UCL	59.67	97.5% Chebyshev (MVUE) UCL	67.13
99% Chebyshev (MVUE) UCL	81.78		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	54.32	95% Jackknife UCL	54.71
95% Standard Bootstrap UCL	54.1	95% Bootstrap-t UCL	67.57
95% Hall's Bootstrap UCL	97.62	95% Percentile Bootstrap UCL	55.7
95% BCA Bootstrap UCL	63.3		
90% Chebyshev(Mean, Sd) UCL	63	95% Chebyshev(Mean, Sd) UCL	71.71
97.5% Chebyshev(Mean, Sd) UCL	83.79	99% Chebyshev(Mean, Sd) UCL	107.5

Suggested UCL to Use

95% Student's-t UCL	54.71	or 95% Modified-t UCL	55.57
or 95% H-UCL	50.92		

TOTAL PETROLEUM HYDROCARBONS (TPH)

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C5-C12) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	29	Number of Distinct Observations	8
		Number of Missing Observations	11
Number of Detects	4	Number of Non-Detects	25
Number of Distinct Detects	4	Number of Distinct Non-Detects	4
Minimum Detect	7.4	Minimum Non-Detect	1
Maximum Detect	830	Maximum Non-Detect	20
Variance Detects	158883	Percent Non-Detects	86.21%
Mean Detects	235.2	SD Detects	398.6
Median Detects	51.65	CV Detects	1.695
Skewness Detects	1.94	Kurtosis Detects	3.782
Mean of Logged Detects	3.874	SD of Logged Detects	2.218

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.705	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.388	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	33.39	KM Standard Error of Mean	32.49
KM SD	151.5	95% KM (BCA) UCL	N/A
95% KM (t) UCL	88.65	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	86.82	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	130.8	95% KM Chebyshev UCL	175
97.5% KM Chebyshev UCL	236.3	99% KM Chebyshev UCL	356.6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.427	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.691	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.295	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.414	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.413	k star (bias corrected MLE)	0.27
Theta hat (MLE)	569.8	Theta star (bias corrected MLE)	871.5
nu hat (MLE)	3.302	nu star (bias corrected)	2.159
Mean (detects)	235.2		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	32.45
Maximum	830	Median	0.01
SD	154.4	CV	4.758
k hat (MLE)	0.115	k star (bias corrected MLE)	0.126
Theta hat (MLE)	281.4	Theta star (bias corrected MLE)	256.8
nu hat (MLE)	6.687	nu star (bias corrected)	7.329
Adjusted Level of Significance (β)	0.0407		
Approximate Chi Square Value (7.33, α)	2.353	Adjusted Chi Square Value (7.33, β)	2.188
95% Gamma Approximate UCL (use when n>=50)	101.1	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	33.39	SD (KM)	151.5
Variance (KM)	22952	SE of Mean (KM)	32.49
k hat (KM)	0.0486	k star (KM)	0.0665
nu hat (KM)	2.817	nu star (KM)	3.859
theta hat (KM)	687.4	theta star (KM)	501.8
80% gamma percentile (KM)	10.59	90% gamma percentile (KM)	69.11
95% gamma percentile (KM)	190.7	99% gamma percentile (KM)	643.7

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C5-C12) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (3.86, α)	0.667	Adjusted Chi Square Value (3.86, β)	0.595
95% Gamma Approximate KM-UCL (use when n>=50)	193.2	95% Gamma Adjusted KM-UCL (use when n<50)	216.4

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.893	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.271	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	32.5	Mean in Log Scale	-4.938
SD in Original Scale	154.4	SD in Log Scale	5.074
95% t UCL (assumes normality of ROS data)	81.26	95% Percentile Bootstrap UCL	89.43
95% BCA Bootstrap UCL	121.6	95% Bootstrap t UCL	2628
95% H-UCL (Log ROS)	16922025		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.56	KM Geo Mean	1.75
KM SD (logged)	1.523	95% Critical H Value (KM-Log)	3.181
KM Standard Error of Mean (logged)	0.331	95% H-UCL (KM -Log)	13.95
KM SD (logged)	1.523	95% Critical H Value (KM-Log)	3.181
KM Standard Error of Mean (logged)	0.331		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	34.08	Mean in Log Scale	0.51
SD in Original Scale	154	SD in Log Scale	1.831
95% t UCL (Assumes normality)	82.74	95% H-Stat UCL	31.41

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1) 216.4

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C13-C22) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	29	Number of Distinct Observations	10
		Number of Missing Observations	11
Number of Detects	8	Number of Non-Detects	21
Number of Distinct Detects	8	Number of Distinct Non-Detects	3
Minimum Detect	9.2	Minimum Non-Detect	1
Maximum Detect	6540	Maximum Non-Detect	25
Variance Detects	5197802	Percent Non-Detects	72.41%
Mean Detects	1246	SD Detects	2280
Median Detects	121.5	CV Detects	1.83
Skewness Detects	2.267	Kurtosis Detects	5.215
Mean of Logged Detects	5.055	SD of Logged Detects	2.468

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.64	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.322	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	344.6	KM Standard Error of Mean	248.3
KM SD	1251	95% KM (BCA) UCL	791.6
95% KM (t) UCL	766.9	95% KM (Percentile Bootstrap) UCL	782.8
95% KM (z) UCL	752.9	95% KM Bootstrap t UCL	2808
90% KM Chebyshev UCL	1089	95% KM Chebyshev UCL	1427
97.5% KM Chebyshev UCL	1895	99% KM Chebyshev UCL	2815

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.488	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.792	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.245	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.316	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.328	k star (bias corrected MLE)	0.288
Theta hat (MLE)	3799	Theta star (bias corrected MLE)	4321
nu hat (MLE)	5.247	nu star (bias corrected)	4.612
Mean (detects)	1246		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	343.7
Maximum	6540	Median	0.01
SD	1273	CV	3.704
k hat (MLE)	0.104	k star (bias corrected MLE)	0.116
Theta hat (MLE)	3308	Theta star (bias corrected MLE)	2959
nu hat (MLE)	6.025	nu star (bias corrected)	6.735
Adjusted Level of Significance (β)	0.0407		
Approximate Chi Square Value (6.74, α)	2.026	Adjusted Chi Square Value (6.74, β)	1.876
95% Gamma Approximate UCL (use when n>=50)	1142	95% Gamma Adjusted UCL (use when n<50)	1234

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	344.6	SD (KM)	1251
Variance (KM)	1564044	SE of Mean (KM)	248.3
k hat (KM)	0.0759	k star (KM)	0.091
nu hat (KM)	4.403	nu star (KM)	5.281
theta hat (KM)	4539	theta star (KM)	3785
80% gamma percentile (KM)	206.8	90% gamma percentile (KM)	878.7
95% gamma percentile (KM)	2007	99% gamma percentile (KM)	5734

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C13-C22) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (5.28, α)	1.284	Adjusted Chi Square Value (5.28, β)	1.172
95% Gamma Approximate KM-UCL (use when n>=50)	1417	95% Gamma Adjusted KM-UCL (use when n<50)	1553

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.203	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	343.9	Mean in Log Scale	-1.477
SD in Original Scale	1273	SD in Log Scale	5.15
95% t UCL (assumes normality of ROS data)	746	95% Percentile Bootstrap UCL	786.1
95% BCA Bootstrap UCL	1014	95% Bootstrap t UCL	2919
95% H-UCL (Log ROS)	1.030E+9		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.436	KM Geo Mean	4.203
KM SD (logged)	2.561	95% Critical H Value (KM-Log)	4.815
KM Standard Error of Mean (logged)	0.513	95% H-UCL (KM -Log)	1148
KM SD (logged)	2.561	95% Critical H Value (KM-Log)	4.815
KM Standard Error of Mean (logged)	0.513		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	345.8	Mean in Log Scale	1.416
SD in Original Scale	1272	SD in Log Scale	2.833
95% t UCL (Assumes normality)	747.8	95% H-Stat UCL	3815

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use	
Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	1553

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C23-C44) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	29	Number of Distinct Observations	18
		Number of Missing Observations	11
Number of Detects	16	Number of Non-Detects	13
Number of Distinct Detects	15	Number of Distinct Non-Detects	3
Minimum Detect	5.25	Minimum Non-Detect	1
Maximum Detect	3880	Maximum Non-Detect	48
Variance Detects	1741969	Percent Non-Detects	44.83%
Mean Detects	650.1	SD Detects	1320
Median Detects	18.8	CV Detects	2.03
Skewness Detects	2.016	Kurtosis Detects	2.758
Mean of Logged Detects	3.996	SD of Logged Detects	2.329

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.55	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.41	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	360.1	KM Standard Error of Mean	192.2
KM SD	1002	95% KM (BCA) UCL	741.6
95% KM (t) UCL	687.1	95% KM (Percentile Bootstrap) UCL	698.5
95% KM (z) UCL	676.3	95% KM Bootstrap t UCL	1052
90% KM Chebyshev UCL	936.8	95% KM Chebyshev UCL	1198
97.5% KM Chebyshev UCL	1561	99% KM Chebyshev UCL	2273

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.903	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.847	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.289	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.234	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.281	k star (bias corrected MLE)	0.27
Theta hat (MLE)	2314	Theta star (bias corrected MLE)	2409
nu hat (MLE)	8.989	nu star (bias corrected)	8.637
Mean (detects)	650.1		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	358.7
Maximum	3880	Median	6.5
SD	1021	CV	2.845
k hat (MLE)	0.136	k star (bias corrected MLE)	0.145
Theta hat (MLE)	2642	Theta star (bias corrected MLE)	2479
nu hat (MLE)	7.875	nu star (bias corrected)	8.393
Adjusted Level of Significance (β)	0.0407		
Approximate Chi Square Value (8.39, α)	2.965	Adjusted Chi Square Value (8.39, β)	2.775
95% Gamma Approximate UCL (use when n>=50)	1015	95% Gamma Adjusted UCL (use when n<50)	1085

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	360.1	SD (KM)	1002
Variance (KM)	1004519	SE of Mean (KM)	192.2
k hat (KM)	0.129	k star (KM)	0.139
nu hat (KM)	7.489	nu star (KM)	8.048
theta hat (KM)	2789	theta star (KM)	2596
80% gamma percentile (KM)	366.4	90% gamma percentile (KM)	1055
95% gamma percentile (KM)	2011	99% gamma percentile (KM)	4832

ProUCL Statistical Evaluation of Total Petroleum Hydrocarbon (C23-C44) (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (8.05, α)	2.763	Adjusted Chi Square Value (8.05, β)	2.581
95% Gamma Approximate KM-UCL (use when n>=50)	1049	95% Gamma Adjusted KM-UCL (use when n<50)	1123

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.824	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.215	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	359.8	Mean in Log Scale	1.874
SD in Original Scale	1020	SD in Log Scale	3.192
95% t UCL (assumes normality of ROS data)	682	95% Percentile Bootstrap UCL	692.1
95% BCA Bootstrap UCL	828.8	95% Bootstrap t UCL	1096
95% H-UCL (Log ROS)	36518		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.415	KM Geo Mean	11.19
KM SD (logged)	2.511	95% Critical H Value (KM-Log)	4.733
KM Standard Error of Mean (logged)	0.494	95% H-UCL (KM -Log)	2474
KM SD (logged)	2.511	95% Critical H Value (KM-Log)	4.733
KM Standard Error of Mean (logged)	0.494		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	362.3	Mean in Log Scale	2.507
SD in Original Scale	1019	SD in Log Scale	2.682
95% t UCL (Assumes normality)	684.3	95% H-Stat UCL	5674

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	1561

VOLATILE ORGANIC COMPOUNDS (VOCs)

ProUCL Statistical Evaluation of Ethylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	33	Number of Distinct Observations	8
		Number of Missing Observations	7
Number of Detects	6	Number of Non-Detects	27
Number of Distinct Detects	6	Number of Distinct Non-Detects	2
Minimum Detect	0.0088	Minimum Non-Detect	0.002
Maximum Detect	0.82	Maximum Non-Detect	0.005
Variance Detects	0.123	Percent Non-Detects	81.82%
Mean Detects	0.234	SD Detects	0.351
Median Detects	0.0205	CV Detects	1.501
Skewness Detects	1.272	Kurtosis Detects	-0.0745
Mean of Logged Detects	-2.955	SD of Logged Detects	1.992

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.717	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.392	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0441	KM Standard Error of Mean	0.0311
KM SD	0.163	95% KM (BCA) UCL	0.0956
95% KM (t) UCL	0.0969	95% KM (Percentile Bootstrap) UCL	0.0995
95% KM (z) UCL	0.0954	95% KM Bootstrap t UCL	1.182
90% KM Chebyshev UCL	0.138	95% KM Chebyshev UCL	0.18
97.5% KM Chebyshev UCL	0.239	99% KM Chebyshev UCL	0.354

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.802	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.746	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.377	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.351	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.433	k star (bias corrected MLE)	0.327
Theta hat (MLE)	0.54	Theta star (bias corrected MLE)	0.714
nu hat (MLE)	5.191	nu star (bias corrected)	3.929
Mean (detects)	0.234		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0088	Mean	0.0507
Maximum	0.82	Median	0.01
SD	0.164	CV	3.237
k hat (MLE)	0.483	k star (bias corrected MLE)	0.459
Theta hat (MLE)	0.105	Theta star (bias corrected MLE)	0.11
nu hat (MLE)	31.86	nu star (bias corrected)	30.29
Adjusted Level of Significance (β)	0.0419		
Approximate Chi Square Value (30.29, α)	18.72	Adjusted Chi Square Value (30.29, β)	18.25
95% Gamma Approximate UCL (use when n>=50)	0.082	95% Gamma Adjusted UCL (use when n<50)	0.0841

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0441	SD (KM)	0.163
Variance (KM)	0.0267	SE of Mean (KM)	0.0311
k hat (KM)	0.0731	k star (KM)	0.0867
nu hat (KM)	4.825	nu star (KM)	5.72
theta hat (KM)	0.604	theta star (KM)	0.509
80% gamma percentile (KM)	0.0244	90% gamma percentile (KM)	0.11
95% gamma percentile (KM)	0.257	99% gamma percentile (KM)	0.752

ProUCL Statistical Evaluation of Ethylbenzene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (5.72, α)	1.498	Adjusted Chi Square Value (5.72, β)	1.391
95% Gamma Approximate KM-UCL (use when n>=50)	0.169	95% Gamma Adjusted KM-UCL (use when n<50)	0.182

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.799	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.318	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0426	Mean in Log Scale	-10.51
SD in Original Scale	0.166	SD in Log Scale	5.015
95% t UCL (assumes normality of ROS data)	0.0917	95% Percentile Bootstrap UCL	0.0928
95% BCA Bootstrap UCL	0.124	95% Bootstrap t UCL	1.298
95% H-UCL (Log ROS)	19479		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.622	KM Geo Mean	0.00362
KM SD (logged)	1.477	95% Critical H Value (KM-Log)	3.072
KM Standard Error of Mean (logged)	0.282	95% H-UCL (KM -Log)	0.024
KM SD (logged)	1.477	95% Critical H Value (KM-Log)	3.072
KM Standard Error of Mean (logged)	0.282		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0444	Mean in Log Scale	-5.551
SD in Original Scale	0.166	SD in Log Scale	1.501
95% t UCL (Assumes normality)	0.0932	95% H-Stat UCL	0.0273

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.18

ProUCL Statistical Evaluation of Toluene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	33	Number of Distinct Observations	4
		Number of Missing Observations	7
Number of Detects	2	Number of Non-Detects	31
Number of Distinct Detects	2	Number of Distinct Non-Detects	2
Minimum Detect	0.0068	Minimum Non-Detect	0.002
Maximum Detect	0.29	Maximum Non-Detect	0.005
Variance Detects	0.0401	Percent Non-Detects	93.94%
Mean Detects	0.148	SD Detects	0.2
Median Detects	0.148	CV Detects	1.349
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-3.114	SD of Logged Detects	2.654

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only
Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0109	KM Standard Error of Mean	0.0121
KM SD	0.0494	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0315	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0309	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0473	95% KM Chebyshev UCL	0.0638
97.5% KM Chebyshev UCL	0.0867	99% KM Chebyshev UCL	0.132

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	0.523	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.284	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	2.091	nu star (bias corrected)	N/A
Mean (detects)	0.148		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0109	SD (KM)	0.0494
Variance (KM)	0.00244	SE of Mean (KM)	0.0121
k hat (KM)	0.0485	k star (KM)	0.0643
nu hat (KM)	3.204	nu star (KM)	4.246
theta hat (KM)	0.224	theta star (KM)	0.169
80% gamma percentile (KM)	0.00317	90% gamma percentile (KM)	0.0219
95% gamma percentile (KM)	0.0618	99% gamma percentile (KM)	0.213

Gamma Kaplan-Meier (KM) Statistics

		Adjusted Level of Significance (β)	0.0419
Approximate Chi Square Value (4.25, α)	0.821	Adjusted Chi Square Value (4.25, β)	0.749
95% Gamma Approximate KM-UCL (use when n>=50)	0.0562	95% Gamma Adjusted KM-UCL (use when n<50)	0.0616

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only
Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00899	Mean in Log Scale	-26.34
SD in Original Scale	0.0505	SD in Log Scale	11.08
95% t UCL (assumes normality of ROS data)	0.0239	95% Percentile Bootstrap UCL	0.0264
95% BCA Bootstrap UCL	0.0441	95% Bootstrap t UCL	85.95
95% H-UCL (Log ROS)	N/A		

ProUCL Statistical Evaluation of Toluene (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-6.027	KM Geo Mean	0.00241
KM SD (logged)	0.872	95% Critical H Value (KM-Log)	2.293
KM Standard Error of Mean (logged)	0.215	95% H-UCL (KM -Log)	0.00503
KM SD (logged)	0.872	95% Critical H Value (KM-Log)	2.293
KM Standard Error of Mean (logged)	0.215		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0111	Mean in Log Scale	-5.956
SD in Original Scale	0.0501	SD in Log Scale	0.931
95% t UCL (Assumes normality)	0.0259	95% H-Stat UCL	0.00589

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use	
97.5% KM (Chebyshev) UCL	0.0867

ProUCL Statistical Evaluation of Total Xylenes (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

General Statistics

Total Number of Observations	33	Number of Distinct Observations	7
		Number of Missing Observations	7
Number of Detects	5	Number of Non-Detects	28
Number of Distinct Detects	5	Number of Distinct Non-Detects	2
Minimum Detect	0.014	Minimum Non-Detect	0.002
Maximum Detect	3.4	Maximum Non-Detect	0.01
Variance Detects	2.231	Percent Non-Detects	84.85%
Mean Detects	0.729	SD Detects	1.494
Median Detects	0.058	CV Detects	2.048
Skewness Detects	2.232	Kurtosis Detects	4.984
Mean of Logged Detects	-2.207	SD of Logged Detects	2.077

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.578	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.456	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.112	KM Standard Error of Mean	0.113
KM SD	0.582	95% KM (BCA) UCL	0.319
95% KM (t) UCL	0.304	95% KM (Percentile Bootstrap) UCL	0.317
95% KM (z) UCL	0.298	95% KM Bootstrap t UCL	3.651
90% KM Chebyshev UCL	0.452	95% KM Chebyshev UCL	0.606
97.5% KM Chebyshev UCL	0.819	99% KM Chebyshev UCL	1.239

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.732	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.731	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.385	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.378	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.355	k star (bias corrected MLE)	0.275
Theta hat (MLE)	2.056	Theta star (bias corrected MLE)	2.65
nu hat (MLE)	3.548	nu star (bias corrected)	2.752
Mean (detects)	0.729		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.119
Maximum	3.4	Median	0.01
SD	0.589	CV	4.953
k hat (MLE)	0.322	k star (bias corrected MLE)	0.313
Theta hat (MLE)	0.369	Theta star (bias corrected MLE)	0.38
nu hat (MLE)	21.28	nu star (bias corrected)	20.68
Adjusted Level of Significance (β)	0.0419		
Approximate Chi Square Value (20.68, α)	11.36	Adjusted Chi Square Value (20.68, β)	11
95% Gamma Approximate UCL (use when n>=50)	0.217	95% Gamma Adjusted UCL (use when n<50)	0.224

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.112	SD (KM)	0.582
Variance (KM)	0.338	SE of Mean (KM)	0.113
k hat (KM)	0.0372	k star (KM)	0.054
nu hat (KM)	2.456	nu star (KM)	3.566
theta hat (KM)	3.016	theta star (KM)	2.077
80% gamma percentile (KM)	0.0198	90% gamma percentile (KM)	0.188
95% gamma percentile (KM)	0.612	99% gamma percentile (KM)	2.366

ProUCL Statistical Evaluation of Total Xylenes (mg/kg) in Soil

Former Chemoil Refinery
2020 Walnut Avenue
Signal Hill, California

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (3.57, α)	0.558	Adjusted Chi Square Value (3.57, β)	0.504
95% Gamma Approximate KM-UCL (use when n>=50)	0.717	95% Gamma Adjusted KM-UCL (use when n<50)	0.794

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.884	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.268	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.111	Mean in Log Scale	-11.48
SD in Original Scale	0.591	SD in Log Scale	5.752
95% t UCL (assumes normality of ROS data)	0.285	95% Percentile Bootstrap UCL	0.315
95% BCA Bootstrap UCL	0.42	95% Bootstrap t UCL	5.767
95% H-UCL (Log ROS)	4364354		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.607	KM Geo Mean	0.00367
KM SD (logged)	1.609	95% Critical H Value (KM-Log)	3.261
KM Standard Error of Mean (logged)	0.313	95% H-UCL (KM -Log)	0.0338
KM SD (logged)	1.609	95% Critical H Value (KM-Log)	3.261
KM Standard Error of Mean (logged)	0.313		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.114	Mean in Log Scale	-5.074
SD in Original Scale	0.59	SD in Log Scale	1.545
95% t UCL (Assumes normality)	0.288	95% H-Stat UCL	0.049

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	0.819

ATTACHMENT E-5

RISK CHARACTERIZATION TABLES

Table E-5A
Risk Characterization of Direct Exposure to COPCs in Soil
for the Hypothetical Onsite Construction/Utility Trench Worker Receptor
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	Exposure Point Concentration (EPC_{soil}) (mg/kg)	Noncarcinogenic Effects: Subhronic Oral Reference Dose (sRfDo) (mg/kg-day)	Noncarcinogenic Effects: Subchronic Inhalation Reference Concentration (sRfCi) (µg/m^3)	Noncarcinogenic Effects: Hazard Quotient (HQ) (unitless)	Carcinogenic Effects: Oral Slope Factor (SFo) (mg/kg-day)$^{-1}$	Carcinogenic Effects: Inhalation Unit Risk (IUR) (µg/m^3)$^{-1}$	Carcinogenic Effects: Excess Cancer Risk (unitless)
Metals							
Antimony	6.43E-01	4.00E-04	- -	9 E-03	- -	- -	- -
[1] Arsenic	1.16E+01	3.50E-06	1.50E-02	See Note 1	9.50E+00	3.30E-03	See Note 1
Barium	1.25E+02	2.00E-01	5.00E+00	1 E-02	- -	- -	- -
Chromium	2.03E+01	1.50E+00	- -	5 E-04	- -	- -	- -
Cobalt	9.19E+00	3.00E-04	6.00E-03	4 E-01	- -	9.00E-03	3 E-07
Copper	2.03E+01	4.00E-02	- -	2 E-03	- -	- -	- -
[2] Lead	2.24E+01	- -	- -	See Note 2	- -	- -	See Note 2
Mercury	4.41E-01	1.60E-04	3.00E-02	1 E-02	- -	- -	- -
Molybdenum	4.44E-01	5.00E-03	- -	3 E-04	- -	- -	- -
Nickel	1.84E+01	1.10E-02	1.40E-02	3 E-01	- -	2.60E-04	2 E-08
Thallium	1.26E+00	1.00E-05	- -	4 E-01	- -	- -	- -
Vanadium	4.26E+01	5.00E-03	- -	2 E-01	- -	- -	- -
Zinc	5.56E+01	3.00E-01	- -	6 E-04	- -	- -	- -
TPH							
TPH (C4-C12) Aliphatic	1.08E+02	4.00E-02	7.00E+02	8 E-03	- -	- -	- -
[3] TPH (C4-C12) Aromatic	1.08E+02	- -	- -	- -	- -	- -	- -
TPH (C13-C22) Aliphatic	7.77E+02	1.00E-01	3.00E+02	2 E-02	- -	- -	- -
TPH (C13-C22) Aromatic	7.77E+02	3.00E-02	5.00E+01	8 E-02	- -	- -	- -
[4] TPH (C23-C44) Aliphatic	7.81E+02	2.00E+00	- -	1 E-03	- -	- -	- -
[4] TPH (C23-C44) Aromatic	7.81E+02	4.00E-02	- -	1 E-01	- -	- -	- -
VOCs							
Benzene	5.70E-02	1.20E-02	3.00E+00	2 E-05	1.00E-01	2.90E-05	2 E-10
Ethylbenzene	1.80E-01	1.00E+00	1.00E+03	5 E-07	1.10E-02	2.50E-06	8 E-11
Naphthalene	5.00E-03	2.00E-01	3.00E+00	5 E-07	1.20E-01	3.40E-05	2 E-11
Toluene	8.67E-02	8.00E-01	3.00E+02	4 E-07	- -	- -	- -
Total Xylenes	8.19E-01	2.00E-01	3.00E+02	1 E-05	- -	- -	- -
PAHs							
Acenaphthene	2.21E-01	6.00E-01	2.40E+02	4 E-06	- -	- -	- -
Chrysene	1.59E+00	- -	- -	- -	7.30E-03	1.10E-05	2 E-09
Fluoranthene	3.60E-02	4.00E-02	1.40E+02	8 E-06	- -	- -	- -
Fluorene	3.87E-01	4.00E-01	1.60E+02	9 E-06	- -	- -	- -
Naphthalene	5.00E-03	2.00E-01	3.00E+00	5 E-07	1.20E-01	3.40E-05	2 E-11
Phenanthrene	1.95E+00	3.00E-01	1.20E+03	6 E-05	- -	- -	- -
Pyrene	1.95E+00	3.00E-01	1.20E+02	6 E-05	- -	- -	- -
		Total Hazard Index (HI)=		**2**	**Total Excess Cancer Risk (CR)=**		**3 E-07**

Notes:
mg/kg = milligrams per kilogram.
mg/kg-day = milligrams per kilogram body weight per day.
µg/m^3 = micrograms per cubic meter.
TPH = total petroleum hydrocarbons.
VOC = volatile organic compounds.
PAH = polycyclic aromatic hydrocarbons.
- - = Not available.

[1] For arsenic, the maximum detected concentration from soil 0 to 15 feet bgs was 6.9 mg/kg, which is less than 12 mg/kg (acceptable ambient background level in Southern California soil [Chernoff et. al.])

[2] For lead, the maximum detected concentration from soil 0 to 15 feet bgs was 71 mg/kg, which is less than 320 mg/kg (California Human Health Screening Level [CHHSL; OEHHA, 2009])

[3] The aromatic fraction of this hydrocarbon range is evaluated by its more toxic components (i.e., benzene, toluene, ethylbenzene, and xylenes [BTEX]; DTSC, 2013).

[4] Inhalation exposure not evaluated due to low volatility of COPCs in this hydrocarbon range (DTSC, 2013).

References:

Chernoff, G., W. Bosan, and D. Oudiz. Determination of a Southern California Regional Background Arsenic Concentration in Soil. http://www.dtsc.ca.gov/upload/Background-Arsenic.pdf

DTSC. 2013. Preliminary Endangerment Assessment Guidance Manual. October.

OEHHA. 2009. Revised California Human Health Screening Levels for Lead. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment. September.

Table E-5B
Risk Characterization of Direct Exposure to COPCs in Soil
for the Hypothetical Onsite Commercial/Industrial Worker Receptor
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	Exposure Point Concentration (EPC_{soil}) (mg/kg)	Noncarcinogenic Effects: Chronic Oral Reference Dose (cRfDo) (mg/kg-day)	Noncarcinogenic Effects: Chronic Inhalation Reference Concentration (cRfCi) (µg/m^3)	Noncarcinogenic Effects: Hazard Quotient (HQ) (unitless)	Carcinogenic Effects: Oral Slope Factor (SFo) (mg/kg-day)$^{-1}$	Carcinogenic Effects: Inhalation Unit Risk (IUR) (µg/m^3)$^{-1}$	Carcinogenic Effects: Excess Cancer Risk (unitless)
Metals							
Antimony	6.43E-01	4.00E-04	- -	2 E-03	- -	- -	- -
[1] Arsenic	1.16E+01	3.50E-06	1.50E-02	See Note 1	9.50E+00	3.30E-03	See Note 1
Barium	1.25E+02	2.00E-01	5.00E-01	2 E-03	- -	- -	- -
Chromium	2.03E+01	1.50E+00	- -	1 E-04	- -	- -	- -
Cobalt	9.19E+00	3.00E-04	6.00E-03	3 E-02	- -	9.00E-03	5 E-09
Copper	2.03E+01	4.00E-02	- -	5 E-04	- -	- -	- -
[2] Lead	2.24E+01	- -	- -	See Note 2	- -	- -	See Note 2
Mercury	4.41E-01	1.60E-04	3.00E-02	3 E-03	- -	- -	- -
Molybdenum	4.44E-01	5.00E-03	- -	9 E-05	- -	- -	- -
Nickel	1.84E+01	1.10E-02	1.40E-02	6 E-03	- -	2.60E-04	3 E-10
Thallium	1.26E+00	1.00E-05	- -	1 E-01	- -	- -	- -
Vanadium	4.26E+01	5.00E-03	1.00E-01	4 E-02	- -	- -	- -
Zinc	5.56E+01	3.00E-01	- -	2 E-04	- -	- -	- -
TPH							
TPH (C4-C12) Aliphatic	1.08E+02	4.00E-02	7.00E+02	2 E-03	- -	- -	- -
[3] TPH (C4-C12) Aromatic	1.08E+02	- -	- -	- -	- -	- -	- -
TPH (C13-C22) Aliphatic	7.77E+02	1.00E-01	3.00E+02	7 E-03	- -	- -	- -
TPH (C13-C22) Aromatic	7.77E+02	3.00E-02	5.00E+01	2 E-02	- -	- -	- -
[4] TPH (C23-C44) Aliphatic	7.81E+02	2.00E+00	- -	3 E-04	- -	- -	- -
[4] TPH (C23-C44) Aromatic	7.81E+02	4.00E-02	- -	4 E-02	- -	- -	- -
VOCs							
Benzene	5.70E-02	4.00E-03	3.00E+00	1 E-05	1.00E-01	2.90E-05	2 E-09
Ethylbenzene	1.80E-01	1.00E-01	1.00E+03	2 E-06	1.10E-02	2.50E-06	6 E-10
Naphthalene	5.00E-03	2.00E-02	3.00E+00	2 E-07	1.20E-01	3.40E-05	2 E-10
Toluene	8.67E-02	8.00E-02	3.00E+02	9 E-07	- -	- -	- -
Total Xylenes	8.19E-01	2.00E-01	1.00E+02	4 E-06	- -	- -	- -
PAHs							
Acenaphthene	2.21E-01	6.00E-02	2.40E+02	9 E-06	- -	- -	- -
Chrysene	1.59E+00	- -	- -	- -	7.30E-03	1.10E-05	1 E-08
Fluoranthene	3.60E-02	4.00E-02	1.40E+02	2 E-06	- -	- -	- -
Fluorene	3.87E-01	4.00E-02	1.60E+02	2 E-05	- -	- -	- -
Naphthalene	5.00E-03	2.00E-02	3.00E+00	2 E-07	1.20E-01	3.40E-05	2 E-10
Phenanthrene	1.95E+00	3.00E-01	1.20E+03	2 E-05	- -	- -	- -
Pyrene	1.95E+00	3.00E-02	1.20E+02	2 E-04	- -	- -	- -
		Total Hazard Index (HI)=		**0.3**	**Total Excess Cancer Risk (CR)=**		**2 E-08**

Notes:
mg/kg = milligrams per kilogram.
mg/kg-day = milligrams per kilogram body weight per day.
µg/m^3 = micrograms per cubic meter.
TPH = total petroleum hydrocarbons.
VOC = volatile organic compounds.
PAH = polycyclic aromatic hydrocarbons.
- - = Not available.

[1] For arsenic, the maximum detected concentration from soil 0 to 15 feet bgs was 6.9 mg/kg, which is less than 12 mg/kg (acceptable ambient background level in Southern California soil [Chernoff et. al.])

[2] For lead, the maximum detected concentration from soil 0 to 15 feet bgs was 71 mg/kg, which is less than 320 mg/kg (California Human Health Screening Level [CHHSL; OEHHA, 2009])

[3] The aromatic fraction of this hydrocarbon range is evaluated by its more toxic components (i.e., benzene, toluene, ethylbenzene, and xylenes [BTEX]; DTSC, 2013).

[4] Inhalation exposure not evaluated due to low volatility of COPCs in this hydrocarbon range (DTSC, 2013).

References:

Chernoff, G., W. Bosan, and D. Oudiz. Determination of a Southern California Regional Background Arsenic Concentration in Soil. http://www.dtsc.ca.gov/upload/Background-Arsenic.pdf

DTSC. 2013. Preliminary Endangerment Assessment Guidance Manual. October.

OEHHA. 2009. Revised California Human Health Screening Levels for Lead. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment. September.

Table E-5C
Risk Characterization of Inhalation of COPCs Volatilizing from Groundwater into Indoor Air
for the Hypothetical Onsite Commercial/Industrial Worker Receptor
Former ChemOil Refinery
Signal Hill, California

Chemical of Potential Concern	Exposure Point Concentration ($EPC_{indoor\ air}$) ($\mu g/m^3$)	Noncarcinogenic Effects: Chronic Inhalation Reference Concentration (cRfCi) ($\mu g/m^3$)	Noncarcinogenic Effects: Hazard Quotient (HQ) (unitless)	Carcinogenic Effects: Inhalation Unit Risk (IUR) $(\mu g/m^3)^{-1}$	Carcinogenic Effects: Excess Cancer Risk (unitless)
Volatile Organic Compounds					
Bis (2-chloroethyl) ether	1.18E-01	- -	- -	7.10E-04	7 E-06
tert-Butyl Alcohol	- -	- -	- -	- -	- -
sec-Butylbenzene	5.97E-02	4.00E+02	3 E-05	- -	- -
Isopropylbenzene	5.75E-01	4.00E+02	3 E-04	- -	- -
Naphthalene	1.13E-01	3.00E+00	9 E-03	3.40E-05	3 E-07
n-Propylbenzene	5.28E-01	1.00E+03	1 E-04	- -	- -
o-Xylene	6.85E-02	1.00E+02	2 E-04	- -	- -
		Total Hazard Index (HI)=	**0.009**	**Total Excess Cancer Risk (CR)=**	**7 E-06**

Notes:
$\mu g/m^3$ = micrograms per cubic meter.
VOC = volatile organic compounds.
- - = Not available.

APPENDIX F

MONITORED NATURAL ATTENUATION PERFORMANCE MONITORING PLAN

APPENDIX F
MONITORED NATURAL ATTENUATION PERFORMANCE MONITORING PLAN

Former Chemoil Refinery
Site Cleanup Program Number 0453A
Site ID No. 2047W00
Global ID SL 2047W2348

2020 Walnut Avenue
Signal Hill, California

093-CHEMOIL-001

Prepared For:

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July 13, 2017

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LIST OF FIGURES ..... **ii**

1.0 INTRODUCTION **1-1**
1.1 Site Background 1-1

2.0 MNA PLAN **2-1**
2.1 Performance Criteria 2-3

3.0 MONITORING NETWORK DESIGN AND SCHEDULE **3-1**
3.1 Baseline Geochemical Sampling 3-1
3.2 Monitoring Parameters 3-1
3.3 Monitoring Points and Schedule 3-2

4.0 REPORTING **4-1**

5.0 REFERENCES **5-1**

6.0 LIMITATIONS **6-1**

LIST OF FIGURES

Figure F-1 Site Location Map
Figure F-2 Site Map
Figure F-3 Summary of Benzene Concentrations in Groundwater
Figure F-4 Summary of TPHg (C4-C12) Concentrations in Groundwater
Figure F-5 Summary of TPHd (C13-C22) Concentrations in Groundwater

LIST OF TABLES

Table F-1 Comparison of Laboratory Detection Limits to Groundwater Quality Objectives

LIST OF ATTACHMENTS

Attachment F-1 Output of Johnson and Ettinger Model for Subsurface Vapor Intrusion into Buildings From Groundwater

1.0 INTRODUCTION

The Source Group, Inc., a division of Apex Companies, LLC (Apex-SGI), has prepared this monitored natural attenuation (MNA) performance monitoring plan (MNA Plan) on behalf of Signal Hill Enterprises, LLC (SHE) and RE | Solutions, LLC (RES). The subject property is the former Chemoil Refinery located at 2020 Walnut Avenue in Signal Hill, California (Site, Figure F-1). As detailed in the Response Plan (Apex-SGI, 2017), MNA has been selected as the remedial approach for the dissolved phase groundwater plume located downgradient from the Site. Figure F-2 identifies the offsite area subject to this MNA Plan (defined as the MNA Area).

Natural attenuation is the reduction in concentration, mass, toxicity, and/or mobility of contaminants via dispersion, sorption, dilution, volatilization, and biodegradation. Consistent with U.S. Environmental Protection Agency guidance (USEPA, 2004), the overall objectives of an MNA performance monitoring program are as follows:

1. Demonstrate that natural attenuation is occurring according to expectations;
2. Detect changes in environmental conditions that may reduce the efficacy of any of the natural attenuation processes;
3. Identify any potentially toxic and/or mobile transformation products;
4. Verify that the plume is not expanding downgradient, laterally or vertically;
5. Verify no unacceptable impact to downgradient receptors;
6. Detect new releases of contaminants to the environment that could impact the effectiveness of the natural attenuation remedy;
7. Demonstrate the efficacy of institutional controls that were put in place to protect potential receptors; and
8. Verify attainment of remediation objectives.

This MNA Plan proposes long term activities to monitor and evaluate trends in offsite groundwater to meet the objectives indicated above. Should changes to this MNA performance monitoring plan become warranted (such as a modification of the sampling program or a cessation of MNA performance monitoring), a Revised MNA Plan will be submitted to the Los Angeles Regional Water Quality Control Board (LARWQCB) for review and approval.

1.1 Site Background

Soil and underlying groundwater at the Site are impacted by historic petroleum releases from a former oil refinery which operated on the Site from 1922 until 1994. For reference, benzene, gasoline range total petroleum hydrocarbon (TPHg), and diesel range total petroleum hydrocarbon (TPHd) isoconcentration maps are provided as Figures F-3, F-4, and F-5. A Response Plan has been prepared which proposes active onsite remediation including operation of a bio-sparge barrier along

the downgradient edge of the property. Concentrations in offsite groundwater are expected to decline over time with the implementation of these planned remedial activities and MNA has been proposed for the offsite, dissolved phase portion off the plume. As detailed in the Response Plan, an MNA approach is proposed for groundwater downgradient from the Site based on the following:

- Current offsite downgradient soil vapor concentrations do not pose a significant potential risk to resident's human health based on USEPA criteria;
- Groundwater is not considered a source of drinking water in the vicinity of the Site;
- Concentrations of petroleum constituents downgradient from the Site are expected to stabilize and subsequently decline as reduced mass flux associated with upgradient source removal/remediation propagates downgradient; and
- There are no sensitive receptors (e.g., groundwater supply wells in the vicinity of and downgradient to the Site).

This MNA performance monitoring plan has been designed for the Site and is detailed in the remaining sections of this document.

2.0 MNA PLAN

This section details activities that are proposed in order to meet the eight objectives identified by USEPA for MNA performance monitoring plans. Rationale and proposed activities are described below, with the performance criteria goals identified in the section that follows.

Performance Monitoring Objective	Proposed Action to Meet Objective
1. Demonstrate that natural attenuation is occurring;	Upon implementation of onsite remedial activities, stable, followed by decreasing concentrations trends in the MNA Area are expected. A monitoring well network and sampling program will be used to monitor trends of COPCs in the MNA Area as detailed in Section 3. Statistical evaluation of groundwater data will be used to demonstrate that natural attenuation is occurring. The statistical evaluation method and performance criteria used to indicate whether natural attenuation is occurring is summarized below in Section 2.1 under Performance Criteria No. 1.
2. Detect changes in environmental conditions that may reduce the efficacy of any of the natural attenuation processes;	Environmental conditions in the subsurface that could affect the efficacy of the natural attenuation process include changes in groundwater flow rates or directions that would impact plume stability; or changes in the geochemical environment (i.e., redox conditions). Monitoring parameters will include field measurements of pH, dissolved oxygen (DO), and oxidation reduction potential (ORP). In addition, a baseline round of geochemical parameters will be collected and evaluated to identify whether long term monitoring of geochemical parameters is warranted. The list of proposed monitoring parameters is included in Section 3. Wells will be gauged during sampling activities for depth-to-water and potentiometric maps will be prepared and used to monitor groundwater flow direction.
3. Identify any potentially toxic and/or mobile transformation products;	The biodegradation of BTEX produce non-toxic end products (e.g., carbon dioxide and water). Toxic or mobile transformation products are not expected as a result of the upgradient remedial actions proposed for the Site.

Performance Monitoring Objective	Proposed Action to Meet Objective
4. Verify that the plume is not expanding downgradient, laterally or vertically;	A monitoring program has been developed that can detect changes in both the plume size and concentration. The program well network consists of monitoring locations downgradient of the Site (detailed in Section 3). Plume maps will be included as part of the semi-annual reports prepared for the Site. A discussion of any changes to the plume size or shape will be included in the reports and in the event that trends indicate an expanding plume, response actions will be proposed. Three new monitoring wells are proposed for the MNA Area with deeper screened intervals than the existing network to monitor the potential for vertical migration.
5. Verify no unacceptable impact to downgradient receptors;	Potential offsite residential receptors are located in the MNA Area. As documented in the Response Plan, data collected to date have indicated that current subsurface conditions do not pose a significant risk to these offsite residential receptors. The MNA program will include an evaluation of data to verify that concentrations do not increase to unacceptable levels. The performance criteria summarized in Section 2.2 under Performance Criteria No. 2 will be used to determine whether response actions are warranted.
6. Detect new releases of contaminants to the environment that could impact the effectiveness of the natural attenuation remedy;	Petroleum refining operations ceased in 1994 and the refinery infrastructure has been removed. Thus, no new releases in relation to past facility operation will occur. Potential new releases or potential on-site migration of constituents unrelated to Site activities (if they occur) will be detected by the monitoring program which is proposed for on-site active remedial operation.
7. Demonstrate the efficacy of institutional controls that were put in place to protect potential receptors; and	Institutional controls are not required or being implemented in the MNA Area; therefore, the objective to demonstrate the efficiency of institutional controls does not apply.
8. Verify attainment of remediation objectives.	Ultimate remedial objectives in the MNA area are groundwater quality objectives. The laboratory detection limits compared to groundwater quality objectives for all COPCs are included in Table F-1.

2.1 Performance Criteria

Performance criteria set forth required standards to demonstrate that monitoring objectives are being met. For the monitoring activities specified above, the following two performance criteria have been identified:

Performance Criteria No. 1 - Criteria to Demonstrate That Natural Attenuation is Occurring

To demonstrate that natural attenuation is occurring, a method to track TPH and volatile organic compound (VOC) concentrations over time will be required. A Mann-Kendall Statistical Test will be conducted for TPH as gasoline (TPHg), TPH as diesel (TPHd), and benzene concentrations detected in monitoring wells located in the MNA Area with levels that are above Water Quality Objectives. The Mann-Kendall test results, based on an 80% confidence level, will be used to determine whether the plume strength is decreasing, stable, or increasing. Analytical detection limits should be able to identify concentrations equal to or less than the ultimate remedial objective of MCLs. The Mann-Kendall analysis on groundwater concentrations in the MNA Area will begin after a minimum of four rounds of samples are collected following start-up of the onsite bio-sparge barrier.

Performance Criteria No. 2 - Criteria to Demonstrate That There is No Unacceptable Impact to Downgradient Receptors

To demonstrate that there are no unacceptable potential risks to downgradient receptors, groundwater concentrations of contaminants of interest (COIs) in the residential portion of the MNA Area will be compared with applicable groundwater trigger levels for vapor intrusion concerns based on residential land use. COIs were identified as any volatile organic compound (VOC) detected in groundwater since third quarter 2012 in MNA program wells (Section 3.3) and western property boundary wells, which include monitoring wells MW-1 and MW-13, and barrier monitoring wells (BMW-1 through BMW-12).

The groundwater trigger levels were estimated using the Johnson and Ettinger (1991) vapor intrusion model, recommended and provided by the Department of Toxic Substances Control (DTSC; CalEPA, 2014). This model estimates risk-based groundwater concentrations that result in acceptable human health risks and/or hazards associated with subsurface vapor migration from groundwater and inhalation of VOCs in indoor air.

Site-specific geotechnical data and a simplified conceptual model was used to model vapor migration from groundwater into indoor air. The Site is generally underlain by deposits of unconsolidated, laterally discontinuous sequences of silt and fine to coarse-

grained sand. Coarse-grained soils consist of sand (SP) and silty sand (SM); whereas, subordinate fine-grained soils consist of silt (ML and MH) and, to a lesser degree, clay (CL). First encountered groundwater in the offsite residential area occurs at approximately 13 feet bgs. As described in Appendix D titled Derived Site-Specific Soil Vapor Screening Levels of the *Response Plan and Remedial Technology Evaluation* (Apex-SGI, 2017), geotechnical data from on Site soils most closely fit with the "silt" USDA soil textural classification. A review of logs from historical borings advanced in the MNA Area shows that this on Site soil classification is consistent with the soils observed in the MNA Area at approximately 0 to 13 feet bgs. Therefore, Silt (SI) was selected as the Vadose Zone Soil Type the reported geotechnical values for on Site soil were used as model input parameters. In accordance with DTSC (2014), default values of 24 degrees Celsius for average soil temperature and 15 centimeters (cm) for depth to the bottom of an enclosed space floor for slab-on-grade construction were used as vapor intrusion model input parameters.

The following table summarizes the Site-specific properties input into the DTSC J/E model for potential vapor migration from groundwater to indoor air in the MNA Area.

Model Variables – Vapor Migration from Soil Vapor to Indoor Air		
Properties	**Symbol**	**Assumed Value**
Depth Below Grade to Bottom of Enclosed Space Floor (default)	L_F	15 cm
Depth Below Grade to Water Table (13 feet)	L_S	396.2 cm
Soil Type Directly Above Water Table (Site-specific)	- -	Silt (SI)
Average Soil/Groundwater Temperature (default)	T_s	24°C
Vadose Zone Soil Type (Site-specific)	- -	Silt (SI)
Vadose Zone Soil Dry Bulk Density (Site-specific)	ρ_b	1.46 g/cm^3
Vadose Zone Soil Total Porosity (Site-specific)	θ_T	0.465 cm^3/cm^3
Vadose Zone Soil Water-Filled Porosity (Site-specific)	θ_w	0.172 cm^3/cm^3
Average Vapor Flow Rate into Building (default)	Q_{soil}	5 L/min
Residential Exposure Factors		
Averaging Time for Carcinogens	AT_C	70 years
Averaging Time for Noncarcinogens	AT_{NC}	26 years
Exposure Duration	ED	26 years
Exposure Frequency	EF	350 days/year
Exposure Time	ET	24 hours/day
Air Exchange Rate	ACH	0.5 hour^{-1}

cm = centimeter
cm^3/cm^3 = cubic centimeter per cubic centimeter
g/cm^3 = gram per cubic centimeter
L/min = liter per minute

The spreadsheets containing the input parameters and results of the DTSC J/E model for subsurface vapor intrusion into buildings for the residential exposure scenario are provided in Attachment F-1.

The COIs and their respective groundwater trigger levels for Performance Criteria No. 2 are summarized in the following table.

Chemical	**Groundwater Trigger Level**	**Current Maximum Concentration in residential portion of MNA Area** Note 1
Benzene	11 µg/L	<0.5 µg/L at all locations, except <2.5 µg/L at MW-19
DIPE	240,000 µg/L	<1.0 µg/L at all locations, except <5.0 µg/L at MW-19
Ethylbenzene	120 µg/L	<0.5 µg/L at all locations, except <2.5 µg/L at MW-19
Naphthalene	130 µg/L	75 µg/L at MW-16
Toluene	36,000 µg/L	<0.5 µg/L at all locations, except <2.5 µg/L at MW-19
1,2,4-TMB	1,200 µg/L	<0.5 µg/L at all locations, except <2.5 µg/L at MW-19
1,3,5-TMB	4,100 µg/L	<0.5 µg/L at all locations, except <2.5 µg/L at MW-19
Xylenes	13,000 µg/L	<1.0 µg/L at all locations, except <5.0 µg/L at MW-19

µg/L = micrograms per liter
DIPE = Diisopropyl ether
1,2,4-TMB = 1,2,4-Trimethylbenzene
1,3,5-TMB = 1,3,5-Trimethylbenzene
Note 1 Based on Quarter 4, 2016 sampling results, highest detection from MW-14, MW-15, MW-16, MW-18, and MW-19 (AA&AI, 2017)

In the event that analysis of groundwater monitoring data does not meet objectives for either Performance Criteria No. 1 or No. 2, response actions (i.e., additional investigation or remediation) will be considered and proposed in the semi-annual reports issued for the Site.

3.0 MONITORING NETWORK DESIGN AND SCHEDULE

The current Groundwater-Monitoring Program (GMP) well network monitors the shallow water-bearing zone identified at the Site. The GMP was been established through past reports and correspondences between SHE and the LARWQCB. The MNA performance monitoring program proposed in the following sections will replace the current GMP program in the MNA Area for the Site. Upon LARWQCB approval of the Response Plan, groundwater in the MNA Area will be monitored under the MNA performance monitoring program as proposed in the following sections.

3.1 Baseline Geochemical Sampling

One set of baseline geochemical data will be collected from select MNA wells to gain an understanding of the site geochemistry as it relates to biodegradation processes. A minimum of three MNA wells will be sampled and analyzed for the following parameters:

- dissolved gases (methane, ethane, ethene, and carbon dioxide)
- dissolved arsenic
- nitrate
- manganese
- ferrous iron
- sulfate

3.2 Monitoring Parameters

The ongoing monitoring program will include analysis of groundwater samples for TPHg and TPHd by USEPA Method 8015M, and VOCs by USEPA Method 8260B. All samples will be handled under chain-of-custody protocol to a California-certified laboratory for analysis.

In addition, the following field measurements will be collected during sample collection:

- depth-to-water
- conductivity
- temperature
- pH
- Oxidation-Reduction Potential (ORP)
- dissolved oxygen

3.3 Monitoring Points and Schedule

Locations of MNA program wells are shown on Figure F-2.

The proposed sampling frequency for groundwater monitoring wells is summarized in the following table.

Groundwater Monitoring Program

Well ID	Sampling Frequency
MW-1A	Semi-Annual
MW-12	Semi-Annual
MW-14	Semi-Annual
MW-15	Semi-Annual
MW-16	Semi-Annual
MW-17	Semi-Annual
MW-18	Semi-Annual
MW-19	Semi-Annual

As detailed in Section 3.7 of the Response Plan, three new wells screened at deeper intervals than existing wells are proposed to be installed within the MNA Area. Location of these wells along with proposed screen intervals are shown on Figure F-2. A determination of whether these wells should be added to the groundwater monitoring program at a semi-annual frequency will be made after initial sampling results from the wells are obtained.

4.0 REPORTING

Performance monitoring activities will be reported to the LARWQCB in semi-annual reports prepared for the Site. Each semi-annual report will include a discussion of data summarizing results of MNA program, including the following:

- Tables summarizing the groundwater elevation data;
- Potentiometric maps displaying the interpreted groundwater flow direction;
- Tables summarizing the groundwater analytical data;
- TPHg, TPHd, and benzene isoconcentration maps;
- VOC trend charts for the select monitoring wells;
- Mann-Kendall analysis of data collected from wells within the MNA Area which have benzene, TPHg, or TPHd detections. The Mann-Kendall analysis will begin after a minimum of four rounds of samples are collected following implementation of onsite remedial actions; and
- A comparison of analytical data collected from the MNA Area to the performance criteria outlined in Section 2.1.

The semi-annual reports will be submitted to the LARWQCB by July 15th for second quarter monitoring activities and January 15th for fourth quarter monitoring activities each year.

5.0 REFERENCES

Ami Adini & Associates, Inc. (AA&AI). 2017. Groundwater Monitoring Report – Fourth Quarter 2016, Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, California. January 15.

Apex-SGI. 2017. Response Plan and Remedial Technology Evaluation Report for Former Chemoil Refinery. June 13.

USEPA, 2004. Performance Monitoring of MNA Remedies of VOCs in Ground Water. April.

6.0 LIMITATIONS

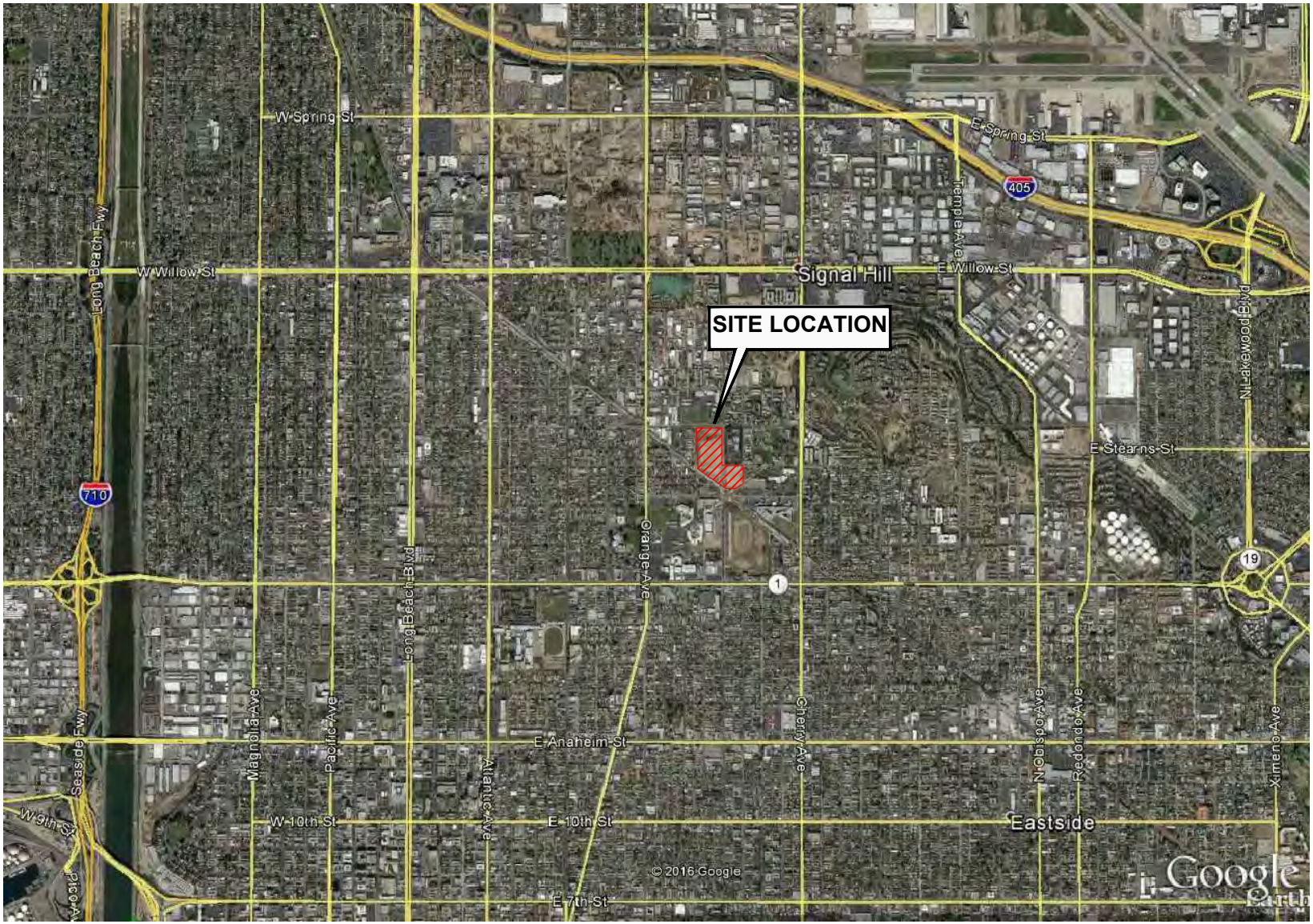
This document has been prepared for the exclusive use of SHE, RES, and their representatives as it pertains to the affected property as described above. Any interpretation of the data represents our professional opinions, and is based in part on information supplied by the client. These opinions and information are based on currently available data and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location.

The data presented in this transmittal are intended only for the purpose, site location, and project indicated. This report is not a definitive study of contamination at the site and should not be interpreted as such. The data reported are limited by the scope of the work as defined by the request of the client, the time, availability of access to the site, and information passed to Apex-SGI.

There are no representations or guarantees that the sampling points are representative of the entire site. Data collected in response to this work may reflect the conditions at specific locations at a specific point in time and does not reflect subsurface variations that may exist between sampling points. These variations cannot be anticipated nor can they be entirely accounted for even with exhaustive additional testing. No other interpretations, warranties, guarantees, expressed or implied, are included or intended in the contents of this transmittal.

As required, all proposed work will be performed under the direct supervision of a Professional Geologist or Registered Civil Engineer as defined in the Registered Geologist Act of the California Code of Regulations.

FIGURES



SGI environmental | APEX

299 WEST HILLCREST DR. SUITE 220
THOUSAND OAKS, CA 91360

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

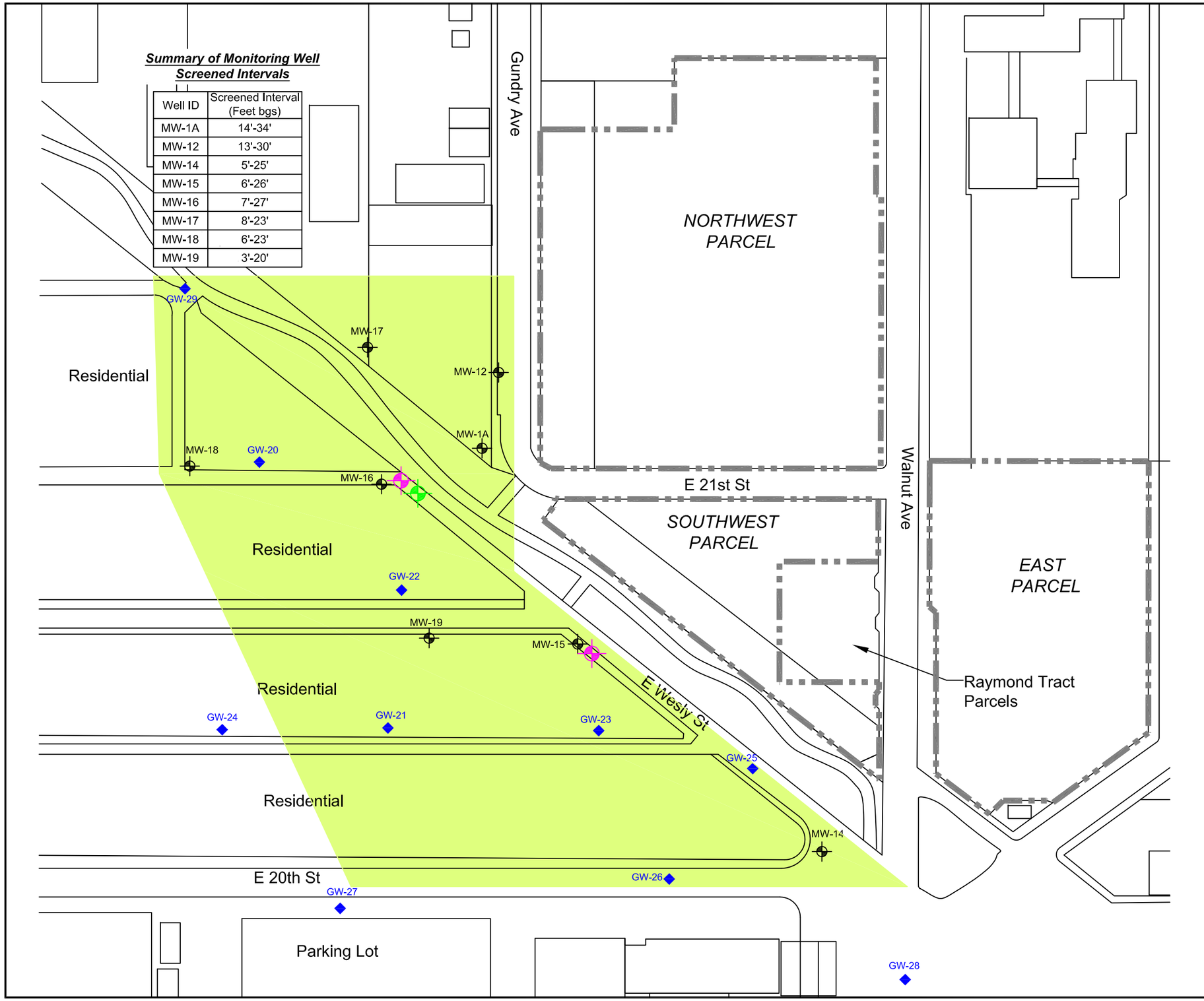
PROJECT NO.	DATE	DR.BY:	APP. BY:
093-CHEMOIL-001	05/30/17	ZA	KD

SITE LOCATION MAP

0 2500 5000
HORIZONTAL SCALE IN FEET

N

FIGURE F-1



Summary of Monitoring Well Screened Intervals

Well ID	Screened Interval (Feet bgs)
MW-1A	14'-34'
MW-12	13'-30'
MW-14	5'-25'
MW-15	6'-26'
MW-16	7'-27'
MW-17	8'-23'
MW-18	6'-23'
MW-19	3'-20'

LEGEND

Site Boundary

MW-16 — Off-Site Groundwater Monitoring Well Locations

GW-29 — Grab Groundwater Sample Locations, Geosyntec, 2012

Proposed New Monitoring Well, 55-65 Feet BGS Screen

Proposed New Monitoring Well, 75-85 Feet BGS Screen

BGS — Below Ground Surface

Monitored Natural Attenuation Area

SITE MAP

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	05/30/17	ZA	KD

0 120 240
HORIZONTAL SCALE IN FEET

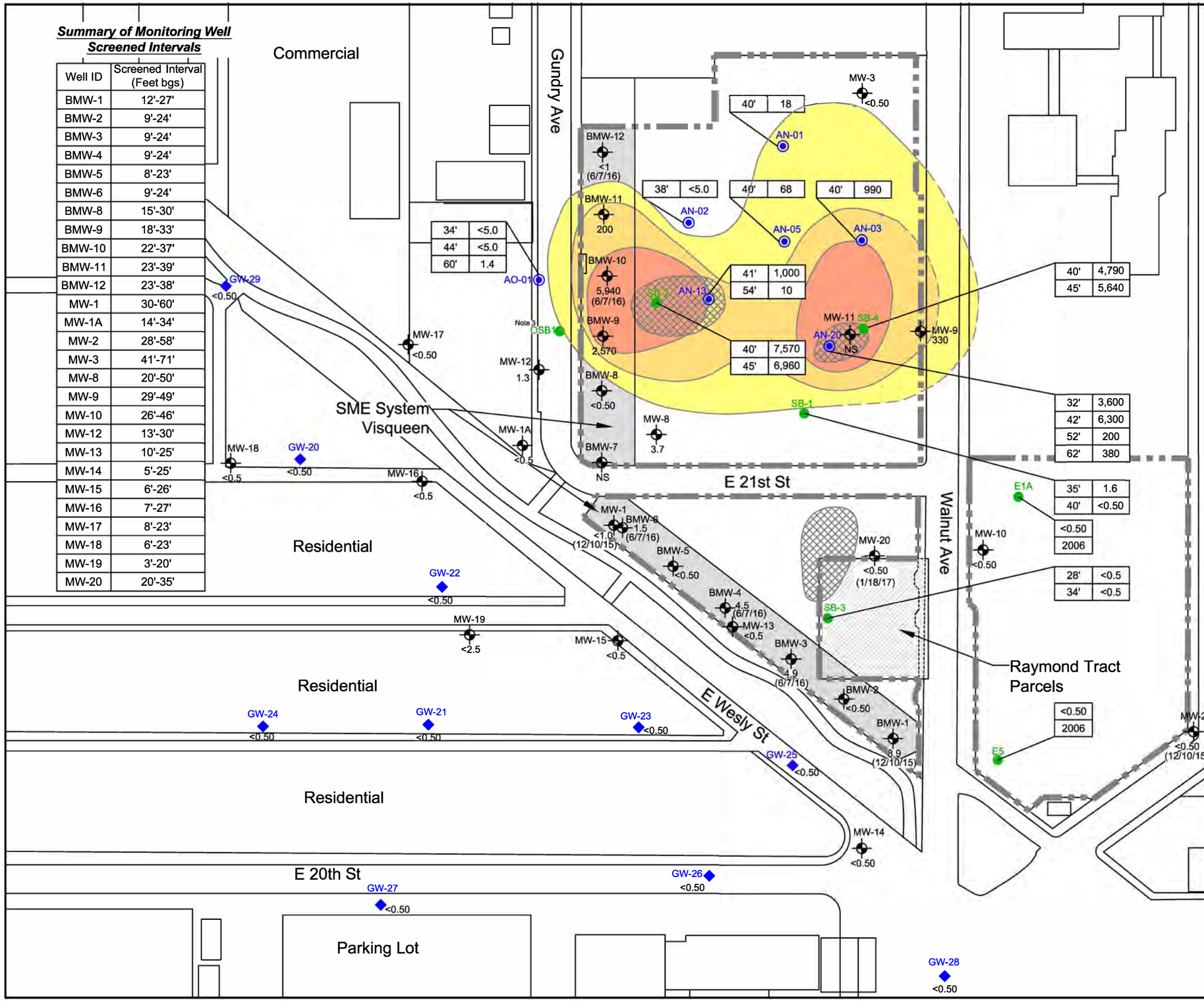
SGI environmental APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE F-2

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\App\App F\Fig.F-2-Site Map.dwg, 7/11/2017 12:07:10 PM



Summary of Monitoring Well Screened Intervals

Well ID	Screened Interval (Feet bgs)
BMW-1	12'-27'
BMW-2	9'-24'
BMW-3	9'-24'
BMW-4	9'-24'
BMW-5	8'-23'
BMW-6	9'-24'
BMW-8	15'-30'
BMW-9	18'-33'
BMW-10	22'-37'
BMW-11	23'-39'
BMW-12	23'-38'
MW-1	30-'60'
MW-1A	14'-34'
MW-2	28'-58'
MW-3	41'-71'
MW-8	20'-50'
MW-9	29'-49'
MW-10	26'-46'
MW-12	13'-30'
MW-13	10'-25'
MW-14	5'-25'
MW-15	6'-26'
MW-16	7'-27'
MW-17	8'-23'
MW-18	6'-23'
MW-19	3'-20'
MW-20	20'-35'

LEGEND

- Site Boundary
- MW-16 — Groundwater Monitoring Well Locations
- AN-01 — Grab Groundwater Sample Locations, APEX, 2017
- SB-2 — Grab Groundwater Sample Locations, Geosyntec, 2012. Samples Collected for First Encountered Groundwater.
- GW-29 — Grab Groundwater Sample Locations, Geosyntec, 2012
- 40' | 18 — Depth in feet bgs; Benzene Concentration in µg/L
- bgs — Below Ground Surface
- µg/L — Micrograms per Liter
- <0.50 — Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
- NS — Not Sampled
- SME — Subsurface Metabolism Enhancement
- Isoconcentration Contour, Dashed Where Inferred
- Area of Observed or Suspected LNAPL
- Concentrations > 10 µg/L
- Concentrations > 100 µg/L
- Concentrations > 1,000 µg/L

Note:
1. Locations sampled during Quarter 4, 2016 unless otherwise indicated.
2.With the exception of MW-20, monitoring wells were sampled by Ami Adini & Associates.
3. OSBI was advanced and sampled prior to installation of the SME barrier. Results no longer representative are not shown.

SUMMARY OF BENZENE CONCENTRATIONS IN GROUNDWATER

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	01/23/17	ZA	KD

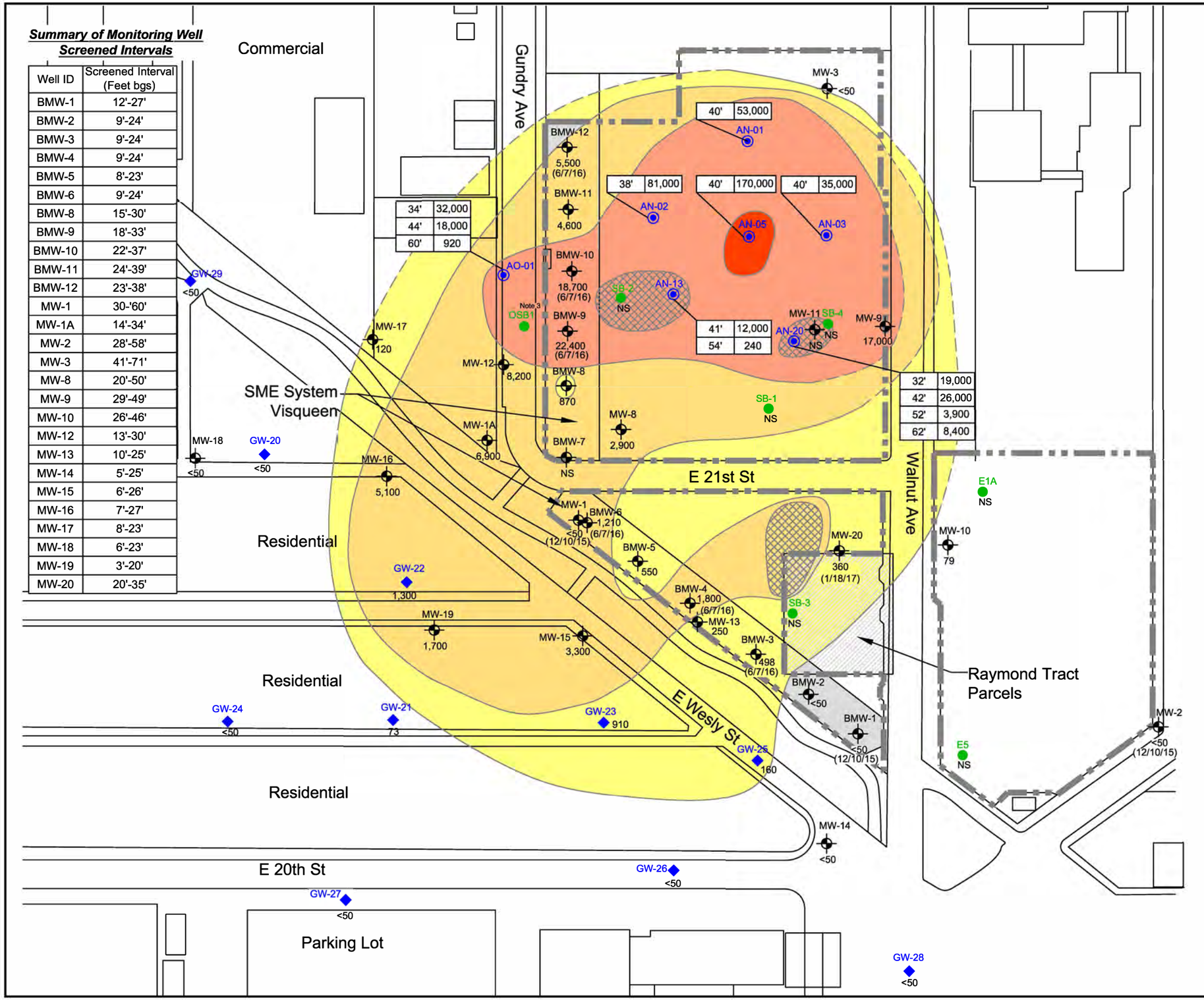
0 120 240
HORIZONTAL SCALE IN FEET

SGI environmental | APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE F-3

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\App\MNA Plan\Fig.x-3-Summari of Benzene Concentrations in GW.dwg, 5/30/2017 2:44:15 PM



Summary of Monitoring Well Screened Intervals

Well ID	Screened Interval (Feet bgs)
BMW-1	12'-27'
BMW-2	9'-24'
BMW-3	9'-24'
BMW-4	9'-24'
BMW-5	8'-23'
BMW-6	9'-24'
BMW-8	15'-30'
BMW-9	18'-33'
BMW-10	22'-37'
BMW-11	24'-39'
BMW-12	23'-38'
MW-1	30-'60'
MW-1A	14'-34'
MW-2	28'-58'
MW-3	41'-71'
MW-8	20'-50'
MW-9	29'-49'
MW-10	26'-46'
MW-12	13'-30'
MW-13	10'-25'
MW-14	5'-25'
MW-15	6'-26'
MW-16	7'-27'
MW-17	8'-23'
MW-18	6'-23'
MW-19	3'-20'
MW-20	20'-35'

LEGEND

- Site Boundary
- MW-16 — Groundwater Monitoring Well Locations
- AN-01 — Grab Groundwater Sample Locations, APEX, 2017
- SB-2 — Grab Groundwater Sample Locations, Tetratech, 2006
- GW-29 — Grab Groundwater Sample Locations, Geosyntec, 2012. Samples Collected for First Encountered Groundwater.

40' | 35,000
Depth in feet bgs — TPHg Concentration in µg/L

- bgs — Below Ground Surface
- µg/L — Micrograms per Liter
- <50 — Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
- NS — Not Sampled
- SME — Subsurface Metabolism Enhancement
- Isoconcentration Contour, Dashed Where Inferred
- Area of Observed or Suspected LNAPL
- Concentrations > 100 µg/L
- Concentrations > 1,000 µg/L
- Concentrations > 10,000 µg/L
- Concentrations > 100,000 µg/L

Note:
1. Locations sampled during Quarter 4, 2016 unless otherwise indicated.
2.With the exception of MW-20, monitoring wells were sampled by Ami Adini & Associates.
3. OSBI was advanced and sampled prior to installation of the SME barrier. Results no longer representative are not shown.

SUMMARY OF TPHg (C4-C12) CONCENTRATIONS IN GROUNDWATER

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	01/23/17	ZA	KD

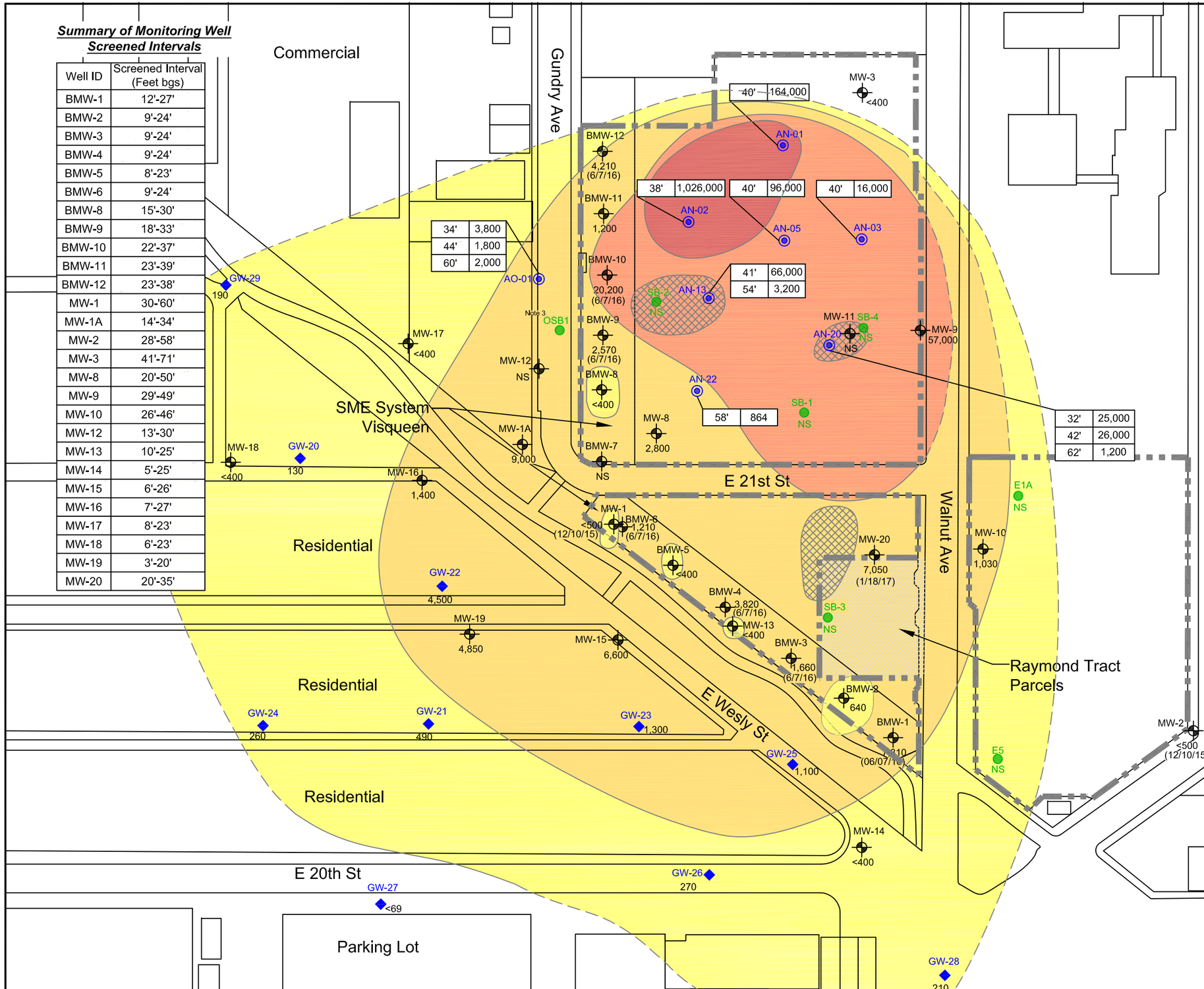
0 120 240
HORIZONTAL SCALE IN FEET

SGI environmental | APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE F-4

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\App\MNA Plan\Fig.x-4-Summary of TPHg (C4-C12) in GW.dwg, 6/1/2017 11:37:26 AM



Summary of Monitoring Well Screened Intervals

Well ID	Screened Interval (Feet bgs)
BMW-1	12'-27'
BMW-2	9'-24'
BMW-3	9'-24'
BMW-4	9'-24'
BMW-5	8'-23'
BMW-6	9'-24'
BMW-8	15'-30'
BMW-9	18'-33'
BMW-10	22'-37'
BMW-11	23'-39'
BMW-12	23'-38'
MW-1	30-'60'
MW-1A	14'-34'
MW-2	28'-58'
MW-3	41'-71'
MW-8	20'-50'
MW-9	29'-49'
MW-10	26'-46'
MW-12	13'-30'
MW-13	10'-25'
MW-14	5'-25'
MW-15	6'-26'
MW-16	7'-27'
MW-17	8'-23'
MW-18	6'-23'
MW-19	3'-20'
MW-20	20'-35'

LEGEND

- Site Boundary
- MW-16 — Groundwater Monitoring Well Locations
- AN-01 — Grab Groundwater Sample Locations, APEX, 2017
- SB-2 — Grab Groundwater Sample Locations, Tetra Tek, 2006. Samples Collected for First Encountered Groundwater.
- GW-29 — Grab Groundwater Sample Locations, Geosyntec, 2012
- 40' | 18 — Depth in feet bgs; TPHd Concentration in µg/L
- bgs — Below Ground Surface
- µg/L — Micrograms per Liter
- <0.50 — Indicated Compound Not Detected at Concentration at or Above the Laboratory Reporting Limit Shown
- NS — Not Sampled
- SME — Subsurface Metabolism Enhancement
- Isoconcentration Contour, Dashed Where Inferred
- Area of Observed or Suspected LNAPL
- Concentrations > 100 µg/L
- Concentrations > 1,000 µg/L
- Concentrations > 10,000 µg/L
- Concentrations > 100,000 µg/L

Note:
1. Locations sampled during Quarter 4, 2016 unless otherwise indicated.
2.With the exception of MW-20, monitoring wells were sampled by Ami Adini & Associates.
3. OSBI was advanced and sampled prior to installation of the SME barrier. Results no longer representative are not shown.

SUMMARY OF TPHd (C13-C22) CONCENTRATIONS IN GROUNDWATER

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	05/30/17	ZA	KD

0 120 240
HORIZONTAL SCALE IN FEET

SGI environmental
APEX
299 WEST HILLCREST DR., SUITE 220
THOUSAND OAKS, CA 91360

N

FIGURE F-5

TABLE

Table F-1
Comparison of Laboratory Detection Limits to Groundwater Quality Objectives
Former ChemOil Refinery
Signal Hill, California

Constituent[Note 1]	Groundwater Quality Objective[Note 2] (micrograms per liter)	Laboratory Detection Limit (micrograms per liter)
Benzene	1.0	0.5
1,2-Dichloroethane	0.5	0.5
cis-1,2-Dichloroethene	6.0	0.5
Ethylbenzene	300	0.5
Tetrachloroethylene	5.0	0.5
tert-Butyl Alcohol	260	10
sec-Butylbenzene	260	0.5
n-Butylbenzene	260	0.5
Naphthalene	17	2.0
n-Propylbenzene	260	0.5
1,2,4-Trimethylbenzene	330	0.5

[Note 1] Constituent list obtained from Chemoil Investigation Report (Apex-SGI, 2017) which identifies concentrations in groundwater that exceed the California MCL or State Water Resource Control Board (SWRQB) drinking water notification level.

[Note 2] California MCL or State Water Resource Control Board (SWRQB) drinking water notification level.

ATTACHMENT F-1

OUTPUT OF JOHNSON AND ETTINGER MODEL FOR SUBSURFACE VAPOR INTRUSION INTO BUILDINGS FROM GROUNDWATER

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Benzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [X]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [ ]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu g/m^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu g/L$)	Noncancer HQ = 1 ($\mu g/L$)
2.18E+02	3.9E-05	8.5E-03	NA	NA	1.1E+01	3.7E+02

MESSAGE: Values of Csource and Cbuilding (INTERCALCS worksheet) are based on unity and do not represent actual values.

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W ($\mu g/L$)	Chemical
71432		**Benzene**

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	396.2	SI	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
SI			SI	1.46	0.465	0.172

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	1.0E-06	1	70	26	26	350	24	0.5
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Diisopropyl ether (DIPE)**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [X]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [ ]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) (µg/m^3)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) (µg/m^3)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} (µg/L)	Noncancer HQ = 1 (µg/L)
1.01E+02	3.0E-05	3.0E-03	NA	NA	NA	2.4E+05

MESSAGE: Values of Csource and Cbuilding (INTERCALCS worksheet) are based on unity and do not represent actual values.

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
108203		Diisopropyl ether (DIPE)

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	396.2	SI	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
SI			SI	1.46	0.465	0.172

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)$^{-1}$
NEW=> Residential	1.0E-06	1	70	26	26	350	24	0.5
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Ethylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [X]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [ ]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
100414		Ethylbenzene

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) (µg/m^3)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) (µg/m^3)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} (µg/L)	Noncancer HQ = 1 (µg/L)
3.05E+02	3.0E-05	9.1E-03	NA	NA	1.2E+02	1.1E+05

MESSAGE: Values of Csource and Cbuilding (INTERCALCS worksheet) are based on unity and do not represent actual values.

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	396.2	SI	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
SI			SI	1.46	0.465	0.172

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)$^{-1}$
NEW=> Residential	1.0E-06	1	70	26	26	350	24	0.5
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Naphthalene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [X]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [ ]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) (µg/m^3)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) (µg/m^3)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} (µg/L)	Noncancer HQ = 1 (µg/L)
1.68E+01	3.9E-05	6.6E-04	NA	NA	1.3E+02	4.8E+03

MESSAGE: Values of Csource and Cbuilding (INTERCALCS worksheet) are based on unity and do not represent actual values.

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
91203		Naphthalene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	396.2	SI	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
SI			SI	1.46	0.465	0.172

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)$^{-1}$
NEW=> Residential	1.0E-06	1	70	26	26	350	24	0.5
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Toluene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [X]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [ ]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu g/m^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk $= 10^{-6}$ ($\mu g/L$)	Noncancer HQ = 1 ($\mu g/L$)
2.59E+02	3.4E-05	8.8E-03	NA	NA	NA	3.6E+04

MESSAGE: Values of Csource and Cbuilding (INTERCALCS worksheet) are based on unity and do not represent actual values.

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W ($\mu g/L$)	Chemical
108883		**Toluene**

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	396.2	SI	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
SI			SI	1.46	0.465	0.172

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	1.0E-06	1	70	26	26	350	24	0.5
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **1,2,4-Trimethylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [X]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [ ]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) (µg/m^3)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) (µg/m^3)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} (µg/L)	Noncancer HQ = 1 (µg/L)
2.37E+02	2.7E-05	6.3E-03	NA	NA	NA	1.2E+03

MESSAGE: Values of Csource and Cbuilding (INTERCALCS worksheet) are based on unity and do not represent actual values.

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
95636		1,2,4-Trimethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	396.2	SI	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
SI			SI	1.46	0.465	0.172

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)$^{-1}$
NEW=> Residential	1.0E-06	1	70	26	26	350	24	0.5
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **1,3,5-Trimethylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [X]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [ ]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu g/m^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu g/L$)	Noncancer HQ = 1 ($\mu g/L$)
3.37E+02	2.6E-05	8.8E-03	NA	NA	NA	4.1E+03

MESSAGE: Values of Csource and Cbuilding (INTERCALCS worksheet) are based on unity and do not represent actual values.

MESSAGE: Risk and/or HQ (or risk-based groundwater concentration) is based on route-to-route extrapolation.

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W ($\mu g/L$)	Chemical
108678		1,3,5-Trimethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	396.2	SI	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
SI			SI	1.46	0.465	0.172

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	1.0E-06	1	70	26	26	350	24	0.5
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

USEPA GW-SCREEN
Version 3.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **m-Xylene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [X]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [ ]

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu g/m^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk $= 10^{-6}$ ($\mu g/L$)	Noncancer HQ = 1 ($\mu g/L$)
2.78E+02	3.0E-05	8.3E-03	NA	NA	NA	1.3E+04

MESSAGE: Values of Csource and Cbuilding (INTERCALCS worksheet) are based on unity and do not represent actual values.

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W ($\mu g/L$)	Chemical
108383		m-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	396.2	SI	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
SI			SI	1.46	0.465	0.172

MORE ↓

Lookup Receptor Parameters

	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH $(hour)^{-1}$
NEW=> Residential	1.0E-06	1	70	26	26	350	24	0.5
	Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

APPENDIX G

SITE REDEVELOPMENT SOIL MANAGEMENT PLAN

APPENDIX G
SITE REDEVELOPMENT SOIL MANAGEMENT PLAN

Former Chemoil Refinery
Site Cleanup Program Number 0453A
Site ID No. 2047W00
Global ID SL 2047W2348

2020 Walnut Avenue
Signal Hill, California

093-CHEMOIL-001

Prepared For:

Signal Hill Enterprises, LLC
1900 South Norfolk Street, Suite 350
San Mateo, California 94403

and

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July 13, 2017

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TABLE OF CONTENTS

PAGE

LIST OF FIGURES ..... **ii**

1.0 INTRODUCTION **1-1**
1.1 Project Description 1-1
1.2 Purpose and Objective 1-1
1.3 Project Responsibilities 1-1

2.0 BACKGROUND **2-1**
2.1 Chemicals of Potential Concern in Soil and Soil Vapor 2-1
2.2 Surface Topography and Ground Cover 2-1

3.0 PLANNING AND NOTIFICATIONS **3-1**
3.1 Utility Clearance and Protection 3-1
3.2 Health & Safety 3-1
3.3 Protection of Existing Wells 3-1
3.4 SCAQMD Permitting 3-1

4.0 SOIL MANAGEMENT GENERAL ACTIVITIES **4-1**
4.1 Soil Management Plan Designated Areas 4-1
4.2 General Site Control and Soil Handling Procedures 4-1
4.3 Dust/Vapor Control Measures 4-1
4.4 Decontamination 4-2
4.5 Storm Water Control 4-2

5.0 FIELD SCREENING AND SOIL SEGREGATION **5-1**
5.1 PID Field Screening Methodology 5-1
5.1.1 Trigger Levels 5-1

6.0 STOCKPILE MANAGEMENT AND SOIL REUSE/DISPOSAL REQUIREMENTS **6-1**
6.1 Handling of Contaminated Soil 6-1

7.0 WRITTEN RECORDS AND REPORTING **7-1**

8.0 LIMITATIONS **8-1**

9.0 REFERENCES **9-1**

LIST OF FIGURES

Figure G-1 Site Map

1.0 INTRODUCTION

On behalf of Signal Hill Enterprises, LLC (SHE) and RE | Solutions, LLC (RES), The Source Group, Inc., a division of Apex Companies, LLC. (Apex-SGI), has prepared this *Soil Management Plan* (Plan) for the former Chemoil Refinery property located at 2020 Walnut Avenue Signal Hill, California (the Site). This Plan will be used in support of pending redevelopment activities at the above referenced Site. Currently, environmental remediation and monitoring is ongoing at the Site under the direction of the Los Angeles Regional Water Quality Control Board (LARWQCB). This Plan will be used as a guidance document for handling potentially impacted soil during redevelopment activities.

1.1 Project Description

The Site is approximately 8.2 acres, located north of the intersection of East 20th Street, East Wesley Drive, Walnut Avenue, and Alamitos Avenue. The Site is divided into areas referred to as the East Parcel, the Northwest Parcel, and the Southwest Parcel. All parcels are currently vacant. The division of the Site into the above-indicated parcels is shown on Figure G-1. Plans are currently underway to redevelop the Site into a light industrial/commercial complex. As a component of redevelopment, grading and potential excavation of the redevelopment area will be required to assure that geotechnical parameters within the near surface soil are achieved and/or for the establishment of underground utility trenches (hereafter referred to as Site Preparation Activities). Given the former use of the property as an oil refinery, and known impact in soil, the potential exists to encounter impacted soils during these activities. Utilizing this Plan, the Environmental Consultant (EC) for the project will guide the Construction Contractor (CC) in proper handling and storage of impacted and potentially impacted soils, which may be encountered during Site Preparation Activities.

1.2 Purpose and Objective

This SMP was prepared to provide guidance for handling potentially contaminated soil. This SMP will provide Site management and workers with procedures for internal and agency notifications, excavation/grading oversight, air and safety monitoring, soil segregation and monitoring, soil sampling and analysis, waste characterization and profiling, waste recycling and disposal procedures, record keeping and reporting in areas of known or encountered impacts. This Plan was prepared to govern Site Preparation Activities associated with future redevelopment and/or intrusive work at the Site, such as soil excavation, trenching, and backfilling.

1.3 Project Responsibilities

The CC will be responsible for implementing provisions outlined in this SMP. An EC will be responsible for field observations and photoionization detector (PID) screening, collection of any soil

samples required, and for coordinating the disposition of excavated/disturbed soil as defined in this SMP.

It is the responsibility of all contractors to adhere to this SMP, project specifications, and site safety.

All on-Site personnel handling or conducting intrusive work in contaminated soils shall be trained in accordance with Occupational Safety and Health Administration (OSHA) regulations for hazardous waste operations. These regulations are based on the Code of Federal Regulations (CFR) 1910.120 (e) and 8 CCR 5192, which states that "general site workers" shall receive a minimum of 40 hours of classroom training and a minimum of three days of field training. This training provides precautions and protective measures to reduce or eliminate hazardous materials/waste hazards at the work place.

2.0 BACKGROUND

This section provides a summary of Site history and subsurface conditions. Further details can be found in the Site Investigation and Site Conceptual Model Report (Apex-SGI, 2017a).

The Site operated as an oil refinery from the early 1920s until the 1990s. All the above ground structures were dismantled in early 1997. It has been reported that known below ground structures, including piping, sumps, footings, and foundations, were also removed at that time. Currently the Site is vacant, and does not contain any above ground storage tanks (ASTs) or known underground storage tanks (USTs). The site currently consists of exposed surface soils, with perimeter chain link fencing and stormwater controls. A few temporary above ground facilities are onsite; associated with groundwater remediation activities.

2.1 Chemicals of Potential Concern in Soil and Soil Vapor

Soil and underlying groundwater at the Site are impacted by historic petroleum releases. Historically, light non-aqueous phase liquid (LNAPL) presence was reported at three onsite locations. The LNAPL occurrences were characterized as heavy crude oil or lubricating oil, or a combination of naphtha, kerosene, and gas oil. Primary chemicals of potential concern (COPCs) present in Site soils and soil vapor as identified in Apex-SGI's Site Investigation and Site Conceptual Model Report (Apex-SGI, 2017a) consist of:

<u>Soil</u>

- Total petroleum hydrocarbons (TPH) in the C4-C12, C13-C22, and C23-C44 ranges
- Volatile organic compounds (VOC)
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Metals

<u>Soil Vapor</u>

- VOCs

2.2 Surface Topography and Ground Cover

The upper soils range from two to seven feet in depth and are classified as fill, consisting of silty sand with intermittent gravels and some intermixed debris. The upper fill is underlain by a silt or silty fine grained sand.

All three parcels are generally flat, with scattered earthen berms or hummocks, and slope toward the south and southeast from a topographic high of approximately 45 feet above mean sea level at the northern boundary. The parcels are separated by public surface streets with East 21st Street dividing the north and south parcels and North Walnut Avenue dividing the east and west parcels.

3.0 PLANNING AND NOTIFICATIONS

3.1 Utility Clearance and Protection

All locations where ground is to be disturbed will be cleared of potential utilities by Underground Service Alert (USA). USA will be contacted at least 72 hours prior to commencing any excavation work. It is anticipated that Site Preparation Activities will progress in stages. To accommodate this, USA will be contacted prior to moving to new areas of the Site that are outside of prior USA notified area(s).

3.2 Health & Safety

Excavation and soil management activities will be completed with safety as the foremost concern to minimize the potential for accidents, injuries, contaminant exposures, and or illnesses. Per OSHA requirements, a site-specific Health and Safety Plan (HASP) will be developed, implemented, reviewed and followed by all personnel working at the Site. The EC will generally also provide their site-specific HASP and this may be used for the CC (with EC approval) if they do not provide their own HASP. All work will be performed as minimum safety Level D. This may be upgraded depending on the area of the site where excavation is planned, expected conditions change, and by field-encountered conditions during digging.

3.3 Protection of Existing Wells

The Site has existing remediation and groundwater monitoring wells installed across the property. Once the redevelopment plan is finalized with planned building footprints and other features, the EC will determine which wells require abandonment and which wells will remain in place and require protection during grading activities. Any well abandonments will occur prior to redevelopment activities under direction from the EC and under a permit issued by the County of Los Angeles.

The EC will communicate to the CC which wells will remain in place prior to the start of earthwork activities. Groundwater monitoring wells are constructed using PVC casing and are thus susceptible to breakage during earth moving activities. In some cases, wellheads may be lowered to an elevation below the lowest grading elevations, capped and marked. The temporary wellhead elevation will be established for each excavation area. These wellheads should be restored to final grade level following excavation during the backfill and compaction activities and accurately marked to avoid future damage. A detailed map showing all well locations will be provided to all field personnel to facilitate the protection and preservation of this equipment/infrastructure prior to earthwork activities.

3.4 SCAQMD Permitting

Prior to the start of field work, the South Coast Air Quality Management District (SCAQMD) will be notified of the planned excavation of VOC-impacted soil as required by SCAQMD Rule 1166. Since there is potential for greater than 2,000 cubic yards (cy) of VOC contaminated soil will require

excavation or disturbance, a Site-specific VOC Contaminated Soil Mitigation Plan will be prepared and submitted to the SCAQMD for approval.

4.0 SOIL MANAGEMENT GENERAL ACTIVITIES

This section outlines the general soil management guidelines that shall be implemented by parties involved in Site Preparation or other soil intrusive activities during future redevelopment of the Site.

4.1 Soil Management Plan Designated Areas

Contractors or personnel working at the Site should be aware that there may be locations with contaminants that exceed soil screening levels. Personnel working at the Site are required to adhere to this SMP. The planned redevelopment has been divided into three Designated Areas for the purpose of soil screening, segregation, analysis and re-use/disposal. The three Designated Areas as identified on Figure G-1 are as follows:

- The East Parcel;
- The Northwest Parcel; and
- The Southwest Parcel.

Excavated soil from these areas shall not be combined with one another nor should soil be moved to a different area from its origin without prior approval from the EC.

4.2 General Site Control and Soil Handling Procedures

The following procedures shall be followed during all soil intrusive activities conducted during property redevelopment:

- Any stockpiled soil shall be covered with plastic sheeting or tarps and will not be stockpiled in or near storm drains;
- Specified areas shall be identified and used for stockpiling soil that does not pass field screening to minimize cross-contamination with clean soil;
- The access to the excavated areas shall be controlled to prevent unauthorized persons accessing exposed soil; and
- Access to the work zones where soil will be disturbed shall be controlled using caution tape, cones, fencing, steel plates, or other measures to clearly designate the active work area and to prevent access by the public.

4.3 Dust/Vapor Control Measures

As necessary, dust control measures shall be utilized during all excavation, soil segregation, soil stockpiling, transport, and compaction activities to prevent or control surface and air movement of dust from disturbed soil surfaces. As necessary, the following dust control measures shall be utilized:

- All active construction activities within the Soil Management Plan Designated Areas shall be watered at least twice daily;

- All trucks hauling soil, sand, or other loose materials excavated from the Site shall be covered or shall maintain at least two feet of freeboard; and
- If visible soil material is carried onto adjacent public streets, the streets shall be swept with water sweepers as necessary to maintain them free of material.

4.4 Decontamination

Decontamination procedures shall be developed and followed to minimize the equipment contamination during excavation activities. The procedures should include removing loose soil from the vehicle exterior using dry methods, such as brushing, scraping or vacuuming. Soil not removed by dry methods, should be cleaned by pressure washing or steam cleaning.

4.5 Storm Water Control

Storm water pollution controls shall be implemented by the CCs to minimize sediment runoff in storm water, which could include soil containing contaminants of concern. Procedures to prevent erosion and sediment runoff from the Site shall include grading the Site, installing storm water control devices such as temporary earth berms or erecting silt fences around the perimeter of exposed soil at the Site. Straw bale barriers or sediment traps are required to protect any existing catch basins or drainage channels. A separate storm water pollution prevention plan shall be provided by the CC's Qualified Stormwater Plan Developer (QSD) prior to beginning Site activities.

5.0 FIELD SCREENING AND SOIL SEGREGATION

During any Site Preparation Activities, visual observation and field screening measurements will be conducted by the EC. Initial field screening measurements will consist of the following and observations/measurements will be noted and documented on field forms by the EC:

- Odorous soil;
- Stained or discolored soil;
- Presence of free-phase petroleum product;
- Any encountered subsurface features; and
- Photoionization detector (PID) field screening readings, further detailed in the following section.

5.1 PID Field Screening Methodology

A (PID) or other organic vapor detecting device shall be present during grading and excavation activities. Field screening using a PID shall be conducted pursuant to SCAQMD Rule 1166 and shall be conducted continuously by the EC during soil intrusive activities. PID field screening procedures are summarized as follows:

- The PID shall be calibrated daily, utilizing hexane gas or other equivalent method with prior approval from SCAQMD;
- The PID probe inlet should be placed no more than three inches from the surface of the excavated soil and while slowly moving the probe across the soil surface, the instrument readout shall be observed; and
- The maximum meter reading shall be recorded at a minimum of every 15 minutes on a Rule 1166 Soil Monitoring Record.

5.1.1 Trigger Levels

The following trigger levels and associated actions will be implemented during intrusive fieldwork at the Site:

PID Measurement or Visual Condition	Required Mitigation Measures
Less than 50 parts per million by volume (PPMV) with no visual or odor indicators	• Stockpiled as Site soils for reuse.
Greater than 50 PPMV but less than 1,000 PPMV	• Affected work area and soil load sprayed with water and/or vapor suppressant;

or less than 50 PPMV but with visual or odor indicators	• Placed in segregated stockpiles, bins or drums for additional laboratory analysis; • Stockpiles covered with plastic sheeting and are secured so that no portion of the contaminated soil is exposed to the atmosphere. During handling the stockpile, only the working face of the stockpile may be uncovered; • May not be used as backfill for the Site without prior approval from SCAQMD and LARWQCB; and • Managed according to Section 6.2.
Greater than 1,000 PPMV	• SCAQMD notification within one hour of detection; • Affected work area and soil load sprayed with water and/or vapor suppressant; and • Soil immediately loaded into SCAQMD approved sealed containers or loaded in trucks for immediate offsite disposal, unless prior written approval from SCAQMD.

6.0 STOCKPILE MANAGEMENT AND SOIL REUSE/DISPOSAL REQUIREMENTS

This section describes the monitoring of VOC emission and dust, and management of stockpiles with contaminated soil. In general, and as indicated in Section 5.0, field observations (i.e., visual staining, strong odors, PID readings of greater than 50 ppmv) will serve as the first line of screening. Soil with PID readings of less than 50 ppmv will be segregated from contaminated soil and will be reused during redevelopment activities.

Stockpile management of contaminated soil will be handled as described in the following section.

6.1 Handling of Contaminated Soil

As mentioned previously, soil that is field screened and determined to contain greater than 1,000 ppmv when measured within three inches of the soil with a calibrated PID will immediately be loaded into SCAQMD approved sealed containers or loaded in trucks for immediate offsite disposal, unless prior written approval from SCAQMD is received.

Soil that is field screened and determined to contain greater than 50 ppmv (but less than 1,000 ppmv) or appears impacted by visual/odor screening observations will be staged in stockpiles no greater than 1,000 cubic yards and will be characterized for offsite disposal or onsite treatment with prior approval from SCAQMD and LARWQCB. The stockpiles will be placed on plastic liner of 30-mil or greater. During construction, the piles will be lightly sprayed with water and covered with plastic sheeting of 10-mil or greater. Plastic sheeting will be secured with sandbags.

Soil that is planned for offsite disposal will be sampled in accordance with the receiving facilities' guidelines. Approximate sampling frequency is as follows:

- A minimum of one (1) 4-point composite sample will be collected from stockpiles of less than 100 cubic yards;
- Three (3) 4-point composite soil samples per 500 cubic yards in a stockpile containing up to 1,000 cubic yards; and
- Five (5) 4-point composite soil samples for the first 1,000 cubic yards and one (1) sample for each additional 500 cubic yards in a stockpile containing up to 5,000 cubic yards.

In the event that contaminated soil is treated onsite for reuse in lieu of offsite disposal, a separate Workplan detailing proposed treatment methodologies and confirmation sampling criteria will be submitted to RWQCB and SCAQMD for approval.

7.0 WRITTEN RECORDS AND REPORTING

At the completion of the redevelopment activities, a report will be prepared by the EC that summarizes the findings of the field observations, laboratory results, and final disposition of any excavated soil. A map will be provided which documents any underground features (not expected) that are unearthed during redevelopment. The headspace log forms will be presented as appendices to the report. If applicable, copies of receipts pertaining to the disposition of the soil will be appended to the report.

8.0 LIMITATIONS

This Plan was prepared to address potential TPH, VOCs, PAHs, and metals present in the soil at the Site and current known site conditions, regulations and laws. This Plan does not address issues related to groundwater, other chemicals or future site conditions that may be encountered during construction projects, including but not limited to, demolition and construction debris, asphalt, concrete, and asbestos-containing materials. If such materials are encountered during a construction project, contractors and workers are responsible for complying with all applicable laws pertaining to the handling and disposal of these materials.

The site-related activities may be subject to federal, state, and local laws and regulations, including those published by U.S. Environmental protection Agency (USEPA), the SCAQMD, California Environmental Protection Agency (Cal-EPA), Los Angeles County, and the City of Signal Hill. These regulations address issues such as health and safety, hazardous waste, dust generation, storm water, and community right-to-know. It is the responsibility of the parties involved to ensure that all construction and maintenance activities abide by current applicable laws and regulations.

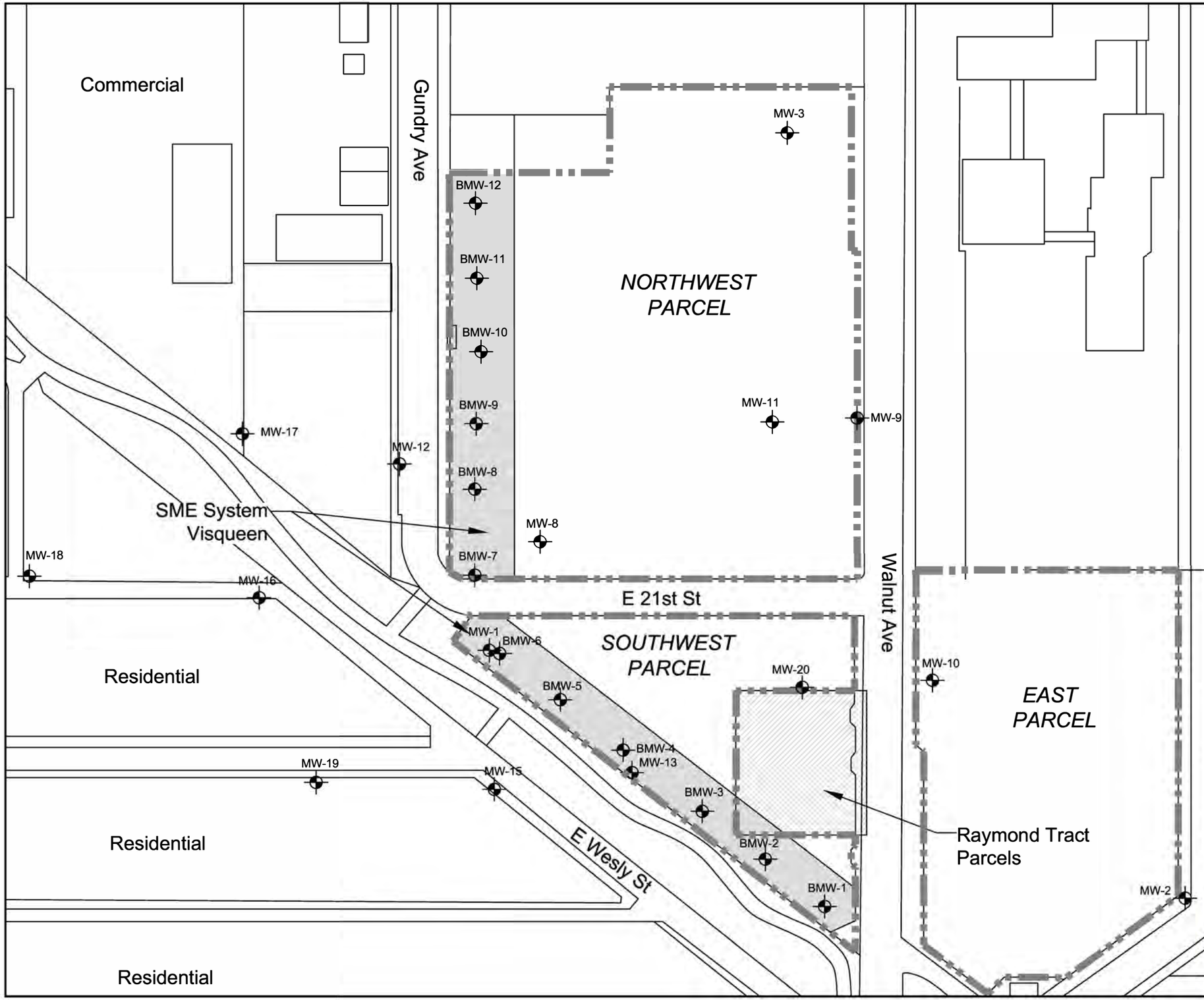
Apex-SGI disclaims any responsibility for any unauthorized use of this SMP. It is understood that while this SMP is intended to provide guidance and establish a framework for the management of potential chemical impacts in the subsurface soil to protect human health and the environment, this SMP shall not create any warranties or obligations to RES/SHE as to implementation, adequacy, or success of protective measures under this SMP.

9.0 REFERENCES

The Source Group, Inc., A Division of Apex Companies, LLC (Apex-SGI). 2017a. Site Investigation and Conceptual Model Report for Former Chemoil Refinery. March 29.

The Source Group, Inc., A Division of Apex Companies, LLC (Apex-SGI). 2017b. Response Plan and Remedial Technology Evaluation for Former Chemoil Refinery. June 13.

FIGURES



LEGEND

Site Boundary

MW-16 Groundwater Monitoring Well Locations

SME Subsurface Metabolic Enhancement

SITE MAP

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-CHEMOIL-001	02/08/17	ZA	KD

0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental APEX

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE G-1

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\App\SMP\Fig.1-2-Site Map.dwg, 5/11/2017 11:26:48 AM

EXCERPTS ONLY DUE TO SIZE

P□ASE I EN□IRONMENTAL SITE ASSESSMENT

□1□□ □ ALNUT A□ENUE

□□□□ □ ALNUT A□ENUE

SIGNAL □ILL□CALIFORNIA □□□□□

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Pr□□□□□□□ □1□-□□1-□□1

SU□MITTE□ □□□ Trihydro Corporation

2501 Cherry Avenue, Suite 200, Signal Hill, CA 90755

PREPARE□ FOR□ Mr. Stuart Miner

RE Solutions

2880 Bryant Street, Denver, CO 80211

Table of Contents

EXECUTIVE SUMMARY

1.0 INTRODUCTION 1-1
- 1.1 Purpose and Objectives 1-1
- 1.2 Scope of Services 1-2
- 1.3 Significant Assumptions 1-2
- 1.4 Limitations 1-2
- 1.5 Special Terms and Conditions 1-3
- 1.6 User Reliance 1-3
- 1.7 Data Gaps 1-4

2.0 LOCATION AND ENVIRONMENTAL SETTINGS 2-1
- 2.1 Site Location and Description 2-1
- 2.2 Topography and Surface Water Drainage 2-1
- 2.3 Surface Soils 2-1
- 2.4 Geology and Hydrogeologic Setting 2-2

3.0 HISTORICAL USE OF PROPERTY 3-1
- 3.1 Chain of Title Review and Environmental Lien Search and Tax Map 3-1
- 3.2 Historical Aerial Photograph Review 3-1
- 3.3 Historical Topographic Map Review 3-3
- 3.4 Review of City Directories 3-4
- 3.5 Sanborn Map Review 3-4
- 3.6 Interview with Project Manager/Consultants 3-4
- 3.7 Interview with Off-site Property Owners 3-5
- 3.8 Interview with Fire Marshall and Building Department 3-5
- 3.9 Interview with State Agencies 3-5
- 3.10 Site History 3-5
- 3.11 Previous Environmental Assessments 3-5
- 3.12 User Provided Information 3-8

4.0 REGULATORY AGENCY REVIEW 4-1
- 4.1 Standard Environmental Record Sources 4-1

Table of Contents

4.1.1 Federal, State, and Tribal Lists 4-1
4.1.2 Listed Facilities 4-1
4.1.3 Orphan Sites 4-4
4.2 Additional Environmental Record Sources 4-4

RESULTS OF SITE RECONNISSSANCE ..... -1
5.1 Site Reconnaissance 5-1
5.1.1 Current Use and Description of Site 5-1
5.1.2 Hazardous Substances and Petroleum Product Storage and Use 5-1
5.1.3 Solid and Hazardous Waste 5-1
5.1.4 Underground Storage Tanks 5-2
5.1.5 Aboveground Storage Tanks 5-2
5.1.6 Wastewater 5-2
5.1.7 Stormwater and Surface Drainage 5-2
5.1.8 Polychlorinated Biphenyls 5-2
5.1.9 Landfills 5-2
5.1.10 Surface Impoundments 5-2
5.1.11 Railroads 5-2
5.1.12 Water Wells 5-2
5.1.13 Oil and Gas Wells 5-3
5.1.14 Pipelines 5-3
5.1.15 Utilities 5-3
5.1.16 Evidence of On-site Releases 5-3
5.1.17 Vapor Intrusion Exposures 5-3
5.1.18 Asbestos Containing Material 5-3
5.1.19 Lead Based Paint 5-4
5.2 Surrounding Properties Reconnaissance 5-4

CONCLUSIONS ..... -1

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1. Site Location Map
2. Site Layout

L□□□□A□□□□d□□□

A. SITE PHOTOGRAPHS

B. EDR RADIUS MAP REPORT WITH GEOCHECK

C. EDR PROPERTY TAX MAP REPORT

D. EDR AERIAL PHOTO PACKAGE

E. EDR HISTORICAL TOPOGRAPHIC MAP REPORT

F. EDR CITY DIRECTORY ABSTRACT

G. USER QUESTIONNAIRE

H. QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

EXECUTI□E SUMMAR□

Trihydro Corporation (Trihydro) performed a Phase I Environmental Site Assessment (ESA) for RE Solutions on the former Chemoil Refinery site (Site), which is currently a vacant property. The Site is divided into two main parcels: the Western Parcel and the Eastern Parcel. The physical addresses for the Site are 2185 Walnut Avenue and 2020 Walnut Avenue.

The Western Parcel is immediately west of Walnut Avenue and the Eastern Parcel is immediately east of Walnut Avenue. The Western Parcel is 5.7 acres, and was formerly developed with two scale houses, a truck scale, several warehouses, a crude oil unloading rack, inspection lab, and about 65 above ground storage tanks (ASTs). Associated structures include piping, a boiler, heater units, loading racks, desalter, and a cooling tower.

The Eastern Parcel is 2.5 acres, and was formerly occupied by six ASTs used for heavy crude oil. There was also an office, maintenance area, truck washing and repair structure, laboratory, and warehouse.

Trihydro visited the Site to perform the Phase I ESA reconnaissance on April 18, 2016. The scope of services for this ESA and the performance of the professional services rendered were in general accordance with the current industry practices, as conducted by similarly qualified practitioners. The scope of work included the general provisions of the American Society for Testing and Materials (ASTM) Standard E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

This Phase I ESA was intended to reduce, but not eliminate, uncertainty regarding the potential for *recognized environmental conditions* (RECs), *historic* RECs (HRECs), *controlled* RECs (CRECs) in connection with the Site. Based upon the Site observations conducted on April 18, 2016, interviews of key company personnel, and data file reviews, the results of the Phase I ESA are summarized below:

T□□□□	N□ F□r□□□r A□□□□□	REC□ □REC □r CREC	R□□□r□ S□□□□□□	C□□ □ □□□
Property Location	X		2.1	
Topography and Surface Water Drainage	X		2.2	
Site History		X	3.10	

T□□□□	N□ F□r□□□r A□□□□□	REC□ □REC □r CREC	R□□□r□ S□□□□□□	C□□ □ □□□
Previous Environmental Assessments		X	3.11	Previous reports document soil, soil vapor, and groundwater hydrocarbon impacts associated with the historic use of the Site.
Regulatory Agency Review		X	4.0	The RWQCB is the lead agency, reviewing the semi-annual groundwater monitoring reports, and the remediation progress reports
Current Use	X		5.1.1	All structures associated with historic uses have been removed from the Site
Hazardous Substances and Petroleum Product Storage		X	5.1.2	Historic releases of petroleum products have impacted the soil, soil vapor, and groundwater
Solid and Hazardous Waste	x		5.1.3	
Underground Storage Tanks (USTs)	X		5.1.4	
Aboveground Storage Tanks (ASTs)	X		5.1.5	
Wastewater	X		5.1.6	
Storm water and Surface Drainage	X		5.1.7	Surface drainage is via sheet flow to the streets
Polychlorinated Biphenyls (PCBs)	X		5.1.8	.
Landfills	X		5.1.9	
Surface Impoundments	X		5.1.10	
Railroads		X	5.1.11	A railroad corridor was located adjacent to the southern perimeter of Site. Impacts associated with this historic use are unknown.
Water Wells	X		5.1.12	
Oil and Gas Wells	X		5.1.13	
Pipelines	X		5.1.14	
Utilities	X		5.1.15	
Evidence of On-Site Releases		X	5.1.16	
Vapor Intrusion Exposures		X	5.1.17	Benzene and ethylbenzene concentrations were detected above CHHSLs in 2009 in the interior of the Site. Soil and soil vapor impacts were not addressed in the historic documents in relation to future use of the Site.
Surrounding Properties		X	5.2	A potential MTBE source may be located west of the Western Parcel based on the distribution of MTBE

Trihydro has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-13. Any exceptions to, or deletions from, this practice are discussed in Section 1.7 of this report.

This assessment has revealed evidence of RECs, HRECs and CRECs. The historic use of the Site as an oil refinery has resulted in hydrocarbon impacts in the soil, soil vapor, and groundwater. The Site is currently vacant with the exception of portable groundwater-remediation equipment rooms.

1 INTRODUCTION

Trihydro Corporation (Trihydro) was retained by RE Solutions to conduct a Phase I Environmental Site Assessment (ESA) on two vacant properties known as the former Chemoil Refinery, located at 2185 Walnut Avenue and 2020 Walnut Avenue, Signal Hill, California (Site). The Site was developed as an oil refinery that operated from 1922 until early 1994. The Chemoil Corporation (Chemoil) acquired the refinery in August 1988 and operated it until 1994. The Site comprises a total of 23 parcels and is divided by Walnut Avenue into two primary parcels, identified as the Western Parcel (2185 Walnut Avenue) and the Eastern Parcel (2020 Walnut Avenue). As shown on Figures 1 and 2, the Site is located within a commercial /residential area.

1.1 PURPOSE AND OBJECTIVES

This Phase I ESA was intended to reduce, but not eliminate, uncertainty regarding the potential for *recognized environmental conditions* (RECs), *historical* RECs (HRECs), and *controlled* RECs (CRECs) in connection with the Site. As defined by American Society for Testing and Materials (ASTM) E 1527-13, "The term *recognized environmental conditions* means the presence or likely presence of any hazardous substances or petroleum products on a site under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into the structures on the site or into the ground, groundwater, or surface water of the site. 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 threat to human 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 term HREC as used throughout this report, is cited from Section 3.2.42 of ASTM E 1527-13. This term is defined as "a past release of any hazardous substance or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority." In other words, it is an environmental condition, which has been dealt with appropriately so that it no longer limits the property's use of activities.

The term CREC as used throughout this report, is cited from Section 3.2.18 of ASTM E 1527-13. This term applies to sites where contamination is present but is controlled but could still pose ongoing or future obligations for the owner, such as special precautions during development. Properties that may be present in this category would be those with deed restrictions, vapor barriers, or other engineering controls designed to eliminate exposure pathways to human and / or environmental receptors.

1 SCOPE OF SERVICES

The scope of work for the Phase I ESA was prepared per RE Solutions request and will be conducted following the ASTM Standard E 1527-13, *Standard Practice for Environmental Site Assessments*. Major elements of this ESA include the following items:

- Site investigation walk-through identifying suspect hazardous materials.
- Site inspection and reconnaissance of the Site and surrounding properties in immediate proximity to the Site.
- Review of State and Federal databases.
- Review of historic uses of the Site and adjoining property.
- Review of aerial photographs (as readily available).
- Review of available records on-file for the Site and/or nearby properties, where warranted.
- Interviews with knowledgeable persons regarding the Site and/or nearby properties.
- Review of previous environmental investigations, if available.

1 SIGNIFICANT ASSUMPTIONS

The information obtained from RE Solutions representatives, individuals interviewed, and the databases reviewed are considered to be accurate unless otherwise noted. The scope of work was based solely upon the condition of the Site and surrounding properties on the date of the Site visit, April 18, 2016.

1 LIMITATIONS

The scope of services for this ESA and the performance of the professional services rendered were in general accordance with the current industry practices, as conducted by similarly qualified practitioners. The scope of work included the general provisions of the ASTM Standard E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

The Phase I assessment was limited to visual observation of surface conditions at the Site and a review of reasonably ascertainable data. For the purposes of this ESA, reasonably ascertainable data are defined as a regulatory database, historical aerials, and topographic maps that could be readily obtained through a commercial source, information provided by representatives of the Site, and interview information that could be obtained from individuals available during the Site reconnaissance. The information obtained was not further verified, unless the information was known to be incorrect or conflicted with other information that was obtained. In addition, unidentified facilities, which are

required to comply with environmental regulations, may be present within the search distance but were not documented in regulatory agency records. Trihydro does not guarantee the completeness or accuracy of the regulatory agency database records.

The Phase I ESA was intended to reduce, but not eliminate, uncertainty regarding the potential for various RECs, HRECs, and CRECs in connection with the Site. In addition, this assessment did not include a regulatory compliance evaluation, including local, state, and federal permitting and reporting requirements. State and federal regulations are subject to change. Certain conditions, if present, such as those listed below, are not within this scope of work.

- Regulatory compliance
- Health and safety, and industrial hygiene
- Radon and other naturally occurring radioactive materials
- Indoor air quality
- Recycling and disposal of electronic waste (e-waste)
- Drinking water quality, including lead in drinking water
- Health effects of electromagnetic radiation from high-voltage power lines
- Naturally-occurring toxins in the subsurface soils, rocks, water, or toxicity of on-site flora
- Biological hazards
- Floodplain areas and geological faults
- Ecological resources
- Cultural and historical resources
- Subsurface contamination

1.[illegible] SPECIAL TERMS AND CONDITIONS

The User of this Phase I ESA is defined as the party seeking to use ASTM E 1527-13 to complete an ESA of the Site, and is identified as RE Solutions.

1.[illegible] USER RELIANCE

This report has been prepared solely for use by RE Solutions. This report should not be relied upon by third parties without written authorization and signed agreement from Trihydro.

1 DATA GAPS

Data gaps are defined by ASTM E 1527-13 as the lack or inability to obtain information despite good faith efforts that could potentially affect the ability of the environmental professional from identifying RECs. Known deviations from the scope of work as defined by ASTM E 1527-13 that are considered data gaps are identified as follows:

- An EDR was requested for 2185 Walnut Avenue. An EDR report was not requested for 2020 Walnut Avenue. Since the properties are located adjacent to each other, the information in one EDR report would be relevant to both properties.
- Chain-of-Title documents were not provided or reviewed. The status of the property ownership should be verified.
- An Environmental Lien and AUL Search was not conducted by EDR.
- A Sanborn Map database for the Site was not requested for the Site.
- Trihydro contacted the Signal Hill Building Department on April 19, 2015, regarding fire or hazardous material spill responses at the Site. At the time of the submission of this report, no additional information had been received.
- Soil and soil vapor impacts associated with future use of the Site are not addressed.

These identified data gaps do not change the observations and findings of the Phase I ESA.

LOCATION AND ENVIRONMENTAL SETTINGS

This section describes the location and environmental setting of the Site. The environmental setting is generally comprised of the Site location, topographic setting, surface water features, geology, and hydrogeology in the vicinity of the Site. A summary of the reasonably available information related to these topics is included below.

1 SITE LOCATION AND DESCRIPTION

The Site is located at 2185 and 2020 Walnut Avenue, Signal Hill, California (Figure 1), within an area that is developed with commercial and residential properties (Figure 2). The approximate latitude of the Site is 33.79649 North and the longitude is -118.172498 West. Photographs of the Site are provided in Appendix A.

TOPOGRAPHY AND SURFACE WATER DRAINAGE

Based on a review of the 1981 United States Geological Survey (USGS) Long Beach 7.5-minute Topographic Map, the topographic gradient at the Site is toward the south. The Site has an average elevation of approximately 52.93 feet above sea level.

Observation of the Site topography corresponds with information presented on the topographic map (USGS, 1981). The property slopes from the northeast to the southwest. Surface water drainage is influenced by the presence of the roadways. Surface water drains are currently not located on the Site.

The Site does not lie within a Federal Emergency Management Agency (FEMA) 100-year or 500-year flood zone; and is not located within an area classified by the U. S. Fish and Wildlife Service (USFWS) as being included in the National Wetlands Inventory (NWI).

SURFACE SOILS

Based on Site investigations completed in 2011, the Site in underlain by deposits of unconsolidated, stratified, laterally discontinuous sequences of fine-grained soil with an intervening fine-to-coarse-grained sand layer, which exists at depths from approximately 13 feet to 45 feet below ground surface (bgs).

According to the Environmental Data Resources (EDR) Radius Map with GeoCheck (Appendix B), the Site is located within an area where the surface soils are classified as loam, clay, silt loam, loamy sand, sandy loam, fine sand, clay loam, gravelly – sandy loam, coarse sand, and gravelly sand.

GEOLOGY AND HYDROGEOLOGIC SETTING

The Site is located in the Los Angeles Basin, which is part of the Coastal Plain of Los Angeles County. A northwest structural trend is evident in many folding and faulting features of the regional geology, characteristic of the Peninsular Ranges geomorphic province. This includes the Newport-Inglewood Fault Zone, which is located approximately 0.25 miles northeast of the Site. Geologic units of the northern Peninsula Ranges province consist of Jurassic and Cretaceous-age basement rocks overlain by as much as 32,000 feet of marine and non-marine sedimentary strata ranging in age from the late Cretaceous to Holocene epochs.

Regional Hydrogeology. The Site is located within the West Coast sub-basin of the Central Plain of Los Angeles groundwater basin. Water bearing formations in the sub-basin generally consist of Holocene, Pleistocene, and Pliocene age unconsolidated and semi-consolidated marine and alluvial sediments. The primary aquifer in the sub-basin is the Silverado aquifer. There is one water supply well located 850 feet south of the Site (LACDPW Well #420).

No natural surface water bodies, including ponds, streams, or other bodies of water are present near or on the Site.

Local Hydrogeology. Groundwater monitoring at the Site began in March 1987. Since the initial monitoring event through June 2012, groundwater elevations have remained relatively consistent. During the groundwater monitoring event conducted in December 2015, the average groundwater elevation was 2.62 feet above mean sea level. The average depth to groundwater was approximately 22.84 ft bgs. Due to Site topography, the difference between the depths to water measurements in the monitoring wells is 29.89 ft. Groundwater flow was determined to be toward the southeast, at an approximate gradient of 0.0012 ft per ft.

3.0 HISTORICAL USE OF PROPERTY

The historical use of the Site was evaluated to determine whether potential RECs, HRECs or CRECs may exist at the Site. Included in the historical use assessment were aerial photographs and topographic maps, a review of city directories, interviews with the on-site contacts, state agencies, and the local fire department.

3.1 CHAIN OF TITLE REVIEW AND ENVIRONMENTAL LIEN SEARCH AND TAX MAP

A chain-of-title is often reviewed to aid in establishing historical use and ownership of a site and to identify on-site business activities that may indicate a type of REC. A chain-of-title search for the Site was not requested by the client.

An environmental lien search is conducted to aid in identifying whether the Site has been assigned an environmental clean-up lien, or other activity and use limitation, such as engineering controls or institutional controls. An Environmental Lien and AUL Search was not conducted by EDR. According to the property representatives, there are no environmental liens on the Site.

An EDR Property Tax Map Report was also requested for 2185 Walnut Avenue. The tax map is designed to assist environmental professionals in evaluating potential environmental conditions on a target property by understanding property boundaries and other characteristics. A copy of the EDR Property Tax Map Report is included in Appendix C.

3.2 HISTORICAL AERIAL PHOTOGRAPH REVIEW

Historical aerial photographs are reviewed to aid in establishing prior land uses and to identify on-site activities or surface features that might indicate a REC. Historical aerial photographs were requested from a commercial source, EDR, on February 29, 2016, and are included in Appendix D. Twelve aerial photos were obtained from EDR from the period between 1928 and 2012 and reviewed by Trihydro. Each of the aerial photographs are discussed below.

□□r□S□□□□	S□□□	N□r□□□r□ Ad□□□□□□ Pr□□□r□□	E□□□□r□ Ad□□□□□□ Pr□□□r□□	S□□□□□r□ Ad□□□□□□ Pr□□□r□□	□ □□□□r□ Ad□□□□□□ Pr□□□r□□
1928 1”=500’	The Site is developed as an oil storage facility. Many ASTs are visible on the Western Parcel, and two ponds and a warehouse are visible on the Eastern Parcel.	Western Parcel: Residential Eastern Parcel: commercial	The property is developed as residential.	Railroad right of way, beyond which is residential	Gundy Ave, commercial and residential
1947 1”=500’	The Site use appears unchanged; however, additional ASTs have been built	Western Parcel: Residential Eastern Parcel: commercial	The property is developed as residential.	Properties remain mostly unchanged	Gundy Ave, commercial and residential
1953 1”=500’	The Site appears mostly unchanged	Western Parcel: Hill Street, residential Eastern Parcel: small buildings, open land	Western Parcel: Walnut Street; beyond that are a few buildings Eastern Parcel: - Gaviota Street, then residential	Properties remain mostly unchanged	Gundy Ave, residential
1963 1”=500’	The Site appears mostly unchanged; however, ponds on the Eastern Parcel have been replaced with ASTs	Western Parcel - Hill Street, followed a School Eastern Parcel – warehouse-type building	Western Parcel: Walnut Street; beyond that are large buildings Eastern Parcel: - Gaviota Street, then residential	Properties remain mostly unchanged	Gundy Ave, commercial and residential
1970 1”=500’	The Site appears mostly unchanged since 1963	Western Parcel - Hill Street, followed a School Eastern Parcel – warehouse-type buildings	Western Parcel: Walnut Street; beyond that is a university Eastern Parcel: - Gaviota Street, then residential	A ball field has been built on the property south of the railroad.	Gundy Ave, commercial and residential since 1963
1977 1”=500’	The Site appears mostly unchanged since 1963	Western Parcel - Hill Street, followed a School Eastern Parcel - school	The properties remain mostly unchanged since 1970	The properties remains mostly unchanged since 1970	Gundy Ave, commercial and residential since 1963
1983 1”=500’	The Site appears mostly unchanged since 1963	The properties remain mostly unchanged since 1977	The properties remain mostly unchanged since 1970	The properties remains mostly unchanged since 1970	Gundy Ave, commercial and residential since 1963

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1989 1”=500’	The Site appears mostly unchanged since 1963	The properties remain mostly unchanged since 1977	The properties remain mostly unchanged since 1970	The properties remains mostly unchanged since 1970	Gundy Ave, commercial and residential since 1963
1994 1”=500’	The Site appears mostly unchanged since 1963	The properties remain mostly unchanged since 1977	The properties remain mostly unchanged since 1970	The properties remains mostly unchanged since 1970	Gundy Ave, commercial and residential since 1963
2002, 2005, 2009 1”=500’	The Site is vacant	Western Parcel - Hill Street, followed a school Eastern Parcel – nursing school	The properties remain mostly unchanged since 1970	The properties remains mostly unchanged since 1970	Gundy Ave, commercial and residential since 1963

[illegible] HISTORICAL TOPOGRAPHIC MAP REVIEW

Historical topographic maps were reviewed to help establish prior land use and to identify on-site activities that might indicate a potential REC or obvious surface features. A chronological evaluation of the United States Geological Survey (USGS) topographic maps and descriptions of the Site and adjacent properties are listed below. A copy of the EDR Historical Topographic Map Report is included as Appendix E.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1896/1:62,500	Vacant land	Vacant land	Vacant land	Vacant land	Vacant land
1902/1:62,500	Vacant land	Vacant land	Vacant land	Vacant land	Vacant land
1925/1:24,000	Small building	Small building	Small building	Railroad	Small building
1943/1:62,500	No structures on topo	No structures on topo	No structures on topo	Railroad	No structures on topo
1949/1:24,000	ASTs on western parcel, no structures on eastern parcel	Commercial development	Commercial development	Train tracks, residential, school	Commercial development
1964/1:24,000	ASTs visible, and other structures on all both parcels	Commercial development	Commercial development	Train tracks, residential, school	Commercial development
1972/1:24,000	ASTs visible, and other structures on all both parcels	Commercial development	Commercial development	Train tracks, residential, school	Commercial development
1981/1:24,000	ASTs visible, and other structures on all both parcels	Commercial development	Commercial development	Train tracks, residential, school	Commercial development
2012/1:24:000	No structures visible on topo	No data on topo	No data on topo	No data on topo	No data on topo

RE□IE□ OF CIT□ □IRECTORIES

A search of available city directories was requested from EDR for the property located at 2185 Walnut Avenue. The EDR-City Directory was not requested for 2020 Walnut Avenue. The City Directory Abstract evaluated business directories including city, cross reference, and telephone directories at approximately 5-year intervals spanning 1920 through 2013. A chronological evaluation of the City Directory and descriptions of the Site and adjacent properties are listed below. A copy of the EDR City Directory Report is included in Appendix F.

□□□r	S□□r□□	Addr□□□	S□□□
2013	Cole Information Services	2185 Walnut Ave	Global Sportswear & Promotions
2006	Haines Company, Inc.	2185 Walnut Ave	Global Promotions Sportswear & Promotions
2000	Haines	2185 Walnut Ave	Global Sportswear & Promotions, The Limo Company
1991	Pacific Bell	2185 Walnut Ave	Carnahan T & Associates Inc.; Full Appraisal Co
1985	Pacific Bell	2185 Walnut Ave	Carnahan T & Associates
1975	Pacific Telephone	2185 Walnut Ave	Donald Bros Inc, Stewart Coatings
1969	Pacific Telephone	2185 Walnut Ave	Advance Pluming Co., Inc.

SAN□ORN MAP RE□IE□

Fire insurance maps (Sanborn) were developed in the mid 1800's to determine insurance rates by identifying fire hazards (such as gasoline), building construction materials, and the location of fire protection equipment and fire stations. A Sanborn Map database for the Site was not requested.

INTER□IE□ □ IT□ PRO□ECT MANAGER□CONSULTANTS

During the Phase I ESA process, Trihydro participated in interviews with individuals knowledgeable of the Site history. The individuals and their titles that participated during the interviews are:

- Ms. Lynn Edlund – Trihydro Environmental Professional
- Ms. Pam Vila – Signal Hill Enterprises
- Mr. Tom Graf - Grafcon

During the interview process, Ms. Vila and Mr. Graff referred Trihydro to the documents in Geotracker (a California database and geographic information system that provides online access to environmental data) regarding the Site history.

□□□ INTER□IE□ □IT□ OFF-SITE PROPERT□ O□ NERS

No off-site property owners were interviewed as part of this Phase I ESA.

□□□ INTER□IE□ □IT□ FIRE MARS□ALL AN□ □UIL□ING □EPARTMENT

Trihydro contacted the Signal Hill Building Department on April 19, 2016, regarding fire or hazardous material spill responses at the Site. At the time of the submission of this report, no additional information had been received.

□□□ INTER□IE□ □IT□ STATE AGENCIES

Based on review of state agency documents, the Regional Water Quality Control Board, Los Angeles Region (RWQCB) is the lead agency for Site assessments, groundwater monitoring reports, and progress reports on groundwater mitigation. The case is open.

□1□ SITE □ISTOR□

Prior to 1922, the Site was used as a dairy farm. From 1922 to 1988, the Site was operated by MacMillan Ring-Free Oil Company. Chemoil purchased the refinery in August 1988, and operated it until February 14, 1994. The refinery and associated equipment were dismantled and removed between 1997 and 1998. The Site is currently vacant and does not contain any ASTs or known underground storage tanks.

□11 PRE□IOUS EN□IRONMENTAL ASSESSMENTS

Subsurface environmental related activities have been performed at the Site since 1985. Groundwater monitoring was initiated in 1987. Site characterization activities were completed in late 2008, 2009, and 2012. A groundwater remediation system was installed in January 2014, and initiated in March 2014. The results of the environmental investigations are summarized below.

Groundwater Monitoring: Groundwater monitoring has been completed since March 1987. Semiannual groundwater has been conducted since June 7, 2013. Twenty groundwater wells are associated with the Site, and are located both on-site and off-site. The data collected during the December 2015 groundwater monitoring event is summarized as follows:

- 19 wells were gauged
- 18 wells were sampled for Total Petroleum Hydrocarbons – gasoline range (TPH-g), TPH-diesel (TPH-d), volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs)
- Light Non-Aqueous Phase Liquid (LNAPL) was detected in one well, with a thickness of 1.73 feet.
- TPHg and TPHd plumes underlie the northern portion of the property and extend southward, off-site, into the residential neighborhood. The lateral extent of TPHg and TPHd has not been defined.
- Benzene was only detected in two on-site wells located on the northern portion of the Site, at concentrations ranging from 31.6 µg/L to 692 µg/L. Benzene was not detected in the perimeter wells or in the neighborhood wells. Benzene has been adequately defined.
- MTBE was detected in one on-site well and in five off-site wells, with concentrations ranging from 1.8J to 131 µg/L. The highest MTBE concentration was detected in an off-site well, located west of the Site, which may indicate an off-site source.
- A remediation system has been installed along the western and southern perimeters of the Site to mitigate further off-site migration.

LNAPL Occurrence: Historically, LNAPL was present in three separate and localized areas. Two areas were located in the northern half of the Western Parcel and were characterized as naphtha, kerosene and gas oil; and one area was located in the southernmost tip of the Site, and was characterized as heavy crude oil or lubricating oil. A LNAPL recovery program was initiated in 1987, and was terminated in 1994. Currently, LNAPL is observed in only one well in the middle of the Western Parcel, as documented in the groundwater monitoring report discussed above.

Soil Sampling: Soil sampling was conducted at the Site in 1986, 1999, 2006, and 2009. The historic sampling data indicates significant portions of the soil column beneath the Western Parcel are impacted by residual hydrocarbons, extending from ground surface to the water table. During the 2009 investigation of the Western Parcel, TPH-g concentrations ranged from 130 to 8,800 milligrams per kilogram (mg/kg); TPH-d concentrations ranged from 370 to 23,000 mg/kg; benzene concentrations ranged from 6.9 to 9,400 mg/kg; and ethylbenzene ranged from 15 to 31,000 mg/kg ("Report on Phase III Additional Site Characterization", prepared by TEC, June 2011). These concentrations are consistent with hydrocarbon concentrations detected during previous investigations. In addition, a small localized area in the northwestern corner of the Eastern Parcel was also identified impacted.

Vapor Intrusion evaluation: A soil gas survey was performed in 2006 within the Western and Eastern Parcels. Samples were collected from depths of 5 and 16 ft bgs. Benzene and ethylbenzene concentrations exceeded California

Human Health Screening Levels (CHHSLs), with concentrations as high as 802,000 micrograms per cubic meter (µg/m3) and 1,500 µg/m3, respectively.

A vapor intrusion evaluation was completed in 2009 along the perimeter of the Site, and updated in 2010. Based on the results of the survey, "potential soil vapor intrusion is not likely to be of concern for current off-site residents living south or southwest of the property". The Office of Human Health and Environmental Assessment (OEHHA) reviewed the May 5, 2010 evaluation, and concurred with this conclusion. ("Second Update to Vapor Intrusion Evaluation for Southern Boundary", prepared by ToxStrategies, October 8, 2012).

Remediation: The remediation system is documented in the "Interim Remedial Action Progress Report", prepared by Ami Adini & Associates, Inc., dated March 25, 2016, and is summarized below.

A groundwater contaminant mitigation system is installed along the western and southern boundaries of the Site. The mitigation system consists of a flow-through barrier using subsurface metabolism enhancement (SME) technology to mitigate petroleum hydrocarbons. SME technology is an in-situ process of soil and groundwater remediation that uses natural microorganisms found natively in soil to degrade petroleum hydrocarbons, and incorporates nutrient injection, air injection, and air and biogenic gas extraction. Using a combination of air and nutrient injection into the subsurface through injection wells, and the extraction of air and biogenic gas from a series of extraction wells, oxygen flow-throughout the subsurface is enhanced. The increased circulation of oxygen and nutrients in the subsurface stimulates the aerobic metabolism of petroleum hydrocarbons by naturally occurring, native microbes in the soil. Extraction of biogenic gas, primarily carbon dioxide, prevents anaerobic conditions from developing in the subsurface, promotes the natural metabolism of petroleum hydrocarbons, and maintains a negative pressure in the subsurface, which promotes the flow and spread of injected air and nutrients throughout the area of contamination.

A total of 150 wells were installed to a maximum depth of 40 ft bgs between December 17, 2013 and January 15, 2014. In March 2014, the SME operation was initiated and included periodic nutrient injections and air injection. The vapor extraction was treated with activated carbon; however the activated carbon was depleted within a day due to the high hydrocarbon vapor load. Therefore, a supplemental vapor extraction system (VES) and treatment of the off-gas with a catalytic oxidizer unit was initiated. This system operated from October 2014 to September 2015. In October 2015, the VES system was no longer needed, and the system switched back to using activated carbon for the vapor treatment. The SME system was operational during the Site visit on April 18, 2016.

Agency Approvals. On December 7, 2012, the RWQCB issued a letter to Signal Hill Holding Corporation approving the interim remedial action plan for mitigating groundwater contamination at the property boundaries. The RWQCB

approved groundwater remediation goals of TPH-g and TPH-d of 100 µg/L along the south and southwest property boundaries.

1 USER PROFILE INFORMATION

The ASTM E 1527-013 Standard requires that the environmental professional request information from the User of the Phase I concerning the Site that will help identify the possibility of RECs, HRECs, or CRECs in connection with the Site. It is the User's responsibility to provide the names of individuals/entities who can provide this information. The User Questionnaire was completed during the interview process by a representative of RE Solutions (Ms. Pam Vila of Signal Hill Holdings and Tom Graf of Grafcon). The interviewees referenced the documents in Geotracker to identify adverse environmental conditions, RECs, HRECs or CRECs. A copy of this questionnaire is provided in Appendix G.

REGULATORY AGENCY REVIEW

Trihydro reviewed relevant and readily available selected federal, state, and Tribal regulatory lists in order to identify recorded information concerning environmental impacts, conditions, or concerns in association with the Site and/or surrounding properties.

1 STANDARD ENVIRONMENTAL RECORD SOURCES

A regulatory agency database list was obtained from EDR and reviewed to identify listed hazardous material sites located on and within the vicinity of the Site. EDR reportedly updates their records on a monthly or quarterly basis, as required. This commercial (EDR) records review reportedly included information that was reasonably ascertainable, publicly available, and retrievable by geographic location in relation to the Site. A copy of the EDR Radius Map with GeoCheck dated September 30, 2015, is included as Appendix B for the property located at 2185 Walnut Avenue.

1.1 FEDERAL STATE AND TRIBAL LISTS

A Trihydro Environmental Professional reviewed the databases provided by EDR, including the approximate minimum search distances, and the number of facilities identified within the search distances. The databases were selected by EDR based on the minimum requirements of ASTM E 1527-13.

1.1 LISTED FACILITIES

The addresses for the Site operations were identified in the following databases searched by EDR. The definitions of these databases are provided in the EDR Radius Map Report with Geocheck that is included in Appendix B.

Prior Address	Land Event	LUST/SWEEPS UST	Prior REC/REC/CREC
2185 Walnut Avenue	Don Anderson	SWEEPS UST, Los Angeles Co. HMS	Yes

Seventy-seven off-site properties were identified within the specified ASTM search radius and are included in the Mapped Sites Summary of the EDR Radius Map Report with Geocheck that is included in Appendix B. The properties are listed below and the definitions of these databases are also included in Appendix B.

E□R MAP I□	Pr□□□r□□ Addr□□□	L□□□□d E□□□□	L□□□□□□S□□□□□□ UST	P□□□□□□□□ REC□□REC□CREC
L48	2424 Brayton St	Fuller HB Co Inc	CERCLIS-NFRAP	No
N54	2335 Cherry Ave	Continental Emsco Co	CERCLIS-NFRAP	No
R70	1845 E. Willow St	Pen Transportation	RRA CORRACTS	No
S78	1835 E. 20th St	Enviropur West Corp	RCRA CORRACTS	No
9	1600 E. Hill St	Universal	RCRA, SQG	No
E22	2285 Walnut Ave	Long Beach USD SIGNA	RCRA, SQG	No
E23	2300 Walnut Ave Suit	Matthews Garage	RCRA, SQG	No
E24	2300 Walnut St	Walnut Industrial PA	RCRA, SQG	No
36	1619 E. Crestonn Pl	Carlos Guzman Inc.	RCRA, SQG	No
G41	2301 Orange Ave	Robinson Oil Tool	RCRA, SQG	No
3	2170 Gundry Ave	P and M Diesel	RCRA, SQG	REC/HREC
B5	2020 Walnut Ave	Macmillan Ring-Free	RCRA, SQG	REC/HREC
19	1361 Hill St	Kalibur Engineering	RCRA, SQG	No
76	2740-2760 Junipero A	Junipero Avenue Site	RESPONSE	No
N55	2335 Cherry	Continental EMSCO Co	ENVIROSTOR	No
68	Hathaway/Temple/Hill	Alamitos Land/Bixby	ENVIROSTOR	No
R69	1845 E. Willow Lot A	Abbotts Waste Oil SE	ENVIROSTOR	No
71	2200 E. Willow St	Price Club #424	ENVIROSTOR	No
75	2850 Walnut	Continental EMSCO Co	ENVIROSTOR	No
76	2740-2760 Junipero A	Junipero Avenue Site	ENVIROSTOR	No
S77	1835-1899 Orizaba Av	Urban Pacific Builder	ENVIROSTOR	No
S79	1835 29th St	Enviropur West Corp	ENVIROSTOR	No
81	3230 East Hill Street	Browning Site	ENVIROSTOR, HWP	No
B4	2020 Walnut	Macmillan Ringfree	ENVIROSTOR, SLIC	No
C14	1777 East 20th St	20th Street school	ENVIROSTOR, SCH	No
C17	1778 East 20th St	Jessie Elwin Nelson	ENVIROSTOR, SCH	No
72	568 East Hill St	Pether H. Burnett Ele	ENVIROSTOR	No
73	1600 Atlantic Ave	LBUSD-Polytechnic Hi	ENVIROSTOR	No
74	Home Street/Del Amo	Dooley's Hardware MA	ENVIROSTOR	No
80	1574 Linden Avenue	Roosevelt Elementary	ENVIROSTOR	No
42	1444 Burnett St	Bob Hill Crane	LUST	HREC
L51	2409 Orange Ave	Sipprelle/Guzman	LUST	HREC
56	1145 Burnett	Slosson Property	LUST	HREC

E□R MAP I□	Pr□□□r□□ Addr□□□	L□□□□d E□□□□□	L□□□□□□S□□□□□□ UST	P□□□□□□□□ REC□□REC□CREC
057	2450 Orange	Tom Tank Enterprises	LUST, Hist CORTESE	HREC
O58, O59	2459 Orange	Heat & Power Equipment	LUST Hist CORTESE	HREC
60	1698 025th	McKernie Family Part	LUST Hist CORTESE	HREC
Q65,Q66	2501 Orange Ave	Gaines Electric Supp	LUST, Hist CORTESE	HREC
C16	1777 E. 20th St	GTE Long Beach Plant	LUST, UST, Hist CORTESE	HREC
D20	1247 Hill	Hust-ITT	LUST, Hist CORTESE	HREC
H34	1851 19th St	Long Beach Bldg Mate	LUST, Hist CORTESE	HREC
J43	1601 E. Pacific Coast H	KL Gas & Oil Auto	LUST	HREC
J44, J45	1600 Pacific Coast H	U-Haul Moving Center	LUST, Hist CORTESE	HREC
K46	1305 E. Pacific Coast H	Long Beach City Coll	LUST, Hist CORTESE	HREC
K47	1300 Pacific Coast H	Carl's Fine Furniture	LUST, Hist CORTESE	HREC
M49	1945 Pacific coast	Shell #204-4482-1407	LUST, Hist CORTESE, Notify 65	HREC
M52	2001 Pacific Coast H	Mobil #99-LNG	LUST, Hist CORTESE	HREC
64	2300 Martin Luther King	Long Beach Redevelop	LUST	HREC
53	2200 Skyline Dr	Signal Hill Petroleum	SLIC	No
67	W. Cherry Ave.	Town Center West -C	SLIC	No
B6	2020 N. Walnut Av	Chemoil Ref Corp	SLIC	No
63	2100 Pacific Coast	CalTrans Highway 1	SLIC	No
F29	2065 Cherry St	So. Cal Military Aca	UST	No
B11	1510 E. 20th St	Unknown	UST	No
C15	1778 E. 20th St	GTE California L.B.	UST	No
25	2150 Orange Ave	File Only	UST	No
27	2053 Orange	Greater Open Door		No
D30	2230 Lemon Ave	Excel Paving Co.	UST	No
32	1150 E. Hill St	Not Reported	UST	No
H35	1851 E 19th St	Long Beach Building	UST, SWEEPS UST, Hist UST	No
I37	2192 Cherry Ave	A&A	Brownsfields	No
I38	2192 Cherry Ave	Bob Lee Site	Brownsfields	No
I39	2192 Cherry Ave	North flank of the H	Brownsfields	No
P61	2475 Gardena Ave	2475 Gardena Ave	Brownsfields	No
P62	2485 Gardena Ave	2485 Gardena Ave	Brownsfields	No
F28	2065 Cherry Ave	So Cal Military Academy	SWEEPS UST	No
G33	1245 E 023rd St	Hawk Industries	SWEEPS UST, Hist UST	No
40	1792 E. Creston St	Redy-Dubois Lease	SWEEPS UST	No
C12, C13	1730 E 20th St	Modern Cleaners	Hist UST, RCRA NonGen/NLR	No
D21	1247 East Hill St	Husk-ITT Corporation	Hist UST	No
26	1851 E. 019th St	Long Beach Building	CA FID UST	No
8	1344 Wesley Dr	Mirandas Trucking	RCRA NonGen/NLR	REC

E□R MAP I□	Pr□□□r□□ Addr□□□	L□□□d E□□□□	L□□□□□S□□□□□ UST	P□□□□□□□ REC□□REC□CREC
N55	2335 Cherry	Continental EMSCO CO	Hist CORTESE	No
56	1145 Burnett	Slosson Property	Hist CORTESE	No
R-17	1845 E. Willow St	Pen Transportation	HWP	No
B7	2000 Alamitos Av	Blain A L	Hist Auto	No
B10	1811 Alamitos Av	Reed Ralph	Hist Auto	No
18	1860 E. 20th St	Not reported	Hist Auto	No

Based upon Trihydro's area reconnaissance, distance of at least one-half mile, type of regulatory listings identified for the facilities, and conditions typical of the identified facility activities, those facilities listed in the above table as "No" are not considered a REC, HREC, or CREC with respect to the Site.

Sixteen facilities were identified as LUST sites within one-quarter mile of the Site, as listed above. Fifteen of the 16 facilities had a closed status, and are therefore identified as a potential HREC. One of the LUST sites, KL Gas & Oil, is listed as an Open – Site Assessment. However, this facility is hydrogeologically down-gradient from the Site based on assumed groundwater flow.

□1□□ ORP□AN SITES

The database report identified five "orphan" facilities (facilities that were not mapped by EDR in the database report due to poor or inadequate address information). The facilities and the their associated data base are: Weissker, Hermann Inc. (SWF/LF), Town Center West – Commercial Site (SLIC), Reingarp Property (SLIC), Anaheim Street School (ENVIROSTOR, SCH), and Roosevelt Elementary School (ENVIROSTOR, SCH).

□□□ A□□ITIONAL EN□IRONMENTAL RECOR□ SOURCES

The ASTM E1527-13 standard provides for review and analysis of additional environmental record sources during the performance of a Phase I ESA at the discretion of the environmental professional. Relevant factors in evaluating whether additional environmental records sources should be reviewed include, but are not limited to:

- The completeness of data provided by standard environmental record sources.
- Whether additional environmental records sources are reasonably ascertainable.
- Whether additional environmental record sources are useful, accurate, and complete in light of the records review objectives.
- Whether additional environmental record sources are customarily obtained pursuant to the type of commercial real estate transaction involved.

□□□ RESULTS OF SITE RECONNISSSANCE

On April 18, 2016, a visual reconnaissance of the Site was performed by Ms. Lynn Edlund, an Environmental Professional within Trihydro. This Phase I ESA report was prepared under the direction of Ms. Sara Brothers, also an Environmental Professional within Trihydro. Documentation of professional experience and statements certifying the qualifications as an Environmental Professional for Ms. Edlund are included in Appendix H. The Site was inspected by conducting a walking reconnaissance of the Site boundaries, observing the Site and surrounding areas from both a vehicle and on foot, and taking photographs of Site conditions. In addition, a driving perimeter survey of adjacent properties was also performed.

□1 SITE RECONNAISSANCE

At the time of the Site walk, the weather conditions were sunny with a temperature of approximately 88 degrees Fahrenheit. A general evaluation of the Site drainage was also conducted. Mr. Ami Adini, of Adini Associates, accompanied Trihydro personal on the Site reconnaissance. The Site features were visually inspected to verify the surface structures had been removed, and that an active remediation system was in place. Photographs documenting conditions of the Site during the Site reconnaissance are included in Appendix A. A general description of the overall findings is included below.

□1□1 CURRENT USE AN□ □ESCRIPTION OF SITE

The site is currently vacant. Only two portable equipment rooms are on-site, which contain equipment associated with the groundwater remediation system.

□1□□ □A□AR□OUS SU□STANCES AN□ PETROLEUM PRO□UCT STORAGE AN□ USE

No hazardous substances and/or petroleum products were observed to be used or stored at the Site. Overall, no stains or evidence of a release were noted and good housekeeping practices were observed. Based on this information, the use and storage of hazardous substances would not be considered an environmental concern to the Site.

□1□□ SOLI□ AN□ □A□AR□OUS □ ASTE

No storage or disposal of large quantities of hazardous wastes were noted at the Site. Based on this information, the storage and disposal of hazardous wastes would not be considered an environmental concern to the Site.

1 UNERGROUND STORAGE TANKS

No USTs are currently located on the Site.

1 AOEGROUND STORAGE TANKS

No ASTs are currently located on the Site.

1 ASTE ATER

The Site does not generate wastewater from on-site processes.

1 STORM ATER AND SURFACE RAINAGE

No storm water drains are located on the Site. No evidence of significant staining or evidence of unauthorized dumping was noted. Storm water exits the Site via sheet flow into the neighboring streets.

1 POLCLORINATE IPENLS

The production of PCBs was banned in the United States in 1979. Prior to that time, PCBs were commonly used as dielectric and coolant fluids in electrical equipment such as transformers and fluorescent light ballasts. No mounted transformers were noted at the Site.

1 LANFILLS

There are no indications that landfilling has been conducted at or near the Site.

11 SURFACE IMPOUNMENTS

There are no surface water impoundment or storm water retention ponds associated with the Site.

111 RAILROAS

There are no ail lines present on-site. A railroad corridor was historically located adjacent to the southern and eastern boundary of the Site. The railroad corridor has been redeveloped into a bike path.

11 ATER ELLS

There were no water supply wells observed during the Site reconnaissance. Many groundwater monitoring wells were observed during the Site visit on April 18, 2016, as discussed in Section 3.11.

5.11.1 OIL AND GAS WELLS

Based upon the EDR report provided in Appendix B, no oil and gas wells were identified on the Site; however, six oil and gas wells are located upgradient and within a quarter mile of the Site; 29 oil and gas wells are located upgradient and between one-quarter and one-half mile from the Site; and over 100 oil and gas wells are located upgradient and between one-half and one mile from the Site. No oil and gas wells were observed on-site during the Site reconnaissance.

5.11.1 PIPELINES

No pipelines were observed during the Site reconnaissance, and no pipelines were noted within the EDR report.

5.11.1 UTILITIES

The following utilities are known to be present at the Site:

- Electric: Southern California Edison

5.11.1 EVIDENCE OF ON-SITE RELEASES

Evidence of chemical releases on Site, such as odors, stressed vegetation, stains, leaks, pools of liquids, and spills, were not observed during the Site reconnaissance.

5.11.1 VAPOR INTRUSION EXPOSURES

Within the interior of the Site, benzene and ethylbenzene concentrations were detected above CHHSLs in 2009. Soil and soil vapor impacts were not addressed in the historic documents in relation to future use of the Site.

South of the Site, within the residential neighborhood, the soil gas survey completed in 2009 indicated that potential soil vapor intrusion is not likely to be of concern for current off-site residents south of the property boundary.

5.11.1 ASBESTOS CONTAINING MATERIAL

The manufacture of most ACMs were phased out in the 1970s, ending in 1980. Previously manufactured ACMs that were in stock continued to be used through approximately 1981. Some non-friable ACMs are still manufactured (e.g. roofing mastics). In general, buildings constructed after 1981 have a negligible potential to contain friable ACMs, and a low potential for most non-friable ACMs, with the exceptions of roofing mastics. All structures have been removed, and there is evidence of rubble associated with the former structures, which may have contained ACMs.

11 LEAD BASED PAINT

The manufacture of lead based paint (LBP) was phased out in approximately 1978. All structures have been removed.

SURROUNDING PROPERTIES RECONNAISSANCE

As shown on Figure 2, by the aerial photographs in Appendix D, and the historic topographic maps in Appendix E, the Site is located in an area that is developed with residential and commercial properties. Current use of adjoining areas to the Site are:

Western Parcel:

North: Commercial office and light industrial

South: Former railroad corridor, with residential properties located south and west of the former railway corridor

East: Walnut Avenue

West: Gundy Avenue, and a former railroad corridor to the southwest.

Eastern Parcel:

North: American University of Health Sciences

South: East 20th Street and Alamitos Avenue

East: North Gaviota Avenue

West: Walnut Avenue

At the time of the Site reconnaissance, no obvious evidence of releases or environmental issues were observed on the adjoining properties.

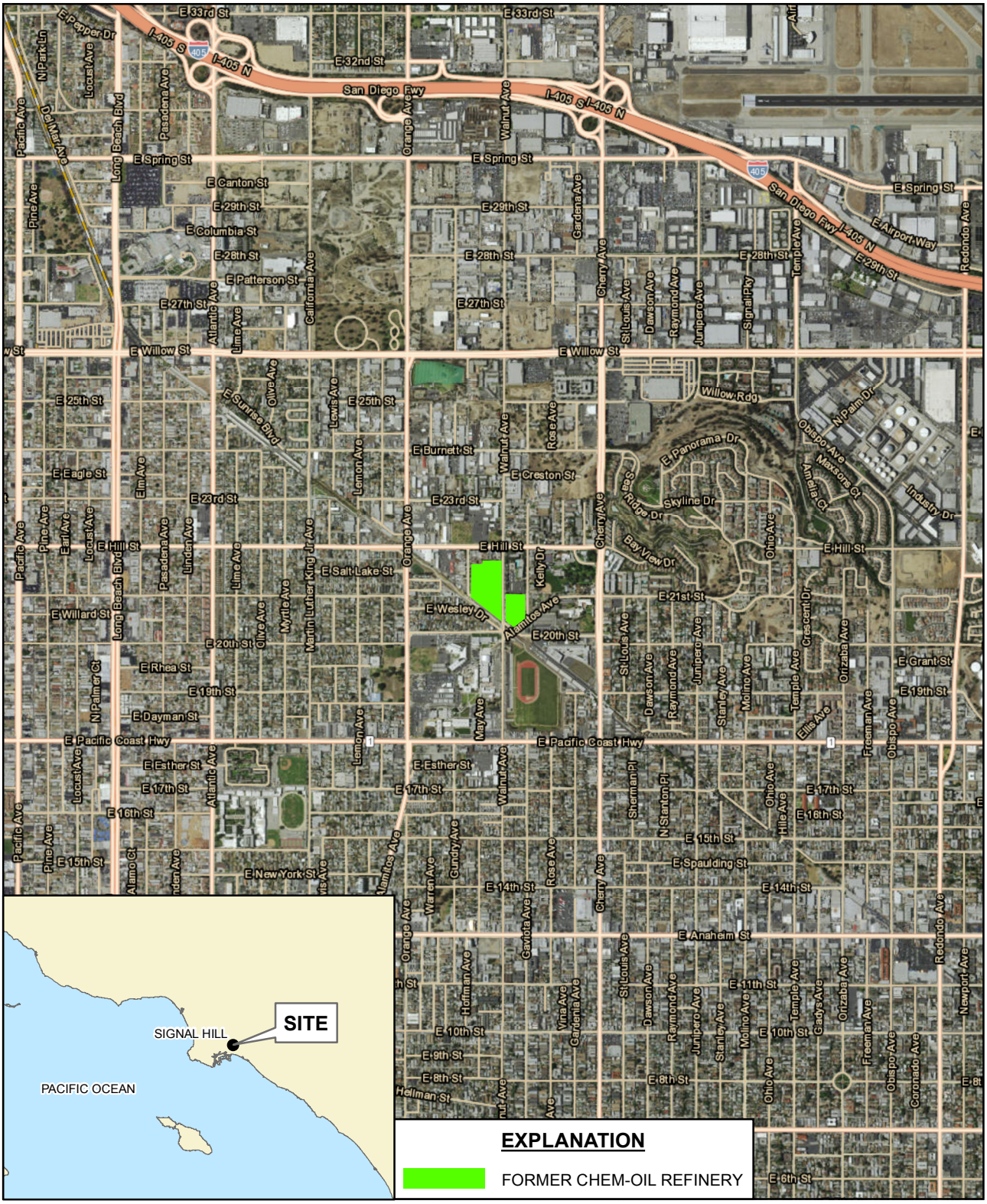
CONCLUSIONS

Trihydro performed a Phase I ESA of the former Chemoil Refinery located at 2185 and 2020 Walnut Avenue, Signal Hill, California. The Site is vacant. Only two portable equipment rooms are on-site, which contain equipment associated with the groundwater remediation system.

Trihydro has performed this Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-13. Any exceptions to, or deletions from, this practice are discussed in Section 1.7 of this report.

This assessment has revealed evidence that historic use of the Site has resulted in REC and HRECs. A groundwater remediation has been installed to mitigate petroleum hydrocarbons in groundwater along the western and southern perimeters of the Western Parcel. Soil impacts on the Site have not been addressed.

FIGURES



N

0 2,000 '

Trihydro CORPORATION

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FIGURE 1

SITE LOCATION MAP

FORMER CHEM-OIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CALIFORNIA

Drawn By: DH	Checked By: LE	Scale: 1 " = 2,000 '	Date: 4/19/16	File: 201603_SiteLocation_FIG1.mxd

N

0 150'

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FIGURE 2

SITE MAP

FORMER CHEM-OIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CALIFORNIA

Drawn By: DH	Checked By: LE	Scale: 1 " = 150 '	Date: 4/19/16	File: 201603_SiteMap_FIG2.mxd

APPEN□ICES A T□ROUG□ □

□PLEASE SEE ATTAC□E□ C□□

A□	**SITE P□OTOGRAP□S**
□□	**E□R RA□IUS MAP REPORT □ IT□ GEOC□EC□**
C□	**E□R PROPERT□ TAX MAP REPORT**
□□	**E□R AERIAL P□OTO PAC□AGE**
E□	**E□R □ISTORICAL TOPOGRAP□IC MAP REPORT**
F□	**E□R CIT□ □IRECTOR□ A□STRACT**
G□	**USER □UESTIONNAIRE**
□□	**□UALIFICATIONS OF EN□IRONMENTAL PROFESSIONALS**

APPENDIX A

SITE PHOTOGRAPHS

1. Western Parcel: Entrance into northern portion of the Western Parcel. Photograph facing north.

2. Western Parcel: Northern half. Photograph facing west. Gundy Avenue is in the top left.

3. Western Parcel. Northern half. Photograph facing west.

4. Western Parcel. Northern half facing Southern half across 21st Street.

5. Western Parcel. Carbon tanks used for hydrocarbon vapor recovery

6. Western Parcel. 55-gallon drums of activated carbon inside trailer.

7. Western Parcel. Fenced area containing oxidizer used for hydrocarbon vapor destruction

8. Container used to contain non-hazardous purge water from groundwater wells.

9. Western Parcel. Two groundwater monitoring wells.

10. Western Parcel. Photograph facing south. Vegetation on top of plastic membrane overlying boundary control remediation system

11. Western Parcel. Vault containing nutrient injection ports, vapor recovery well, and monitoring well.

12. Western Parcel. Southern half. Photograph facing north. 21st Street is in the background, beyond which is the Northern half.

13. Western Parcel. Southern half. Photograph facing west.

14. Western Parcel: Southern half. Photograph facing west along the southern boundary.

15. Western Parcel: Southern half. Photograph facing west along the southern boundary. The railroad tracks were replaced with a bike path.

16. Western Parcel. Southern half. Trailer on site housing remediation equipment.

17. Eastern Parcel: Drums with non-haz labels along western perimeter

18. Eastern Parcel: Photograph facing east

19. Eastern Parcel: Photograph facing north, along the western perimeter

20. Eastern Parcel: metal casing on western perimeter of property

APPEN□IX □

E□R RA□IUS MAP REPORT □ IT□ GEOC□EC□

SIGNAL □ILL□□ ALNUT A□E □ □1ST STREET
POT□OLING OPERATION NARRATI□E AN□ REPORT

The exploratory pothole operation began July 31, 2017, with the clearing and grubbing of the site to remove all existing live and dead plant material and trash debris from the site. The grading contractor had a John Deere 544 front end loader, a Cat 305.5E rubber tracked excavator, and a water truck on site. The site was first saturated to minimize fugitive dust during clearing and scraped clean with the 544 loader. The Cat 305 was used for finer removals along the fence lines and adjacent exiting remediation facilities. All debris was placed in two 40 yard dumpsters delivered to the site to collect the debris for off-site removal. Clearing was completed on August 1, 2017, at which time the point location survey commenced on August 2.

The survey operation located the 14 points on the northwest parcel and 11 points on the southwest parcel as requested by Apex and an additional 3 points added by Jim Italiano on the northwest parcel. The northwest points were labeled NW-1 through NW-17 and the southwest parcel were labeled SW-1 through SW-11 for a total of 28 exploratory locations across both parcels.

Exploration began after survey had located several points on the northwest parcel late morning of August 2. Exploration was accomplished with the grading contractor operating the water truck with Odex treated water for vapor suppression along with the Cat 305 performing the actual exploratory excavation. Apex Environmental was on site initially with one representative and one tech using a Photo Ionization Detector (PID) sensing each bucket load of dirt extracted from each hole location. TRG Geotechnical was on site with one geologist viewing and analyzing each hole location reading the exposed soil for debris, disturbed soils and to ascertain native soil elevation. Jim Italiano shot vertical elevation at each hole location for surface elevation, each elevation where PID readings exceeded 50PPM and native soil elevation using his David White 8300D transit.

The exploration generally indicates that the site is fairly consistently contaminated with heavier petroleum constituents beginning from 12” to 18” beneath the surface which continues to depth and includes contamination of native soils in all but 6 of the 28 points explored. The PID readings were generally mid-range until holes were opened along both the north and south parcels adjacent to 21st Street where high readings that pegged the PID at 15,000ppm were encountered. We chased the contamination 3.70’ below native soil elevation and 5.09’ below surface elevation at hole SW-7, where a PID reading at 15,000ppm stopped the excavation from proceeding deeper due to the exceedingly high contamination levels. Note that PID readings at 15,000ppm are the maximum reading possible with a PID so actual contamination levels are unknown and may be significantly higher than indicated. The majority of the points explored contained, for lack of a better term, asphaltic concretions likely caused by the application of oil to the ground surface gravel that over time solidified into a quasi-asphaltic concrete material. It is very dense but can be broken by an excavator or backhoe. What is unknown without actual sample testing, is whether or not this contains high levels of TPH or other chemicals. Point NW-12 appears to have been a disposal pit as the excavation was laced with wood, brick, string, glass, wire, pipe and heavy oil debris from near the surface to native soil depth 9.58’ beneath the surface where we could excavate no deeper due to AQMD soils volume restrictions and equipment depth limitations. Native soils elevations were generally shallow in all locations explored except for NW-12 where native was 9.58’ beneath the surface.

Prepared By: J. Italiano 8-4-17

Pipes ranging in size from 1” to 9” were found in many excavations with the condition and disposition, limits and lengths of these lines being an unknown. Dates of abandonment and whether or not these lines were purged or if they contain petroleum or other chemicals is an unknown. Therefore costs associated with cleaning and disposal of these lines is an unknown. Significant amounts of oil saturated timber was found in some of the holes and will require special disposition along with the creosote treated telephone poles abandoned on the site. It is known by Apex that there were some actual oil wells on the site and the actual disposition condition of these wells is an unknown.

What appear to be concrete encasements were found in holes SW-4 and SW-5. What these contain is unknown and would require further exploration to determine the limits of these concrete encasements and what is actually encased in the concrete.

In the northeast corner of the northwest parcel erosion was found on the site caused by water moving beneath the surface, along what appear to be concrete foundations abandoned and buried, caused some surface sinkholes to develop. We filled these areas to make them safe and to stop further surface collapse by either pedestrian or equipment traffic.

To accurately estimate the amount of material and debris that would have to be removed from the site, further exploratory excavation at specific intervals from each of the points listed in the attached tables would have to be accomplished.

Please see the attached tables and photos that depict the above described conditions and I am available at any time should you have any questions regarding the site exploration.

Prepared By: J. Italiano 8-4-17

Prepared By: J. Italiano 8-4-17

Prepared By: J. Italiano 8-4-17

Prepared By: J. Italiano 8-4-17

NW-9 9" STEEL PIPE WITH OIL
CONTAMINATION FLOWING ALONG
THE PIPE

SW-4 CONCRETE ENCASEMENT

SW-5 CONCRETE ENCASEMENT

SIGNAL HILL POTHOLE LOCATION LOG

NORTHWEST PARCEL

POINT NO.	ACTUAL POINT SURFACE ELEV.	NATIVE SOILS ELEV.	DEPTH SURFACE TO NATIVE	CONTAMINATED SOILS ELEV.	PPM	NOTES
NW-1	31.02	28.98	2.04	30.02	62	
NW-2	26.99	NOT ACCESSIBLE		25.15	15,000	
NW-3	24.28	22.01-CONTAM.	2.27	23.40	82	
				22.56	215	
				22.01	15,000	
NW4	28.45	25.97-CONTAM.	2.48	27.43	113	
				26.45	397	
				25.97	397	
NW-5	29.14	25.90-CONTAM.	3.24	27.39	347	
				25.90	398	
NW-6	30.40	28.55-CONTAM.	1.85	28.69	178.6	
				28.55	245	
NW-7	34.95	31.47	3.48	NON-DETECT		
NW-8	37.70	35.21	2.49	NON-DETECT		
NW-9	32.32	30.48-CONTAM.	1.84	30.99	93	
				30.50	336	
				30.02	322	
				29.95	380	
				30.48	TOP 9" PIPE	STEEL PIPE N. to S.
NW-10	30.95	27.41-CONTAM.	3.54	28.43	122.6	
				28.11	337	
				27.41	337	HEAVY OIL
NW-11	32.23	29.22	3.01	NON-DETECT		
NW-12	37.89	28.31-CONTAM.	9.58	32.17	58	HEAVY OIL & DEBRIS
				31.27	121	HEAVY OIL & DEBRIS
				29.32	69	HEAVY OIL & DEBRIS
				28.31	352	HEAVY OIL & DEBRIS

POINT NO.	ACTUAL POINT SURFACE ELEV.	NATIVE SOILS ELEV.	DEPTH SURFACE TO NATIVE	CONTAMINATED SOILS ELEV.	PPM	NOTES
NW-13	36.26	31.91-CONTAM.	4.35	32.86	350	
				32.42	385	
				31.95	308	
				31.91	308	
NW-14	42.14	38.62-CONTAM.	3.52	38.91	53	
				38.62	58.3	
NW-15	38.26	34.09	4.17	35.53		TOP 5" STEEL PIPE
				33.18	60	
NW-16	45.50	41.84	3.66	NON-DETECT		
NW-17*	43.54	40.91-CONTAM.	2.63	43.54	165	
				42.54	88.2	
				41.96	68.3	
				41.52	78.3	
				40.91	74.1	

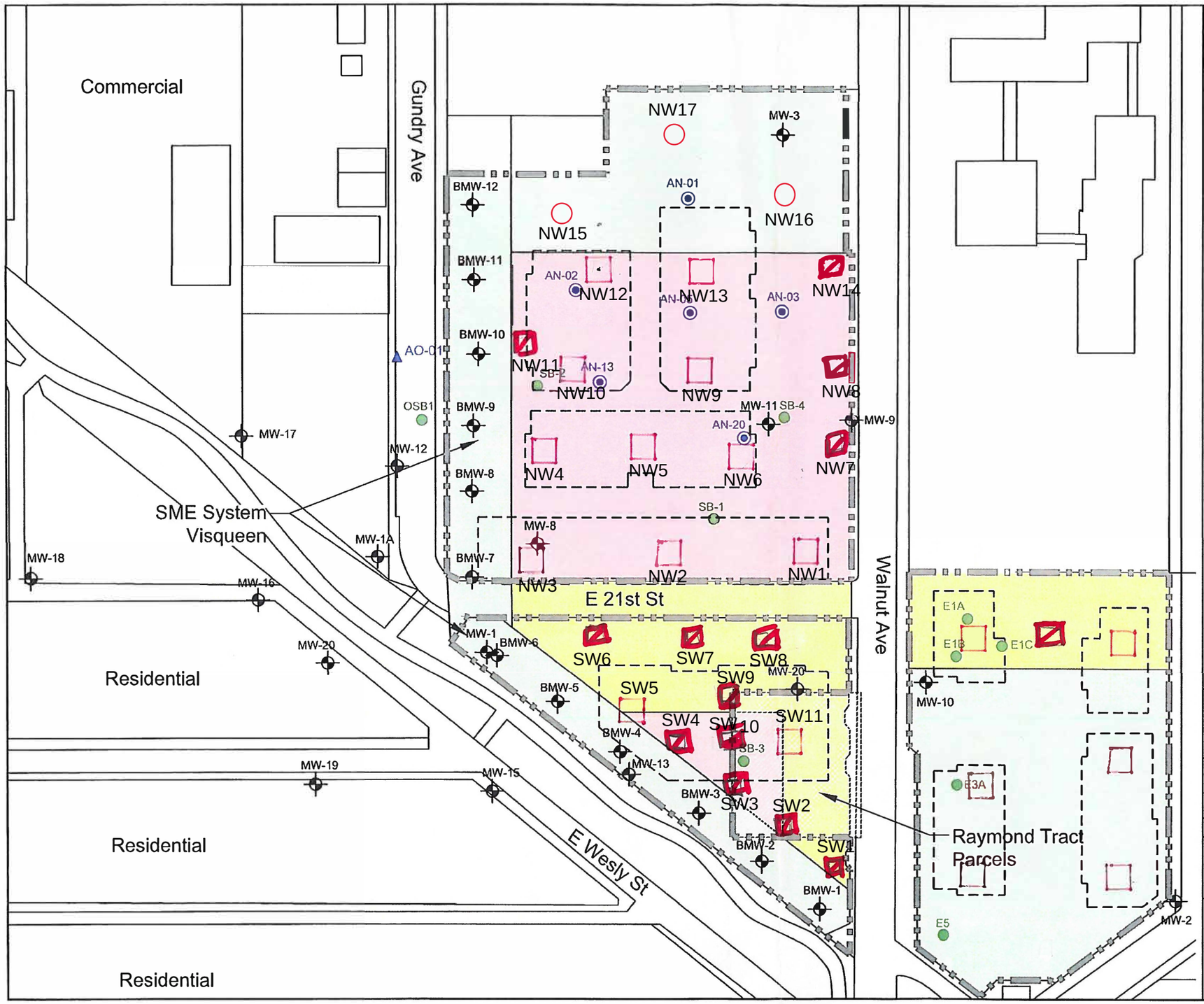
*** Note: point 17 is actually located in one of the northern palm trees and is innaccessible. This point as listed was shot in 10' south of the 10' eastern offset for the actual point.**

SIGNAL HILL POTHOLE LOCATION LOG

SOUTHWEST PARCEL

POINT NO.	ACTUAL POINT SURFACE ELEV.	NATIVE SOILS ELEV.	DEPTH SURFACE TO NATIVE	CONTAMINATED SOILS ELEV.	PPM	NOTES
SW-1	22.55	20.30	2.25	20.30	9.5	
SW-2	21.60	20.17	1.43	20.17	NON-DETECT	
SW-3	22.29	20.41-CONTAM.	1.88	21.45	80	
				21.27	351.2	
				20.41	368.1	
SW-4	22.37	20.26-CONTAM.	2.11	21.18	350.1	
				20.26	350	
				21.60		CONCRETE ENCASE.
SW-5	21.95	19.24-CONTAM	2.71	19.11	395	14' W. OF POINT
				20.19		TOP EAST CONCRETE
				20.79		TOP WEST CONCRETE
				19.24	50	3' EAST OF POINT
SW-6	23.51	21.28-CONTAM.	2.23	22.28	109	
				21.67	365	
				21.28	272	
SW-7	24.76	23.37-CONTAM.	1.39	23.37	255.1	EXPLORED BELOW NATIVE
				22.93	340.2	
				21.71	15,000	
				19.67	15,000	
NW-8	26.27	NOT ACCESSIBLE		25.33	15,000	
SW-9	23.94	20.49-CONTAM.	3.45	22.55	57.2	
				21.18	93.3	
				20.49	350.6	
SW-10	23.08	20.41-CONTAM	2.67	21.86	129	
				21.70	261.1	
				21.29	281	

POINT NO.	ACTUAL POINT SURFACE ELEV.	NATIVE SOILS ELEV.	DEPTH SURFACE TO NATIVE	CONTAMINATED SOILS ELEV.	PPM	NOTES
SW-10				20.88	363	
				20.41	382.1	
SW-11	24.11	21.82-CONTAM.	2.29	21.82	85.6	



LEGEND

- Site Boundary
- AN-01 — Onsite Soil and Grab Groundwater Sample Locations (APEX, 2017)
- SB-4 — Soil and Grab Groundwater Sample Locations (Tetratech, 2006)
- AO-01 — Offsite Grab Groundwater Sample Locations (APEX, 2017)
- MW-16 — Groundwater Monitoring Well Locations
- SME — Subsurface Metabolism Enhancement
- Excavated Soil ≤5' bgs Likely Does not Exceed 1,000 ppm
- Excavated Soil ≤5' bgs Suspected to Exceed 1,000 ppm
- Excavated Soil ≤5' bgs Likely Exceeds1,000 ppm
- Proposed Building Location
- bgs — Below Ground Surface
- ppm — Parts per Million
- Apex Proposed added test pit
- TGR PROPOSED TEST PIT

SUMMARY OF ASSUMED 1166 EXCEEDANCE AREAS

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
093-CHEMOIL-001	5/151/17	ZA	KD

0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental
APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE X

S:\Clients A - F\ChemOil Refinery\Reports\Response Plan\Figures\Fig.x-Summary of Assumed 1166 Exeedance Area.dwg, 5/15/2017 4:49:51 PM

APPENDIX D

California's Land Reuse and Revitalization Act (CLRRA) Agreement for Former Chemoil Refinery, 2020 Walnut Avenue, Signal Hill, California Site Cleanup Program No. 0453A, Site ID No. 2047W00

Docket No. HSA - CLRRA _____

Overview

The California Land Reuse and Revitalization Act of 2004 ("CLRRA" or "Act") was enacted by Assembly Bill No. 389, Montanez, on September 23, 2004.[1] CLRRA provides for an eligible bona fide purchaser ("BFP"), innocent landowner ("ILO"), contiguous property owner ("CPO"), or bona fide prospective purchaser ("BFPP") (each a "Person") to qualify for specified immunities from liability for certain response costs or damage claims under applicable state statutes. Under CLRRA, a Person seeking the immunities provided by the Act is required to enter into an agreement that requires the performance of various actions, including a site assessment and the preparation and implementation of a response plan if necessary.

By entering into this CLRRA Agreement ("Agreement"), the Parties (as defined below) acknowledge and agree that RE | Solutions, LLC ("RES"), a Colorado limited liability company, meets the CLRRA requirement to enter into such an agreement. The CLRRA program is a voluntary program afforded to qualifying Persons and does not alter existing state law regarding liability for releases or discharges of hazardous substances or hazardous materials not addressed by this Agreement.

RES is in contract with Signal Hill Enterprises, LLC ("Seller"), to acquire and redevelop approximately 7.6 acres of land in Signal Hill, California, as more particularly described in Section 1.2, below. In addition, RES has a signed Letter of Intent and is negotiating a purchase agreement with MPO Walnut Partners, LLC for acquisition of approximately 0.48 acres of property known as the Raymond Tract Parcels, as more particularly described in Section 1.2 below. Pursuant to this Agreement, the Los Angeles Regional Water Quality Control Board ("Regional Water Board" or "Board") will oversee RES's investigation and remediation of the property.

RES and the Regional Water Board hereby agree as follows:

1. Introduction

1.1 Parties: This Agreement is entered into by RES and the Los Angeles Regional Water Quality Control Board, who are jointly referred to as the "Parties" to this Agreement.

1.2 Site Description. This Agreement applies to the property that is the location of the former Chemoil Refinery in Signal Hill, Los Angeles County, California. The real property is identified by various addresses, including 2185, 2020 and 2040 Walnut Avenue, and is comprised of 17 legal parcels totaling approximately 7.6 acres of land. The Chemoil Refinery also operated on three leased parcels of contiguous

[1] Assembly Bill No. 389 added Chapter 6.82 (commencing with §25395.60) and Chapter 6.83 (commencing with §25395.110) to Division 20 of the Health and Safety Code.

land at 2025-2035 Walnut Avenue (the Raymond Tract Parcels). The Raymond Tract Parcels total approximately 0.48 acres of land. RES, either as a BFPP or CPO, will investigate and remediate these parcels under the terms of this Agreement. "Site" as used in this Agreement includes the location of the Chemoil Refinery and the Raymond Tract Parcels. A figure showing the location and boundaries of the Site, and a legal description of the property are contained in Exhibit A.

1.3 Jurisdiction: CLRRA, as codified in Health and Safety Code ("HSC") section 25395.60 et seq., authorizes the Board to enter into this Agreement with RES with respect to the Site.

1.4 Purpose: The purpose of the Agreement is to implement CLRRA for the assessment and remediation of the Site so that RES may qualify for the immunities afforded under CLRRA and Board may be reimbursed for costs incurred in the oversight of the Site.

1.5 Agreement Not an Admission: Entry into this Agreement by RES does not constitute an admission of fact or liability or conclusion of law for any purpose or proceeding nor does it limit a defense to liability that may be available to RES under any other provision of law.

1.6 Agreement Not a Limitation: Nothing in this Agreement limits the Board's authority to conduct a response action that the Board determines is necessary to protect public health and safety or the environment pursuant to any applicable statute. Except as otherwise expressly provided, nothing in this Agreement limits the Board's authority to issue an order or take any other action under any provision of law to protect public health and safety or the environment or to pursue any existing legal, equitable or administrative remedies pursuant to state or federal law.

2. Definitions

2.1 Citation to Health & Safety Code: Unless otherwise specified, definitions of terms used in this Agreement are those set forth in HSC, Division 20, Chapters 6.82 and 6.83.

2.2 Applicable Statute: "Applicable Statute" means the statutory provisions listed in section 25395.66(a)-(e).

3. Findings

3.1 Site History. The Site encompasses approximately 7.6 acres of land in Signal Hill, California. The Site was first developed in approximately 1922 and has been used for the refining and storage of lubricating oils and other petroleum products, first by McMillan Ring Free until 1988, and then by The Chemoil Corporation (Chemoil) until 1994, when operations ceased. The plant was decommissioned and demolished between 1994 and 1997. The Site has been vacant since 1997, with the exception of equipment related to an on-going interim remedial measure being implemented by Seller. To date, the Regional Water Board has been the lead environmental regulatory agency for the Site. A legal description of the Site

is attached in Exhibit A.

3.2 Eligibility of Site: On May 20, 2016, RES submitted to the Board a Request for Agency Oversight of a Brownfield Site under CLRRA ("Application"), together with a Phase I Environmental Site Assessment ("Phase I ESA") for the Site, (Trihydro Corporation, May 18, 2016). Based on the information submitted in the Application, the Phase I ESA, and other information available to it, the Board has determined that the Site meets the definition of a site specified under HSC §25395.79.2 because it is real property located in an urban infill area whose redevelopment is complicated by the presence of hazardous materials. Together, the information provided was sufficient for the Board, pursuant to HSC §25395.92(c), to enter into this Agreement.

3.3 RES as a Bona Fide Purchaser: Based on the information submitted in the Application and Phase I ESA, the Board has determined that RES meets the definition of a Bona Fide Purchaser for the Chemoil portions of the Site and meets the conditions under HSC §25395.80 that apply. Specifically, RES meets the conditions of a BFP for the Chemoil portions of the Site as of the effective date of this Agreement in that: RES has made all appropriate inquiries pursuant to HSC §25395.65 prior to purchasing the Site; RES will acquire the Site after January 1, 2005; the release of hazardous substances has occurred prior to RES taking ownership of the Site; and RES is not liable or in any way affiliated with any other person potentially liable for the contamination at the Site under the provisions of CLRRA. Furthermore, RES agrees to exercise appropriate care with respect to release or threatened release of hazardous materials at the Site; provide full cooperation, assistance and access for response action or natural resource restoration; comply with land use controls; not impede the effectiveness of any remedy; comply with information requests or subpoenas; provide all notices; and satisfy any reporting requirements.

4. Immunities, Withdrawal and Termination

4.1 Immunities: Pursuant to section 25395.81(a)(1), RES is not liable under any applicable statute for a claim made by any person, other than an agency, for response costs or other damages associated with a release or threatened release of a hazardous material at the Site characterized in the site assessment conducted pursuant to, or a response plan pursuant to, article 6 of CLRRA (commencing with § 25395.90). Pursuant to sections 25395.81(c), 25395.82 and 25395.93, the immunities remain in effect unless one or more of the following occurs: RES or the Regional Water Board withdraws from the Agreement; the Agreement is terminated before a finding of no further action or a certificate of completion is issued; RES receives a notice from the Board of an unapproved material deviation from the Agreement; a release of hazardous materials that poses an unreasonable risk is discovered before a finding of no further action or a certificate of completion is issued and the release is not appropriately resolved to the satisfaction of the Board; or a release of hazardous materials that poses an unreasonable risk is discovered after a finding of no further action or a certificate of completion is issued, and either RES caused or contributed to the release or the release is not appropriately resolved to the satisfaction of the Board. RES will be entitled to the immunities

provided for by CLRRA, subject to its limitations and conditions, upon entry into this Agreement and purchase of the Site. Any successor-in-interest to all or a portion of the Site will also be entitled to the immunities set forth by CLRRA provided: (a) such successor-in-interest executes a written agreement (in the form attached hereto as Exhibit E) to assume any remaining obligations under this Agreement not performed by RES, including, without limitation, long-term operation and maintenance; (b) the Board finds that such successor-in-interest meets all of the qualifying conditions of HSC §25395.80 and either §25395.69 or §25395.70 of CLRRA, as applicable; and (c) the Board accepts the assumption by such successor-in-interest of the remaining obligations under this Agreement. The Board's acceptance of the successor-in-interest qualifying under the conditions of HSC §25395.80 and either §25395.69 or §25395.70 of CLRRA, as applicable, shall be evidenced solely by the Board's execution of the assumption agreement. Such agreement shall then be incorporated into this Agreement as a subsequent Exhibit.

4.2 The immunities set forth in Paragraph 4.1 will apply to the Raymond Tract Parcels upon the Board's determination that RES meets the conditions of a contiguous property owner for the Raymond Tract Parcels after review of documentation required in Paragraph 5.1.1.

4.3 Withdrawal and Termination. The circumstances and procedures under which RES or the Board may withdraw from or terminate this Agreement, and the consequences of withdrawal or termination, are as set forth in CLRRA. Circumstances include, but are not limited to, an unapproved material deviation from this Agreement or misrepresentation with respect to any CLRRA requirement to the Board.

4.4 Opportunity to Cure. RES shall be given an opportunity to cure within a reasonable period of time before the Board terminates this Agreement for an unapproved material deviation from this Agreement pursuant to HSC §§25395.81(c)(1) and §§25395.93(d) of CLRRA.

4.5 Chapter 6.82 Repeal. Immunities that attach at the time this Agreement is fully executed shall continue after January 1, 2017, the date Chapter 6.82 will be repealed unless extended, provided RES continues to be in compliance with the requirements of then-former Chapter 6.82, all approved response plans and all other applicable laws.

4.6 Disclosure Provisions: RES will comply with all reporting, disclosure and notification requirements under all applicable statutes.

5. Activities

5.1 Activities. RES and the Regional Water Board agree that the following activities have been or are to be conducted under this Agreement:

5.1.1 Site Assessment. Pursuant to HSC §25395.92, RES is required to submit to the Board a Site Assessment under this Agreement. RES submitted a copy of a current ASTM Phase I ESA with its Application. Seller has previously submitted numerous site assessment and monitoring reports to the Board, which information is being relied upon by both RES and the Board to provide characterization information for the Site. Previous investigations have

identified the following constituents, both on- and off-Site: total petroleum hydrocarbons (TPH); volatile organic chemicals (VOCs), including benzene; fuel oxygenates, including methyl-tert-butyl ether (MTBE) and tert-butyl alcohol (TBA); and areas of light non-aqueous phase liquid (LNAPL). On and off-site impacts by some or all of these constituents have been identified in soil, soil gas, and groundwater.

On July 7, 2016, the Board transmitted to the Seller, with a copy to RES, a Draft Cleanup and Abatement Order ("Draft Order"). The Draft Order sets forth the Board's findings regarding the current regulatory and cleanup status of the Site and additional activities that the Board proposes to require the Seller to undertake to fill data gaps at the Site. The Board accepted written comments on the Draft Order from the Seller and other stakeholders for a 30-day period.

On October 25, 2016, RES and Seller submitted a "Site Investigation Workplan for the Former Chemoil Refinery" ("Workplan", Apex, 2016). The Workplan addresses the data gaps identified by the Board in the Draft Order, and was designed to serve as a Site Assessment Plan under this Agreement. A summary of the additional assessment work proposed in the Workplan is presented in Exhibit C. The Workplan was approved by the Board (with minor comments) in a letter dated November 23, 2016, and field work was completed January 30, 2016. A report of findings will be submitted to the Board by March 15, 2017.

5.1.2 RES shall submit documentation of its eligibility for CLRRA for the Raymond Tract Parcels pursuant to Health and Safety Code Section 25395.92(c). Response Plan: The Board has determined that a response action will be necessary to prevent or eliminate an unreasonable risk to human health and safety or the environment. Based on the results of the Site Assessment, RES will submit a Response Plan to the Board for approval. The Response Plan will address the cleanup required for both the eastern and western portions of the property. The Response Plan will contain the information specified in HSC §25395.96(a) and (b) and shall provide that implementation of the Response Plan will place the Site in a condition that allows it to be used for its reasonably anticipated future land use without unreasonable risk to human health and safety and the environment and is protective of water quality. Once the Response Plan is approved, RES will implement the Response Plan and the Board will notify all appropriate persons, including the City of Signal Hill.

The response actions are expected to include: removal of LNAPL; soil excavation in identified areas; groundwater remediation in identified areas; continued operation and maintenance of the existing groundwater barrier system (or installation of an equivalent system, as may be approved by the Board); design and installation of a vapor mitigation system in new construction; periodic groundwater monitoring and reporting; and recording of an environmental land use covenant and site management plan as described below.

5.1.3 Response Plan Completion Report. A report documenting the completion of all of the field activities associated with the Response Plan (specified in

Section 5.1.2 above) will be submitted within 60 days of completing field activities and prior to commencement of development activities. The report will include all confirmation sampling data, excavation maps, as well as waste manifests for soil removed to off-site disposal facilities and confirmation data for fill placed into excavations.

5.2 Environmental Land Use Covenant and Site Management Plan: Prior to vertical development of each portion of the property, an appropriate land use covenant consistent with California Civil Code Section 1471 and HSC §25395.99 ("LUC") and an associated Site Management Plan ("SMP") will be prepared by RES for each portion of the property and submitted to the Board. The LUC will prohibit use of underlying groundwater, prohibit unrestricted or sensitive uses, and require that all uses and development of the Site be consistent with the SMP. The SMP will be prepared and submitted to the Board as part of the Response Plan Completion Report. RES and any successors or assigns under this Agreement shall adequately implement the SMP. The SMP will set forth all mitigation measures, including engineering controls, institutional controls (such as deed restrictions that prohibit certain land uses), and activity and use limitations (such as controls for certain site activities, such as excavation), as may be required to protect human health and the environment after the Response Plan has been implemented. The SMP also will set forth requirements for inspection and maintenance of all mitigation measures. The LUC and SMP (and any amendments thereto) shall be acceptable to the Board. These documents will be finalized and the LUCs for the eastern and western portions of the property recorded prior to vertical development of the respective portion.

5.3 Vapor Mitigation System Engineering Design and Installation. Engineering controls will include a vapor mitigation system ("VMS") to be installed as part of the future building(s) constructed on the Site. RES will submit an engineering design and specification plan for the VMS to the Board for review and comment prior to installation.

5.4 Public Participation: RES will conduct public participation activities that meet the requirements of HSC §25395.96, including attendance at the Board's meeting or other public meetings, if requested.

5.5 Determination of Appropriate Care: After the Board receives the Response Plan submitted under Section 5.1.2, the Board will make a written determination as to whether proper completion of the Response Plan will constitute appropriate care for the purposes of HSC §25395.67(a).

5.6 Certificate of Completion: The Board will issue a Certificate of Completion separately for the eastern and western portions of the property upon determining that all response actions required by the Response Plan have been satisfactorily completed for the respective portion and that, based upon the data provided to the Board at the time of the determination, no further remedial action is warranted, except continued compliance with the ongoing obligations of the VMS, LUC, and SMP, and any long-term Operation and Maintenance (O&M) or monitoring requirements.

5.7 Notification of Change in End Use: RES intends to develop the Site for commercial /

industrial purposes. After the Response Plan is approved, RES will notify the Board of any proposed change in the use or anticipated use of the Site. If the proposed change in use or anticipated use of the Site requires a higher level of protection than the use or anticipated use identified in the Response Plan, the Board may require RES to prepare and implement a new Response Plan that takes into account the change in use or anticipated use of the Site. RES may not make any change in use of the Site inconsistent with any recorded land use control without the express approval of the Board made in accordance with HSC §25395.99(f).

5.8 CEQA Compliance. Upon request, RES will submit to the Board all documentation necessary for compliance with the California Environmental Quality Act ("CEQA"), Public Resources Code §§21000-21177 (CEQA). These documents will be uploaded to the Geotracker file for the Site.

5.9 Final Reports. For all final reports, RES will submit an electronic copy with all applicable signatures and certified stamps as a text-readable Portable Document Formatted (pdf) file will be uploaded to the Geotracker file for the Site. Additional electronic submittals will include the laboratory reports in Electronic Delivery Format (EDF), wellhead survey of latitude and longitude and wellhead survey of elevations. If requested by the Board, RES will also submit one hard (paper) copy of final reports.

5.10 Endangerment.

5.10.1 RES shall notify the Board promptly upon learning of any previously unknown condition that endangers the public health or safety or that poses an unreasonable risk to human health and safety or the environment.

5.10.2 In the event the Board determines that any activity (whether or not pursued in compliance with this Agreement) may pose an imminent or substantial endangerment to the health and safety of people on the Site or in the surrounding area or to the environment, the Board may order RES to stop further implementation of this Agreement for such period of time as may be needed to abate the endangerment.

5.11 Further Response Actions. The Board may require RES to conduct further response actions only under the circumstances set forth in CLRRA.

5.12 Disclosure Provisions. RES will provide all notices and satisfy reporting requirements required by State or federal law with respect to the discovery or release of hazardous substances at the Site.

5.13 Access. While RES is the owner of the Site, RES will provide the Board access to the Site and make all reasonable efforts to obtain access to offsite areas to which access is necessary to implement this Agreement. Such access shall be provided to the Board's employees, contractors, and consultants at all reasonable times. Nothing in this paragraph is intended or shall be construed to limit in any way the right of entry or inspection that the Board or any other agency may otherwise have by operation of any law.

5.14 Notification of Field Activities. RES shall inform the Board at least seven (7) calendar days in advance of all field activities pursuant to this Agreement and shall allow the Board and its authorized representatives to take duplicates of any samples collected pursuant to this Agreement.

6. Oversight, Management and Payment

6.1 Managers: Jessica Pao is designated by the Regional Water Board as its manager for this Agreement ("Board Manager") and Mary Hashem is designated by RES as its manager for this Agreement ("Project Manager"), each a "Manager". Each of the Parties to this Agreement will provide at least ten (10) calendar days' advance written notice to the other Party of a change of its designated Manager. All notices, documents and communications unless otherwise specified will be sent to the following addresses:

To: Jessica Pao
Regional Water Quality Control Board
320 W. 4th Street
Los Angeles, California 90013
Phone: (213) 576-6729

To: Mary Hashem
RE | Solutions, LLC
2880 Bryant Street
Denver, CO 80211
Phone: (303) 945-3018

6.2 Payment of the Board's Costs: RES shall follow the procedures for payment of the Board's oversight costs.

6.2.1 Costs Included: RES shall reimburse the Board for all the Board costs incurred in connection with this Agreement and its oversight costs. Subject to the provisions of section 6.2.6 below, RES shall reimburse the Board's costs in accordance with Health and Safety Code §25395.93. The Board's costs are recoverable pursuant to the Water Code Section 13304.

6.2.2 Cost Estimate: An estimate of the Board's oversight costs ("Cost Estimate") is contained in Exhibit D. The Cost Estimate is the estimated cost of the Board's oversight of the activities discussed in Section 5, above, not otherwise billed since the Application was filed. The Parties acknowledge that the Cost Estimate is not the final cost figure. The Board will provide an updated Cost Estimate if the estimated oversight cost increases or the scope of work changes. If the Parties revise the Cost Estimate in Exhibit D, such revision shall be incorporated into this Agreement as an amendment to Exhibit D.

6.2.3 Payment Procedures. The State Water Resources Control Board ("State Water Board") will invoice RES through its Project Manager quarterly. The invoices will reflect hourly charges and overhead. RES shall pay all invoices within 30 calendar days of the mailing date of the invoice. If payment is not received by the State Water Board within 30 calendar days, such non-payment is a material deviation of this Agreement and RES will be in default of this Agreement.

6.2.4 Billing Address. The Board will provide a Statement of Account to RES at

least quarterly. RES's billing address is:

RE | Solutions, LLC
2880 Bryant Street
Denver, CO 80211
Attn: Teresa Fritts

6.2.5 Payment Address. All payments made by RES pursuant to this Agreement shall be by check made payable to State Water Resources Control Board, and bearing on its face the Cost Recovery ID for the Site (TBD) and the docket number of this Agreement. Payments shall be sent to:

State Water Resources Control Board
Site Cleanup Program
P.O. Box 94412
Sacramento, California 94244-2120

6.2.6 Dispute Resolution. If RES disputes the Board's billing, or any part thereof, RES shall notify the Board Manager and attempt to informally resolve the dispute. If RES desires to formally request dispute resolution with regard to the billing, RES shall file a request for dispute resolution in writing within 30 calendar days of the date of the billing in dispute. The written request shall describe all issues in dispute and shall set forth the reasons for the dispute, both factual and legal. If the dispute pertains only to a portion of the costs included in the invoice, RES shall pay all costs that are undisputed in accordance with this section. The written request shall be sent to:

Los Angeles Regional Water Quality Control Board
Attn: Assistant Executive Officer
320 W. 4th Street
Los Angeles, California 90013

A copy of the written request for dispute resolution shall also be sent to the person designated by the Board to receive submittals under this Agreement. A decision on the billing dispute will be rendered by the Assistant Executive Officer or designee.

6.2.7 Effect of Billing Dispute: The existence of a billing dispute does not excuse, stay, or suspend any other compliance obligation or deadline required pursuant to this Agreement.

7. Additional Provisions

7.1 Exhibits: All Exhibits are incorporated into this Agreement by reference.

7.2 Liens. The Regional Water Board shall be entitled to place a lien on the property constituting the Site for its unrecovered costs of any response action it carried out at the Site, if the response action increased the fair market value of the Site that existed before the response action was initiated. The Board and RES may agree to substitute a lien on another property or other assurance of payment for the unrecovered response costs.

7.3 Proponent Liabilities. Except as specified in CLRRA, nothing in this Agreement shall constitute or be considered a satisfaction or release from liability for any condition or claim arising as a result of RES's past, current, or future operations.

7.4 Government Liabilities. The State of California ("State") shall not be liable for any injuries or damages to persons or property resulting from acts or omissions by RES or by related parties in carrying out activities pursuant to this Agreement, nor shall the State be held as a party to any contract entered into by RES or its agents in carrying out the activities pursuant to this Agreement.

7.5 Third Party Actions. In the event that RES is a party to any suit or claim for damages or contribution to which the Board is not a party, relating to the Site, RES will notify the Board in writing within 10 calendar days after service of the complaint in the third-party action. However, failure to give such notice within 10 calendar days will not be a material breach of this Agreement, and this requirement confers no rights on any third parties not party to this Agreement.

7.6 California Law. This Agreement shall be governed, performed and interpreted under the laws of the State of California.

7.7 Severability. If any portion of this Agreement is ultimately determined not to be enforceable, that portion will be severed from this Agreement and the severability shall not affect the enforceability of the remaining terms of this Agreement.

7.8 Parties Bound. This Agreement applies to and is binding upon RES and any successors and assigns and upon the Board and any successor agency of the Los Angeles Regional Water Board that may have responsibility for and jurisdiction over the subject matter of this Agreement.

7.9 Amendment. This Agreement may be amended in writing by mutual agreement of the Board and RES. Any agreed upon amendment shall be in writing, shall be signed by both Parties, shall be effective upon the date the amendment is signed by the Board and, once signed by the Board, is incorporated in this Agreement.

An amendment may include changes to the terms and conditions of this Agreement, including changes to the Schedule in Exhibit B and the Cost Estimate in Exhibit D and addition of another party in Exhibit F (provided that the party meets all of the qualifying conditions of HSC section 25395.80 and either section 25395.69 or section 25395.70, as applicable) and any other changes the Board determines to be necessary. Such amendment shall then be incorporated into this Agreement as a subsequent Exhibit.

7.10 Effective Date. The effective date of this Agreement is concurrent with the close of escrow, which is scheduled to take place on or before September 5, 2017.

7.11 Representative Authority. Each undersigned representative of the Parties to this Agreement certifies that she or he is fully authorized to enter into the terms and conditions of this Agreement and to execute and legally bind the Parties to this Agreement.

7.12 Counterparts. This Agreement may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

[SIGNATURES ON FOLLOWING PAGE]

California Regional Water Quality Control Board,
Los Angeles Region

By:_____

Name: _____

Title: _____

Date: _____

RE | Solutions, LLC, a Colorado limited liability company

By: Mary B. Hashem

Name: Mary B. Hashem

Title: Managing Member

Date: March 8. 2017

CARLETTE HAVARD
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID # 20134059708
MY COMMISSION EXPIRES SEPTEMBER 19, 2017

3-8-17

California Regional Water Quality Control Board, Los Angeles Region

Print Name: Samuel Unger

Signature: Samuel Unger

Title: Executive Officer

Date: March 14, 2017

CERTIFICATE OF ACKNOWLEDGEMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document

State of California

County of Los Angeles

On MARCH 14, 2017 before me, Gwendolyn Rachelle Monroe, Notary Public

personally appeared Samuel Unger, Executive Officer who proved to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she~~/~~they~~ executed the same in his/~~her~~/~~their~~ authorized capacity(~~ies~~), and that by his/~~her~~/~~their~~ signature(~~s~~) on the instrument the person(~~s~~),or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Gwendolyn Rachelle Monroe (Notary Seal)

GWENDOLYN RACHELLE MONROE
Commission # 2058467
Notary Public - California
Los Angeles County
My Comm. Expires Mar 20, 2018

LIST OF EXHIBITS

Exhibit A: Site Map

Exhibit B: Schedule

Exhibit C: Outline of Site Assessment Plan

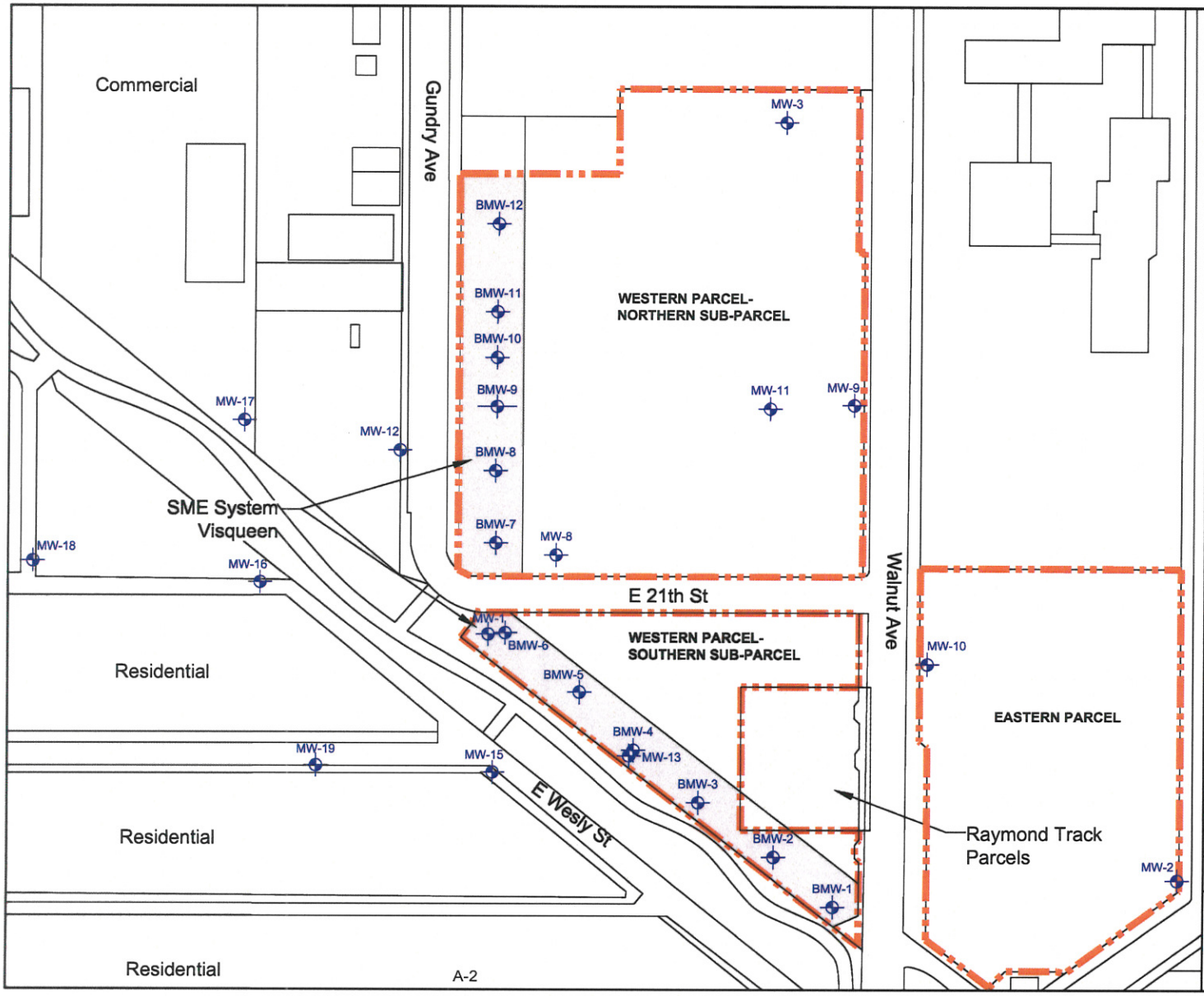
Exhibit D: Board Oversight Costs Estimate

Exhibit E: Successor Assignment & Assumption Agreement

Exhibit F: Addition of Another Party

EXHIBIT A

SITE MAP



LEGEND

MW-8 Groundwater Monitoring Well Locations

SME Subsuface Metabolic Enhancement

Site Boundary

SITE MAP

FORMER CHEMOIL REFINERY
2020 WALNUT AVENUE
SIGNAL HILL, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
XX-XXX-XX	09/06/16	ZA	KD

0 100 200
HORIZONTAL SCALE IN FEET

SGI environmental APEX
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

N

FIGURE 2

S:\Clients A - F\ChemOil Refinery\Assessment Workplan\Figures\Fig.2-Site Map.dwg

EXHIBIT B SCHEDULE

If either RES or the Board is unable to perform any activity or submit any document within the schedule outlined below, that Party shall notify the other Party's Manager prior to the date the task was to be completed in the schedule below. If either Party determines that the revised schedule will have a significant effect on the response action, the Parties will re-negotiate the schedule and amend it pursuant to Section 7.9 of the Agreement. The Parties recognize that RES intends to close on the acquisition of the property on or before 9/5/2017 and commence construction on the Site in September 2017, and agree to use best efforts in order for the cleanup to be completed by March 2019.

Activity	Schedule
Submit Workplan for Site Characterization	Submitted October 25, 2016. Workplan was approved in a letter from the Water Board dated November 23, 2016
Implement Site Characterization Work Plan	Site characterization work began on December 12, 2016. Field work was completed on January 30, 2017.
Submit Site Conceptual Model	A draft Site Conceptual Model will be included with the Site Characterization Report (line item, below) estimated to be submitted on March 15, 2017
Submit Site Characterization Report	March 15, 2017
Meeting with Board to Review Site Conceptual Model and Pathway to Closure	April 12, 2017
Submit Revised Site Conceptual Model (if necessary)	May 12, 2017
Submit Response Plan	June 14, 2017
Start Implementation of Response Plan	Within 30 days of acquisition of Property or approval of Response Plan, whichever is later.
Submit Response Plan Completion Report	Within 60 days of completion of field activities elements of Response Plan
Submit Site Vapor Mitigation System (VMS) Design Report	60 days prior to VMS installation
Submit VMS Installation Report	Within 60 days of completion of VMS installation
Prepare Site Management Plan (SMP)	Following completion of field activities elements of Response Plan, or within 30 days of Board request
Submit draft Land Use Covenants (LUC)	Following completion of field activities elements of Response Plan, or within 30 days of Board request
Certificate of Completion	To be issued by Board upon satisfactory completion of remedial activities

EXHIBIT C

OUTLINE OF SITE ASSESSMENT PLAN

On October 25, 2016, a site assessment workplan (Workplan) was submitted to the Water Board by SGI/Apex for additional investigations at the former Chemoil Refinery site (Property). The Workplan addresses investigatory activities required by the Water Board in the July 6, 2016, Draft Cleanup and Abatement Order (Draft CAO) issued to the Property owners, Signal Hill Enterprises, LLC, as Discharger.

In part, the Draft CAO required the Discharger to:

1. Complete Delineation of Wastes
2. Develop an LNAPL Conceptual Site Model
3. Update the Conceptual Site Model based on Site investigation data
4. Submit an LNAPL Recovery Plan or LNAPL Management Plan

The Workplan proposes a phased approach to field activities, along with other tasks to investigate and assess the nature and extent of impacts associated with the operation of the former Chemoil Refinery. The primary objectives of the investigation are to delineate the extent and mobility of residual LNAPL within soil and groundwater, and to further investigate the horizontal and vertical extent of dissolved-phase petroleum hydrocarbon constituents within groundwater. The data from the assessment work will be used to calculate the extent and mobility of LNAPL, aid in the preparation of a focused LNAPL management strategy, and provide the additional Site assessment data necessary to complete an updated Conceptual Site Model and prepare a Response Plan.

In summary, the phases of assessment work proposed are as follows:

NAPL and Vertical Groundwater Impact Screening – the limits of hydrocarbon impacted soil and the presence of NAPL in soil and on groundwater will be preliminarily assessed using cone penetrometer testing (CPT) equipped with a Laser Induced Fluorescence (LIF) tool. LIF data will be collected using a Rapid Optical Screening Tool (ROST™) to evaluate the distribution of NAPL vertically and laterally. In addition, a Membrane Interface Probe (MIP©) will be used to assess the vertical distribution of dissolved phase hydrocarbons in groundwater.

Groundwater, NAPL, and Soil Sampling – Based on the results of the ROST™ and MIP© data, onsite borings will be advanced at select locations for the collection of soil and groundwater samples for laboratory analysis. Groundwater grab samples will be collected via Hydropunch®-type groundwater sampling system. Where present within soil samples, petrophysical analysis of NAPL will be completed in order to provide data for the NAPL mobility evaluation.

Well Installation and NAPL Field Mobility Study – Baildown testing will be performed to assist in estimating the NAPL present beneath the Site and to assist with the quantification of NAPL transmissivity. Baildown testing will occur at locations where NAPL is known to be

present. If NAPL is identified in other areas during investigation activities, a monitoring well will be installed for baildown testing purposes at that location.

Investigation of Northern Portion of Western Parcel – In order to fill data gaps in the northern portion of the Western Parcel, continuously cored soil borings will be advanced to groundwater for the purpose of collecting soil samples and groundwater grab samples. In addition, to assess vapor risk in this area, up to four (4) temporary vapor probes will be installed to a depth of 5 feet bgs and sampled.

Reporting / Development of an Updated Conceptual Site Model – After completing field activities and receiving analytical results, a technical report will be prepared summarizing the findings. Included in the report will be a brief introduction and Site background; a discussion of the sampling activities conducted, including figures depicting sample locations; tabulated analytical data from the work performed; a Site conceptual model, including the use of hydrographs and cross-sections to illustrate soil lithology and the vertical and horizontal distribution of NAPL; results of the NAPL mobility study, using data generated from laboratory studies and the NAPL field mobility study; and conclusions and recommendations for NAPL management and response actions.

Exhibit D

BOARD OVERSIGHT DOCUMENTS

ATTACHMENT 1 – Oversight Cost Reimbursement Account Letter: Correspondence dated December 29, 2016, RE: Site Cleanup Program Oversight Cost Reimbursement Account, with Billing Cost Explanation

ATTACHMENT 2 – Reimbursement Process for Regulatory Oversight

ATTACHMENT 3 – Certification Declaration for Compliance with Fee Title Holder Notification Requirements; one each for former Chemoil Facility parcels and Raymond Tract parcels

ATTACHMENT 4 – Acknowledgement of Receipt of Oversight Cost Reimbursement Account Letter

ATTACHMENT 5 – Electronic Submittal to the Los Angeles Regional Board for GeoTracker Users

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

December 29, 2016

Ms. Mary Hashem
Re|Solutions
2880 Bryant Street
Denver, CO 80211

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7016 1370 0001 2479 8947

SUBJECT: SITE CLEANUP PROGRAM OVERSIGHT COST REIMBURSEMENT ACCOUNT

SITE: FORMER CHEMOIL FACILITY AT 2020 WALNUT AVENUE, SIGNAL HILL, CALIFORNIA (SCP NO. 1391)

Dear Ms. Hashem:

The California Regional Water Quality Control Board (Regional Board), Los Angeles Region, is the public agency with primary responsibility for the protection of ground and surface water quality for all beneficial uses within major portions of the Los Angeles and Ventura Counties, including the referenced site.

The Regional Board has evidence that indicates that there is or has been a discharge of waste from the site referenced above (Site). The evidence includes information in the project files that the subsurface soil and groundwater have been impacted by petroleum discharges at the Site. Historically light non-aqueous phase liquid (LNAPL) presence was reported as three on-site separate pools, and was characterized as heavy crude oil or lubricating oil, or a combination of naphtha, kerosene, and gas oil. Primary constituents of concern with groundwater plumes include total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs) and fuel oxygenates (including benzene, methyl tertiary-butyl ether [MTBE], tertiary-butyl alcohol [TBA]). The releases of chemicals at the Site may potentially affect the groundwater quality and beneficial uses of the State's waters.

Section 13304 of the California Water Code (Porter Cologne Act) allows the Regional Board to recover reasonable expenses from a responsible party or parties for overseeing the investigation and cleanup of unregulated discharges adversely affecting the State's waters. In compliance with Section 13365 of the California Water Code, this letter is being sent to provide you the following information regarding costs for regulatory oversight work.

I. Estimate of Work to be performed

The Regional Board staff estimates that during the Regional Board's 2016/2017 fiscal year (July 1, 2016 to June 30, 2017), regulatory oversight work may include, but is not limited to, the following tasks to be performed at the site:

1. Review technical reports and determine if the contamination sources and plumes are fully delineated vertically and laterally;

2. Request and review of additional assessment workplans and reports, detailed remediation design and installation plan, progress and monitoring reports, risk assessment workplans and reports, and other technical reports as necessary;
3. Prepare comment letters on various reports and communicate findings to responsible parties;
4. Conduct site inspections, collect split samples, and attend meetings with environmental consultant and responsible parties; and
5. Conduct internal and external communication (i.e. meetings, memos) about or related to the site.

II. Statement of Expected Outcome

The expected outcome of work that will be performed includes providing written comments on the submitted reports and workplans, verifying the adequacy of reports, and determining the need to further investigate the impact to soil and groundwater as well as risk to human health and environment, and responding to public inquiries about site investigations and cleanups as needed.

III. Billing Rate

Attached are the Site Cleanup Program, Monthly Salary Scales by Job Classification (Attachment 1) for employees expected to perform the work and the Reimbursement Process for Regulatory Oversight (Attachment 2). The names and classifications of employees that charge time to this site will be listed on the invoices. The average billing rate is about $160.00 per hour.

IV. Estimation of Expected Charges

A. Regional Board staff expects to charge about 100 hours for work related to this site during fiscal year 2016/2017. Based on the average billing rate of $160.00 per hour, the estimated billing charge by the Regional Board staff for this site during this fiscal year is about $16,000, which does not include possible contract charges stated in B (below). **Please note that this is neither a commitment nor a contract for regulatory oversight. It is only an estimate of the work, which may be performed.**

B. To better evaluate the potential health risk from the detected or residual contaminants posed to the current/future occupants of the site and the immediate site vicinity, the Regional Board has established a contract with the State Office of Environmental Health Hazard Assessment (OEHHA), to have their toxicologists review the submitted health risk assessment reports. OEHHA will review, evaluate if appropriate, and provide comments on risk assessment reports. When requested, OEHHA toxicologists will provide the Regional Board consultation services on issues concerning human health and/or environmental risks.

Under the Cost Recovery Program, the responsible party is required to reimburse the Regional Board for the cost incurred by OEHHA review. Occurred charges by OEHHA staff will be included in our invoices under the contract charges category. All quarterly invoices generated for this project will be sent to your provided billing contact by the Site Cleanup Program, State Water Resources Control Board.

V. Landowner Notification and Participation Requirements

Pursuant to California Water Code section 13307.1, the Regional Board is required to notify all current fee title holders for the subject site prior to considering corrective action or granting case closure. Therefore, you are required to provide the name, mailing and e-mail addresses, and telephone number for all record fee title holders for the site together with a copy of county record of current ownership, available from the County Recorder's Office, or complete the attached Certification Declaration Form (Attachment 3) and submit it to our office.

Please sign and return the enclosed landowner's information (Attachment 3) and "Acknowledgment of Receipt of Cost Reimbursement Account Letter" (Attachment 4) to Mr. Kwang-il Lee of the Regional Board by **January 30, 2017.**

VI. Other Requirements

1. **Change of Ownership:** You must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this cost reimbursement account's responsibility to a new owner containing a specific date for the transfer. In addition, you shall notify the succeeding owner of the existence of this cost reimbursement account by letter, copy of which shall be forwarded to the Board.

2. **Public Participation:** With increased public interest in our programs and the public knowledge of threat to human health and the environment, the Regional Board has increased efforts to get the public more involved in our decision making process. The Regional Boards are also required to involve the public in site cleanup decisions under State law (including Health & Safety Code section 25356.1 and California Water Code sections 13307.5 and 13307.6). You may be required to prepare and implement a public participation plan. Regional Board staff will provide you with additional guidance as appropriate.

3. **Electronic Submittals:** In September 2004, the State Water Resources Control Board adopted regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, California Code of Regulation) requiring the electronic submittal of information (ESI) for all site cleanup programs, starting January 1, 2005. Currently, all of the information on electronic submittals and GeoTracker contacts can be found at http://www.waterboards.ca.gov/ust/electronic_submittal.

To comply with the above referenced regulation, you are required to upload all technical reports, documents, and well data to GeoTracker by the due dates specified in the Regional Board letters and orders issued to you or for the site. However, we may request that you submit hard copies of selected documents and data to the Regional Board in addition to electronic submittal of information to GeoTracker.

If you have any questions, please contact Mr. Kwang-il Lee at (213) 576-6734 (Kwangil.lee@waterboards.ca.gov).

Sincerely,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

Attachments:
1. Monthly Salary Scales by Job Classification
2. Reimbursement Process for Regulatory Oversight
3. Certification Declaration Form
4. Acknowledgment of Receipt of Cost Reimbursement Account Letter

STATE WATER RESOURCES CONTROL BOARD
SITE CLEANUP PROGRAM (SCP)
BILLING COST EXPLANATION
Fiscal Year 2016-2017

Employee Salary and Benefit by Classification [1]	Salary/Benefits Range		
7500 - AEO CEA	$ 9,241.34	-	$ 20,635
4558 - Admin Officer II	$ 6,919.91	-	$ 8,598
5871 - Assistant Chief Counsel	$ 13,371.52	-	$ 15,488
5393 - Associate Governmental Program Analyst (Statewide)	$ 6,587.66	-	$ 8,246
5778 - Attorney	$ 6,997.24	-	$ 12,190
5795 - Attorney III	$ 11,502.63	-	$ 14,758
5780 - Attorney IV	$ 12,705.59	-	$ 16,314
4707 - Business Serv Asst (Spec)	$ 3,736.35	-	$ 5,717
3756 - Engineering Geologist (SWRCB)	$ 6,816.80	-	$ 12,833
0756 - Environmental Program Manager I (Supervisory) (SWRCB)	$ 13,186.78	-	$ 16,393
0769 - Environmental Program Manager II (SWRCB)	$ 15,304.85	-	$ 17,386
0762 - Environmental Scientist (SWRCB)	$ 4,538.32	-	$ 8,676
3843 - Exec Officer I	$ 16,308.75	-	$ 18,526
3842 - Exec Officer II	$ 16,706.88	-	$ 18,977
5601 - Information Officer I (Spec)	$ 6,587.66	-	$ 8,246
1282 - Legal Secretary	$ 4,548.35	-	$ 5,980
1441 - Office Assistant (General) (Statewide)	$ 3,104.79	-	$ 4,272
1379 - Office Assistant (Typing) (Statewide)	$ 3,209.34	-	$ 4,358
1138 - Office Technician (General) (Statewide)	$ 3,949.73	-	$ 4,948
1139 - Office Technician (Typing) (Statewide)	$ 4,022.77	-	$ 5,034
3851 - Principal Water Resources Control Engineer	$ 16,035.22	-	$ 18,213
5373 - Public Participation Specialist	$ 6,587.66	-	$ 8,246
3826 - Sanitary Engineering Associate (Statewide)	$ 7,425.44	-	$ 9,294
3782 - Sanitary Engineering Technician (Statewide)	$ 5,114.03	-	$ 7,350
3751 - Senior Engineering Geologist (Statewide)	$ 12,015.32	-	$ 15,038
0764 - Senior Environmental Scientist (SWRCB)	$ 11,403.81	-	$ 14,176
0765 - Senior Environmental Scientist (Spec)	$ 8,031.22	-	$ 9,989
3224 - Senior Legal Typist	$ 3,876.69	-	$ 5,420
3844 - Senior Water Resources Control Engineer (SWRCB)	$ 12,015.32	-	$ 15,038
5157 - Staff Services Analyst (General)	$ 4,217.53	-	$ 6,857
4800 - Staff Services Manager I	$ 7,605.88	-	$ 9,449
5815 - Supervising Attorney	$ 11,508.36	-	$ 14,626
3748 - Supervising Engineering Geologist (Statewide)	$ 13,196.80	-	$ 16,522
3849 - Supervising Water Resources Control Engineer (SWRCB)	$ 13,196.80	-	$ 16,522
3846 - Water Resources Control Engineer (SWRCB)	$ 6,816.80	-	$ 12,767
Intermittent Employees:			
1120 - Seasonal Clerk	$ 1,733.00		$ 1,955
1931 - Scientific Aid	$12.11/hour		$14.36/hour
4871 - Student Assistant Engineering (Statewide)	$ 2,093.00		$ 3,227

Note: The State is currently in negotiations with the unions so the upper limits of these ranges may be subject to change.

Operating Expenses and Equipment [2] (both State and Regional Board offices)
Indirect Costs (Overhead = cost of doing business) 125%

Billing Example

Water Resources Control Engineer	
Salary and Benefits:	$12,767
Overhead (indirect costs):	$15,959
Total Cost per month	$28,726

Divided by 173 hours per month equals per hour: $166.04
(Due to the various classifications that expend SCP resources an average of $ 160.00 per hour can be used for projection purposes.)

[1] The name and classification of employees performing oversight work will be listed on the invoice you receive.
[2] The examples are estimates based on recent billings. Actual charges may be slightly higher or lower.

ATTACHMENT 2

REIMBURSEMENT PROCESS FOR REGULATORY OVERSIGHT

We have identified your facility or property as requiring regulatory cleanup oversight. Pursuant to the Porter-Cologne Water Quality Control Act, reasonable costs for such oversight can be recovered by the Regional Water Quality Control Board (RWQCB) from the responsible party. The purpose of the enclosure is to explain the oversight billing process structure.

INTRODUCTION

The Porter-Cologne Water Quality Control Act authorizes the State Water Resources Control Board (SWRCB) to set up Cost Recovery Programs. The Budget Act of 1993 authorized the SWRCB to establish a Cost Recovery Program for Site Cleanup Program (SCP). The program is set up so that reasonable expenses incurred by the SWRCB and RWQCBs in overseeing cleanup of illegal discharges, contaminated properties, and other unregulated releases adversely impacting the State's waters can be reimbursed by the responsible party. Reasonable expenses will be billed to responsible parties and collected by the Fee Coordinator at the SWRCB in the Division of Financial Assistance (DFA).

THE BILLING SYSTEM

Each cost recovery account has a unique Site ID number assigned to it. Whenever any oversight work is done, the hours are entered into the SCP Cost Recovery/daily logs database. The cost of the staff hours is calculated by the State Accounting System based on the employee's salary and benefit rate and the SWRCB overhead rate.

SWRCB and RWQCB Administrative charges for work such as accounting, billing preparation, general program meetings and program specific training cannot be charged directly to an account. This work will be charged to Administrative accounting codes one per Region. The Accounting Office totals these administrative charges for the billing period and distributes them back to all of the accounts based on the number of hours charged to each account during that billing period. These charges show as State Board Program Administrative Charges and Regional Board Program Administrative Charges on the Invoice.

The current billing period charges will include associated labor costs, risk assessment contract charges, overhead charges, SWRCB/DFA Administrative charges, and RWQCB Administrative charges. The overhead charges are based on the number of labor hours charged to the account. The overhead charges consist of rent, utilities, travel, supplies, training, and accounting services. Most of these charges are paid in arrears. The Accounting Office keeps track of these charges and distributes them back monthly to only those accounts having Labor hours charged to them for the period being billed. No site will be billed for overhead during a billing period unless Labor hours have been posted to the RWQCB employee's daily logs residing in the SCP Cost Recovery database.

Invoices are issued quarterly, one quarter in arrears. If a balance is owed, a check is to be remitted to the SWRCB with the invoice remittance stub within 30 days after receipt of the invoice. The Fee Coordinator inputs a record of all checks received directly or by the Accounting Office on a daily basis.

Copies of the invoices are sent to the appropriate RWQCBs so that they are aware of the oversight work invoiced. Questions regarding the work performed should be directed toward your RWQCB case worker.

DISPUTE RESOLUTION

If a dispute regarding oversight charges cannot be resolved with the RWQCB, Section 13320 of the California Water Code provides a process whereby persons may petition the SWRCB for review of RWQCB decisions. Regulations implementing Water Code Section 13320 are found in the Title 23 of the California Code of Regulations, Section 2050.

DAILY LOGS

A detailed description (daily log) of the actual work being done at each specific site is kept by each employee in the Regional Water Board who works on the cleanup oversight at the property. This information is provided on the quarterly invoice using standardized work activity codes to describe the work performed. *Upon request, a more detailed description of the work performed is available from the RWQCB staff.*

REMOVAL FROM THE BILLING SYSTEM

After the cleanup is complete, the RWQCB will submit a closure form to the SWRCB to close the account. If a balance is due, the Fee Coordinator will send a final billing for the balance owed. The responsible party should then submit a check to the SWRCB to close the account.

AGREEMENT

No cleanup oversight will be performed unless the responsible party of the property has agreed in writing to reimburse the State for appropriate cleanup oversight costs and submitted to the RP. You may wish to consult an attorney in this matter. As soon as the letter is received, the account will be added to the active Site Cleanup program Cost Recovery billing list and oversight work will begin.

If you have any questions regarding billing, please contact the Division of Financial Assistance (DFA) at the Site Cleanup Program (SCP) Message Line: (916) 341-5643 or via email: DFA-SCP@waterboards.ca.gov

CALIFORNIA
Water Boards

EDMUND G. BROWN JR
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

ATTACHMENT 3

CERTIFICATION DECLARATION FOR COMPLIANCE WITH FEE TITLE HOLDER NOTIFICATION REQUIREMENTS (California Water Code Section 13307.1)

Please Print or Type

Fee Title Holder(s): ____Signal Hill Enterprises, LLC_____

Mailing Address: _____459 Geary Street, Suite 200, San Francisco, CA 94102 _____

Contact Person: _____Pam Vila _____

Telephone Number / E-mail: ____(415) 286-9533 / Pam@footprintsinvestments.com _____

Site Name: _____Former Chemoil Facility_____

Address: _____2020 Walnut Avenue, Signal Hill, CA _____

County Assessor Parcel Numbers (APN): __7210-043-002, 7210-043-003, 7210-043-004, 7210-043-010, 7210-043-011, 7210-043-012, 7210-043-013, 7210-043-014, 7210-043-016, 7210-043- 017, 7210-043-018, 7210-043-019, 7210-043-023, 7210-043-024, 7210-043-025, 7210-043-026, 7215-009-003, and 7215-009-006_____

Contact Person: ____Mary Hashem, Managing Member, RE | Solutions, LLC_____

Telephone Number / E-mail: ___(303) 945-3018 / mary@resolutionsdev.com_____

File Number: _____SCP No. 1391_____

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (See attached page for who shall sign the Certification Declaration).

Mary B. Hashem
Mary B. Hash
Signature

Managing Member

March 3, 2017
Date Signed

The certification declaration form must be signed as follows:

1. For a corporation - by a responsible corporate officer, which means; (i) by a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy of decision making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship – by a general partner or the proprietor respectively.

3. For a municipality, state, federal, or public agency - by either a principal executive officer or ranking elected official. A principal executive officer of a federal agency includes (i) the chief executive officer of the agency or (ii) a senior executive officer having responsibility for the overall operations or a principal geographic unit.

CALIFORNIA
Water Boards

EDMUND G. BROWN JR
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

ATTACHMENT 3

CERTIFICATION DECLARATION FOR COMPLIANCE WITH FEE TITLE HOLDER NOTIFICATION REQUIREMENTS (California Water Code Section 13307.1)

Please Print or Type

Fee Title Holder(s): _____MPO Walnut Partners, LLC_____

Mailing Address: _____P.O. Box 2907, La Habra, CA 90632_____

Contact Person: _____Rick McAuley_____

Telephone Number / E-mail: ____(714) 224-1792 / rick@aztecgrp.com _____

Site Name: _____Raymond Tract Parcels_____

Address: _____2025-2035 Walnut Avenue, Signal Hill, CA _____

County Assessor Parcel Numbers (APN): __7210-043-020, 7210-043-021, 7210-043-022_____

Contact Person: ____Mary Hashem, Managing Member, RE | Solutions, LLC_____

Telephone Number / E-mail: ___(303) 945-3018 / mary@resolutionsdev.com_____

File Number: _____SCP No. 1391_____

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (See attached page for who shall sign the Certification Declaration).

Mary B. Hashem

Mary B. Hash
Signature

Managing Member

March 3, 2017
Date Signed

The certification declaration form must be signed as follows:

1. For a corporation - by a responsible corporate officer, which means; (i) by a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy of decision making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship – by a general partner or the proprietor respectively.

3. For a municipality, state, federal, or public agency - by either a principal executive officer or ranking elected official. A principal executive officer of a federal agency includes (i) the chief executive officer of the agency or (ii) a senior executive officer having responsibility for the overall operations or a principal geographic unit.

CALIFORNIA
Water Boards

EDMUND G. BROWN JR
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

ATTACHMENT 4

ACKNOWLEDGEMENT OF RECEIPT OF OVERSIGHT COST REIMBURSEMENT ACCOUNT LETTER

I, Mary B. Hashem, acting within the authority vested in me as an authorized representative of RE | Solutions, LLC, a Colorado limited liability company, acknowledge that I have received and read a copy of the attached *REIMBURSEMENT PROCESS FOR REGULATORY OVERSIGHT* and the cover letter dated December 29, 2016, concerning cost reimbursement for Regional Board staff costs involved with oversight of cleanup and abatement efforts at **Former Chemoil Facility in Los Angeles County.** The site location is **2020 Walnut Avenue, Signal Hill, California**, and its Los Angeles County Assessor's Parcel Numbers are 7210-043-002, 7210-043-003, 7210-043-004, 7210-043-010, 7210-043-011, 7210-043-012, 7210-043-013, 7210-043-014, 7210-043-016, 7210-043- 017, 7210-043-018, 7210-043-019, 7210-043-023, 7210-043-024, 7210-043-025, 7210-043-026, 7215-009-003, and 7215-009-006.

I understand the reimbursement process and billing procedures as explained in the letter. Our company is willing to participate in the cost recovery program and pay all subsequent billings in accordance with the terms in your letter and its attachments, *and to the extent required by law*. I also understand that signing this form does not constitute any admission of liability, but rather only intent to pay for costs associated with oversight, *as set forth above, and to the extent required by law*. Billings for payment of oversight costs should be mailed to the following individual and address:

BILLING COMPANY **RE | Solutions, LLC**

BILLING CONTACT **Mary Hashem**

BILLING ADDRESS **2880 Bryant Street**

Denver, CO 80211

TELEPHONE NO. **(303) 945-3018** **E-Mail** **mary@resolutionsdev.com**

RESPONSIBLE PARTY'S SIGNATURE Mary Hash
(Signature)

Managing Member
(Title)

DATE: **March 3, 2017**

SCP NO. 1391	**SITE ID NO.**

California Regional Water Quality Control Board
Los Angeles Region

320 W. 4th Street, Suite 200, Los Angeles, California 90013
(213) 576-6600 • FAX (213) 576-6640
http://www.waterboards.ca.gov/losangeles

Matthew Rodriquez
Secretary for Environmental Protection

Edmund G. Brown Jr.
Governor

ATTACHMENT 5

December 12, 2011

Electronic Submittal to the Los Angeles Regional Board for GeoTracker Users

To Interested Parties:

Effective November 1, 2011, the Los Angeles Regional Water Quality Control Board (Regional Board) implemented a Paperless Office system. Interested parties were notified of this intent in a letter dated October 20, 2011 (the announcement can be seen at http://www.waterboards.ca.gov/losangeles/resources/Paperless/).

This letter is intended to clarify the electronic submittal process for all **GeoTracker** users in accordance with the October 20, 2011 Paperless Office announcement.

For all parties who upload electronic documents to State Database GeoTracker, it is no longer necessary to email a copy of these documents to losangeles@waterboards.ca.gov or submit hard copies to our office.

The Regional Board will no longer accept documents (submitted by either hard copy or email) already uploaded to GeoTracker. In special circumstances where GeoTracker may not be the best place to submit correspondence, such as oversized or confidential documents, please contact case staff directly to arrange a submittal method.

If you have questions regarding this matter, please contact the appropriate staff assigned to your program or project. You may refer to the Regional Boards' Departmental Listing for contact information.

Sincerely,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

Exhibit E

SUCCESSOR ASSIGNMENT AND ASSUMPTION AGREEMENT

This SUCCESSOR ASSIGNMENT AND ASSUMPTION AGREEMENT (this "Assumption Agreement") is dated as of_____(the "Effective Date"), by and RE | Solutions, LLC, a Colorado limited liability company ("RES"), ("Assignor"), _____ ("Assignee"), and, for purposes of consenting to this Assumption Agreement only, the California Regional Water Quality Control Board, Los Angeles Region ("Water Board").

RECITALS

WHEREAS, Assignor is a party to that certain California Land Reuse and Revitalization Act ("CLRRA") Program Agreement for the former Chemoil Refinery Site identified by various addresses, including 2185, 2020 and 2040 Walnut Avenue, Signal Hill, Los Angeles County, California, by and between Assignor and the Regional Water Board, dated as of_____ the "CLRRA Agreement");

WHEREAS, Assignor wishes to assign to Assignee all of its obligations (from and after the Effective Date) pursuant to this Assumption Agreement effective as of the Effective Date, and Assignee wishes to assume all of Assignor's obligations (to the extent arising from and after the Effective Date) with respect to the CLRRA Agreement effective as of the Effective Date;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby expressly acknowledged, the parties hereto agree as follows:

1. Assumption. Effective as of the Effective Date, Assignee agrees to hereby assume all of the remaining obligations (to the extent arising from and after the Effective Date) of the CLRRA Agreement.

2. Water Board's Determinations. The Water Board has determined that the Assignee meets all of the qualifying conditions of HSC Section 25395.80 and either Section 25395.69 or 25395.70 of CLRRA, as applicable, and is qualified to perform any remaining obligations under the CLRRA Agreement, including, without limitation, long-term operation and maintenance, and, by execution of this Assumption Agreement, has agreed to assume such obligations.

3. Further Actions. The Water Board hereby consents to the assumption by the Assignee of the Assignor's remaining obligations under the CLRRA Agreement. Assignor and Assignee each covenants and agrees, at its own expense, to execute and deliver, at the request of the other party hereto, such further instruments of transfer and assignment and to take such other action as such other party may reasonably request to more effectively consummate the assignments and assumptions contemplated by this Assumption Agreement.

4. Counterparts. This Assumption Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

5. Binding Effect. This Assumption Agreement shall be binding upon, and shall inure to the benefit of the parties, and each of their respective successors and permitted assigns.

6. Governing Law. This Assumption Agreement shall be governed by, and be construed in accordance with, the laws of the State of California.

IN WITNESS WHEREOF, the parties have executed this Assumption Agreement on the date first set forth above.

_____

(Assignee)

Dated:_____

_____

RE | Solutions, LLC (Assignor)

Dated:_____

_____

Regional Water Quality Control Board, Los Angeles Region

Dated: _____

Exhibit F

Addition of Another Party

This Amendment is made and entered into by and among the California Regional Water Quality Control Board, Los Angeles Region (Water Board), RE | Solutions, LLC, a Colorado limited liability company ("RES"), and_____ (the " Additional Party") (collectively referred to as the "Parties").

1. The Standard Agreement for participating under California's Land Reuse and Revitalization Act (CLRRA) Program, LA Regional Water Board Docket No. _____(the "Agreement") is amended to include in the definition of "Parties" named in the Agreement _____ ("Additional Party")."

2. The Additional Party agrees to comply with the amended Agreement.

3. The Regional Water Board has verified that the Additional Party meets the requirements and conditions for a bona fide purchaser pursuant to HSC section 25395.69, contiguous property owner pursuant to HSC section 25395.70, or innocent landowner pursuant to HSC section 25395.75 and has made all appropriate inquiries pursuant to HSC section 25395.65 and section 25395.80.

_____

4. Submittals to the Additional Party, pursuant to section 6.1 of the Agreement, shall be addressed as follows:

   To: _____
   Address: _____
   Attention: _____
   Telephone: _____
   Fax: _____
   Email address: _____

5. The Water Board reviewed the all appropriate inquiries documentation submitted by_____and updated as necessary and has determined that the documentation meets the requirements for a site assessment plan and that no changes to the site assessment are necessary.

Each undersigned representative of the Parties to this Agreement certifies that she or he is fully authorized to enter into the terms and conditions of this Agreement and to execute and legally bind the Parties to this Agreement.

RE | Solutions, LLC

_____

Signature

_____

Name

_____

Title

Dated: _____

[Additional Party]

_____

Signature

_____

Name [Typed Name of Person Authorized to Sign on Behalf of Additional Party]

_____

Title

Dated: _____

California Regional Water Quality Control Board, Los Angeles Region

_____

Signature

_____

Name

_____

Title

Dated: _____