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June 10, 2016

**RECEIVED**

By Alameda County Environmental Health 11:29 am, Jun 14, 2016

Mr. Mark Detterman  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

Dear Mr. Detterman:

Attached for your review is the *Low-Threat Closure Policy Evaluation and Request for Closure* for former Chevron-branded service station 91723, located at 9757 San Leandro Street in Oakland, California. This report was prepared by Stantec Consulting Services Inc. (Stantec), upon whose assistance and advice I have relied. I declare under penalty of perjury that the information and/or recommendations contained in the attached report are true and correct, to the best of my knowledge.

If you have any further questions, please do not hesitate to contact me or the Stantec project manager, Travis Flora, at (408) 356-6124 ext. 238, or [travis.flora@stantec.com](mailto:travis.flora@stantec.com).

Sincerely,

A handwritten signature in cursive script that reads "Carryl MacLeod".

**Carryl MacLeod**  
Project Manager



June 10, 2016

**Attention: Mr. Mark Detterman**

Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

**Reference: Low-Threat Closure Policy Evaluation and Request for Closure**

Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, CA

Dear Mr. Detterman,

Stantec Consulting Services Inc. (Stantec), on behalf of Chevron Environmental Management Company (Chevron), submitted the *Site Investigation Report* for former Chevron-branded service station 91723, located at 9757 San Leandro Street in Oakland, Alameda County, California (the Site; shown on **Figure 1**) on October 26, 2015. In response, Alameda County Environmental Health (ACEH) provided technical comments in a letter dated December 11, 2015, and requested a Data Gap Investigation Work Plan be submitted by February 19, 2016. Extensions on the work plan were approved by ACEH in emails dated February 1 and April 20, 2016. Copies of the ACEH correspondence are provided in **Attachment A**.

Based on ACEH review of the *Site Investigation Report* and *Third Quarter 2015 Semi-Annual Groundwater Monitoring Report*, dated October 26, 2015, ACEH stated that the Site meets the Low-Threat Underground Storage Tank (UST) Case Closure Policy (LTCP) media-specific criteria for direct contact and outdoor air exposure, but not the LTCP general criteria or media-specific criteria for groundwater or vapor intrusion to indoor air. Following the acquisition of additional Site information and data, Stantec is submitting this document in lieu of the Data Gap Investigation Work Plan to present how the Site meets additional LTCP criteria, and demonstrate that there is no risk to human health and that additional Site assessment is not necessary.

Soil analytical results are summarized in **Table 1** through **Table 4**, grab groundwater analytical results are summarized in **Table 5** and **Table 6**, groundwater monitoring well analytical results are summarized in **Table 7** and **Table 8**, and soil vapor analytical results are summarized in **Table 9** and **Table 10**. Locations of soil borings, groundwater monitoring wells, soil vapor borings, soil vapor wells, and other pertinent former Site features are shown on **Figure 2**.

Stantec sent two requests to the property owner inquiring about whether any sub-grade structures are present at their facility. The property owner did not respond regarding this question. For the purposes of this evaluation, Stantec assumes there are no sub-grade structures.



June 10, 2016  
Mr. Mark Detterman  
Page 2 of 11

**Reference: Low-Threat Closure Policy Evaluation and Request for Closure**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, CA

## **LOW-THREAT UST CASE CLOSURE POLICY EVALUATION**

This section presents the low-risk general and media-specific criteria defined by the State Water Resources Control Board's (SWRCB's) LTCP, effective August 17, 2012, under Resolution No. 2012-0016.

### **GENERAL CRITERIA**

The general criteria requirements that must be satisfied by candidate sites are listed below along with a statement of how each criterion is satisfied:

**a) Is the unauthorized release located within the service area of a public water system?**

**Yes.** The Site and surrounding properties are served by municipal water supply from the East Bay Municipal Utility District.

**b) Does the unauthorized release consist only of petroleum?**

**Yes.** The constituents of concern (COCs) at the Site are petroleum hydrocarbons associated with a former service station, including total petroleum hydrocarbons as gasoline range organics (TPH-GRO); total petroleum hydrocarbons as diesel range organics (TPH-DRO); benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds); and naphthalene.

Chlorinated hydrocarbons were historically detected in groundwater in off-site groundwater monitoring wells MW-1, MW-7, and MW-9, which are at or down-gradient from the former adjacent Shell site. ACEH requested the collection of halogenated volatile organic compound (HVOC) groundwater analytical data from the Site well network, on a minimum of a one-time basis, in their letter dated December 11, 2015 (**Attachment A**). HVOC analysis was added to the groundwater monitoring and sampling program in First Quarter 2015 (**Table 8**), and HVOCs were not detected above method detection limits (MDLs) in any well, except well MW-9. HVOC concentrations detected in well MW-9 were below their respective California Regional Water Quality Control Board – San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs). Based on these data, HVOC analysis was discontinued. The source of chlorinated hydrocarbons is not associated with the release from this Site.

**c) Has the unauthorized (“primary”) release from the UST system been stopped?**

**Yes.** As documented in the *Site Conceptual Model and Data Gap Work Plan*, dated March 31, 2014, prior to 1966, three fuel USTs and one fuel dispenser island (first generation) located in the eastern portion of the Site were removed. Second-generation



June 10, 2016  
Mr. Mark Detterman  
Page 3 of 11

**Reference: Low-Threat Closure Policy Evaluation and Request for Closure**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, CA

fuel structures were installed between 1966 and 1968 and included three fuel USTs located in the north-central portion of the Site, one waste oil UST located in the western portion of the Site, and five fuel dispenser islands (four located in the central portion of the Site and one located in the southern portion of the Site). In 1978, the service station was closed and all second-generation fuel structures were removed from the Site.

A UST unauthorized release (leak)/contamination site report, dated August 24, 2001, states that an unknown amount of gasoline was released to the subsurface at the Site and was discovered during assessment activities in April 1987. The cause of the release is unknown. The date discharge began is unknown and it was stopped in 1978, when all fueling features were removed from the Site.

As shown on the hydrographs in **Attachment B**, dissolved-phase petroleum hydrocarbon concentrations associated with the Site are stable or decreasing, indicating that there is no longer a petroleum hydrocarbon source propagating on Site.

**d) Has free product been removed to the maximum extent practicable (per CCR Chapter 16 Section 2655 a-c)?**

**Yes.** Site monitoring wells have been screened for free product accumulation during all groundwater monitoring events from 1987 to the present. Light non-aqueous phase liquid (LNAPL) has never been observed at the Site.

**e) Has a Conceptual Site Model (CSM) that assesses the nature, extent, and mobility of the release been developed?**

**Yes.** The *Site Conceptual Model and Data Gap Work Plan*, dated March 31, 2014, is the CSM assessing the nature, extent, and mobility of the release. The previous focused site conceptual model is included in **Attachment C**. This letter report includes additional data collected during the July 2015 investigation; however, Site conditions have not changed significantly since submittal of the 2014 SCM.

**f) Has secondary source been removed to the extent practicable?**

**Yes.** Active remedial efforts have not been conducted at the Site; however, natural attenuation and intrinsic biodegradation have been occurring at the Site for at least 38 years, and residual soil contamination does not have a significant effect, if any, on groundwater concentrations, as demonstrated by the Site groundwater monitoring well data in **Table 7**. The dissolved-phase petroleum hydrocarbon concentrations associated with the Site are stable or decreasing (**Attachment B**), indicating that there is no longer a petroleum hydrocarbon source propagating on Site that would warrant active remediation. In addition, per ACEH, the Site meets direct contact and outdoor air



June 10, 2016  
Mr. Mark Detterman  
Page 4 of 11

**Reference: Low-Threat Closure Policy Evaluation and Request for Closure**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, CA

exposure LTCP criteria; therefore, residual soil contamination does not pose a human health risk based on the current Site use, so active remediation is not warranted.

**g) Has soil or groundwater been tested for methyl tertiary-butyl ether (MtBE) and results reported in accordance with Health and Safety Code section 25296.15?**

**Yes.** MtBE in groundwater was routinely analyzed during groundwater monitoring and sampling events from Fourth Quarter 1995 through Third Quarter 2013 (**Table 7**). MtBE was not detected since 2012 and was therefore removed from the analyte list. Results were reported to ACEH and uploaded to GeoTracker™.

**h) Does nuisance as defined by Water Code section 13050 exist at the site? A “nuisance” is defined as anything which meets the following (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property; (2) Affects at the same time an entire community or neighborhood; (3) Occurs during, or as a result of, the treatment or disposal of wastes.**

**No.** The conditions of “nuisance” as defined by Water Code section 13050 do not exist at the Site. The ACEH has previously expressed concern regarding the methane detections from the vapor probes; however, this is addressed in the Petroleum Vapor Intrusion to Indoor Air section below.

### **MEDIA-SPECIFIC CRITERIA**

The LTCP contains media-specific criteria that are related to the most common exposure pathways and receptor scenarios. The three media are:

1. Groundwater
2. Petroleum Vapor Intrusion to Indoor Air
3. Direct Contact and Outdoor Air Exposure

Each medium is discussed in the following subsections.

#### **Groundwater-Specific Criteria**

Groundwater at the Site does not currently pose a risk to human health, safety, and the environment, because it meets the groundwater-specific criteria outlined in the LTCP. The LTCP states that “the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites.”



June 10, 2016  
Mr. Mark Detterman  
Page 5 of 11

**Reference: Low-Threat Closure Policy Evaluation and Request for Closure**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, CA

Evaluation of groundwater monitoring data indicates plume stability at the Site as defined by the SWRCB's 2012, *Technical Justification for Groundwater Media-Specific Criteria*. A comparison between the dissolved-phase TPH-GRO plume from Third Quarter 2014 (**Attachment D**) and the plume from First Quarter 2016 (**Figure 3**) shows that the plume from First Quarter 2016 is approximately 150 feet shorter than the plume from Third Quarter 2014. No dissolved-phase concentrations are currently detected above MDLs or ESLs at down-gradient wells MW-2 and MW-9. In addition, the hydrographs in **Attachment B** demonstrate stable and/or decreasing concentration trends for all active groundwater monitoring wells.

As described in the LTCP, a Site can meet the groundwater media-specific criteria through one of five scenarios. This Site satisfies scenario 1 as described below.

**The contaminant plume that exceeds water quality objectives is less than 100 feet in length.**

Based on dissolved-phase TPH-GRO and benzene concentrations that exceed their respective Regional Water Quality Control Board ESLs in groundwater monitoring wells during First Quarter 2016, the contaminant plume is approximately 60 feet or less in length, as shown on **Figure 3** and **Figure 4**.

The SWRCB LTCP references the 2012, *Technical Justification for Groundwater Media-Specific Criteria*, which is used to supplement and provide technical justification on possible dissolved-phase plume lengths. This document provides average, 90th percentile, and maximum dissolved-phase plume lengths for TPH-GRO, benzene, and MtBE at any given site. TPH-GRO and benzene plumes using these specified lengths are also shown on **Figure 3** and **Figure 4** for comparison to Site-specific plumes using the most recent groundwater monitoring well data. The Site-specific data from down-gradient groundwater monitoring wells MW-2, MW-6, and MW-9 support the interpretation of the plumes generated using First Quarter 2016 groundwater monitoring well data, which are shorter than the average, 90th percentile, and maximum dissolved-phase plumes developed using the LTCP technical justification.

**There is no free product.**

Site monitoring wells have been screened for free product accumulation during all historical groundwater monitoring events from 2011 to the present and LNAPL has never been observed at the Site.

**The nearest existing water supply well or surface water body is greater than 250 feet from the defined plume boundary.**

As shown on **Table 11** and **Figure 5**, seven water supply wells were reported within a 0.25-mile radius of the Site (includes all wells not documented to have been destroyed under permit,



June 10, 2016  
Mr. Mark Detterman  
Page 6 of 11

**Reference: Low-Threat Closure Policy Evaluation and Request for Closure**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, CA

cathodic protection wells, and other deep well structures). All seven wells were identified as industrial use. Three wells are reportedly within 250 feet from the Site; one well is down-gradient approximately 100 feet (P-2), one well is up-gradient approximately 195 feet, and one well is cross-gradient approximately 220 feet (P-3). In the text of the Versar, Inc. *Well Closure Report*, dated April 23, 2014 (**Attachment E**), provided by the property owner, supply well P-2 was confirmed to have been closed-in-place and covered by a substantial concrete slab (date unknown), and supply well P-3 was confirmed to have been destroyed by pressure grouting in April 2014. The Department of Water Resources (DWR) Well Completion Report and figure included in **Attachment E** was provided by the Alameda County Public Works Agency. Further details on how well P-2 was closed-in-place were not provided, but if the well was abandoned and not properly destroyed, the well screen interval for well P-2 ranges from 160 to 590 feet below ground surface (bgs), which is significantly deeper than Site groundwater, so it is highly unlikely that contamination from the Site will affect well P-2. Stantec did not have access to field verify the up-gradient off-site well; however, since it is up-gradient of the Site, and groundwater is shallow, it is also highly unlikely that contamination from the Site will affect that well.

In a letter dated December 11, 2015 (**Attachment A**), the ACEH stated they remain concerned with dissolved-phase petroleum hydrocarbon plume delineation at the Site, and specifically reference grab groundwater samples collected from borings SB-28 and SB-31 with elevated groundwater concentrations (**Table 5**). ACEH stated that the impacts in those borings appear to bypass the existing well network (specifically wells MW-2 and MW-9). As shown on the First Quarter 2016 groundwater flow direction rose diagram on **Figure 6**, while the predominant (mean) flow direction is west, the flow direction has historically been more toward the west-southwest at least 11 different times, with seven of those occurrences observed in the last four years. Given that well MW-2 is west-southwest of boring SB-31, and well MW-9 is west of boring SB-28, both of the wells are down-gradient from the referenced borings. With no dissolved-phase concentrations currently detected above MDLs or ESLs at wells MW-2 and MW-9, the dissolved-phase petroleum hydrocarbon plume is adequately delineated down-gradient of the Site within the existing well network.

ACEH also stated that soil and groundwater contamination associated with the former service station is not understood or defined to the southeast of the Site along 98th Avenue and to the east and off-site from the property. San Leandro Street and 98th Avenue present significant access and safety issues. Current groundwater concentrations observed in Site wells that are down-gradient from these former features demonstrate a stable to decreasing plume, so if a residual off-site source is present, it does not appear to be affecting conditions observed on-site. In addition, any impacts are covered by the street asphalt or concrete, and there are no nearby buildings where vapor intrusion would be a concern; therefore, any residual off-site source that may be present does not pose a risk to human health. Furthermore, a closed Leaking Underground Fuel Tank (LUFT) case (former Thrifty-branded service station) is located southeast of the Site at 9801 San Leandro Street (Case No.: RO0000894), which is up-gradient to cross-





June 10, 2016  
Mr. Mark Detterman  
Page 7 of 11

**Reference: Low-Threat Closure Policy Evaluation and Request for Closure**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, CA

gradient from the Site. If additional investigation is conducted east and southeast of the Site into 98th Avenue and beyond, and if impacts are found, they would likely be associated with the former Thrifty site.

A utility map obtained from the City of Oakland that shows utilities located at and adjacent to the Site is presented in **Attachment F**. A Site Plan showing those utilities is shown on **Figure 7**. Per the City of Oakland, storm drain conduit and sanitary sewer lines are present within San Leandro Street and 98th Avenue at depths of approximately 2 and 2.25 feet bgs, respectively. The historical minimum depth-to-groundwater measurement in Site wells nearest San Leandro Street and 98th Avenue (wells MW-2, MW-5, MW-6, and MW-8) is 6.27 feet below top of casing (TOC), indicating that groundwater associated with the Site is, and always has been, well below the depth of the storm drain and sanitary sewer conduits. Therefore, these utilities do not appear to be acting as preferential pathways for dissolved concentrations, and they are highly unlikely to act as preferential pathways in the foreseeable future.

#### **Petroleum Vapor Intrusion to Indoor Air**

Current Site conditions do not satisfy any of the scenarios in category a of the petroleum vapor intrusion to indoor air criteria, because a bioattenuation zone (as defined by the policy) does not exist, and direct measurement of soil gas concentrations was conducted in 2010 and 2015 (**Table 9** and **Table 10**), and concentrations were above LTCP screening levels for commercial land use. However, there is currently no risk to human health associated with these petroleum hydrocarbon vapor concentrations, because there are no buildings on Site, and the Site meets direct contact and outdoor air exposure LTCP criteria, and as described in the following paragraph, recent data show that the nearby buildings are not at risk, so the Site satisfies category b of the petroleum vapor intrusion to indoor air criteria. Should the on-site land use change through property redevelopment, a management plan should be developed to manage excavated and exposed soil and groundwater to mitigate potential risk from petroleum hydrocarbon vapors.

Although conditions nearest former fueling features do not meet vapor intrusion criteria, it appears that conditions in the areas nearest to buildings do meet the criteria. Soil boring SB-24 is the closest location to the off-site buildings, at approximately 23 feet away, and data for that boring indicate a bioattenuation zone with static depth-to-groundwater at 11.3 feet bgs, a non-detect dissolved-phase benzene concentration (**Table 5**), and TPH concentrations in soil below 100 milligrams per kilogram (mg/kg) at all depths (**Table 1**). There is sufficient vertical separation near the building. Furthermore, all Site groundwater and soil meet the definition of low-risk per the LTCP, and the closest soil boring, soil vapor well, or groundwater monitoring well with concentrations above ESLs is soil boring SB-28, which is approximately 70 feet from the nearest building.





June 10, 2016  
 Mr. Mark Detterman  
 Page 8 of 11

**Reference: Low-Threat Closure Policy Evaluation and Request for Closure**

Former Chevron-Branded Service Station 91723  
 9757 San Leandro Street, Oakland, CA

During vapor well sampling in July 2015, methane concentrations ranged between 13% and 42%. ACEH expressed concern with these levels, because they are between the lower explosive limit (LEL; 4.4 to 5%) and upper explosive limit (UEL; 15%) or above the UEL. In response to this, Stantec conducted methane monitoring on February 29, 2016, using two different hand-held methane detectors at monitoring wells MW-2, MW-5, MW-6, and MW-8, vapor wells VP-2, VP-3, and VP-4, and four utility vaults and two manholes located near the Site. Methane monitoring could not be completed at vapor well VP-5, because there was surface water in the well box due to recent rainfall. With the exception of wells MW-5 and VP-3, readings were collected from the well box or vault and from the well casing or soil vapor probe for the remaining monitoring and vapor wells. All locations and the associated methane data are shown on **Figure 7**. During this monitoring, the only methane detected was at soil vapor probes VP-1 at 0.4% and VP-4 at 6% (**Attachment G**). This indicates that although high methane levels are detected in the soil vapor probes (indicative of biodegradation in the subsurface), methane is not accumulating in the wells or utility vaults; therefore, there is no imminent risk to human health associated with the methane vapors.

**Direct Contact and Outdoor Air Exposure**

Current Site conditions satisfy the LTCP direct contact and outdoor air exposure criteria, and ACEH has indicated that the Site meets these criteria. Concentrations of benzene, ethylbenzene, and naphthalene were below the commercial/industrial and utility worker limits for direct contact and outdoor air exposure specified in Table 1 of the LTCP in soil samples collected in July 2015 from 0 to 10 feet bgs, as shown below.

Constituent	Low-Threat Closure Policy Criteria for Direct Contact/Outdoor Air					Site Data	
	Residential		Commercial/Industrial		Utility Worker	Maximum Conc. (July 2015)	
	0 – 5 feet bgs mg/kg	Volatilization to outdoor air (5 – 10 feet bgs) mg/kg	0 – 5 feet bgs mg/kg	Volatilization to outdoor air (5 – 10 feet bgs) mg/kg	0 – 10 feet bgs mg/kg	0 – 5 feet bgs mg/kg	Volatilization to outdoor air (>5 – 10 feet bgs) mg/kg
Benzene	1.9	2.8	8.2	12	14	1.4	2.7
Ethylbenzene	21	32	89	134	314	21	0.59
Naphthalene	9.7	9.7	45	45	219	12	1.7
PAH*	0.063	NA	0.68	NA	4.5	0.02	0.002
*Notes: Based on the seven carcinogenic polynuclear aromatic hydrocarbons (PAHs) as benzo(a)pyrene toxicity equivalent [BaPe]. The PAH screening level is only applicable where soil is affected by either waste oil and/or Bunker C fuel.							

Soil samples collected from soil boring SB-24, located in the immediate vicinity of the former waste oil UST, in July 2015 were analyzed for polynuclear aromatic hydrocarbons (PAHs; **Table 3**) and concentrations were below the residential, commercial/industrial, and utility worker limits for



June 10, 2016  
Mr. Mark Detterman  
Page 9 of 11

**Reference: Low-Threat Closure Policy Evaluation and Request for Closure**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, CA

direct contact and outdoor air exposure specified in Table 1 of the LTCP, as shown above. In addition, detections of metals (**Table 4**) were reported below ESLs. The overall results of the sampling at soil boring SB-24, indicate the former waste oil UST has been adequately assessed, and there does not appear to be a waste oil release associated with the Site.

## **CONCLUSIONS AND RECOMMENDATIONS**

- Site conditions meet all LTCP general criteria.
- Current and historical groundwater quality data indicate that the dissolved-phase petroleum hydrocarbon plume at the Site is adequately defined to less than 100 feet in length from the source and is stable or decreasing in size and concentration. Current Site conditions satisfy groundwater-specific criteria scenario 1.
- Current Site conditions satisfy category b of the LTCP petroleum vapor intrusion to indoor air criteria scenarios. There is currently no human health risk associated with the petroleum hydrocarbon vapors. In addition, methane monitoring data demonstrate no imminent human health risk associated with methane vapors generated from petroleum hydrocarbon degradation.
- Site conditions satisfy the LTCP direct contact and outdoor air exposure criteria for commercial/industrial and utility workers.
- Evaluation of risk to on-site receptors was based on the current land use of the Site. If the property owner decides to redevelop in the future, a site management plan should be developed to safely manage exposed and excavated soil and groundwater to mitigate potential risk from exposure to petroleum hydrocarbons in soil, groundwater, and vapor. A site management plan will be dependent upon actual redevelopment plans, so there is no need to prepare one at this time.

Based on current land use and conditions, the LTCP general and media-specific criteria are satisfied. No additional Site assessment is necessary. There is a low-threat to human health, safety, and the environment, so we request that the ACEH proceed with low-threat case closure.

If you have any questions, please contact the Stantec Project Manager, Travis Flora, at (408) 356-6124 or [travis.flora@stantec.com](mailto:travis.flora@stantec.com).



June 10, 2016  
Mr. Mark Detterman  
Page 10 of 11

**Reference: Low-Threat Closure Policy Evaluation and Request for Closure**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, CA

**LIMITATIONS**

This document entitled *Low-Threat Closure Policy Evaluation and Request for Closure* was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Chevron Environmental Management Company (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by *Eran O'Malley*  
(signature)

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\_\_\_\_\_

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*Dorota Runyan*  
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Reviewed by



June 10, 2016  
Mr. Mark Detterman  
Page 11 of 11

**Reference: Low-Threat Closure Policy Evaluation and Request for Closure**

Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, CA

Attachments:

Table 1 – Soil Analytical Results  
Table 2 – Historical Soil Analytical Results  
Table 3 – Soil Analytical Results – Polyaromatic Hydrocarbons  
Table 4 – Soil Analytical Results – Metals  
Table 5 – Grab Groundwater Analytical Results  
Table 6 – Historical Grab Groundwater Analytical Data  
Table 7 – Groundwater Monitoring Data and Analytical Results  
Table 8 – Groundwater Analytical Results – Halogenated Volatile Organic Compounds  
Table 9 – Vapor Analytical Results  
Table 10 – Historical Soil Vapor Sample Analytical Results  
Table 11 – Well Receptor Details

Figure 1 – Site Location Map  
Figure 2 – Site Plan  
Figure 3 – TPH-GRO Isoconcentration Map  
Figure 4 – Benzene Isoconcentration Map  
Figure 5 – Well Receptor Locations  
Figure 6 – Groundwater Flow Direction Rose Diagram – First Quarter 2016  
Figure 7 – Site Plan Showing Utilities and Methane Monitoring Data

Attachment A – ACEH Correspondence  
Attachment B – Hydrographs  
Attachment C – Focused Site Conceptual Model, dated March 31, 2014  
Attachment D – TPH-GRO Isoconcentration Map – Third Quarter 2014  
Attachment E – Versar, Inc. *Well Closure Report*, dated April 23, 2014  
Attachment F – City of Oakland Utility Map  
Attachment G – Air Monitoring Logs

cc. Ms. Carryl MacLeod, Chevron Environmental Management Company, 6001 Bollinger Canyon Road, San Ramon, CA 94583 – Electronic Copy

Hothem Trust c/o Mr. Jan Greben, Greben & Associates, 125 East De La Guerra Street, Suite 203, Santa Barbara, CA 93101 – Electronic Copy

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Mr. Francis Meynard, Pacific American Group, 104 Caledonia Street, Sausalito, CA 94965 – Electronic Copy

## **TABLES**

**Table 1**  
**Soil Analytical Results**  
9757 San Leandro Street  
Oakland, California

Sample ID	Depth Interval (feet bgs)	Date Collected	US EPA Method 8015B			US EPA METHOD 8260B				
			TPH-ORO (mg/kg)	TPH-DRO w/ silica gel (mg/kg)	TPH-GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes <sup>(1)</sup> (mg/kg)	Naphthalene (mg/kg)
SB-24	2.5	7/29/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	5	7/29/2015	<3.9	<3.9	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	7.5	7/29/2015	<3.9	<3.9	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	10	7/29/2015	<4.0	<4.0	11	<0.0005	<0.001	<0.001	<0.001	<0.001
	12.5	7/29/2015	<3.9	<3.9	9.5	<0.0005	<0.001	0.02	0.002	0.014
	15	7/29/2015	<4.0	<4.0	<0.5	<0.0005	<0.0009	<0.0009	<0.0009	<0.0009
	20	7/29/2015	<3.9	<3.9	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
SB-25	2.5	7/29/2015	490	190	23	<0.0005	<0.0009	<0.0009	<0.0009	<0.0009
	5	7/29/2015	<4.0	<4.0	0.8	<0.0005	<0.001	<0.001	<0.001	<0.001
	7.5	7/29/2015	<4.0	<4.0	1.7	<0.0005	<0.001	<0.001	<0.001	<0.001
	10	7/29/2015	15	21	140	0.32	<0.049	0.096	<0.049	0.69
	12.5	7/29/2015	69	73	450	0.76	<0.091	0.86	1.2	0.4
	15	7/29/2015	<4.0	<4.0	5.1	0.01	<0.001	<0.001	0.003	<0.001
	20	7/29/2015	<3.9	<3.9	<0.5	0.001	<0.001	<0.001	0.002	<0.001
SB-26	2.5	7/30/2015	<4.0	160	1,300	1.4	0.68	21	49	12
	5	7/30/2015	<4.0	53	530	0.26	<0.047	5.1	3.7	3.5
	7.5	7/30/2015	160	150	210	0.049	<0.05	0.069	<0.05	0.097
	10	7/30/2015	270	220	530	2.7	<0.047	0.36	0.089	1.7
	12.5	7/30/2015	770	560	650	0.2	<0.046	0.078	0.11	0.11
	15	7/30/2015	93	76	26	0.007	0.001	0.003	0.005	<0.001
	20	7/30/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
SB-27	2.5	7/29/2015	130	65	57	<0.027	<0.053	<0.053	<0.053	<0.053
	5	7/29/2015	7.1	11	20	0.009	<0.001	0.002	<0.001	0.002
	7.5	7/29/2015	230	170	78	<0.025	<0.05	<0.05	<0.05	<0.05
	10	7/29/2015	15	110	540	0.089	<0.053	0.59	<0.053	1.1
	12.5	7/29/2015	<4.0	33	390	<0.025	<0.049	0.3	0.082	0.23
	15	7/29/2015	<4.0	8	20	<0.026	<0.053	<0.053	<0.053	<0.053
	20	7/29/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
SB-28	2.5	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	5	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	7.5	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	10	7/28/2015	7.7	9.3	21	0.002	<0.001	0.003	<0.001	<0.001
	12.5	7/28/2015	37	38	46	<0.025	<0.05	0.32	0.38	0.13
	15	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	20	7/28/2015	<4.0	<4.0	<0.5	0.0009	<0.001	<0.001	<0.001	<0.001
SB-29	2.5	7/28/2015	4.2	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	5	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	7.5	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	10	7/28/2015	<4.0	4.8	5.1	<0.0005	<0.0009	<0.0009	<0.0009	<0.0009
	12.5	7/28/2015	19	17	220	<0.024	<0.049	<0.049	<0.049	<0.049
	15	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	20	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.0009	<0.0009	<0.0009	<0.0009
SB-30	2.5	7/27/2015	<4.0	<4.0	0.7	<0.0005	<0.001	<0.001	<0.001	<0.001
	5	7/27/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	7.5	7/27/2015	20	16	7.0	<0.0005	<0.001	<0.001	<0.001	<0.001
	10	7/27/2015	65	55	120	<0.026	<0.051	<0.051	<0.051	<0.051
	12.5	7/27/2015	<4.0	<4.0	0.7	<0.0005	<0.001	<0.001	<0.001	<0.001
	15	7/27/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	20	7/27/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001

**Table 1**  
**Soil Analytical Results**  
 9757 San Leandro Street  
 Oakland, California

Sample ID	Depth Interval (feet bgs)	Date Collected	US EPA Method 8015B			US EPA METHOD 8260B				
			TPH-ORO (mg/kg)	TPH-DRO w/ silica gel (mg/kg)	TPH-GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes <sup>(1)</sup> (mg/kg)	Naphthalene (mg/kg)
SB-31	2.5	7/27/2015	<4.0	<4.0	<0.5	<0.0005	<0.0009	<0.0009	<0.0009	<0.0009
	5	7/27/2015	<4.0	<4.0	<0.5	<0.0005	<0.0009	<0.0009	<0.0009	<0.0009
	7.5	7/27/2015	<4.0	<4.0	<0.5	<0.0005	<0.0009	<0.0009	<0.0009	<0.0009
	10	7/27/2015	<b>27</b>	<b>17</b>	<b>7.1</b>	<0.0005	<0.001	<0.001	<0.001	<0.001
	12.5	7/27/2015	<b>11</b>	<b>10</b>	<b>49</b>	<0.023	<0.046	<0.046	<0.046	<0.046
	15	7/27/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	20	7/27/2015	<3.9	<3.9	<0.5	<0.0005	<0.0009	<0.0009	<0.0009	<0.0009
SB-32	2.5	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	5	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	7.5	7/28/2015	<b>120</b>	<b>81</b>	<b>18</b>	<0.0005	<0.001	<0.001	<0.001	<0.001
	10	7/28/2015	<b>360</b>	<b>190</b>	<b>47</b>	<0.0005	<0.001	<0.001	<b>0.011</b>	<0.001
	12.5	7/28/2015	<b>1,200</b>	<b>620</b>	<b>110</b>	<0.026	<0.052	<0.052	<b>0.13</b>	<0.052
	15	7/28/2015	<b>1,300</b>	<b>670</b>	<b>110</b>	<0.0005	<0.0009	<0.0009	<b>0.01</b>	<0.0009
	20	7/28/2015	<b>170</b>	<b>77</b>	<b>5.3</b>	<0.0005	<0.0009	<0.0009	<0.0009	<0.0009
SB-33	2.5	7/28/2015	<3.9	<3.9	<b>0.7</b>	<0.0005	<0.001	<0.001	<0.001	<0.001
	5	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	7.5	7/28/2015	<b>140</b>	<b>63</b>	<b>19</b>	<0.0005	<0.0009	<0.0009	<0.0009	<0.0009
	10	7/28/2015	<4.0	<4.0	<b>40</b>	<b>0.062</b>	<0.051	<b>0.068</b>	<0.051	<0.051
	12.5	7/28/2015	<b>130</b>	<b>78</b>	<b>58</b>	<0.025	<0.05	<0.05	<0.05	<0.05
	15	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	20	7/28/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
SB-34	2.5	7/30/2015	<4.0	<4.0	<b>0.8</b>	<0.0005	<0.001	<0.001	<0.001	<0.001
	5	7/30/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	7.5	7/30/2015	<4.0	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
	10	7/30/2015	<4.0	<b>6.4</b>	<b>43</b>	<b>0.04</b>	<0.051	<0.051	<0.051	<0.051
	12.5	7/30/2015	<4.0	<b>13</b>	<b>55</b>	<0.026	<0.052	<0.052	<0.052	<0.052
	15	7/30/2015	<4.0	<4.0	<b>3.2</b>	<b>0.0007</b>	<0.001	<0.001	<0.001	<0.001
	20	7/30/2015	<4.0	<b>6.1</b>	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001
<b>ESLs<sup>(2)</sup></b>			<b>100</b>	<b>240</b>	<b>100</b>	<b>0.044</b>	<b>2.9</b>	<b>1.4</b>	<b>2.3</b>	<b>0.023</b>

**Notes:**

(1) Total xylenes is the sum of ortho-, meta-, and para-xylenes.

(2) California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.

**Bold** font denotes detected value. **Bold/blue** font denotes detected value equal to or above RWQCB ESLs.

**Abbreviations:**

< = compound was not detected at or above the detection limit shown.

bgs = below ground surface

ESLs = Environmental Screening Levels

mg/kg = milligrams per kilogram

US EPA = United States Environmental Protection Agency

TPH-DRO = total petroleum hydrocarbons as Diesel range organics (C<sub>10</sub>-C<sub>28</sub> reported as total purgeable petroleum hydrocarbons)

TPH-GRO = total petroleum hydrocarbons as gasoline range organics (C<sub>6</sub>-C<sub>12</sub> reported as total purgeable petroleum hydrocarbons)

TPH-ORO = total petroleum hydrocarbons as oil range organics (C<sub>18</sub>-C<sub>40</sub> reported as total purgeable petroleum hydrocarbons)



**Table 2**  
**Historical Soil Analytical Data**  
9757 San Leandro Street  
Oakland, CA

Consultant	Sample ID	Depth (feet bgs)	Date Collected	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	MO (mg/kg)	TOG (mg/kg)
Beta Associates	MW-1	3	4/18/1987	--	--	<0.010	<0.010	<0.010	<0.020	--	<10.0	--
	MW-2	3	4/18/1987	--	--	<0.010	<0.010	<0.010	<0.020	--	--	--
	DH-3	2.5	4/18/1987	--	--	<0.010	<0.010	<0.010	<0.020	--	--	--
	MW-4	10.5	4/18/1987	<1.0	--	<0.010	<0.010	--	<0.010	--	<10.0	--
	DH-5	5	4/18/1987	<1.0	--	<0.010	<0.010	<0.010	<0.020	--	<10.0	--
	DH-6	10.5	4/18/1987	<1.0	--	<0.010	<0.010	--	<0.010	--	<10.0	--
	DH-7	3.5	4/18/1987	--	<1	<0.010	<0.010	--	<0.010	--	--	--
	DH-8	10	4/18/1987	<1	<b>1,017</b>	<b>1.063</b>	<b>9.997</b>	--	<b>108.092</b>	--	<b>240</b>	--
	DH-9	1	4/18/1987	--	--	<0.010	<0.010	<0.010	<0.020	--	<b>230</b>	--
	DH-10	1	4/18/1987	--	--	--	--	--	--	--	--	--
	DH-11	1	4/18/1987	--	--	<0.010	<0.010	--	<0.010	--	<b>380</b>	--
GTI	MW-5	5	5/18/1988	--	<1	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
		10		--	<b>160</b>	<0.0005	<0.0005	<b>3</b>	<b>7</b>	--	--	--
		15		--	<1	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
	MW-6	5	5/18/1988	--	<1	<0.0005	<0.005	<0.005	<0.005	--	--	--
		10		--	<b>310</b>	<0.0005	<b>2</b>	<b>4</b>	<b>18</b>	--	--	--
	MW-7	5	5/18/1988	--	<1	<0.0005	<0.005	<0.005	<0.005	--	--	--
		10		--	<1	<0.0005	<0.005	<0.005	<0.005	--	--	--
	MW-8	5	5/19/1988	--	<b>2</b>	<0.0005	<0.005	<0.005	<0.005	--	--	--
10		--		<b>5</b>	<0.0005	<0.005	<0.005	<0.005	--	--	--	

**Table 2**  
**Historical Soil Analytical Data**  
9757 San Leandro Street  
Oakland, CA

Consultant	Sample ID	Depth (feet bgs)	Date Collected	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	MO (mg/kg)	TOG (mg/kg)
HLA	SB-1	6.5	8/3/1989	--	<10	<0.005	<b>0.03</b>	<0.005	<0.005	--	--	--
		10.5		--	<b>400</b>	<b>1.9</b>	<b>1.4</b>	<b>4.1</b>	<b>11</b>	--	--	--
	SB-2	6.5	8/3/1989	--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--
		9.5		--	<b>34</b>	<b>0.14</b>	<b>0.2</b>	<b>0.27</b>	<b>0.43</b>	--	--	--
		16		--	<b>140</b>	<b>0.67</b>	<b>0.79</b>	<b>1.3</b>	<b>4.9</b>	--	--	--
	SB-3	6.5	8/3/1989	--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--
		9.5		--	<b>130</b>	<b>0.9</b>	<0.100	<b>1.5</b>	<b>3.4</b>	--	--	--
		15.5		--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--
	SB-4	5.5	8/3/1989	--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--
		10.5		--	<b>300</b>	<b>3.3</b>	<b>0.42</b>	<b>8.2</b>	<b>12</b>	--	--	--
		15.5		--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--
	SB-5	5.5	8/3/1989	--	<10	<b>0.047</b>	<0.005	<0.005	<0.005	--	--	--
		10.5		--	<b>470</b>	<b>1.9</b>	<b>0.58</b>	<b>7.2</b>	<b>22</b>	--	--	--
		15.5		--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--
	SB-6	5.5	10/5/1989	--	<10	<b>0.018</b>	<b>0.023</b>	<b>0.008</b>	<b>0.027</b>	--	--	--
		10.5		--	<b>270</b>	<b>2.0</b>	<b>0.9</b>	<b>1.6</b>	<b>3.8</b>	--	--	--
		15.5		--	<10	<b>0.033</b>	<b>0.034</b>	<b>0.0055</b>	<b>0.026</b>	--	--	--
	MW-9	6.5	8/4/1989	--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--
		12.5		--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--
	MW-10	6.5	8/4/1989	--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--
12.5		--		<10	<0.005	<0.005	<0.005	<0.005	--	--	--	

**Table 2**  
**Historical Soil Analytical Data**  
 9757 San Leandro Street  
 Oakland, CA

Consultant	Sample ID	Depth (feet bgs)	Date Collected	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	MO (mg/kg)	TOG (mg/kg)
GTI	SB-1	5	4/2/1996	--	--	--	--	--	--	--	--	--
		10		--	400	1.4	0.44	8.9	28	--	--	78
		15		--	--	--	--	--	--	--	--	--
	SB-2	5	4/1/1996	--	--	--	--	--	--	--	--	--
		10		--	51	0.18	0.12	0.79	0.59	--	--	24
	SB-3	5	4/1/1996	--	--	--	--	--	--	--	--	--
		10		--	190	0.54	0.66	2.3	3.3	--	--	35
		15		--	--	--	--	--	--	--	--	--
	SB-4	5	4/1/1996	--	--	--	--	--	--	--	--	--
		10		--	170 <sup>1</sup>	0.59	0.52	0.14	1.1	--	--	940
		15		--	20 <sup>1</sup>	0.091	0.036	0.029	0.23	--	--	--
	SB-5	5	4/1/1996	--	--	--	--	--	--	--	--	--
		10		--	300	2.4	1.4	10	4.2	--	--	--
		15		--	--	--	--	--	--	--	--	--
	SB-6	5	4/4/1996	--	--	--	--	--	--	--	--	--
		10		--	330 <sup>1</sup>	0.57	<0.0050	0.42	2.3	--	--	--
		15		--	--	--	--	--	--	--	--	--
	SB-7	5	4/1/1996	--	880	2.2	0.58	7.7	7.9	--	--	--
		10		--	500	1.3	1.6	7.0	27	--	--	--
		15		--	--	--	--	--	--	--	--	--
	SB-8	5	4/4/1996	--	110 <sup>1</sup>	1.6	<0.0050	<0.0050	0.79	--	--	--
		10		--	240 <sup>1</sup>	4.6	1.1	0.76	2.1	--	--	--
		15		--	2.1 <sup>2</sup>	0.0054	<0.0050	<0.0050	0.042	--	--	--
	SB-9	5	4/1/1996	--	67	0.60	0.16	0.14	0.82	--	--	--
		10		--	--	--	--	--	--	--	--	--
		15		--	610	3.8	7.4	17	69	--	--	--
	SB-10	5	4/4/1996	--	450	3.7	8.9	9.9	53	--	--	--
		10		--	1,300	99	40	150	210	--	--	--
		15		--	<1.0	0.010	0.0051	<0.0050	0.016	--	--	--

**Table 2**  
**Historical Soil Analytical Data**  
9757 San Leandro Street  
Oakland, CA

Consultant	Sample ID	Depth (feet bgs)	Date Collected	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	MO (mg/kg)	TOG (mg/kg)
GTI	SB-11	5	4/4/1996	--	7.5 <sup>1</sup>	0.012	0.040	0.019	0.056	--	--	--
		10		--	550	1.5	<0.0050	9.7	3.2	--	--	--
		15		--	--	--	--	--	--	--	--	--
	SB-12	5	4/3/1996	--	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--
		10		--	750	1.1	4.1	19	85	--	--	--
		15		--	--	--	--	--	--	--	--	--
	SB-13	5	4/3/1996	--	--	--	--	--	--	--	--	--
		10		--	340	1.6	0.81	7.4	24	--	--	--
	SB-14	5	4/4/1996	--	17 <sup>1</sup>	0.066	0.050	0.097	0.067	--	--	--
		10		--	820	5.0	28	16	82	--	--	--
	SB-15	5	4/3/1996	--	2.1 <sup>1</sup>	0.011	0.0060	<0.0050	0.15	--	--	--
		10		--	1,800	17	68	53	260	--	--	--
	SB-16	5	4/3/1996	--	1.9	0.15	<0.0050	0.0069	0.026	--	--	--
		10		--	760	6.2	1.8	28	76	--	--	--
	SB-17	5	4/3/1996	--	--	--	--	--	--	--	--	--
		10		--	1,600	4.3	15	38	150	--	--	--
	SB-18	5	4/4/1996	--	--	--	--	--	--	--	--	--
		10		--	480	5.9	4.5	2.0	5.4	--	--	--
	SB-19	5	4/3/1996	--	--	--	--	--	--	--	--	--
		10		--	220	2.3	<0.0050	1.1	1.5	--	--	--
	SB-20	5	4/3/1996	--	--	--	--	--	--	--	--	--
		10		--	510	3.8	1.5	17	39	--	--	--
	SB-21	5	4/2/1996	--	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--
SB-22	5	4/2/1996	--	3.1 <sup>1</sup>	0.027	0.0091	0.020	0.015	--	--	--	
	10		--	110	0.72	0.47	4.7	0.39	--	--	--	
SB-23	5	4/2/1996	--	--	--	--	--	--	--	--	--	
	10		--	140	3.4	2.9	0.86	4.6	--	--	--	

**Table 2**  
**Historical Soil Analytical Data**  
 9757 San Leandro Street  
 Oakland, CA

Consultant	Sample ID	Depth (feet bgs)	Date Collected	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	MO (mg/kg)	TOG (mg/kg)
CRA	VP-1	5	6/24/2010	--	<1.0	<0.0005	<0.001	<0.001	<0.001	--	--	--
	VP-2	6	6/24/2010	--	<b>230</b>	<0.047	<0.094	<0.094	<0.094	--	--	--
	VP-3	6	6/24/2010	--	<b>100</b>	<b>0.14</b>	<0.047	<b>0.52</b>	<b>0.14</b>	--	--	--
	VP-4	6	6/24/2010	--	<b>100</b>	<b>0.033</b>	<0.050	<0.050	<b>0.074</b>	--	--	--
	VP-5	5	6/24/2010	--	<1.0	<0.0005	<0.001	<0.001	<0.001	--	--	--
ESLs <sup>(1)</sup>				<b>240</b>	<b>100</b>	<b>0.044</b>	<b>2.9</b>	<b>1.4</b>	<b>2.3</b>	<b>0.023</b>	<b>100</b>	<b>100</b>

**Notes:**

(1) California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.

**Bold** text denotes detected concentrations.

Detected concentrations above ESLs are noted in **blue/bold** text

**Abbreviations:**

feet bgs = feet below ground surface

mg/kg = milligrams per kilogram

ND = not detected

-- = not analyzed

NS = no standard

TPH-DRO = total petroleum hydrocarbons as diesel range organics

TPH-GRO = total petroleum hydrocarbons as gasoline range organics

MtBE = methyl tertiary-butyl ether

MO = motor oil

TOG = total oil and grease

1 = Laboratory report indicates gasoline and unidentified hydrocarbons >C8

2 = Unidentified hydrocarbons >C8

**Table 3**  
**Soil Analytical Results**  
**Polyaromatic Hydrocarbons (PAH)**  
9757 San Leandro Street  
Oakland, California

			US EPA Method 8270C-SIM															
Sample ID	Depth Interval (feet bgs)	Date Collected	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo[a] anthracene (mg/kg)	Benzo[b] fluoranthene (mg/kg)	Benzo[k] fluoranthene (mg/kg)	Benzo[a] pyrene (mg/kg)	Benzo[g,h,i] perylene (mg/kg)	Chrysene (mg/kg)	Dibenz [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)
SB-24	2.5	7/29/2015	<b>0.00077</b>	<b>0.00067</b>	<b>0.00051</b>	<b>0.0010</b>	<b>0.0085</b>	<b>0.0012</b>	<0.00066	<b>0.0010</b>	<b>0.0076</b>	<0.00066	<b>0.0047</b>	<b>0.00095</b>	<b>0.0011</b>	<b>0.0031</b>	<b>0.0039</b>	<b>0.0019</b>
	5	7/29/2015	<0.00067	<0.00033	<0.00033	<0.00067	<b>0.0011</b>	<0.00067	<0.00067	<0.00067	<b>0.00046</b>	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067
	7.5	7/29/2015	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066
	10	7/29/2015	<b>0.0021</b>	<b>0.0015</b>	<b>0.0011</b>	<b>0.00094</b>	<0.00066	<0.00066	<0.00066	<b>0.00073</b>	<b>0.00080</b>	<0.00066	<b>0.0020</b>	<b>0.0037</b>	<0.00066	<b>0.0065</b>	<b>0.0078</b>	<b>0.0019</b>
	12.5	7/29/2015	<0.00066	<0.00033	<b>0.00056</b>	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<b>0.00043</b>	<0.00066	<b>0.00085</b>	<0.00066	<0.00066	<b>0.0023</b>	<b>0.0012</b>	<b>0.0011</b>
	15	7/29/2015	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<b>0.0011</b>	<0.00066	<0.00066
	20	7/29/2015	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<b>0.0020</b>	<0.00066	<0.00066
<b>ESLs <sup>(1)</sup></b>			<b>16</b>	<b>13</b>	<b>2.8</b>	<b>0.7</b>	<b>0.7</b>	<b>2.6</b>	<b>0.07</b>	<b>2.5</b>	<b>3.8</b>	<b>0.07</b>	<b>60</b>	<b>8.9</b>	<b>0.7</b>	<b>0.023</b>	<b>11</b>	<b>85</b>

**Notes:**  
Highlighted columns represent the seven carcinogenic PAHs as identified by the US EPA and used for evaluation of Direct Contact and Outdoor Air Exposure Criteria in the LTCF for a Commercial/Industrial property.  
**Bold** font denotes detected value. **Bold/blue** font denotes detected value equal to or above RWQCB ESLs.

(1) California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.

**Abbreviations:**  
bgs = below ground surface  
ESLs = Environmental Screening Levels  
mg/kg = milligrams per kilogram  
US EPA = United States Environmental Protection Agency  
< = compound was not detected at or above the detection limit shown.

**Table 4**  
**Soil Analytical Results - Metals**  
 9757 San Leandro Street  
 Oakland, California

			US EPA Method 6010B				
Sample ID	Depth Interval (feet bgs)	Date Collected	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
SB-24	2.5	7/29/2015	<b>0.173</b>	<b>49.2</b>	<b>9.0</b>	<b>51.7</b>	<b>53</b>
	5	7/29/2015	<b>0.0608</b>	<b>50.4</b>	<b>7.99</b>	<b>47.5</b>	<b>51.1</b>
	7.5	7/29/2015	<b>0.101</b>	<b>38.9</b>	<b>6.57</b>	<b>43.6</b>	<b>39.1</b>
	10	7/29/2015	<b>0.138</b>	<b>56.7</b>	<b>8.46</b>	<b>62.7</b>	<b>59.4</b>
	12.5	7/29/2015	<0.0422	<b>60.9</b>	<b>7.29</b>	<b>47.8</b>	<b>55.8</b>
	15	7/29/2015	<0.0422	<b>43.7</b>	<b>5.74</b>	<b>32.6</b>	<b>35.4</b>
	20	7/29/2015	<b>0.128</b>	<b>43.6</b>	<b>6.96</b>	<b>48.6</b>	<b>44.3</b>
<b>ESLs <sup>(1)</sup></b>			<b>0.00006</b>	<b>NE</b>	<b>80</b>	<b>150</b>	<b>23000</b>

**Notes:**

**Bold** font denotes detected value. **Bold/blue** font denotes detected value equal to or above RWQCB ESLs.

(1) California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.

**Abbreviations:**

bgs = below ground surface

ESLs = Environmental Screening Levels

mg/kg = milligrams per kilogram

US EPA = United States Environmental Protection Agency

NE = ESL not established



**Table 5**  
**Grab Groundwater Analytical Results**  
 9757 San Leandro Street  
 Oakland, California

Sample ID	Date Collected	US EPA Method 8015B		US EPA METHOD 8260						
		TPH-ORO w/ silica gel (µg/L)	TPH-DRO w/ silica gel (µg/L)	TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes <sup>(1)</sup> (µg/L)	MtBE (µg/L)	Naphthalene (µg/L)
SB-24	7/30/2015	92	78	300	<0.5	<0.5	12	0.8	<0.5	2
SB-25	7/29/2015	410	1,100	14,000	430	36	350	980	<3	110
SB-26	7/30/2015	1,800	420	1,400	25	2	22	7	<0.5	10
SB-27	7/29/2015	710	750	4,400	30	5	11	10	0.9	4
SB-28	7/28/2015	<49	610	4,100	2	0.6	110	76	<0.5	42
SB-29	7/28/2015	<47	180	200	<0.5	<0.5	<0.5	<0.5	<0.5	<1
SB-30	7/27/2015	<48	250	620	<0.5	<0.5	<0.5	<0.5	<0.5	<1
SB-31	7/27/2015	<48	320	1,000	<0.5	<0.5	<0.5	<0.5	<0.5	<1
SB-32	7/28/2015	7,600	4,300	240	<0.5	0.7	<0.5	2	0.9	1
SB-33	7/28/2015	<48	210	960	3	<0.5	24	0.7	<0.5	17
SB-34	7/30/2015	73	150	1,100	3	1	42	6	<0.5	8
<b>ESLs<sup>(2)</sup></b>		<b>NE<sup>(3)</sup></b>	<b>100</b>	<b>100</b>	<b>1.0</b>	<b>40</b>	<b>13</b>	<b>20</b>	<b>5.0</b>	<b>0.12</b>

**Notes:**

(1) Total xylenes is the sum of ortho-, meta-, and para-xylenes.

(2) California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.

(3) Per California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs, TPH motor oil is not soluble. TPH motor oil detections in water most likely are petroleum degradates or less likely NAPL. If the detections are degradates, add TPH motor oil and TPH diesel results and compare to TPH diesel criterion.

**Bold** font denotes detected value. **Blue** font denotes detected value equal to or above RWQCB ESLs .

**Abbreviations:**

bgs = below ground surface

ESLs = Environmental Screening Levels

(µg/L) = micrograms per liter

TPH-DRO = total petroleum hydrocarbons as Diesel range organics (C<sub>10</sub>-C<sub>28</sub> reported as total purgeable petroleum hydrocarbons)

TPH-GRO = total petroleum hydrocarbons as gasoline range organics (C<sub>6</sub>-C<sub>12</sub> reported as total purgeable petroleum hydrocarbons)

TPH-ORO = total petroleum hydrocarbons as oil range organics (C<sub>18</sub>-C<sub>40</sub> reported as total purgeable petroleum hydrocarbons)

MtBE = methyl tertiary-butyl ether

NE = ESL not established

US EPA = United States Environmental Protection Agency

< = compound was not detected at or above the detection limit shown.

**Table 6**  
**Historical Grab Groundwater Analytical Data**  
 9757 San Leandro Street  
 Oakland, CA

Consultant	Sample ID	Date Collected	TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
Fluor Daniel	SB-11	4/4/1996	<b>5,100</b>	<b>210</b>	<b>97</b>	<b>180</b>	<b>400</b>
	SB-19	4/3/1996	<b>2,300<sup>1</sup></b>	<b>170</b>	<b>30</b>	<b>21</b>	<b>34</b>
	SB-22	4/2/1996	<b>19,000<sup>2</sup></b>	<b>400</b>	<0.50	<b>110</b>	<b>77</b>
ESLs <sup>(1)</sup>			<b>100</b>	<b>1.0</b>	<b>40</b>	<b>13</b>	<b>20</b>

**Notes:**

(1) California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.

**Bold** text denotes detected concentrations.

Detected concentrations above ESLs are noted in **blue/bold** text.

**Abbreviations:**

µg/L = micrograms per liter

< = not detected

TPH-GRO = total petroleum hydrocarbons as gasoline range organics.

1 = Laboratory report indicates gasoline and unidentified hydrocarbons <C7

2 = Laboratory report indicates gasoline and unidentified hydrocarbons >C8

**Table 7**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, California

WELL ID/ DATE	TOC (ff.)	DTW (ff.)	GWE (msl)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)	TDS (µg/L)
Groundwater ESL or SMCL (TDS only)				100	100	1	40	13	20	5	500,000
<b>MW-2</b>											
09/23/11	21.31	9.78	11.53	--	180	<0.5	<0.5	0.6	0.6	0.6	--
12/29/11	21.31	9.73	11.58	--	100	<0.5	<0.5	0.7	0.9	<0.5	--
03/30/12	21.31	8.02	13.29	--	180	<0.5	<0.5	2	4	<0.5	--
06/12/12	21.31	9.58	11.73	--	99	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/27/12	21.31	9.81	11.50	--	93	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/13/13	21.31	9.52	11.79	--	110	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/17/13	21.31	9.96	11.35	--	94	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/21/14	21.31	9.35	11.96	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
09/11/14	21.31	9.93	11.38	--	99	<0.5	<0.5	<0.5	<0.5	--	--
03/10/15	21.31	9.30	12.01	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
08/24/15	21.31	9.97	11.34	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
<b>03/11/16</b>	<b>21.31</b>	<b>6.28</b>	<b>15.03</b>	<b>&lt;50</b>	<b>25</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>--</b>	<b>480,000</b>
<b>MW-5</b>											
09/23/11	21.84	9.85	11.99	--	190	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/29/11	21.84	9.91	11.93	--	180	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/30/12	21.84	7.92	13.92	--	190	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/12/12	21.84	9.65	12.19	--	260	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/27/12	21.84	9.83	12.01	--	230	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/13/13	21.84	9.55	12.29	--	200	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/17/13	21.84	9.93	11.91	--	140	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/21/14	21.84	9.41	12.43	--	100	<0.5	<0.5	<0.5	<0.5	--	--
09/11/14	21.84	9.94	11.90	--	150	<0.5	<0.5	<0.5	<0.5	--	--
03/10/15	21.84	9.36	12.48	--	120	<0.5	<0.5	<0.5	<0.5	--	--
08/24/15	21.84	10.04	11.80	--	260	<0.5	<0.5	<0.5	<0.5	--	--
<b>03/11/16</b>	<b>21.84</b>	<b>6.27</b>	<b>15.57</b>	<b>&lt;50</b>	<b>230</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>--</b>	<b>469,000</b>
<b>MW-6</b>											
09/23/11	21.71	9.99	11.72	--	<22	<0.5	<0.5	<0.5	<0.5	0.7	--
12/29/11	21.71	9.93	11.78	--	<22	<0.5	<0.5	<0.5	<0.5	0.6	--
03/30/12	21.71	8.00	13.71	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/12/12	21.71	9.76	11.95	--	66	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/27/12	21.71	9.93	11.78	--	27	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/13/13	21.71	9.70	12.01	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/17/13	21.71	10.06	11.65	--	34	<0.5	<0.5	<0.5	<0.5	<0.5	--

**Table 7**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, California

WELL ID/ DATE	TOC (ff.)	DTW (ff.)	GWE (msl)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)	TDS (µg/L)
Groundwater ESL or SMCL (TDS only)				100	100	1	40	13	20	5	500,000
<b>MW-6 (cont)</b>											
03/21/14	21.71	9.38	12.33	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
09/11/14	21.71	10.07	11.64	--	<b>52</b>	<0.5	<0.5	<0.5	<0.5	--	--
03/10/15	21.71	9.47	12.24	--	<b>28</b>	<0.5	<0.5	<0.5	<0.5	--	--
08/24/15	21.71	10.15	11.56	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
<b>03/11/16</b>	<b>21.71</b>	<b>6.39</b>	<b>15.32</b>	<b>&lt;50</b>	<b>31</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>--</b>	<b>487,000</b>
<b>MW-8</b>											
09/23/11	21.84	10.15	11.69	--	<b>1,900</b>	<b>55</b>	<b>2</b>	<b>10</b>	<b>8</b>	<0.5	--
12/29/11	21.84	10.10	11.74	--	<b>1,300</b>	<b>31</b>	<b>1</b>	<b>5</b>	<b>5</b>	<0.5	--
03/30/12	21.84	8.12	13.72	--	<b>2,200</b>	<b>65</b>	<b>3</b>	<b>20</b>	<b>14</b>	<0.5	--
06/12/12	21.84	9.90	11.94	--	<b>2,300</b>	<b>49</b>	<b>2</b>	<b>14</b>	<b>14</b>	<0.5	--
09/27/12	21.84	10.12	11.72	--	<b>1,900</b>	<b>43</b>	<b>2</b>	<b>10</b>	<b>8</b>	<0.5	--
03/13/13	21.84	9.86	11.98	--	<b>1,400</b>	<b>31</b>	<b>1</b>	<b>7</b>	<b>5</b>	<0.5	--
09/17/13	21.84	10.34	11.50	--	<b>2,100</b>	<b>60</b>	<b>2</b>	<b>11</b>	<b>9</b>	<0.5	--
03/21/14	21.84	9.49	12.35	--	<b>270</b>	<b>2</b>	<0.5	<0.5	<b>0.6</b>	--	--
09/11/14	21.84	10.22	11.62	--	<b>3,000</b>	<b>44</b>	<b>2</b>	<b>13</b>	<b>8</b>	--	--
03/10/15	21.84	9.61	12.23	--	<b>1,500</b>	<b>36</b>	<b>1</b>	<b>5</b>	<b>6</b>	--	--
08/24/15	21.84	10.33	11.51	--	<b>2,700</b>	<b>39</b>	<b>2</b>	<b>5</b>	<b>7</b>	--	--
<b>03/11/16</b>	<b>21.84</b>	<b>6.48</b>	<b>15.36</b>	<b>210</b>	<b>1,500</b>	<b>27</b>	<b>1</b>	<b>4</b>	<b>5</b>	<b>--</b>	<b>465,000</b>
<b>MW-9</b>											
09/23/11	20.55	9.30	11.25	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/29/11	20.55	9.51	11.04	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/30/12	20.55	7.52	13.03	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/12/12	20.55	9.14	11.41	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/27/12	20.55	9.24	11.31	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/13/13	20.55	9.07	11.48	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/17/13	20.55	9.51	11.04	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/21/14	20.55	8.87	11.68	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
09/11/14	20.55	9.43	11.12	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
03/10/15	20.55	8.10	12.45	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
08/24/15	20.55	9.53	11.02	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
<b>03/11/16</b>	<b>20.55</b>	<b>5.80</b>	<b>14.75</b>	<b>&lt;50</b>	<b>&lt;22</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>--</b>	<b>489,000</b>

**Table 7**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, California

WELL ID/ DATE	TOC (ff.)	DTW (ff.)	GWE (msl)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)	TDS (µg/L)
Groundwater ESL or SMCL (TDS only)				100	100	1	40	13	20	5	500,000

**TRIP BLANK**

**QA**

09/23/11	--	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/29/11	--	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/30/12	--	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/12/12	--	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/27/12	--	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/13/13	--	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/17/13	--	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/21/14	--	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
09/11/14	--	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
03/10/15	--	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
08/24/15	--	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	--	--
<b>03/11/16</b>	--	--	--	--	<b>&lt;22</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	--	--

**Table 7**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron-Branded Service Station 91723  
9757 San Leandro Street, Oakland, California

---

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**EXPLANATIONS:**

Current groundwater monitoring data provided by Gettler-Ryan Inc. Current laboratory analytical results provided by Eurofins Lancaster Laboratories.

TOC = Top of Casing (ft.) = Feet	TPH-GRO = Total Petroleum Hydrocarbons as Gasoline Range Organics TPH-DRO = Total Petroleum Hydrocarbons as Diesel Range Organics	MtBE = Methyl tertiary-butyl ether TDS = total dissolved solids
DTW = Depth to Water	B = Benzene	(µg/L) = Micrograms per liter
GWE = Groundwater Elevation (msl) = Mean Sea Level	T = Toluene E = Ethylbenzene X = Xylenes	-- = Not Measured/Not Analyzed QA = Quality Assurance/Trip Blank

ESL = California Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Level.  
Update to Environmental Screening Levels. February 22, 2016. Tier 1 ESLs.

SMCL = Secondary Maximum Contaminant Level for public water supplies, California Code of Regulation, Title 22, Division 4, Environmental Health, Chapter 15, Domestic Water Quality and Monitoring Regulations, Article 6, Secondary Water Standards.

**Bold** font denotes detected value. **Bold/blue** font denotes detected value above ESLs or SMCL (TDS only).

<sup>1</sup> With silica gel cleanup. Laboratory report indicates the reverse surrogate, capric acid, is present at <1%.

**Table 8**  
**Groundwater Analytical Results - Halogenated Volatile Organic Compounds**  
 Former Chevron-Branded Service Station 91723  
 9757 San Leandro Street, Oakland, California

WELL ID/ DATE	1,1-DCA (µg/L)	1,1-DCE (µg/L)	cis -1,2-DCE (µg/L)
<b>Groundwater ESL</b>	<b>5</b>	<b>3.2</b>	<b>6</b>
<b>MW-2</b>			
03/10/15	<0.5	<0.5	<0.5
<b>MW-5</b>			
03/10/15	<0.5	<0.5	<0.5
<b>MW-6</b>			
03/10/15	<0.5	<0.5	<0.5
<b>MW-8</b>			
03/10/15	<0.5	<0.5	<0.5
<b>MW-9</b>			
03/10/15	<b>1</b>	<b>0.7</b>	<b>0.6</b>

**EXPLANATIONS:**

Current groundwater monitoring data provided by Gettler-Ryan Inc.  
 Current laboratory analytical results provided by Eurofins Lancaster Laboratories.

1,1-DCA = 1,1-Dichloroethane  
 1,1-DCE = 1,1-Dichloroethene  
 cis -1,2-DCE = cis -1,2-Dichloroethene  
 (µg/L) = Micrograms per liter

ESL = California Regional Water Quality Control Board - San Francisco Bay Region  
 Environmental Screening Level. "Update to Environmental Screening Levels."  
 February 22, 2016. Tier 1 ESLs.

**Bold** font denotes detected value.

**Bold/blue** font denotes detected value above ESLs.



**Table 9**  
**Vapor Analytical Results**  
 9757 San Leandro Street  
 Oakland, California

			US EPA Method TO-15 Full Scan									
Sample ID	Vapor Probe Depth (feet bgs)	Date Collected	TPH-GRO ( $\mu\text{g}/\text{m}^3$ )	Benzene ( $\mu\text{g}/\text{m}^3$ )	Toluene ( $\mu\text{g}/\text{m}^3$ )	Ethylbenzene ( $\mu\text{g}/\text{m}^3$ )	Total Xylenes <sup>(1)</sup> ( $\mu\text{g}/\text{m}^3$ )	Naphthalene ( $\mu\text{g}/\text{m}^3$ )	Carbon Dioxide (%)	Oxygen (%)	Methane (%)	Helium (%)
VP-1	6	7/31/2015	<b>65,000,000</b>	<4,100	<4,900	<5,600	<5,600	<27,000	<b>29</b>	<b>1.6</b>	<b>13</b>	<0.13
VP-2	6	7/31/2015	<b>70,000,000</b>	<b>4,800</b>	<4,600	<5,300	<5,300	<26,000	<b>22</b>	<b>1.3</b>	<b>29</b>	<0.12
VP-3	6	7/31/2015	<b>94,000,000</b>	<b>120,000</b>	<5,400	<b>22,000</b>	<5,400	<26,000	<b>22</b>	<b>1</b>	<b>42</b>	<0.12
VP-4	6	7/31/2015	<b>61,000,000</b>	<b>7,600</b>	<4,300	<4,900	<5,000	<24,000	<b>27</b>	<b>0.94</b>	<b>40</b>	<0.11
VP-5	6	7/31/2015	<b>53,000,000</b>	<3,600	<4,200	<4,900	<4,900	<23,000	<b>28</b>	<b>0.78</b>	<b>25</b>	<0.11
DUP	6	7/31/2015	<b>70,000,000</b>	<b>4,200</b>	<4,800	<5,500	<5,500	<27,000	<b>30</b>	<b>1</b>	<b>13</b>	<0.13
<b>ESLs<sup>(2)</sup></b>			<b>50,000</b>	<b>48</b>	<b>160,000</b>	<b>560</b>	<b>52,000</b>	<b>41</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

**Notes:**

(1) Total xylenes is the sum of ortho-, meta-, and para-xylenes.

(2) California Regional Water Quality Control Board, San Francisco Bay Region, "Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.

**Bold** font denotes detected value. **Bold/blue** font denotes detected value equal to or above RWQCB ESLs.

**Abbreviations:**

< = compound was not detected at or above the detection limit shown.

US EPA = United States Environmental Protection Agency

bgs = below ground surface

ESLs = Environmental Screening Levels

( $\mu\text{g}/\text{m}^3$ ) = micrograms per cubic meter

TPH-GRO = total petroleum hydrocarbons as gasoline range organics (C<sub>4</sub>-C<sub>12</sub> reported as total purgeable petroleum hydrocarbons)

**Table 10**  
**Historical Soil Vapor Sample Analytical Results**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street  
Oakland, California

Boring/ Sample ID	Sample Depth (feet bgs)	Sample Date	TPH-GRO ( $\mu\text{g}/\text{m}^3$ )	Benzene ( $\mu\text{g}/\text{m}^3$ )	Toluene ( $\mu\text{g}/\text{m}^3$ )	Ethylbenzene ( $\mu\text{g}/\text{m}^3$ )	Total Xylenes <sup>(1)</sup> ( $\mu\text{g}/\text{m}^3$ )	Oxygen (%)	Carbon dioxide (%)	Helium (%)
SV-1	3	10/06/97	--	<b>307</b>	<b>19</b>	<b>26.9</b>	<b>83.3</b>	--	--	--
SV-1	5	10/06/97	--	<b>1,309</b>	<b>17.3</b>	<b>1,129</b>	<b>122.8</b>	--	--	--
SV-2	3	10/06/97	--	<b>3,098</b>	<b>45</b>	<b>825</b>	<b>2,135</b>	--	--	--
SV-2	5	10/06/97	--	<b>1,341</b>	<b>22.6</b>	<b>521</b>	<b>1,241</b>	--	--	--
SV-2	8	10/06/97	--	<b>9,899</b>	<b>4,520</b>	<b>12,588</b>	<b>53,818</b>	--	--	--
SV-3	3	10/06/97	--	<b>15.6</b>	<b>21.1</b>	<b>27.8</b>	<b>126.7</b>	--	--	--
SV-3	5	10/06/97	--	<b>11.5</b>	<b>7.9</b>	<b>11.7</b>	<b>52.9</b>	--	--	--
SV-4	3	10/06/97	--	<b>5.7</b>	<b>18.1</b>	<b>26.0</b>	<b>136.3</b>	--	--	--
SV-4	5	10/06/97	--	<b>6.4</b>	<b>38</b>	<b>26.0</b>	<b>131.1</b>	--	--	--
SV-5 <sup>(2)</sup>	5	10/06/97	--	<b>319,338</b>	<b>5,650</b>	<b>19,967</b>	<b>5,208</b>	--	--	--
SV-6 <sup>(3)</sup>	5	10/06/97	--	<b>1,852</b>	<b>452</b>	<b>2,127</b>	<b>13,802</b>	--	--	--
VP-1	5.25-5.75	06/29/10	<b>26,000,000</b>	<b>3,700</b>	<3,200	<3,600	<3,600	<b>6.2</b>	<b>15</b>	<0.13
VP-2	5.25-5.75	06/29/10	<b>89,000,000</b>	<b>11,000</b>	<2,500	<2,900	<2,900	<b>0.84</b>	<b>21</b>	<0.13
VP-3	5.25-5.75	06/29/10	<b>88,000,000</b>	<b>540,000</b>	<b>1,700</b>	<b>26,000</b>	<b>3,700</b>	<b>2.9</b>	<b>14</b>	<0.13
VP-4	5.25-5.75	06/29/10	<b>53,000,000</b>	<b>22,000</b>	<2,900	<3,400	<3,400	<b>2.4</b>	<b>13</b>	<0.12
VP-5	5.25-5.75	06/29/10	<b>37,000,000</b>	<b>4,100</b>	<2,700	<3,100	<3,100	<b>2.3</b>	<b>18</b>	<0.14
<b>ESLs<sup>(4)</sup></b>			<b>50,000</b>	<b>48</b>	<b>160,000</b>	<b>560</b>	<b>52,000</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>

**Notes:**

(1) Total xylenes is the sum of m,p-xylene and o-xylene. If either m,p-xylene and o-xylene was non-detect, the detected value was used.

If both were non-detect, the highest detection limit was used.

(2) This sample was collected to verify results from boring SV-1.

(3) This sample was collected to verify results from boring SV-2.

(4) California Regional Water Quality Control Board, San Francisco Bay Region.

"Update to Environmental Screening Levels." February 22, 2016. Tier 1 ESLs.

**Bold** text denotes detected concentrations. **Bold/blue** text denotes detected concentrations above ESLs.

**Abbreviations:**

bgs = below ground surface

TPH-GRO = total petroleum hydrocarbons as gasoline range organics

$\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

-- = not measured/not analyzed

NS = no standard

ESL = Environmental Screening Level

**Table 11**  
**Well Receptor Details**

Former Chevron-branded Service Station 91723  
9757 San Leandro Street  
Oakland, California

Map ID	State Well ID	Well Owner ID	Well Address	Distance from Site <sup>(1)</sup> (feet)	Direction from Site <sup>(1)</sup>	Use	Installation Date
1	2S3W22P2	P2	801 98th Ave.	100	SW (Down-gradient)	Industrial; Closed-in-place	04/09/48
2	2S3W22K	--	98th Ave. and San Leandro St.	195	NE (Up-gradient)	Industrial	01/11/67
3	2S3W22P3	P3	801 98th Ave.	220	W-NW (Cross-Gradient)	Industrial; Destroyed	--
4	2S3W22K8	--	930 98th Ave.	435	NE (Up-gradient)	Industrial	01/91
5	2S3W22L3	--	921 98th Ave.	590	N (Cross-gradient)	Industrial	09/18/54
6	2S3W22Q1	--	9957 Medford Ave.	765	ESE (Cross-gradient)	Industrial	07/27/56
7	2S3W22J1,J2	--	9957 Medford Ave.	765	ESE (Cross-gradient)	Industrial	46

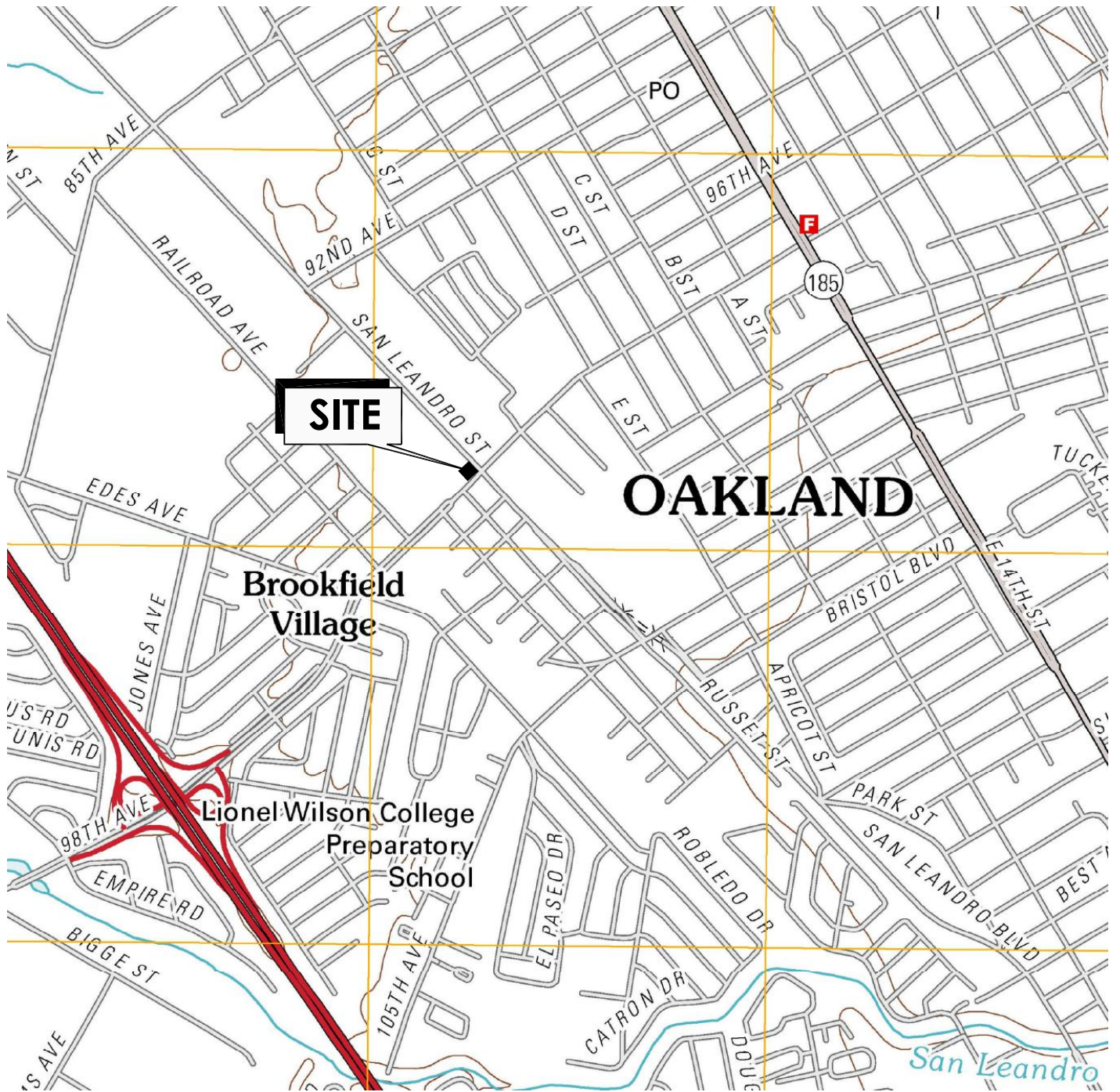
**Notes:**

(1) Approximate distance and direction determined from well location address and/or drawings on boring logs, where available, and Google Earth® images.

**Abbreviations:**

-- = information not available  
bgs = below ground surface

## **FIGURES**



CALIFORNIA



SCALE IN MILES



SCALE IN FEET

REFERENCE: USGS 7.5 MINUTE QUADRANGLE;  
SAN LEANDRO, CALIFORNIA; 2012



15575 Los Gatos Blvd, Building C  
Los Gatos, CA 95032  
Phone: (408)356-6124 Fax: (408)356-6138

FOR:  
FORMER CHEVRON-BRANDED  
SERVICE STATION 91723  
9757 SAN LEANDRO STREET  
OAKLAND, CALIFORNIA

SITE LOCATION MAP

FIGURE:

1

JOB NUMBER:  
211602332

DRAWN BY:  
JRO

CHECKED BY:  
EEO

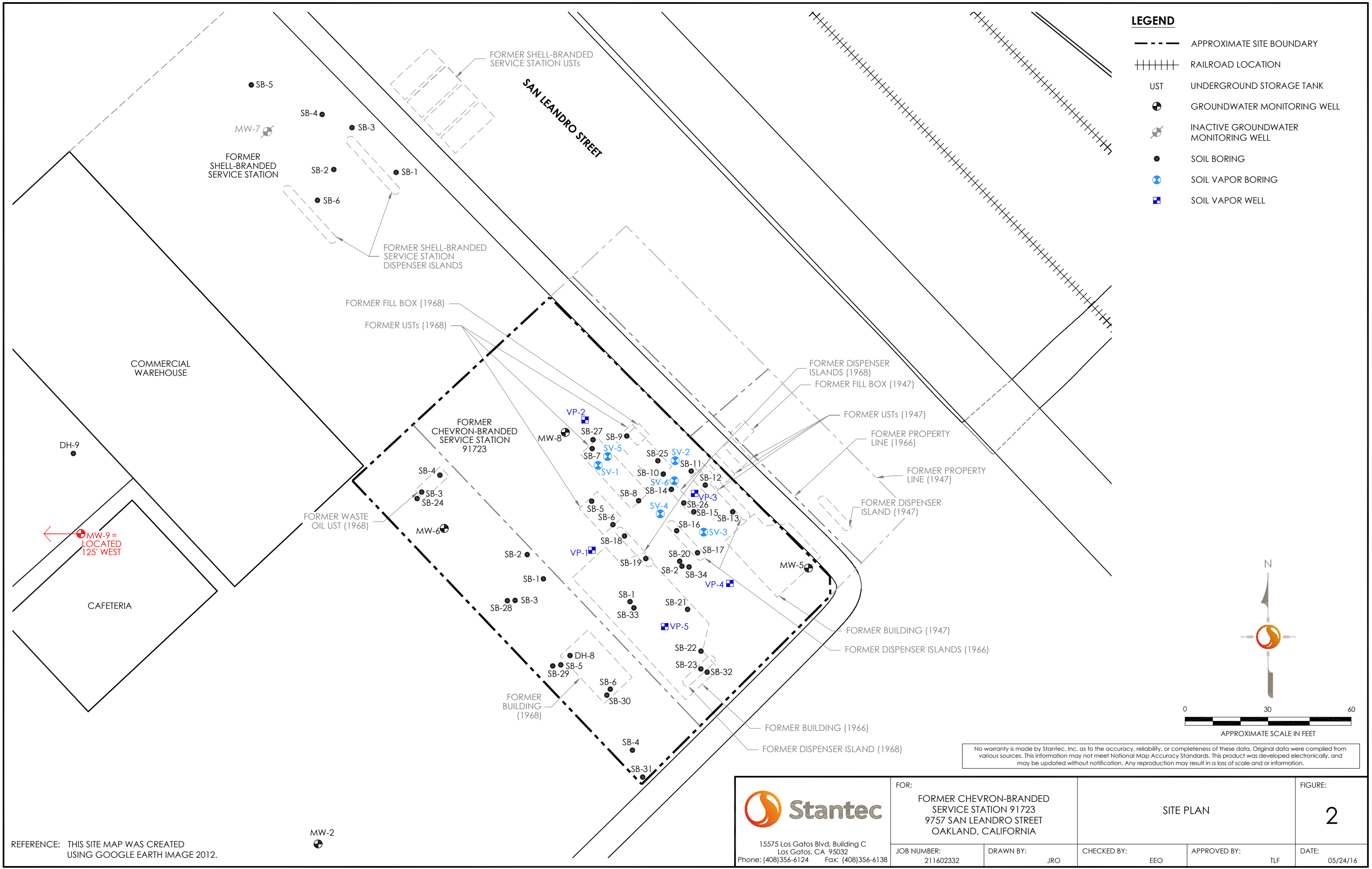
APPROVED BY:  
TLF

DATE:  
05/24/16

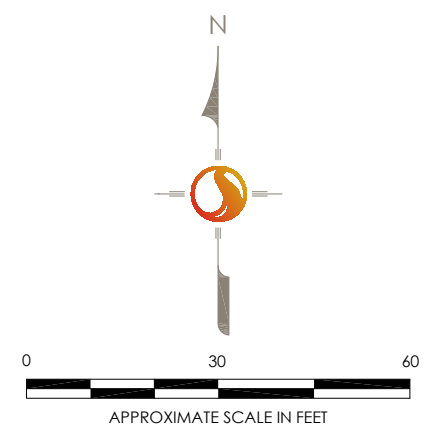


**LEGEND**

- APPROXIMATE SITE BOUNDARY
- ++++ RAILROAD LOCATION
- UST UNDERGROUND STORAGE TANK
- ⊕ GROUNDWATER MONITORING WELL
- ⊖ INACTIVE GROUNDWATER MONITORING WELL
- SOIL BORING
- ⊗ SOIL VAPOR BORING
- ⊠ SOIL VAPOR WELL



MW-9 = LOCATED 125' WEST


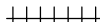











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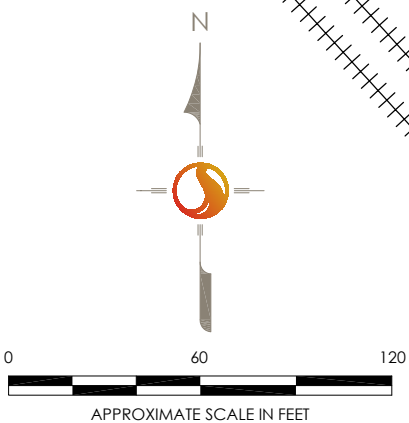
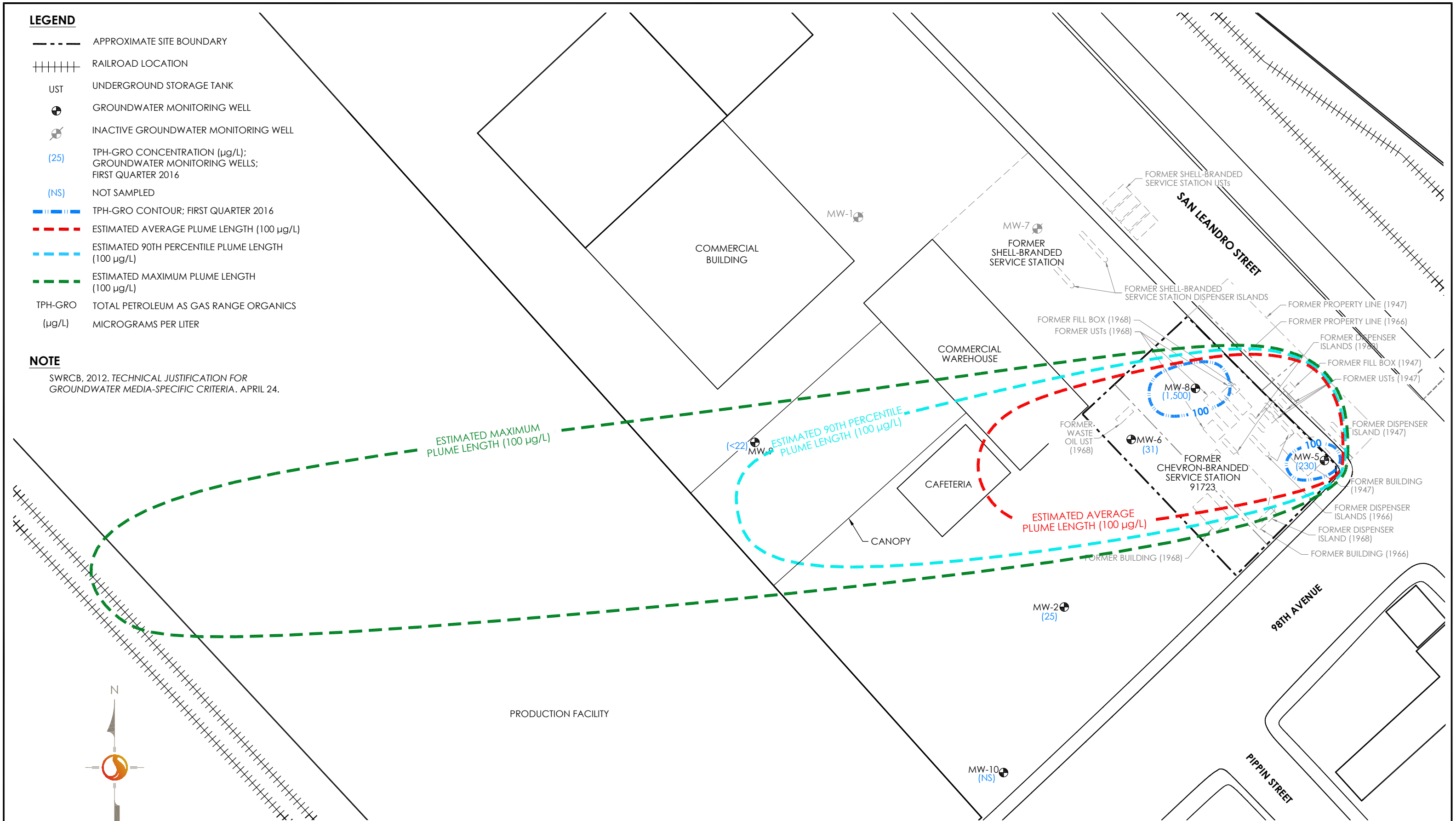
<p>15575 Los Gatos Blvd, Building C Los Gatos, CA 95032 Phone: (408)356-6124 Fax: (408)356-6138</p>	FOR: <b>FORMER CHEVRON-BRANDED SERVICE STATION 91723</b> 9757 SAN LEANDRO STREET OAKLAND, CALIFORNIA		SITE PLAN		2
	JOB NUMBER: 211602332	DRAWN BY: JRO	CHECKED BY: EEO	APPROVED BY: TLF	DATE: 05/24/16

**LEGEND**

-  APPROXIMATE SITE BOUNDARY
-  RAILROAD LOCATION
-  UST
-  GROUNDWATER MONITORING WELL
-  INACTIVE GROUNDWATER MONITORING WELL
-  (25) TPH-GRO CONCENTRATION (µg/L); GROUNDWATER MONITORING WELLS; FIRST QUARTER 2016
-  (NS) NOT SAMPLED
-  TPH-GRO CONTOUR; FIRST QUARTER 2016
-  ESTIMATED AVERAGE PLUME LENGTH (100 µg/L)
-  ESTIMATED 90TH PERCENTILE PLUME LENGTH (100 µg/L)
-  ESTIMATED MAXIMUM PLUME LENGTH (100 µg/L)
- TPH-GRO TOTAL PETROLEUM AS GAS RANGE ORGANICS (µg/L) MICROGRAMS PER LITER

**NOTE**

SWRCB, 2012. TECHNICAL JUSTIFICATION FOR GROUNDWATER MEDIA-SPECIFIC CRITERIA. APRIL 24.



REFERENCE: THIS SITE MAP WAS CREATED USING GOOGLE EARTH IMAGE 2012.

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	JOB NUMBER: 211602332	DRAWN BY: JRO	CHECKED BY: EEO	APPROVED BY: TLF	DATE: 05/24/16

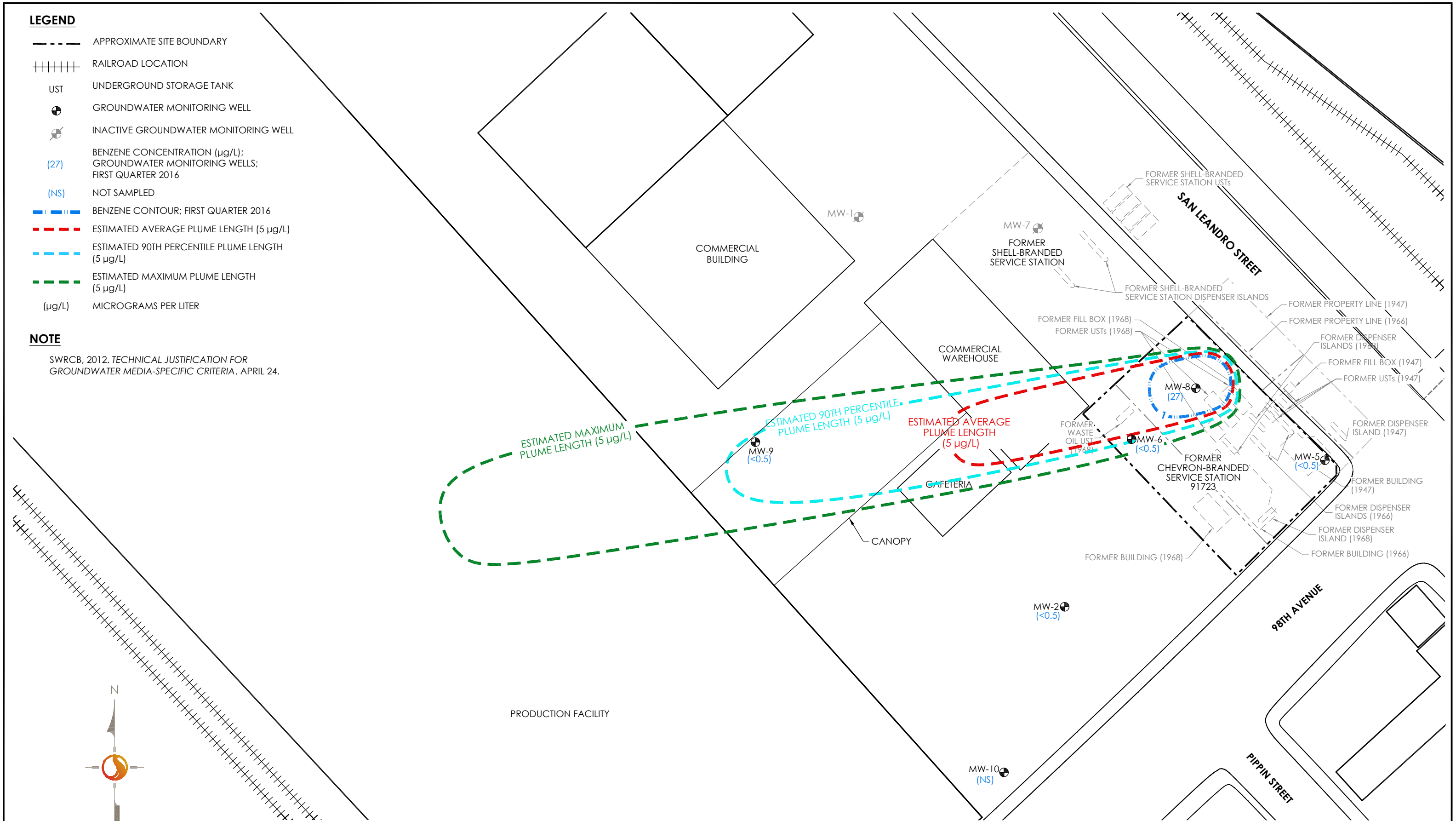


**LEGEND**

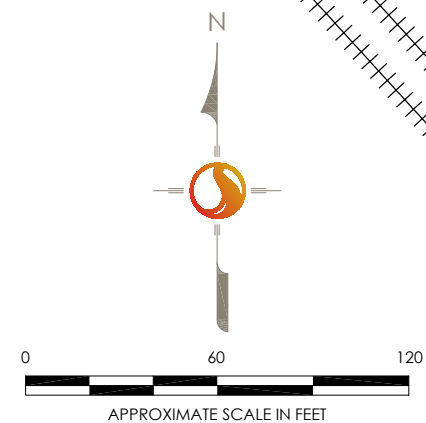
- APPROXIMATE SITE BOUNDARY
- ++++ RAILROAD LOCATION
- UST UNDERGROUND STORAGE TANK
- ⊕ GROUNDWATER MONITORING WELL
- ⊖ INACTIVE GROUNDWATER MONITORING WELL
- (27) BENZENE CONCENTRATION (µg/L); GROUNDWATER MONITORING WELLS; FIRST QUARTER 2016
- (NS) NOT SAMPLED
- ||| BENZENE CONTOUR; FIRST QUARTER 2016
- - - ESTIMATED AVERAGE PLUME LENGTH (5 µg/L)
- - - ESTIMATED 90TH PERCENTILE PLUME LENGTH (5 µg/L)
- - - ESTIMATED MAXIMUM PLUME LENGTH (5 µg/L)
- (µg/L) MICROGRAMS PER LITER

**NOTE**

SWRCB, 2012. TECHNICAL JUSTIFICATION FOR GROUNDWATER MEDIA-SPECIFIC CRITERIA. APRIL 24.



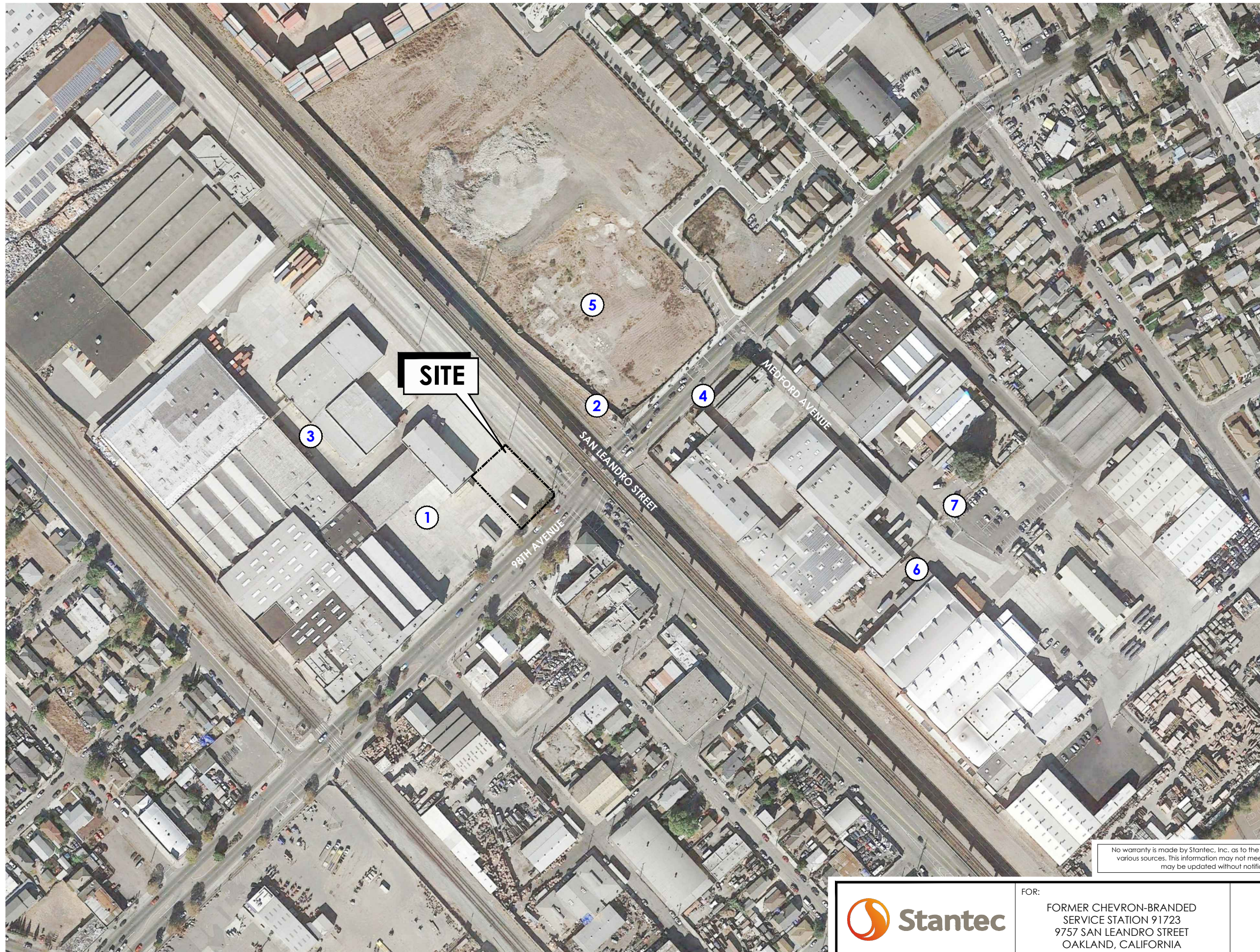
REFERENCE: THIS SITE MAP WAS CREATED USING GOOGLE EARTH IMAGE 2012.



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	JOB NUMBER: 211602332	DRAWN BY: JRO	CHECKED BY: EEO	APPROVED BY: TLF





**LEGEND**

--- APPROXIMATE SITE BOUNDARY

**WATER SUPPLY WELLS**

- 1 INDUSTRIAL WELL (P-2)
- 2 INDUSTRIAL WELL
- 3 INDUSTRIAL WELL (P-3)
- 4 INDUSTRIAL WELL
- 5 INDUSTRIAL WELL
- 6 INDUSTRIAL WELL
- 7 INDUSTRIAL WELL

**NOTE**


PER THE VERSAR, INC. WELL CLOSURE REPORT, DATED APRIL 23, 2014. WELL P-2 HAS BEEN CLOSED-IN-PLACE AND WELL P-3 HAS BEEN DESTROYED BY PRESSURE GROUTING.



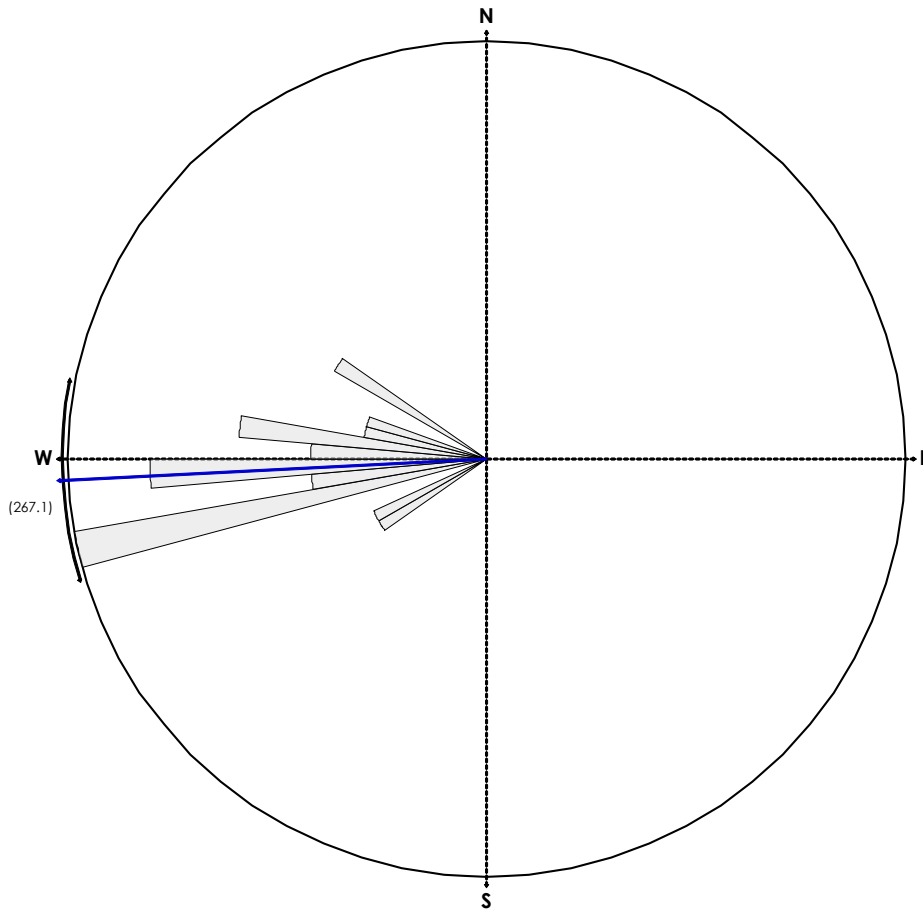
APPROXIMATE SCALE IN FEET

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REFERENCE: THIS SITE MAP WAS CREATED USING GOOGLE EARTH IMAGE 2015.

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	JOB NUMBER: 211602332	DRAWN BY: JRO	CHECKED BY: EEO	APPROVED BY: TLF	DATE: 05/24/16



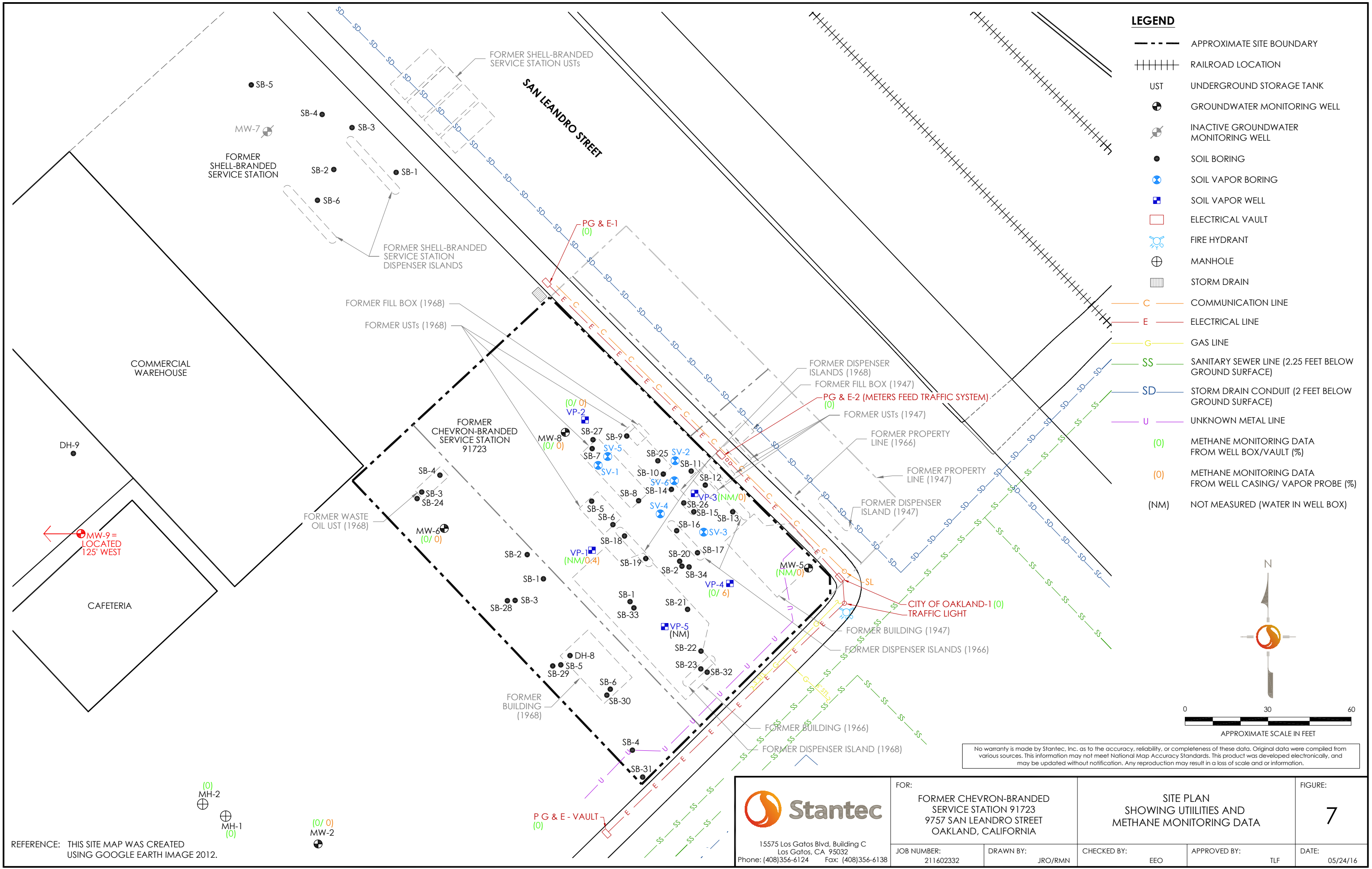


EQUAL AREA PLOT

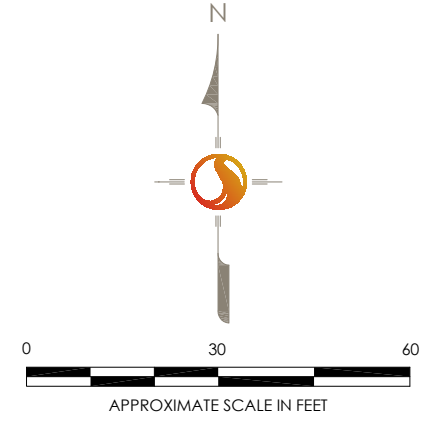
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 Vector Mean 267.12  
 Vector Magnitude 31.05  
 Consistency Ratio 0.97

NOTE: ROSE DIAGRAM IS BASED ON THE DIRECTION OF GROUNDWATER FLOW BEGINNING THIRD QUARTER 1988. DIRECTIONS OF GROUNDWATER FLOW WERE NOT INCLUDED FOR EVENTS WHERE THE GROUNDWATER FLOW DIRECTION VARIED.

 15575 Los Gatos Blvd, Building C Los Gatos, CA 95032 Phone: (408)356-6124 Fax: (408)356-6138	FOR: FORMER CHEVRON-BRANDED SERVICE STATION 91723 9757 SAN LEANDRO STREET OAKLAND, CALIFORNIA		GROUNDWATER FLOW DIRECTION ROSE DIAGRAM - FIRST QUARTER 2016		FIGURE: 6
	JOB NUMBER: 211602332	DRAWN BY: JRO	CHECKED BY: EEO	APPROVED BY: TLF	DATE: 05/24/16

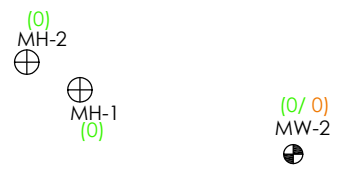


- LEGEND**
- APPROXIMATE SITE BOUNDARY
  - ++++ RAILROAD LOCATION
  - UST UNDERGROUND STORAGE TANK
  - ⊕ GROUNDWATER MONITORING WELL
  - ⊖ INACTIVE GROUNDWATER MONITORING WELL
  - SOIL BORING
  - ⊗ SOIL VAPOR BORING
  - ⊕ SOIL VAPOR WELL
  - ELECTRICAL VAULT
  - ⊕ FIRE HYDRANT
  - ⊕ MANHOLE
  - ▨ STORM DRAIN
  - C COMMUNICATION LINE
  - E ELECTRICAL LINE
  - G GAS LINE
  - SS SANITARY SEWER LINE (2.25 FEET BELOW GROUND SURFACE)
  - SD STORM DRAIN CONDUIT (2 FEET BELOW GROUND SURFACE)
  - U UNKNOWN METAL LINE
  - (0) METHANE MONITORING DATA FROM WELL BOX/VAULT (%)
  - (0) METHANE MONITORING DATA FROM WELL CASING/ VAPOR PROBE (%)
  - (NM) NOT MEASURED (WATER IN WELL BOX)



No warranty is made by Stantec, Inc. as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and/or information.

REFERENCE: THIS SITE MAP WAS CREATED USING GOOGLE EARTH IMAGE 2012.



<p>15575 Los Gatos Blvd, Building C Los Gatos, CA 95032 Phone: (408)356-6124 Fax: (408)356-6138</p>	<p>FOR: FORMER CHEVRON-BRANDED SERVICE STATION 91723 9757 SAN LEANDRO STREET OAKLAND, CALIFORNIA</p>	<p>SITE PLAN SHOWING UTILITIES AND METHANE MONITORING DATA</p>		<p>FIGURE: <b>7</b></p>
	<p>JOB NUMBER: 211602332</p>	<p>DRAWN BY: JRO/RMN</p>	<p>CHECKED BY: EEO</p>	<p>APPROVED BY: TLF</p>

**ATTACHMENT A**  
**ACEH Correspondence**

ALAMEDA COUNTY  
**HEALTH CARE SERVICES**  
AGENCY  
ALEX BRISCOE, Agency Director



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

December 11, 2015

Ms. Carryl MacLeod  
Chevron Environmental Management Company  
6101 Bollinger Canyon Road  
San Ramon, CA 94583  
(sent via email to [CMacleod@chevron.com](mailto:CMacleod@chevron.com))

9401 San Leandro LP  
104 Caledonia Street  
Sausalito, CA 94965

Linda Hothem Trust  
c/o Mr. Jan Greban  
Greiben & Associates  
1332 Anacapa Street  
Suite 110  
Santa Barbara, CA 93101  
(sent via email to  
[Jan@greibenlaw.com](mailto:Jan@greibenlaw.com))

Mr. Francis Meynard  
Pacific American Group  
104 Caledonia Street  
Sausalito, CA 94965  
(sent via email to  
[FMeynard@pacamgroup.com](mailto:FMeynard@pacamgroup.com))

Ms. Gene Kida  
Gerber Products  
12 Vreeland Road  
Fiorham Park, NJ 07932

Subject: Request for Work Plan and HVOC Groundwater Analysis; Fuel Leak Case No. RO0000412 and Geotracker Global ID T0600101789, Chevron #9-1723; 9757 San Leandro Street, Oakland, CA 94603

Dear Ladies and Gentlemen:

Alameda County Environmental Health (ACEH) staff has reviewed the case file including the *Site Investigation Report*, and the *Third Quarter 2015, Semi-Annual Groundwater Monitoring Report*, both dated October 16, 2015. The documents were prepared and submitted on your behalf to ACEH and Geotracker by Stantec Consulting Services, Inc (Stantec). The referenced investigation report documented the installation of soil bores SB-24 to SB-34, and the resampling of existing vapor wells VP-1 to VP-5 at the site. Thank you for undertaking the work and submitting the reports. They provide further details regarding the site and will help move the case towards closure.

Utilizing the new data presented in the referenced reports, ACEH has re-evaluated site data to determine if the site is eligible for closure as a low risk site under the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP). Based on the review, ACEH determined that the site additionally meets the Media-Specific Criteria for Direct Contact. ACEH has again determined that the site continues to fail to meet the LTCP General Criteria b (Petroleum Release Only), LTCP General Criteria f (Secondary Source Removal), and the Media-Specific Criteria for Groundwater, and the Media-Specific Criteria for Vapor Intrusion to Indoor Air.

Based on ACEH staff review of the case file, we request that you address the following technical comments and send us the reports described below.

### **TECHNICAL COMMENTS**

1. **LTCP Re-Evaluation** – To provide further details in regards to the LTCP re-evaluation conducted by ACEH the following analysis is provided.
  - a. **LTCP General Criteria b (Unauthorized Release Consists Only of Petroleum)** – The presence at the site of a first generation waste oil UST is not clear; however, the detection of Halogenated Volatile Organic Compounds (HVOCs) downgradient of well MW-8 (secondary gradient on to adjacent former Shell service station) has indicated that HVOC contamination may be located at the subject site. As previously requested, and as previously stated would occur in work plan addendum

responses (February 2015), ACEH requests the collection of HVOC groundwater analytical data from the site well network, on a minimum of a one-time basis.

- b. General Criteria f – Secondary Source Has Been Removed to the Extent Practicable** – At a minimum, secondary source appears to be present at the former dispenser islands characterized by soil bores SB-26 and SB-32. At the location of SB-26, elevated soil analytical concentrations as shallow as 2.5 feet below grade surface (bgs) are present (1,300 milligrams per kilogram [mg/kg] Total Petroleum Hydrocarbons as gasoline [TPHg], and benzene at 1.4 mg/kg at 2.5 feet bgs). Additionally, the laboratory noted the presence of “fuel” in the sample extract for sample SB-26-S-12.5, thus also indicating the presence of free phase product (FP) in soil at the location at a minimum.

The extent of secondary source, if any, at presumed former first generation offsite infrastructure locations has not been determined.

- c. LTCP Media Specific Criteria for Groundwater** – The referenced investigation report indicates that groundwater is not significantly affected by residual soil contamination as indicated by groundwater concentrations in existing site wells; however, ACEH remains concerned with the extent of plume delineation at the site. Grab groundwater collected at the locations of SB-28 and SB-31 appear to indicate elevated concentrations of TPHg of up to 4,100 micrograms per liter ( $\mu\text{g}/\text{l}$ ) at the downgradient property line that appear to bypass the existing well network (between MW-2, with a slightly submerged screen, and well MW-9).

Additionally, an elevated grab groundwater TPHg concentration in soil bore SB-31, and an elevated grab groundwater TPH as diesel (TPHd) concentration in soil bore SB-32, suggests that the extent of soil or groundwater contamination associated with the former service station is not understood or defined to the southeast of the site along 98<sup>th</sup> Avenue. This may be of importance due to the presence of an underground storm drain culvert that the Oakland Museum of California has mapped beneath 98<sup>th</sup> Avenue that starts at Pippin Street and 98<sup>th</sup> Avenue and flows to the southwest. The storm drain discharges directly to an open water engineered channel and San Leandro Bay.

The presence of elevated secondary source beneath the former dispenser island that soil bore SB-32 was installed to investigate may, or may not, have biased grab groundwater concentrations at this soil bore; however, limited soil source appears to be present at the location of soil bore SB-31 to account for the elevated grab groundwater concentration at this location. If groundwater flows to the west as indicated in available documents, this location indicates potential contaminated soil to the east and offsite from the property.

To support this LTCP criterion, ACEH additionally requests that the results of the recent well survey be plotted on a figure in order to allow ACEH to quickly determine the location of vicinity privately owned water supply wells. This is requested to include all wells not documented to have been destroyed under permit (such as well P2, located within 100 feet of the property, and other deep water supply wells that have been reported for the immediate vicinity of the site), cathodic protection wells, or other deep well structures. It is not necessary to plot relatively shallow monitoring wells or other shallow vertical structures. Please be aware that well construction details are still considered private, but are in the process of being opened to the public; however, locations and addresses are not considered private.

- d. LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air** – The referenced report documented soil vapor concentrations, collected at a depth of 5.5 feet bgs, of benzene that ranged between <3,600 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) to 120,000  $\mu\text{g}/\text{m}^3$ , ethylbenzene, between <4,900 and 22,000  $\mu\text{g}/\text{m}^3$ , naphthalene between <24,000 and <27,000  $\mu\text{g}/\text{m}^3$ , and oxygen concentrations that ranged between 0.78 and 1.6 percent (%) beneath the site. The data indicates the site does not meet the LTCP Criteria for a commercial site lacking a bioattenuation zone.

The report also documented carbon dioxide between 22 and 30% (atmospheric concentration is 0.04%) and methane between 13 and 42% (the Lower Explosive Limit [LEL] is approximately 4.4 to 5%, while the Upper Explosive Limit [UEL] is approximately 15%).

At a minimum, these concentrations document the presence of significant vadose zone residual petroleum contamination at the site. The location of the vapor wells do not provide a level of

comfort in regards to immediately adjacent offsite buildings with respect to the potential for petroleum vapor intrusion or explosion hazards. This may affect both the commercial warehouse and cafeteria downgradient of the property line.

Additionally, to ensure open communication between all involved parties, please be aware that the current property owner has verbally indicated that the subject site may be subject to redevelopment, including residential redevelopment; however, has not provided a final determination.

- 2. Data Gap Investigation Work Plan and Focused Site Conceptual Model** – Please prepare a Data Gap Investigation Work Plan to address the technical comments listed above by the date identified below. Please support the scope of work in the Revised Data Gap Investigation Work Plan with a focused SCM and Data Quality Objectives (DQOs) that relate the data collection to each LTCP criteria. For example please clarify which scenario within each Media-Specific Criteria a sampling strategy is intended to apply to.

In order to expedite review, ACEH requests the focused SCM be presented in a tabular format that highlights the major SCM elements and associated data gaps, which need to be addressed to progress the site to case closure under the LTCP. Please sequence activities in the proposed revised data gap investigation scope of work to enable efficient data collection in the fewest mobilizations possible.

- 3. Groundwater Monitoring** – Please continue to conduct semi-annual groundwater monitoring at the site. As requested above, please include, on a minimum of a one-time basis, HVOC compounds in the well network at the site. Please submit semi-annual reports by the dates identified below.

### TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the following specified file naming convention and schedule:

- **February 19, 2016** – Work Plan  
File to be named: RO412\_WP\_R\_yyyy-mm-dd
- **May 20, 2016** – Semi-Annual Groundwater Monitoring  
File to be named: RO412\_GWM\_R\_yyyy-mm-dd
- **November 11, 2016** – Semi-Annual Groundwater Monitoring  
File to be named: RO412\_GWM\_R\_yyyy-mm-dd

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Online case files are available for review at the following website: <http://www.acgov.org/aceh/index.htm>. Additionally, if your email address does not appear on the cover page of this notification, ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

If you have any questions, please call me at 510-567-6876 or send me an email at [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org).

Sincerely,



Digitally signed by Mark Detterman  
DN: cn=Mark Detterman, o=ACEH, ou=ACEH,  
email=mark.detterman@acgov.org, c=US  
Date: 2015.12.11 11:24:33 -08'00'

Mark E. Detterman, PG, CEG  
Senior Hazardous Materials Specialist

Enclosures: Attachment 1 - Responsible Party(ies) Legal Requirements/Obligations & ACEH Electronic Report Upload (ftp) Instructions



Ladies and Gentlemen  
RO0000412  
December 11, 2015, Page 4

cc: Travis Flora, Stantec Consulting Services, Inc., 15575 Los Gatos Blvd, Los Gatos, CA 95032; (sent via email to [travis.flora@stantec.com](mailto:travis.flora@stantec.com))

Peter Krasnoff, West Environmental Services & Technology, Inc, 711 Grand Avenue, Suite 220, San Rafael, CA 94901; (sent via email to [peterk@westenvironmental.com](mailto:peterk@westenvironmental.com))

Dilan Roe (sent via email to [dilan.roe@acgov.org](mailto:dilan.roe@acgov.org))

Mark Detterman (sent via email to [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org))  
Electronic file, GeoTracker

## Attachment 1

### Responsible Party(ies) Legal Requirements / Obligations

#### REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

#### ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.waterboards.ca.gov/water\\_issues/programs/ust/electronic\\_submittal/](http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)).

#### PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

#### PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

#### UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

#### AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>REVISION DATE:</b> May 15, 2014
	<b>ISSUE DATE:</b> July 5, 2005
	<b>PREVIOUS REVISIONS:</b> October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

## REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection.**
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

RO#\_Report Name\_Year-Month-Date (e.g., RO#5555\_WorkPlan\_2005-06-14)

## Submission Instructions

- 1) Obtain User Name and Password
  - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
    - i) Send an e-mail to [deh.loptoxic@acgov.org](mailto:deh.loptoxic@acgov.org)
  - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
  - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
    - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
  - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
  - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
  - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  - a) Send email to [deh.loptoxic@acgov.org](mailto:deh.loptoxic@acgov.org) notify us that you have placed a report on our ftp site.
  - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
  - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
  - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

## Detterman, Mark, Env. Health

---

**From:** Detterman, Mark, Env. Health  
**Sent:** Monday, February 01, 2016 10:35 AM  
**To:** 'Flora, Travis'  
**Cc:** 'MacLeod, Carryl G'  
**Subject:** RE: RO0000412\_CORRES\_2016-01-29  
**Attachments:** RO0000412\_CORRES\_2016-01-29.pdf

Carryl and Travis,  
ACEH has extended the submittal date until April 22, 2016 per your request. It is hoped the meetings with the peer review group and with ACEH, will more quickly identify the path forward for the site.

*Mark Detterman*  
*Senior Hazardous Materials Specialist, PG, CEG*  
*Alameda County Environmental Health*  
*1131 Harbor Bay Parkway*  
*Alameda, CA 94502*  
*Direct: 510.567.6876*  
*Fax: 510.337.9335*  
*Email: [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org)*

*PDF copies of case files can be downloaded at:*

*<http://www.acgov.org/aceh/lop/ust.htm>*

---

**From:** Flora, Travis [<mailto:Travis.Flora@stantec.com>]  
**Sent:** Friday, January 29, 2016 5:41 PM  
**To:** Detterman, Mark, Env. Health  
**Cc:** dehloptoxic, Env. Health  
**Subject:** RO0000412\_CORRES\_2016-01-29

Hi Mark,  
Please see attached extension request that was uploaded to GeoTracker and the ACEH FTP site.

Regards,

**Travis L. Flora**  
Associate Project Manager  
Stantec  
15575 Los Gatos Boulevard Building C Los Gatos CA 95032-2569  
Phone: (408) 827-3876  
Cell: (408) 458-6320  
[Travis.Flora@stantec.com](mailto:Travis.Flora@stantec.com)



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## Flora, Travis

---

**From:** Detterman, Mark, Env. Health <Mark.Detterman@acgov.org>  
**Sent:** Wednesday, April 20, 2016 17:17  
**To:** MacLeod, Carryl G  
**Cc:** Flora, Travis  
**Subject:** RE: RO0412 extension request (Chevron 91723)  
**Attachments:** RO0000412\_CORRES\_2016-04-19.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Carryl and Travis,  
I have extended the due date until June 10, 2016, and updated Geotracker; please use this email to document this change should it be needed.

*Mark Detterman*  
*Senior Hazardous Materials Specialist, PG, CEG*  
*Alameda County Department of Environmental Health*  
*1131 Harbor Bay Parkway*  
*Alameda, CA 94502*  
*Direct: 510.567.6876*  
*Fax: 510.337.9335*  
*Email: mark.detterman@acgov.org*

*PDF copies of case files can be downloaded at:*

*<http://www.acgov.org/aceh/lop/ust.htm>*

---

**From:** Flora, Travis [mailto:Travis.Flora@stantec.com]  
**Sent:** Tuesday, April 19, 2016 3:16 PM  
**To:** Detterman, Mark, Env. Health  
**Cc:** dehloptoxic, Env. Health  
**Subject:** RO0412 extension request (Chevron 91723)

Hi Mark,  
As discussed last week, I just submitted an extension request for RO0412 (attached).

Thanks,

**Travis L. Flora**

Associate Project Manager  
Stantec  
15575 Los Gatos Boulevard Building C Los Gatos CA 95032-2569  
Phone: (408) 827-3876  
Cell: (408) 458-6320  
Travis.Flora@stantec.com

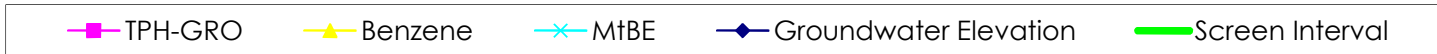
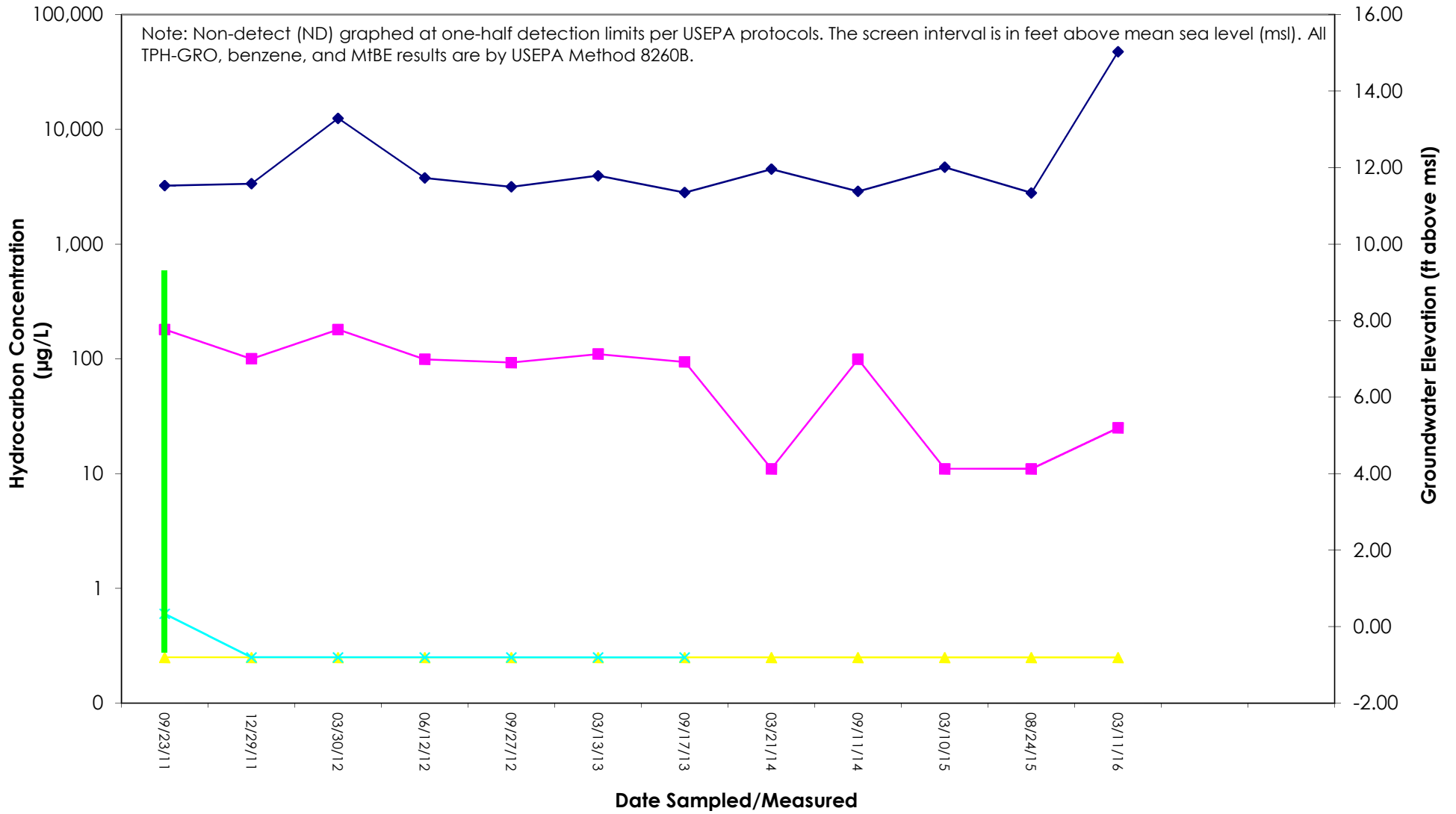


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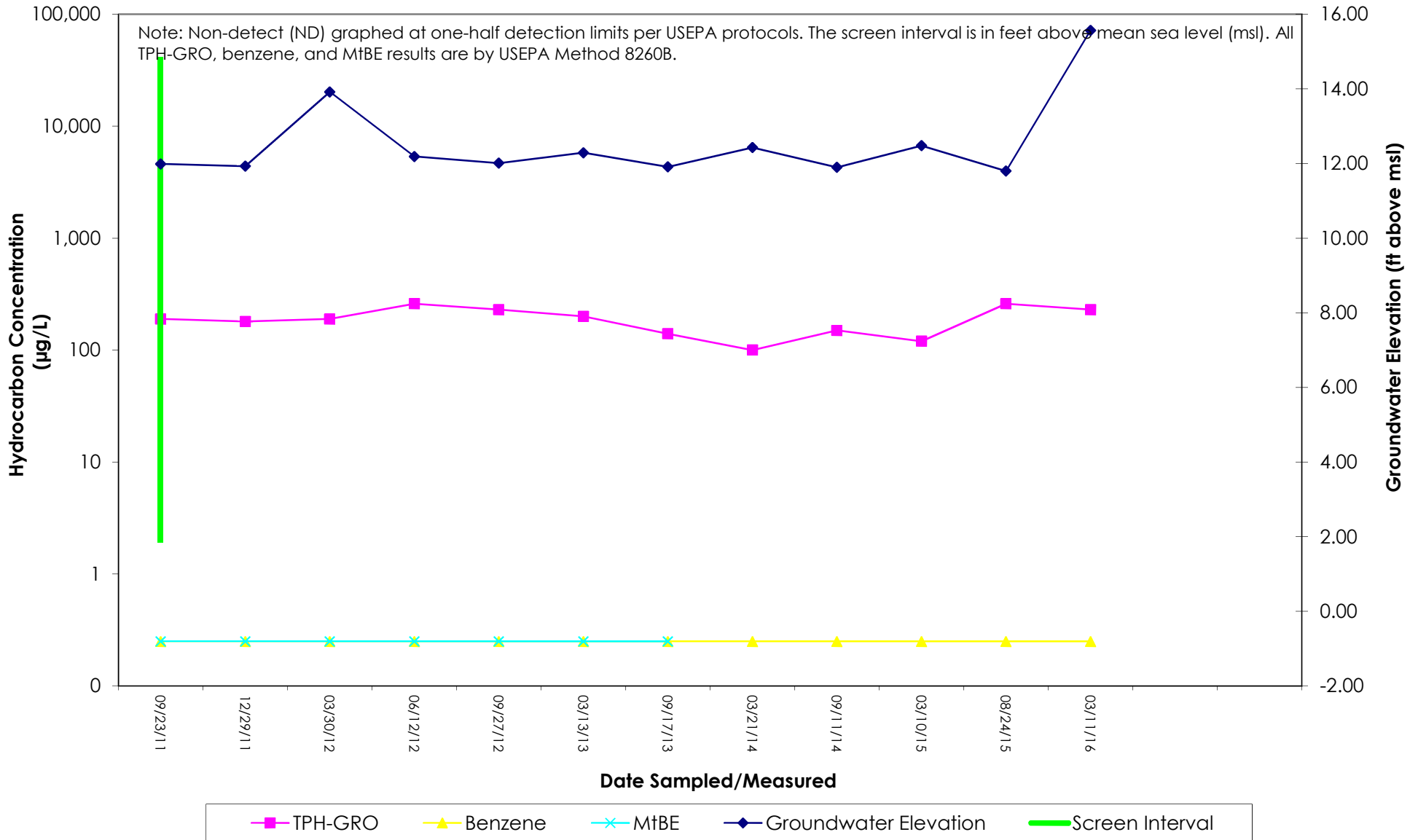
**ATTACHMENT B**  
**Hydrographs**

**MW-2 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time**  
 Former Chevron-branded Service Station 91723  
 9757 San Leandro Street  
 Oakland, California





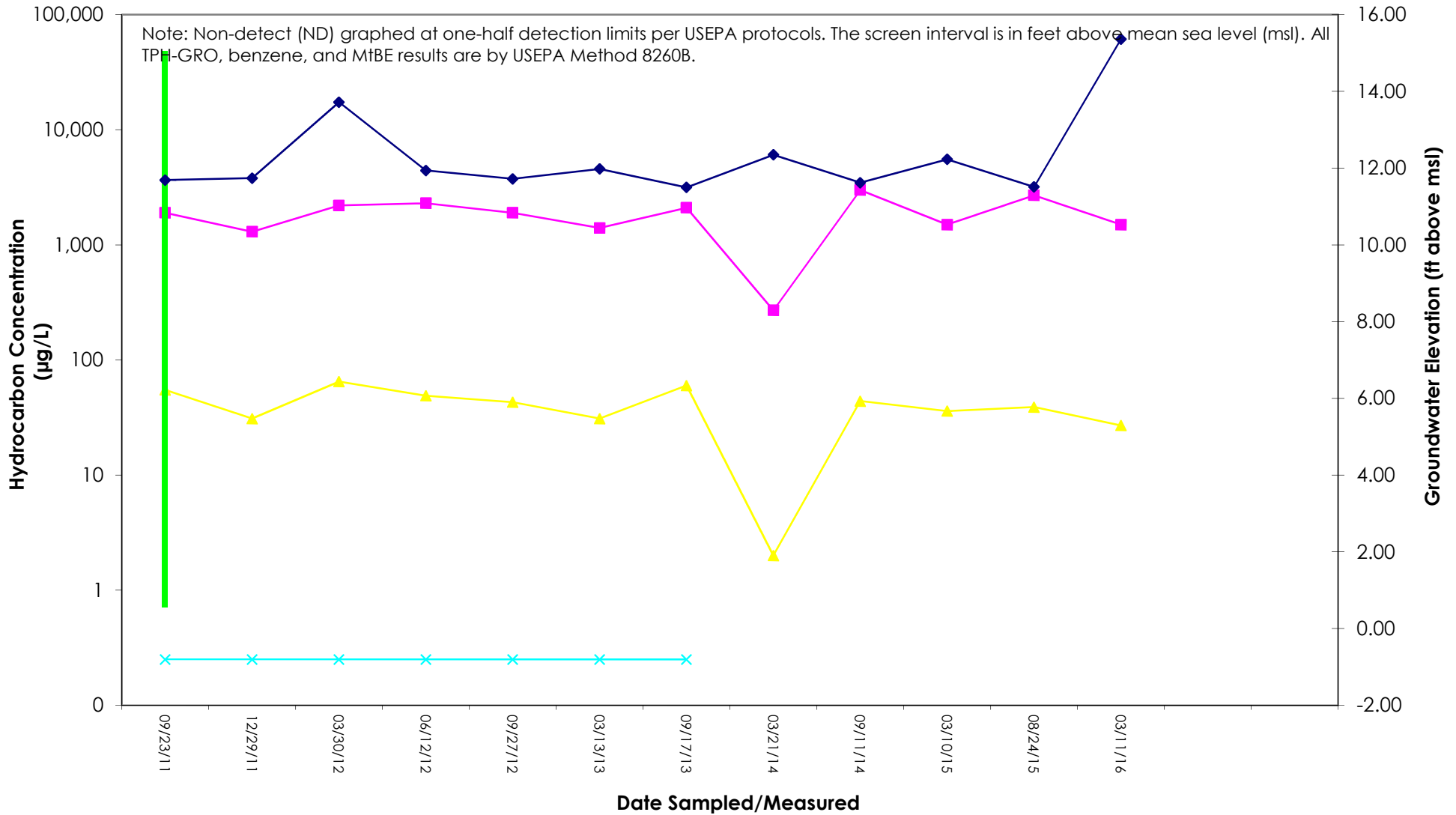
**MW-5 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time**  
 Former Chevron-branded Service Station 91723  
 9757 San Leandro Street  
 Oakland, California



**MW-6 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time**  
 Former Chevron-branded Service Station 91723  
 9757 San Leandro Street  
 Oakland, California



**MW-8 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time**  
 Former Chevron-branded Service Station 91723  
 9757 San Leandro Street  
 Oakland, California

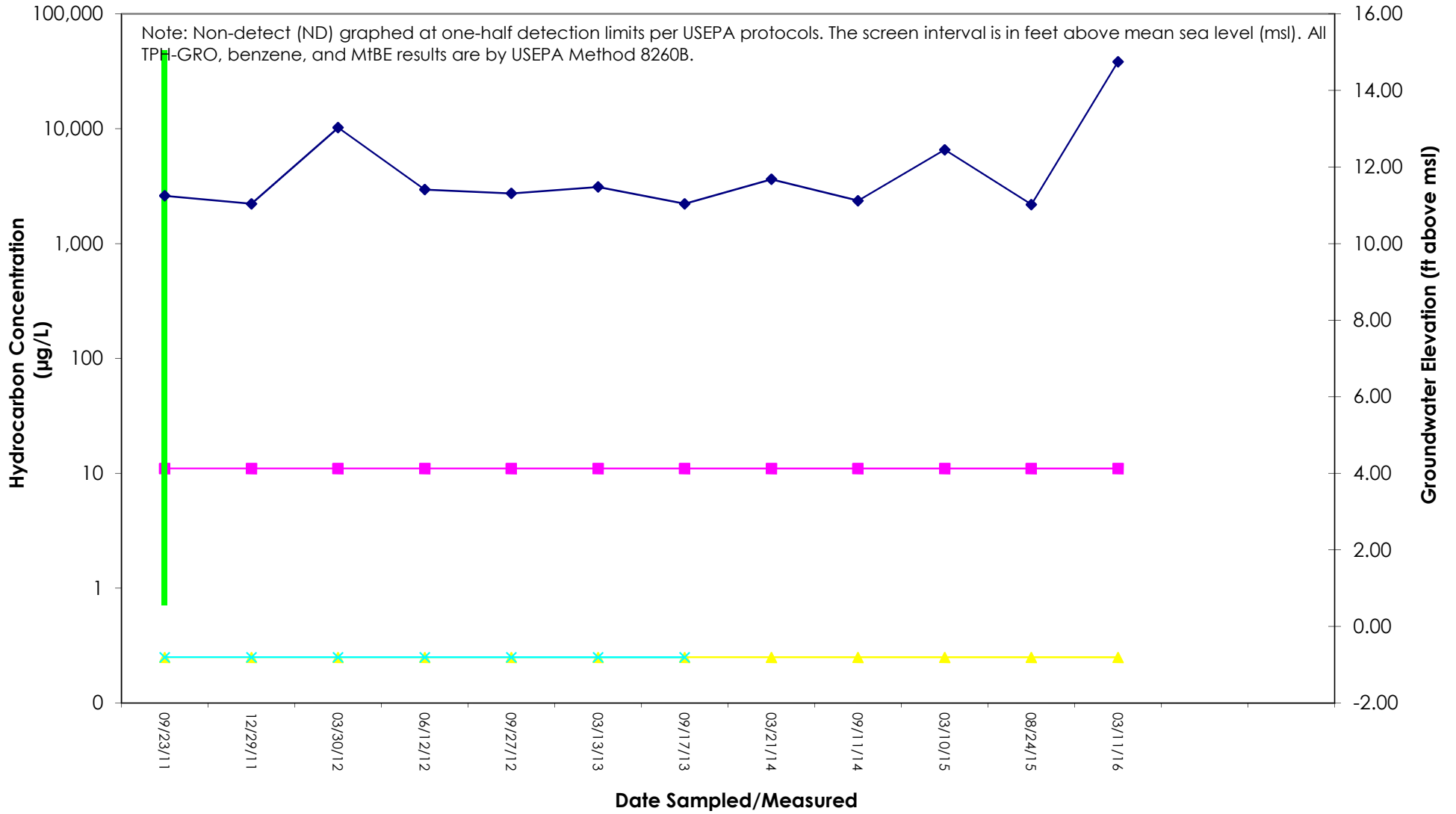


## MW-9 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time

Former Chevron-branded Service Station 91723

9757 San Leandro Street

Oakland, California



**ATTACHMENT C**  
**Focused Site Conceptual Model, dated March 31,**  
**2014**

**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
Geology and Hydrogeology	Regional	9757 San Leandro Street, Oakland, Alameda County, California (the Site) is located within the East Bay Plain Groundwater Basin, which is a subbasin of the Santa Clara Valley Groundwater Basin. The subbasin is comprised chiefly of unconsolidated sediments of Quaternary age with a thickness of approximately 1,000 feet. Deposits in the subbasin include the early Pleistocene age Santa Clara Formation, the late Pleistocene age Alameda Formation, the early Holocene age Temescal Formation, and artificial fill (Department of Water Resources [DWR], 2004).	None	NA
Geology and Hydrogeology	Site	<p>Soil boring and well construction logs are included in the <i>Site Conceptual Model and Data Gap Work Plan</i>, dated March 31, 2014 (Stantec Consulting Services Inc. [Stantec], 2014). Geologic cross-section A-A' prepared by Cambria Environmental Technology, Inc. [Cambria] is included in the <i>Closure Request</i>, dated December 14, 2006 (Cambria, 2006). This cross-section shows lithology, historic high and low depth-to-water (DTW) measurements, DTW measurements on July 17, 1998, historical soil, groundwater, and soil vapor sample locations and analytical results, and the approximate extent of petroleum hydrocarbon impacts in soil. As illustrated in the cross-section, the subsurface beneath the Site consists primarily of fine-grained soils including clayey silt, silty clay, and silty sand interbedded with occasional lenses of gravel to the greatest depth explored of 23.5 feet below ground surface (bgs) (Cambria, 2006).</p> <p>Well construction details, an assessment of whether Third Quarter 2013 groundwater samples were collected when groundwater elevations were measured across the well screen intervals, and</p>	None	NA

**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		<p>historical groundwater elevation data are included in the <i>Third Quarter 2013 Semi-Annual Groundwater Monitoring Report</i>, dated November 1, 2013. The historical range of DTW measurements for the Site is approximately 5 to 11.5 feet below top of casing (TOC). During Third Quarter 2013, DTW gauged in wells for the Site ranged from 9.51 to 10.34 feet below TOC and all active Site wells were screened across the prevailing groundwater table, with the exception of well MW-2 where the groundwater elevation was gauged above the upper screen interval, and the entire screen interval was thought to be submerged. Further evaluation of well MW-2, regarding its submerged screen interval, is provided below in the "Petroleum Hydrocarbons in Groundwater" CSM element.</p> <p>The direction of groundwater flow during Third Quarter 2013 was generally toward the west at an approximate hydraulic gradient ranging from 0.002 to 0.004 feet per foot (ft/ft), which is consistent with the historical direction of groundwater flow from Third Quarter 1988 to Third Quarter 2013 (vector mean flow direction to the west) (Stantec, 2013).</p>		
Surface Water Bodies		<p>The United States Geological Survey (USGS) 7.5-minute San Leandro Quadrangle topographic map and aerial photos from Google Earth® were reviewed to identify any surface water within a 0.5-mile radius of the Site. The nearest surface water body is the San Leandro Creek, located approximately 0.85 miles (4,488 feet) southwest of the Site. Based on the distance to this surface water body, it is unlikely that it will be impacted by the dissolved-phase petroleum hydrocarbon plume associated with the Site.</p>	None	NA

**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

<p>Nearby Wells</p>	<p>Stantec conducted a well survey in November 2013 to identify all active, inactive, standby, decommissioned, unrecorded, and abandoned (improperly decommissioned or lost) wells within a 0.5-mile radius of the Site. The survey consisted of reviewing files provided by the DWR and Alameda County Public Works (ACPW). All files provided by the DWR and ACPW are confidential in nature and are not provided with this document.</p> <p>Information provided by the DWR indicated seven wells with an unknown use, four cathodic protection wells, one domestic well, 13 extraction wells, five industrial wells, three irrigation wells, 117 monitoring wells, five wells with other uses, three test wells, and nine unused wells.</p> <p>Information provided by ACPW indicated 4 cathodic protection wells, 3 extraction wells, 9 industrial wells, 8 irrigation wells, 137 monitoring wells, 19 test wells, 11 geotechnical wells, 2 recovery wells, 2 wells that have been abandoned and are not being used but were not destroyed through permitting, and 14 wells that were destroyed through permitting.</p> <p>Stantec reviewed the well information listed above to determine wells within a 0.25-mile radius of the Site that may have been abandoned and could be acting as preferential pathways for contaminant migration. All borings, soil sampling or exploration holes, and geotechnical wells are assumed to have been destroyed properly so as not to create a preferential pathway for contaminant migration. Of the seven wells identified by the DWR with an unknown use, two are not located within 0.25 miles of the Site and the other five wells have unknown locations. From ACPW information, the two wells listed as abandoned are not within 0.25 miles of the Site.</p>	<p>1. The status of previous Site wells MW-1, MW-4, MW-7, and MW-10 is unknown.</p>	<p>Conduct a Site visit to determine the status of former Site wells.</p> <p>Details in the data gap summary table.</p>
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**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

		<p>Wells MW-1, MW-4, MW-7, and MW-10 were formerly monitored and sampled as part of the groundwater monitoring program for the Site. These wells were installed to investigate potential off-site source areas and are no longer monitored or sampled. The current status and condition of these wells is unknown. Stantec did not locate any documentation of the abandonment or destruction of these wells in DWR and ACPW records.</p> <p>There is no evidence to suggest there are any abandoned wells that have the potential to act as preferential pathways for contaminant migration.</p> <p>To determine active water supply wells within a 0.25-mile radius of the Site, Stantec removed all cathodic protection, extraction, monitoring, other use, geotechnical, recovery, test, unused, and abandoned and destroyed wells from the lists of wells provided by the DWR and ACPW. There were four wells identified in the DWR list that did not have an identified use or location and these wells were removed as well. These four wells were not identified in the ACPW list. All wells not within a 0.25-mile radius were then removed. Seven water supply wells were identified during the active water supply well survey and all were identified as for industrial use.</p> <p>The industrial well located approximately 100 feet southwest of the Site is the only well identified within 0.25 miles of the Site that is down-gradient. This well was identified as well P2. Well P2 was previously identified by Fluor Daniel GTI (Fluor Daniel) during their water well survey in 1996. Well P2 was completed to a depth of 602 feet bgs, and screened from approximately 160 to 590 feet bgs (Fluor Daniel, 1996). Stantec visited the Site on January 10, 2014,</p>		
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**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

		<p>and did not observe any water supply wells remaining at or in the close vicinity of the Site. Stantec spoke with property maintenance staff, who was not aware of any existing water supply wells at or in the close vicinity of the Site. It appears all water supply wells previously identified by Fluor Daniel in 1996, including well P2, have been destroyed since they were originally documented.</p> <p>All other water supply wells identified within a 0.25-mile radius of the Site during the current well survey are located up-gradient or cross-gradient based on the predominant direction of groundwater flow (west), and are unlikely to be impacted by the dissolved-phase petroleum hydrocarbon plume associated with the Site.</p> <p><b>Utility Survey</b>  A survey of utilities in the vicinity of the Site was not completed as the soil source area appears to be confined to the Site and the dissolved-phase petroleum hydrocarbon plume appears to extend off Site to a private commercial property and not into a right-of-way where utilities would be present. It is unlikely that any utilities are present in the area of the plume that would act as preferential pathways for contaminants.</p> <p>Given the limited extent of the dissolved-phase petroleum hydrocarbon plume and the information presented above, there is no evidence to suggest utility trenches are acting as preferential pathways for contamination associated with the Site. It does not appear that additional assessment of utilities is necessary, and this is not a requirement of the Low-Threat Underground Storage Tank (UST) Case Closure Policy (LTCP). The potential need for additional information on utilities is not considered a data gap at this time.</p>		
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**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

<p>Release Source and Volume</p>		<p>Prior to 1966, three fuel USTs and one fuel dispenser island (first generation) located in the eastern portion of the Site were removed. Second-generation fuel structures were installed between 1966 and 1968 and included three fuel USTs located in the north-central portion of the Site, one waste oil UST located in the western portion of the Site, and five fuel dispenser islands (four located in the central portion of the Site and one located in the southern portion of the Site). In 1978, the service station was closed and all second-generation fuel structures were removed from the Site (Conestoga-Rovers &amp; Associates [CRA], 2011).</p> <p>A UST unauthorized release (leak) contamination site report, dated August 24, 2001, is on file with ACEH. The report states that an unknown amount of gasoline was released to the subsurface at the Site, which was discovered during assessment activities on April 18, 1987, and stopped when all second-generation fuel structures were removed in 1978 (ACEH, 2001).</p> <p><b>Off-Site Sources</b></p> <p>In email correspondence dated February 3, 2014, ACEH expressed concern about halogenated volatile organic compounds (HVOCs) historically detected in former off-site wells MW-1 and MW-7. Historical groundwater analytical data for former wells MW-1 and MW-7 from 1987 to 1989 indicates the presence of 1,1-dichloroethene (1,1-DCE), 1,1-dichloroethane (1,1-DCA), 1,2-dichloroethane (1,2-DCA), and trichloroethane (TCA). These detections of 1,1-DCE, 1,1-DCA, 1,2-DCA, and TCA off Site indicate the presence of an off-site source potentially comingling with the dissolved-phase petroleum hydrocarbon plume associated with the Site.</p>	<p>None</p>	<p>NA</p>
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**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

		Monitoring well MW-1 was installed to investigate the outdoor chemical storage area located on the east side of the cold storage building associated with the former food processing plant to the northwest of the Site (Beta Associates [Beta], 1987) and well MW-7 was installed to investigate the area of the former Shell-branded service station, located immediately adjacent and northwest of the Site (Groundwater Technology, Inc. [GTI], 1988). As these wells were installed to investigate potential off-sources not associated with the former Chevron-branded service station, the detections of 1,1-DCE, 1,1-DCA, 1,2-DCA, and TCA are unlikely associated with the unauthorized release at the Site. Furthermore, HVOCs were analyzed in current Site wells MW-2, MW-5, MW-6, MW-8, and MW-9 from 1987 through 1989, and all concentrations were below laboratory reporting limits (LRLs) with the exception of 1,1-DCE in well MW-9 during Third Quarter 1989, which was detected at 3 micrograms per liter (µg/L). This is below the current ESL for 1,1-DCE of 6 µg/L. HVOCs are not believed to be associated with the former release associated with the Site; therefore, further assessment of HVOCs is not necessary and is not considered a data gap.		
LNAPL		Light non-aqueous phase liquid (LNAPL) was reportedly observed while advancing soil boring SB-8 at approximately 7 feet bgs in 1996; however, LNAPL has not been observed or documented in any other borings or any Site wells to-date.	None	NA
Source Removal Activities		Prior to 1966, three fuel USTs and one fuel dispenser island (first generation) located in the eastern portion of the Site were removed. Second-generation fuel structures were installed between 1966 and 1968 and included three fuel USTs located in the north-central portion of the Site, one waste oil UST located in the western portion of the Site, and five fuel dispenser islands	None	NA

**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

		(four located in the central portion of the Site and one located in the southern portion of the Site). In 1978, the service station was closed and all second-generation fuel structures were removed from the Site (CRA, 2011). Further documentation on these activities could not be found and it is unknown if soil sampling or excavation of impacted soil, if present, was conducted.		
Contaminants of Concern		<p>The contaminants of concern (COCs) at the Site are dissolved-phase petroleum hydrocarbons associated with gasoline from a former service station, including TPH-GRO and BTEX compounds.</p> <p>In email correspondence dated February 3, 2014, ACEH stated that the former presence of diesel usage should be evaluated. Historical records were reviewed, and there is no evidence that diesel was ever dispensed at the Site. During soil sampling at the Site in April 1987, clear TPH-GRO and BTEX compound impacts were observed in soil boring DH-8, with concentrations above current California Regional Water Quality Control Board – San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs) for commercial land use; however, total petroleum hydrocarbons as diesel range organics (TPH-DRO) was not detected above the LRL of 1.0 milligrams per kilogram (mg/kg) (Beta, 1987). This data appears to support that diesel was not dispensed at the former service station, or if it was dispensed, it was not part of the historical release. Further evaluation of TPH-DRO is not considered a data gap.</p>	None	NA
Petroleum Hydrocarbons in Soil		<p>Soil analytical results are compared to California RWQCB ESLs for commercial land use (RWQCB, 2013).</p> <p>The vertical extent of petroleum hydrocarbons in on-site soil appears to be from approximately 5 to 16 feet bgs. Many on-site</p>	None	NA

**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

		<p>soil borings exceeded ESLs for TPH-GRO and BTEX compounds at the greatest depth explored; however, with the exception of the sample collected from boring VP-3 at 6 feet bgs, all soil samples that exceeded ESLs at the greatest depth explored (ranging from 10 to 15 feet bgs) were collected at a depth within the current saturated zone. The depth of the current saturated zone is based on DTW readings from on-site wells MW-5, MW-6, and MW-8 from Third Quarter 2011 to Third Quarter 2013 (ranging from 7.92 to 10.34 feet below TOC). Any samples collected deeper on Site, even in the area of boring VP-3, would be in the saturated zone and would likely be more indicative of groundwater conditions than actual soil conditions. Furthermore, the soil concentrations detected in VP-1 through VP-5, which were collected in 2010 in the vicinity of the 1996 "SB" series of borings, show concentration decreases of one to three orders of magnitude. No soil ESLs were exceeded in any sample collected off Site. The vertical extent of petroleum hydrocarbons in soil is considered adequately defined.</p> <p>The lateral extent of petroleum hydrocarbons in soil appears to be confined to the Site in the area of the second-generation USTs and fuel dispenser islands. Concentrations of TPH-GRO and/or BTEX compounds were observed above soil ESLs in vadose zone soil in borings SB-5(1996), SB-7 through SB-10, SB-14, and SB-16 and borehole VP-3. These impacts are laterally delineated by concentrations below soil ESLs in vadose zone samples collected from boreholes MW-8 and VP-2 to the northwest, borings SB-11 and SB-12 to the northeast, borings SB-2(1989), SB-15, and SB-21 and boreholes MW-5, VP-4, and VP-5 to the southeast, and boring SB-1(1989) and boreholes MW-6 and VP-1 to the southwest. The lateral extent of petroleum hydrocarbons in soil is considered defined.</p>		
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**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

<p>Petroleum Hydrocarbons in Groundwater</p>		<p>Soil impacts extend vertically to groundwater and DTW at the Site has historically ranged from approximately 5 to 11.5 feet below TOC.</p> <p>During Third Quarter 2013, concentrations of TPH-GRO and benzene exceeded ESLs for groundwater that is a potential source of drinking water as follows:</p> <ul style="list-style-type: none"> <li>• TPH-GRO concentrations exceeded the ESL of 100 µg/L in wells MW-5 and MW-8; and</li> <li>• The benzene concentration exceeded the ESL of 1 µg/L in well MW-8.</li> </ul> <p>During Third Quarter 2013, maximum concentrations of TPH-GRO and BTEX compounds were observed in well MW-8, which is located in the northern portion of the Site in the area of the second-generation USTs. TPH-GRO was also detected above the ESL in well MW-5, in the area of the first-generation dispenser island (Stantec, 2013).</p> <p>Isoconcentration maps showing the estimated lateral extent of the dissolved-phase plume were prepared following the Third Quarter 2013 groundwater monitoring and sampling event. Due to TPH-GRO and BTEX compounds below ESLs or LRLs in well MW-6 (cross-gradient of well MW-8) and the potential for two distinct source areas, dissolved-phase TPH-GRO is currently represented as two distinct plumes, the longest of which is currently defined to below ESLs within approximately 200 feet down-gradient of the source area. The dissolved-phase TPH-GRO plumes are defined by concentrations below ESLs or LRLs in wells MW-2, MW-6, and MW-9. The dissolved-phase TPH-GRO plume is considered adequately defined.</p>	<p>None</p>	<p>NA</p>
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**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

	<p>The dissolved-phase benzene plume is considered defined by concentrations below LRLs in wells MW-5, MW-6, and MW-9.</p> <p>In email correspondence dated February 3, 2014, ACEH expressed concern that well MW-2 was not providing representative groundwater data. Although the screen interval in well MW-2 is often submerged, there is no evidence to suggest groundwater concentrations in well MW-2 are not representative of actual groundwater concentrations. Groundwater elevations in well MW-2 are similar to other Site wells and trends suggest that the data is representative of actual groundwater conditions. During Third Quarter 2013, the groundwater elevations in all Site wells differed by a maximum of 0.84 feet. In addition, during quarters when the screen interval of well MW-2 was not submerged, petroleum hydrocarbon concentrations were similar to, if not less than, concentrations observed in the same year when the well was submerged. For instance, during First Quarter 1995, the screen interval in well MW-2 was not submerged and the concentration of TPH-GRO was observed to be 78 µg/L, while during Second Quarter 1994 and Third Quarter 1995, the screen interval was submerged, and concentrations were observed to be 390 µg/L and 100 µg/L, respectively. Concentrations within well MW-2 appear to be conservative in quarters when the screen is submerged. Furthermore, the sand filter pack for well MW-2 begins at approximately 9 feet bgs and allows the groundwater to infiltrate the well at this depth. These observations suggest that groundwater concentrations in well MW-2 are representative of actual groundwater conditions at the Site.</p> <p>Current and historical groundwater quality data indicate that the petroleum hydrocarbon plume associated with the Site is generally stable or decreasing in size and concentration. During Third</p>		
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**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

		Quarter 2013, with the exception of a historical low concentration of TPH-GRO in well MW-5, all groundwater concentrations were within historical limits at all wells sampled. Concentrations of TPH-GRO and benzene appear to have an inverse relationship with changes in groundwater elevation; however, overall stable or decreasing concentration trends are still observed (Stantec, 2013).		
Risk Evaluation		<p><b>Current and Future Land Uses</b></p> <p>The Site is a former Chevron-branded service station located on the western corner at the intersection of San Leandro Street and 98<sup>th</sup> Avenue in Oakland, California. The zoning for the Site and all adjacent and nearby down-gradient properties is currently commercial/industrial.</p> <p>In a letter dated January 23, 2014, ACEH requested the property owner for the Site and nearby property owners submit information regarding any potential changes in the current land use and classification of the Site and any known future plans for redevelopment of the Site, inclusive of the construction of new buildings under the current land use classification (commercial/industrial). This information was requested by March 31, 2014. Should there be changes to the current land use and classification of the Site from commercial/industrial to residential, the Site conceptual model will be updated to compare Site criteria to residential ESLs and LTCP criteria. The current Site conceptual model assumes the Site will likely continue to be used for commercial/industrial purposes in the future.</p> <p><b>On-Site and Off-Site Current or Potential Populations</b></p> <p>Based on the current and likely future use of the Site, adjacent, and nearby down-gradient properties as commercial/industrial, the future potentially exposed populations on Site include</p>	2. Site conditions do not meet LTCP criteria for petroleum vapor intrusion to indoor air.	<p>Resample soil vapor wells VP-1 through VP-5 and conduct an evaluation of current soil vapor quality.</p> <p>See data gaps summary table.</p>

**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

		<p>commercial/industrial workers, customers, and construction workers.</p> <p><b>Potential Sensitive Population Survey</b>  Stantec conducted a survey to determine if any potential sensitive populations were located in the vicinity of the Site. Potential sensitive populations are people who would potentially be more susceptible to risks resulting from exposure to Site-related hydrocarbons such as school-age children, medically-compromised people, and the elderly.</p> <p>Based on the predominant direction of groundwater flow associated with the Site (west), only one identified potential sensitive population is located within a 0.5-mile radius down-gradient of the Site (East Oakland Senior Center). Based on its distance from the Site (approximately 0.45 miles [2,376 feet]), and the limited extent of the dissolved-phase plume associated with the Site, East Oakland Senior Center is unlikely to be at risk from exposure to Site-related petroleum hydrocarbons.</p> <p><b>Exposure Pathway Analysis</b>  Incomplete exposure pathways are justified as follows:</p> <ul style="list-style-type: none"> <li>• The ingestion of groundwater and dermal contact with groundwater exposure pathways are considered incomplete for all current or future human receptors as there is no mechanism for deliberate consumption of the groundwater (no on-site or nearby down-gradient water supply wells) and because excavation at or below the groundwater table is unlikely.</li> <li>• The soil gas emission pathways (inhalation of indoor and outdoor air) are considered incomplete for current or future off-site human receptors due to the limited extent</li> </ul>		
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**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

		<p>and location of the soil source area and the distance to down-gradient potential sensitive populations (approximately 0.45 miles).</p> <p>Potentially complete pathways are summarized as follows:</p> <ul style="list-style-type: none"> <li>• The ingestion and dermal contact surface soil exposure pathways are considered potentially complete for on-site construction workers only, as shallow soil impacts were observed in the area of the second-generation fuel USTs and dispenser islands. The Site is paved, so customers and commercial workers are unlikely to contact shallow soil.</li> <li>• The ingestion, dermal contact, and inhalation of outdoor particulates from excavated soil exposure pathways are considered potentially complete for on-site construction workers only, due to historical shallow (less than 10 feet bgs) soil detections of petroleum hydrocarbons above ESLs. These pathways are considered incomplete for customers and commercial workers, as excavation work is unlikely while the Site is used as a semi-truck parking and staging area for a distribution facility.</li> <li>• The soil gas emission pathways (inhalation of indoor and outdoor air) are considered potentially complete for on-site receptors due to the potential for petroleum hydrocarbons in shallow vadose zone soil to volatilize and be inhaled in the indoor or outdoor air.</li> <li>• The groundwater emission pathways (inhalation of indoor and outdoor air) are considered potentially complete for on-site and off-site receptors due to the potential for petroleum hydrocarbons in shallow groundwater to volatilize and be inhaled in the indoor or outdoor air.</li> </ul>		
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**TABLE 1**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

		<p><b>Risk Evaluation</b></p> <p>Although the ingestion, dermal contact, and inhalation pathways for shallow and excavated soil are considered potentially complete for on-site construction workers, the Site is paved, so risk to construction workers is unlikely at this time. In the event of planned construction or excavation, care should be taken to safely manage exposed and excavated soil. In addition, Site conditions appear to meet the criteria for direct contact and outdoor air exposure criteria set forth in the LTCP.</p> <p>The soil gas and groundwater emission pathways are considered potentially complete for on-site and off-site receptors and conditions do not meet the petroleum vapor intrusion to indoor air criteria set forth in the LTCP. However, the Site is currently used as a semi-truck parking and staging area for a distribution facility and background vapors associated with semi-trucks and visiting vehicles likely present a higher risk than vapors from residual contamination on Site.</p>		
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**TABLE 2**  
**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

<b>Item</b>	<b>Data Gap Item #</b>	<b>Proposed Investigation</b>	<b>Rationale</b>	<b>Analyses</b>
1	The status of previous Site wells MW-1, MW-4, MW-7, and MW-10 is unknown.	Conduct a Site visit to determine the status (location and condition) of former Site wells.	Determining the status of former Site wells MW-1, MW-4, MW-7, and MW-10 will satisfy ACEH request in February 3, 2014 correspondence.	None.
2	Site conditions do not meet LTCP criteria for petroleum vapor intrusion to indoor air.	Resample soil vapor wells VP-1 through VP-5.	Resampling of soil vapor wells VP-1 through VP-5 will allow for an evaluation of current soil vapor quality at the Site and whether the Site meets the criteria for petroleum vapor intrusion to indoor air set forth in the LTCP. Soil vapor wells VP-1 through VP-5 are adequately spaced across the Site and in the area of former fueling features.	TPH-GRO, BTEX compounds, and naphthalene by United States Environmental Protection Agency (US EPA) Method TO-15, and fixed gases (carbon dioxide, oxygen, methane, and helium) by American Society for Testing and Materials (ASTM) Method D-1946.

**Focused Site Conceptual Model**  
Former Chevron-branded Service Station 91723  
9757 San Leandro Street, Oakland, California

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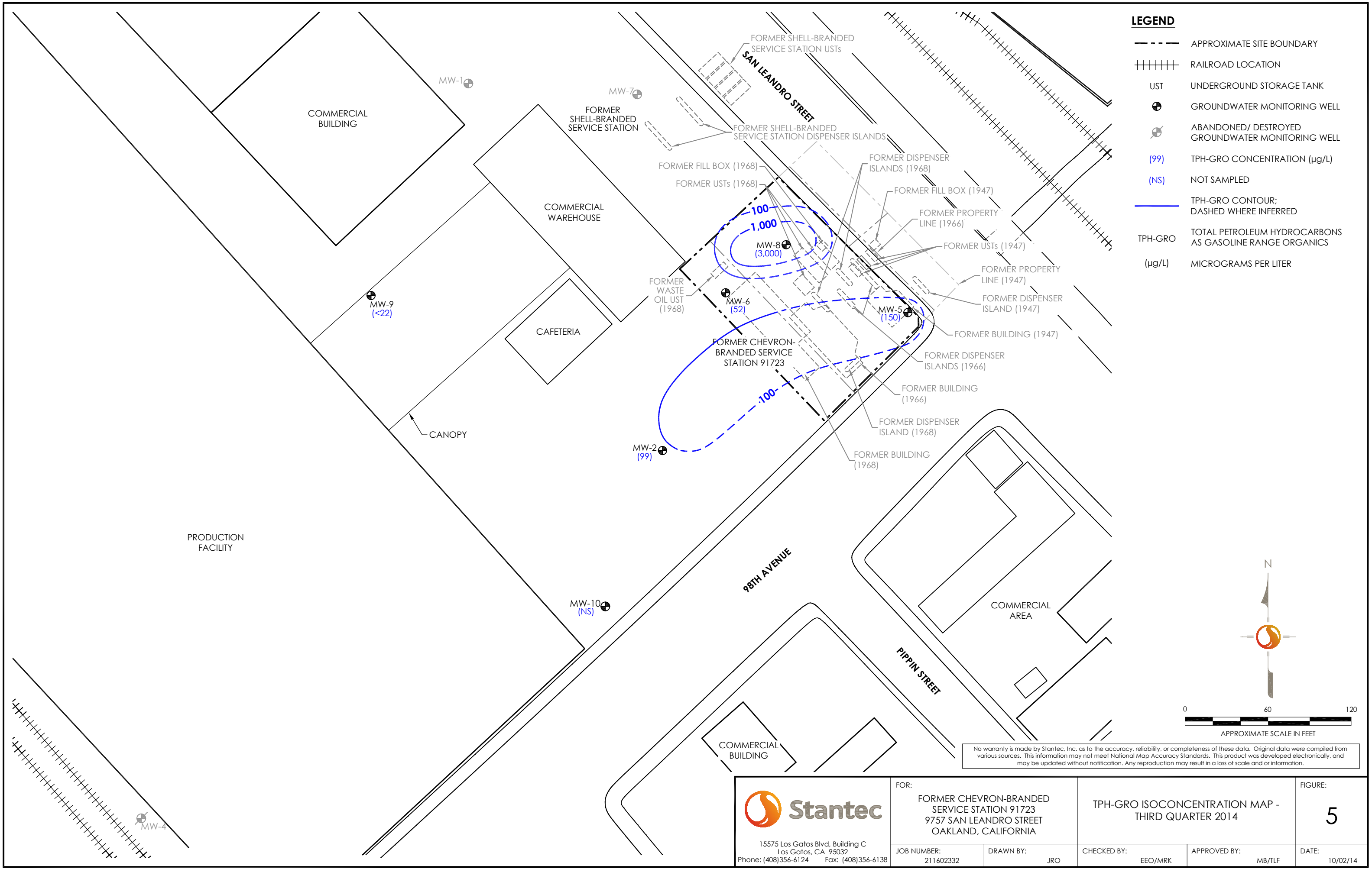
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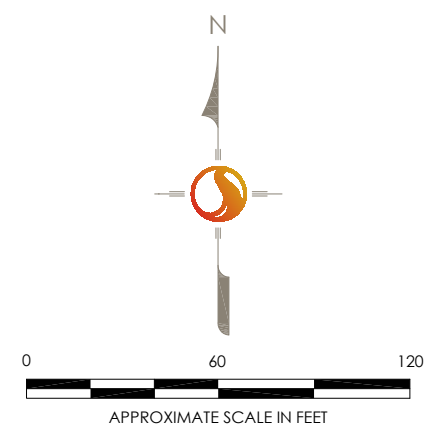
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**ATTACHMENT D**  
**TPH-GRO Isoconcentration Map –**  
**Third Quarter 2014**



- LEGEND**
- APPROXIMATE SITE BOUNDARY
  - ++++ RAILROAD LOCATION
  - UST UNDERGROUND STORAGE TANK
  - ⊕ GROUNDWATER MONITORING WELL
  - ⊕ ABANDONED/ DESTROYED GROUNDWATER MONITORING WELL
  - (99) TPH-GRO CONCENTRATION (µg/L)
  - (NS) NOT SAMPLED
  - TPH-GRO CONTOUR; DASHED WHERE INFERRED
  - TPH-GRO TOTAL PETROLEUM HYDROCARBONS AS GASOLINE RANGE ORGANICS (µg/L)
  - MICROGRAMS PER LITER



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 15575 Los Gatos Blvd, Building C Los Gatos, CA 95032 Phone: (408)356-6124 Fax: (408)356-6138	FOR: FORMER CHEVRON-BRANDED SERVICE STATION 91723 9757 SAN LEANDRO STREET OAKLAND, CALIFORNIA	TPH-GRO ISOCONCENTRATION MAP - THIRD QUARTER 2014		FIGURE: <b>5</b>
	JOB NUMBER: 211602332	DRAWN BY: JRO	CHECKED BY: EEO/MRK	APPROVED BY: MB/TLF



**ATTACHMENT E**

**Versar, Inc. *Well Closure Report*, dated April 23, 2014**

April 23, 2014

Mr. Francis Meynard, CFO  
9401 San Leandro Street, LP, c/o PAMCO, LLC  
14 Caledonia Street  
Sausalito, CA 94965

Subject: Well Closure Report for Pacific American Management Company, LLC,  
Facility at 9757 San Leandro Street, Oakland, Alameda County,  
California  
Versar Project No. 112054.0001.001

Dear Mr. Meynard:

Versar, Inc. (Versar), on behalf of Pacific American Management Company, LLC (PAMCO, or Client), has abandoned the potable water supply well at 9757 San Leandro Street, Oakland, California (Site). The Site location is presented in Figure 1, *Site Location Map* and the Site layout is presented in Figure 2, *Site Layout Map* (Attachment I).

## **BACKGROUND**

In January 2012 Versar completed, at the Client's request, a Phase I Environmental Site Assessment (ESA) of the subject property. The Phase I ESA identified two historic water supply wells associated with the Site.

Of the two water supply wells identified in the Phase I ESA, one appears to have been closed in place and was observed to have been covered with a substantial concrete slab. The second well was located within a secured nook of the north exterior wall of Building K. The well head appeared to be connected and the well useable, though Site water is provided via the municipal system. Supplemental data provided by PAMCO indicates the well was upgraded in 1994 with a new electric submersible pump and pressure tank. Based on observations conducted by Versar personnel, the well is ten inches in diameter and 195 feet deep.

## **SUPPLY WELL ABANDONMENT**

Prior to the abandonment of the supply well, Versar obtained a permit from the Alameda County Public Works Agency (ACPWA), which is included as Attachment II.



**VERSAR**

5330 Primrose Drive, Suite 147  
Fair Oaks, CA 95628  
916.962.1612  
[www.versar.com](http://www.versar.com)

Additionally, Versar requested a search of the Department of Water Resources records for information about the well; ACPWA performed a search of their records, as well. The DWR provided an undated well log to Versar, well construction record WCR: #01-1609. The log identified the well as having 250 feet of 10-inch casing, 18 feet of which was perforated. Versar provided the log to the ACPWA, who did not identify the well in their records.

Under permit, Versar performed abandonment of the supply well on April 2, 2014. The supply well was constructed of 10-inch inside diameter galvanized steel casing, and was sounded to a depth of 195 feet below grade after pump and supply tubing removal. The well was finished with a mating flange at grade. The well was observed to have a hard bottom and no evidence of silt buildup.

Samples of the water contained in the well casing and wastewater generated during the abandonment were collected and submitted to a California state-certified laboratory for chemical analyses; McCampbell Analytical Inc. (McCampbell) (ELAP Certificate No. 1644). All samples were analyzed within instrument and accuracy limits defined by the method for the following: Total petroleum hydrocarbons (TPH) in the gas (-g), diesel (-d) and motor oil (-mo) ranges, benzene, toluene, ethylbenzene and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method SW-8015B; hexane-extractable material (oil and grease) with silica gel cleanup by EPA Method E1664A; and volatile organic compounds (VOCs) by EPA Method SW8260. TPH-d and TPH-mo were detected in the well water sample at concentrations of 63 micrograms per liter ( $\mu\text{g/L}$ ) and 350  $\mu\text{g/L}$ , respectively. TPH-d was detected in the waste water sample at 58  $\mu\text{g/L}$ . No other compounds of concern were detected above laboratory reporting limits in the well water or waste water samples. The results of analytical testing are presented as Attachment II, Table. A laboratory report and chain-of-custody documentation is presented as Attachment V.

The supply well was destroyed by Tremie-backfilling/pressure grouting with a sand-grout mixture containing eleven sacks of Portland cement per yard of mixture. The surface was finished to match the surrounding poured concrete slab. All work was performed by Pitcher Drilling, a subsidiary of Gregg Drilling and Testing, a California-licensed water well drilling contractor, C-57 license #485165. As required by the Department of Water Resources (DWR), a well completion report describing abandonment activities was submitted; a copy is included in Attachment III.

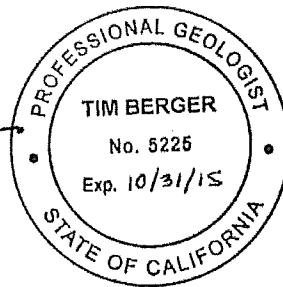
Well abandonment waste materials were contained in thirteen 55-gallon drums and stored on-Site pending disposal. The waste was removed on April 23, 2014 by an authorized hauler. The waste manifest is included in Attachment VI.

If you have any questions or comments regarding this action, please call me at (916) 863-9323.

Sincerely,



Tim Berger, P.G. No. 5225  
Program Manager



Attachment I	Figures
Attachment II	Table
Attachment III	Well Permit
Attachment IV	Department of Water Resources Well Completion Report
Attachment V	Laboratory Report and Chain of Custody Documentation
Attachment VI	Waste Manifest

20208306

# Oakland Commerce Center

9401 San Leandro Street Oakland, CA 94603

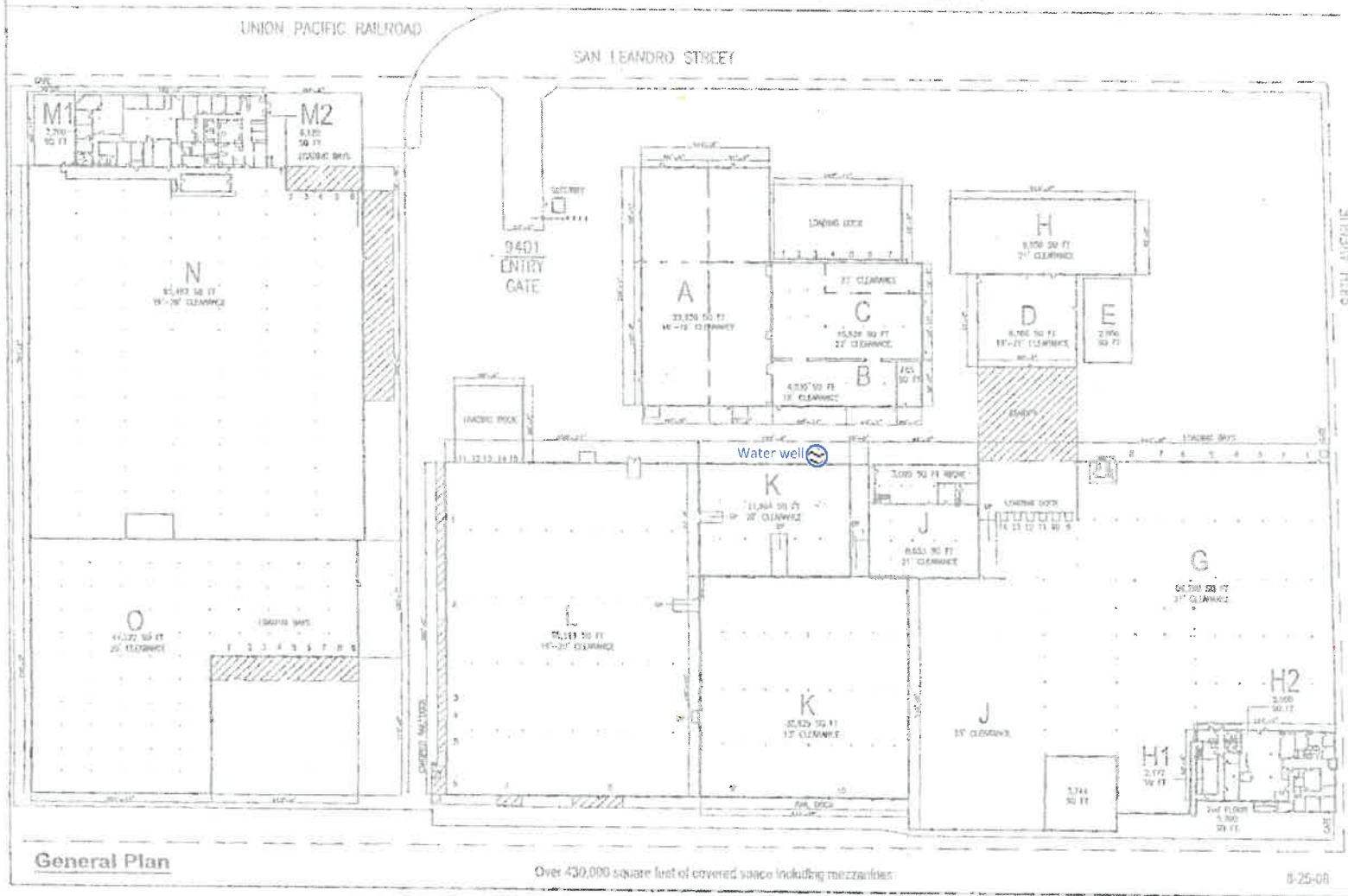
\* 20 ACRES

\* 430,000 SQ FT

\* 5 LOADING RAMPS

\* 18'-31" CLEAR HEIGHT

\* 52 DOCK DOORS



Dr. By: TWB
Date: 03/19/2014
Scale: NTS
Project No. : 112044.0001.001



## WELL ABANDONMENT LOCATION

### Pacific American Management Facility

9757 San Leandro Street  
Oakland, California

Figure  
1

\*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

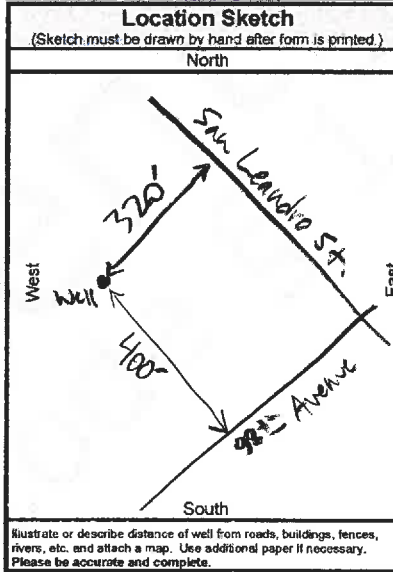
State of California  
**Well Completion Report**  
*Refer to Instruction Pamphlet*  
No. **e0208306**

DWR Use Only -- Do Not Fill In			
State Well Number/Site Number			
		N	W
Latitude		Longitude	
APN/TRS/Other			

Page 1 of 1  
Owner's Well Number WCR: #01-1609  
Date Work Began 04/02/2014 Date Work Ended 4/2/2014  
Local Permit Agency Alameda County  
Permit Number W2014-0296 Permit Date 4/1/14

Geologic Log				
Orientation	<input checked="" type="radio"/> Vertical	<input type="radio"/> Horizontal	<input type="radio"/> Angle	Specify _____
Drilling Method	Drilling Fluid _____			
Depth from Surface		Description		
Feet	to Feet	Describe material, grain size, color, etc		
0	195	Abandon 10" supply well by removing pump and supply tubing and backfilling with neat cement to surface. Backfilling performed by pressure-grouting with Tremie pipe. Complete surface to match surrounding area (cement).		
Total Depth of Boring _____ Feet				
Total Depth of Completed Well _____ Feet				

Well Owner	
Name	<u>Pacific American Group</u>
Mailing Address	<u>104 Caledonia Street</u>
City	<u>Sausalito</u> State <u>CA</u> Zip <u>94965</u>
Well Location	
Address	<u>9757 San Leandro Street</u>
City	<u>Oakland</u> County <u>Alameda</u>
Latitude	<u>37</u> <u>44</u> <u>22</u> N Longitude <u>122</u> <u>10</u> <u>54</u> W
Datum	
APN Book	
Page	
Parcel	<u>44-4989-6-10</u>
Township	
Range	
Section	



Activity	
<input type="radio"/> New Well	
<input type="radio"/> Modification/Repair	
<input type="radio"/> Deepen	
<input type="radio"/> Other	
<input checked="" type="radio"/> Destroy	
Describe procedures and materials under "GEOLOGIC LOG"	

Planned Uses	
<input type="radio"/> Water Supply	
<input type="checkbox"/> Domestic	<input type="checkbox"/> Public
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Industrial
<input type="radio"/> Cathodic Protection	
<input type="radio"/> Dewatering	
<input type="radio"/> Heat Exchange	
<input type="radio"/> Injection	
<input type="radio"/> Monitoring	
<input type="radio"/> Remediation	
<input type="radio"/> Sparging	
<input type="radio"/> Test Well	
<input type="radio"/> Vapor Extraction	
<input type="radio"/> Other	

Water Level and Yield of Completed Well	
Depth to first water _____ (Feet below surface)	
Depth to Static _____	
Water Level _____ (Feet)	Date Measured _____
Estimated Yield * _____ (GPM)	Test Type _____
Test Length _____ (Hours)	Total Drawdown _____ (Feet)
*May not be representative of a well's long term yield.	

Casings							
Depth from Surface	Borehole Diameter	Type	Material	Wall Thickness	Outside Diameter	Screen Type	Slot Size if Any
Feet to Feet	(Inches)			(Inches)	(Inches)		(Inches)

Annular Material		
Depth from Surface	Fill	Description
Feet to Feet		
<u>0</u> <u>190</u>	<u>10 sack sand/grout</u>	<u>Tremie pipe</u>

Attachments	
<input type="checkbox"/> Geologic Log	
<input type="checkbox"/> Well Construction Diagram	
<input type="checkbox"/> Geophysical Log(s)	
<input type="checkbox"/> Soil/Water Chemical Analyses	
<input checked="" type="checkbox"/> Other <u>Former well location map</u>	
Attach additional information, if it exists.	

Certification Statement	
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief	
Name <u>Pitcher Drilling</u>	
Person, Firm or Corporation _____	
<u>218 Demeter Street</u> _____	<u>East Palo Alto</u> _____
Address	City
<u>[Signature]</u>	<u>CA</u> <u>94303</u>
C-57 Licensed Water Well Contractor	State <u>CA</u> Zip <u>94303</u>
Date Signed <u>4-1-2014</u>	263085
C-57 License Number	

**ATTACHMENT F**  
**City of Oakland Utility Map**



1,812,000

456,000

1,815,000

456,000

VS PERALTA

PLOT NO. 13

40  
1509 B 454

42  
1515 B 454



Disclaimer:

This service has been provided to allow easy access and a visual display of City of Oakland information. Every reasonable effort has been made to ensure the accuracy of these maps; nevertheless, some information may not be accurate. The City of Oakland assumes no responsibility arising from use of this information. The maps and associated data are provided without warranty of any kind, either expressed or implied, including but not limited to, the warranties of merchantability and fitness for a particular purpose. Do not make business decisions based on this data before validating your decision with the City of Oakland office.

SCALE: 0 100 200 300 400 500 600 700 800 900 1000

NORTH

LEGEND

- SANITARY SEWER
- STORM CONDUIT
- FLOW MONITOR
- MANHOLE
- LAMPHOLE
- CLEAN OUT
- INLET
- DEED REFERENCE
- MAP REFERENCE

UNDERGROUND SEWER MAP  
REVISED 7/10/97

Portions Jones Ave. St. Open to Right  
 (L. 3100) BURLWOOD AVE. 2-2-96



**ATTACHMENT G**  
**Air Monitoring Logs**

### AIR MONITORING LOG

Instrument(s) Used: Make: LAND TEC

Model: GM 2000 PLUS/SN# GM12027/09

DATE	TIME	LOCATION/SOURCE (Personal/Area Sampling)	WORK ACTIVITY DURING SAMPLING (Be specific)	CH <sub>4</sub> Measurement (Units)		WHAT DID YOU DO BECAUSE OF THE RESULT? (PPE Change/Activity Change/Nothing Needed)	SAMPLED BY
				* % *	**		
2/29/16	1010	MW-8	Methane screening	0	0		DO
	1015	VP-2		0	0		
	1020	MW-6		0	0		
	1025	MW-2		0	0		
	1030	MW-5		—	0	water in well box.	
	1047	VP-4		0	out of range		
	1055	VP-3		—	out of range	water in well box	
	1135	VP-1		—	8.4	water in well box.	
	1140	VP-5		—	at top range	water in well box	
	1145	MH-1		0	—		
	1148	MH-2		0	—		
	1152	ON SITE PPE VAULT		0	—		
	1200	PPE (STORMWATER 1)		0	—		
	1205	PPE 2		0	—		

1208 CITY OF OAKVILLE

\* Submit copies of logs to Health Safety and Environment (HSE) Manager, US, Carol Ferguson-Scott within 24 hours, if a PEL is exceeded, or personal protective equipment level is upgraded at (506) 333-2845 or via email at Carol.Ferguson-Scott@stantec.com.

\* reading from well BOX/VAULT

\*\* reading from well CASING/SG PROBE.

### AIR MONITORING LOG

Instrument(s) Used: Make: RAE SYSTEMS

Model: QRAE 3 / SN# ~~905117~~

M02A000690

DATE	TIME	LOCATION/SOURCE (Personal/Area Sampling)	WORK ACTIVITY DURING SAMPLING (Be specific)	CH <sub>4</sub> Measurement (Units)		WHAT DID YOU DO BECAUSE OF THE RESULT? (PPE Change/Activity Change/Nothing Needed)	SAMPLED BY
				* % *	***		
2/29/16	1010	MW-0	methane screening	0	0		SS
	1015	VP-2		0	0		
	1020	MW-6		0	0		
	1025	MW-2		0	0		
	1030	MW-5		—	0	water in well box	
	1047	VP-4		0	6		
	1055	VP-3		—	0	water in well box	
	1135	VP-1		—	—	water in well box	
	1140	VP-5		—	—	water in well box	
	1145	MH-1		0	—		
	1148	MH-2		0	—		
	1152	on site PGE vault		0	—		
	1200	PGE (sidewalk 1)		0	—		
	1205	PGE 2		0	—		
	1208	CITY OF OAKLAND		0	—		

\* Submit copies of logs to Health Safety and Environment (HSE) Manager, US, Carol Ferguson-Scott within 24 hours, if a PEL is exceeded, or personal protective equipment level is upgraded at (506) 333-2845 or via email at Carol.Ferguson-Scott@stantec.com.

→ Readings from well box / vault  
 \*\*\* Readings from well casing / SG probe