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Date: August 7, 2015 Reference No.: 240897

To: Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California

No. of Copies	Description/Title	Drawing No./ Document Ref.	Issue
1	Updated Conceptual Site Model and Closure Evaluation		

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Remarks:
If you have any questions regarding the contents of this document, please call the GHD project manager Peter Schaefer at (510) 420-3319 or the Shell program manager Perry Pineda at (425) 413-1164.

Copy to: Perry Pineda, Shell Oil Products US

Laura Wong, Phua Management (property owner representative, electronic copy)

Completed by: Peter Schaefer Signed: Peter Schaefer
[Please Print]

Filing: Correspondence File

GHD Services Inc.
5900 Hollis Street Suite A Emeryville California 94608 USA
T 510 420 0700 F 510 420 9170 W www.ghd.com

Shell Oil Products US
Soil and Groundwater Focus Delivery Group
20945 S. Wilmington Avenue
Carson, CA 90810
Tel (425) 413 1164
Fax (425) 413 0988
Email perry.pineda@shell.com
Internet http://www.shell.com

Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **4411 Foothill Boulevard, Oakland, California**
PlaNet Site ID 10059562
PlaNet Project ID 31733
ACEH Case No. RO0000415

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

As always, please feel free to contact me directly at (425) 413-1164 with any questions or concerns.

Sincerely,
Shell Oil Products US

Perry Pineda
Senior Environmental Program Manager

Updated Conceptual Site Model and Closure Evaluation

Former Shell Service Station
4411 Foothill Boulevard
Oakland, California

PlaNet Site ID	10059562
PlaNet Project ID	31733
Agency No.	RO0000415

Shell Oil Products US

August 7, 2015

5900 Hollis Street Suite A Emeryville California 94608 USA

240897 | 15.04 | Report No 32

Executive Summary

The Site is located in the Oakland subarea of the East Bay Plain. Groundwater in this area is not currently a source of drinking water, and given the shallow depth and proximity to San Francisco Bay, it is unlikely that shallow groundwater would be used as a source of drinking water.

Extensive excavations in 1992, 2002, and 2005 have removed most vadose-zone soil impacts.

COCs in soil are adequately defined.

No SPHs have ever been measured in Site wells.

GHD concludes that this Site meets SWRCB Low-Threat UST Closure Policy general and direct exposure and outdoor air criteria, but does not meet media-specific groundwater or vapor criteria.

The following data gaps were identified in the CSM and closure evaluation.

- Groundwater is not delineated horizontally northeast or east of well S-6 or southwest of Chevron well C-11.
- The status of the irrigation well on the 4320 Bond Street, Oakland property is unknown.
- More information is needed concerning the basement of the building located at 1718 High Street, Oakland to properly evaluate the potential for soil vapor intrusion.

Since the Site's groundwater gradient is consistently westerly to southerly, which is consistent with the gradients at the nearby Chevron and BP service station sites, and the groundwater impacts in well S-6 are likely from the former eastern dispenser islands, it does not appear that additional groundwater investigation northeast or east of well S-6 is warranted.

All COC groundwater concentrations are delineated to below RWQCB ESLs by down-gradient Chevron well C-11, with the exception of benzene. Benzene groundwater concentrations attenuate from 15,000 μg/L in on-Site well S-7 to 56 μg/L in well C-11, so the benzene plume likely is less than 250 feet long.

GHD recommends additional effort to obtain information regarding the status of the irrigation well on the 4320 Bond Street, Oakland and the depth of the basement below the building located at 1718 High Street, Oakland in order provide a complete receptor survey and then a formal human health risk assessment to further evaluate potential risks posed by residual COC impacts.

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1. Introduction

GHD Services Inc. (GHD) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) for the former Shell Service Station located at 4411 Foothill Boulevard, Oakland, California (Site). This report provides an updated Conceptual Site Model (CSM) as proposed in Conestoga-Rovers & Associates' (CRA's) June 5, 2015 *Subsurface Investigation Report* and as requested in Alameda County Environmental Health's (ACEH's) June 15, 2015 letter.

2. Site Background

2.1 Site Description

The Site is a former Shell service station located on the southern corner of the intersection of Foothill Boulevard and High Street in Oakland, California (Figure 1). The former station layout included three first-generation underground storage tanks (USTs) (present from 1958 to 1971), three second-generation USTs (1971 to 1984), three third-generation gasoline USTs (1984 to 2002), a waste oil UST (removed 1992), and four product dispensers (removed 2002) as shown on Figure 2.

Land use in the vicinity of the Site is a mix of commercial and residential, with gasoline service stations occupying the northern and western corners of the intersection. The subject property is currently developed as a strip mall with a variety of commercial and retail uses.

A summary of previous work performed at the Site and additional background information is presented in Appendix A.

3. Environmental Activities at Nearby Sites

Figure 3 shows the location of the nearby sites summarized below.

3.1 Chevron Service Station 90076, 4265 Foothill Boulevard

This site has been an open environmental case since 1989 under ACEH jurisdiction (Fuel Leak Case Number RO0000427 and GeoTracker Global ID T0600100339). Since 1987, a total of seven soil borings have been drilled and six vapor probes and eleven monitoring wells have been installed.

In May 1987, Blaine Tech Services removed three (8,000-, 6,000-, and 3,000-gallon) steel fuel USTs and one 1,000-gallon fiberglass used-oil UST. In August 1987, Pacific Environmental Group measured greater than 2 feet of light separate-phase hydrocarbons (SPHs) in well C-2. No SPHs have been measured at the site since 2005. A groundwater extraction system operated from 1991 to 1993 in well C-2, which extracted approximately 10,200 gallons of groundwater.

3.2 Former BP Service Station 11109, 4280 Foothill Boulevard

This site has been an open environmental case since 1989 under ACEH jurisdiction (Fuel Leak Case Number RO0000426 and GeoTracker Global ID T0600100217) and is currently a

Westco-branded service station. Since 1987, a total of 4 soil borings and 16 temporary vapor probes have been drilled and 10 monitoring wells have been installed.

In July 1986, a 550-gallon steel waste oil UST was removed. In September 1990, Paradiso Construction Company (Paradiso) removed and replaced one 8,000-gallon super unleaded gasoline steel UST, one 10,000-gallon regular unleaded gasoline fiberglass UST, product lines, and dispensers and removed approximately 1,950 cubic yards of soil for off-Site disposal. Historically, up to 1.30 feet of SPHs have been detected in wells MW-5, MW-10, MW-11, and MW-12. Approximately 187 gallons of SPHs have been recovered from these wells.

4. Conceptual Site Model

4.1 Site Stratigraphy and Hydrogeology

4.1.1 Regional Physiographic Features

The Site is situated in the East Bay Plain, west of the Hayward Hills. A remaining day-lighted portion of Courtland Creek is approximately 1,500 feet to the north and a remaining day-lighted portion of Peralta Creek is approximately 0.4 mile to the northwest. A tidal canal that feeds into San Leandro Bay is approximately 1 mile to the southwest. The Site is located on a level lot at an elevation of approximately 36 feet above mean sea level. Surrounding properties are at or near the same elevation as the Site.

4.1.2 Geology

According to the San Francisco Regional Water Quality Control Board's (RWQCB's) June 1999 *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report for Alameda and Contra Costa Counties, CA*, the Site is located within the Oakland subarea of the East Bay Plain in the San Francisco Basin. The Oakland subarea contains a sequence of alluvial fans from 300 to 700 feet thick.

Based on previous investigations, the Site is underlain by silts and clays interbedded with lenses of sands and gravels to the total depth explored of 44 feet below grade (fbg). Available boring logs are included in Appendix B, geologic cross-sections are included as Figures 4 and 5, and the cross-section locations are shown on Figure 3.

4.1.3 Hydrogeology

There are no well-defined aquitards such as estuarine muds in the Oakland Subarea. The largest and deepest wells in this subarea historically pumped 1 to 2 million gallons per day at depths greater than 200 feet. Overall, sustainable yields were low due in part due to low recharge potential. The Merritt Sand in West Oakland was an important part of the early water supply for the City of Oakland. The Merritt Sand is shallow (up to 60 fbg), but before the turn of the last century, septic systems contaminated the water supply wells.

Throughout most of the East Bay Plain, from Hayward north to Albany, water-level contours show that the general direction of groundwater flow is from east to west or from the Hayward Fault to San Francisco Bay. Groundwater flow direction generally correlates to topography. Flow direction and velocity are also influenced by buried stream channels that typically are oriented from east to west;

however, in the southern end of the study area, near the San Lorenzo subarea, the direction of flow may vary. According to information presented in the June 1999 *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report for Alameda and Contra Costa Counties, CA*, the small set of water-level measurements available showed that the groundwater in the upper aquifers may be flowing south, with the deeper aquifers (the Alameda Formation), moving north. As stated above, the nearest natural drainage is Courtland Creek, located approximately 1,500 feet north of the Site.

Depth to first-encountered groundwater beneath the Site during the fourth quarter 2014 groundwater sampling event ranged from approximately 6.40 to 8.98 feet below top of casing in the nine Site wells.

4.2 Hydrocarbon Distribution

4.2.1 Soil

4.2.1.1 Soil Screening Levels

The RWQCB environmental screening levels (ESLs)[1] for both shallow (less than 10 fbg) and deep soils (greater than 10 fbg) with commercial/industrial land use where groundwater is a not a current or potential source of drinking water are presented in Table A below. In addition, the SWRCB's *Low-Threat Underground Storage Tank Case Closure Policy* (the Policy) provides media-specific soil screening criteria which are also listed below. Policy criteria shown for total petroleum hydrocarbons (TPHs) are for determining if there is a soil vapor bioattenuation zone at the Site. Policy criteria shown for benzene, ethylbenzene, and total xylenes are for direct contact and outdoor air exposure with commercial land use.

Table A

	Environmental Screening Levels for Soil Commercial/ Industrial Land Use		Policy Criteria		
COC	Less than 10 fbg Screening Level (mg/kg)	Greater than 10 fbg Screening Level (mg/kg)	Less than 5 fbg to Demonstrate a Bioattenuation Zone (mg/kg)	Less than 5 fbg Commercial Direct Contact/ Outdoor Air (mg/kg)	5 to 10 fbg Commercial Direct Contact/ Outdoor Air (mg/kg)
TPHd ("middle distillates")	110	110	100 (Combined TPHs)	--	--
TPHg	500	1,000		--	--
Benzene	1.2	1.2	--	8.2	12
Toluene	9.3	9.3	--	--	--
Ethylbenzene	4.7	4.7	--	89	134
Total Xylenes	11	11	--	--	--
Naphthalene	4.8	4.8	--	45	45

[1] *User's Guide: Derivation and Application of Environmental Screening Levels*, RWQCB, Interim Final 2013

Table A

	Environmental Screening Levels for Soil Commercial/ Industrial Land Use		Policy Criteria		
COC	Less than 10 fbg Screening Level (mg/kg)	Greater than 10 fbg Screening Level (mg/kg)	Less than 5 fbg to Demonstrate a Bioattenuation Zone (mg/kg)	Less than 5 fbg Commercial Direct Contact/ Outdoor Air (mg/kg)	5 to 10 fbg Commercial Direct Contact/ Outdoor Air (mg/kg)
MTBE	8.4	8.4	--	--	--
TBA	110	110	--	--	--

Notes:

mg/kg = Milligrams per kilogram
TPHd = Total petroleum hydrocarbons as diesel
TPHg = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tertiary-butyl ether
TBA = Tertiary-butyl alcohol
-- = No criteria specified in the Policy

The ESLs are screening levels and not mandatory cleanup levels. According to the RWQCB, ESLs are intended to be conservative, and *"the presence of a chemical in soil, soil gas or groundwater at concentrations below the corresponding ESL can be assumed to not pose a significant, long-term (chronic) threat to human health and the environment."*

4.2.1.2 Hydrocarbon Distribution in Soil

Previous subsurface investigations at the Site have identified constituents of concern (COCs) in areas adjacent to, east, and west of the former USTs. Most of these detections have been removed by excavation and no significant COC concentrations have been identified in other areas of the Site.

Up to 880 mg/kg TPHd, 290 mg/kg TPHg, 1.3 mg/kg benzene, 2.2 mg/kg toluene, 6.6 mg/kg ethylbenzene, 180 mg/kg total xylenes, and 0.0603 mg/kg MTBE have been detected in vadose-zone (less than 8 fbg, depth to groundwater is typically 8 to 10 fbg) residual soils. TBA has not been detected in vadose zone soils. Soil detections deeper than 8 fbg are likely related to groundwater impacts. Residual vadose zone soil impacts exceeding ESLs are restricted to the area southwest of the USTs, with the exception of a TPHd detection in the boring for off-Site well S-12.

4.2.2 Groundwater

4.2.2.1 Water Quality Objectives (WQOs)

The RWQCB Groundwater Committee's June 1999 *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report for Alameda and Contra Costa Counties, CA* states that the City of Oakland (among other cities) "does not have plans to develop local groundwater resources for drinking water purposes, because of existing or potential saltwater intrusion, contamination, or poor or limited quantity." Although groundwater in this area cannot be precluded from being a potential future source of drinking water, it is not currently a source of drinking water, and given the shallow depth and proximity to San Francisco Bay, it is unlikely that groundwater would be used as a source of drinking water. Thus, RWQCB non-drinking water ESLs listed in the following table are the

appropriate WQOs for this Site. In addition, the SWRCB's Policy provides media-specific groundwater screening criteria which are also listed below. The listed Policy criteria are for sites where the groundwater plume is less than 250 feet long.

Table B

COC	ESL (µg/L)	Policy Criteria for a Plume Less than 250 Feet Long (µg/L)
TPHd	640	--
TPHg	500	--
Benzene	27	3,000
Toluene	130	--
Ethylbenzene	43	--
Total Xylenes	100	--
Naphthalene	24	--
MTBE	1,800	1,000
TBA	18,000	--

Notes:

µg/L = Micrograms per liter
-- = No criteria specified in the Policy

4.2.2.2 Hydrocarbon Distribution in Groundwater

Historically, groundwater samples from the wells have contained up to 120,000 µg/L TPHg, 32,000 µg/L benzene, and 67,500 µg/L MTBE. During the fourth quarter 2014 groundwater monitoring event (Figure 6), groundwater samples contained up to 49,000 µg/L TPHg, 15,000 µg/L benzene, and 250 µg/L MTBE. Maximum historical and current concentrations of TPHg and benzene have been detected in samples collected from well S-7.

The extent of groundwater impacts are adequately defined to below ESLs to the south and southeast by wells S-10, S-11, and S-12, to the northwest by Chevron wells C-3 and C-10, and to the north by BP wells MW-3, MW-4, and MW-7. TPHd, TPHg, benzene, and ethylbenzene groundwater impacts are not defined northeast or east of well S-6 and benzene impacts are not defined southwest of Chevron well C-11. As shown in Graphs 1 through 13, COCs exceeding RWQCB ESLs are stable or decreasing demonstrating that the groundwater plume that exceeds WQOs is stable or decreasing in areal extent.

4.2.3 Soil Vapor

4.2.3.1 Soil Vapor Screening Levels

The RWQCB ESL document provides ESLs for residential and commercial land use as detailed below. In addition, the SWRCB's *Low-Threat Underground Storage Tank Case Closure Policy* (the Policy) provides media-specific soil vapor screening criteria which are also listed below. Policy criteria for sites without a bioattenuation zone are shown.

Table C

COC	Residential ESL (µg/m^3)	Commercial ESL (µg/m^3)	Residential Policy Criteria (µg/m^3)	Commercial Policy Criteria (µg/m^3)
TPHg	300,000	2,500,000	--	--
Benzene	42	420	85	280
Toluene	160,000	1,300,000	--	--
Ethylbenzene	490	4,900	1,100	3,600
Total Xylenes	52,000	440,000	--	--
Naphthalene	36	360	93	310
MTBE	4,700	47,000	--	--

Notes:

µg/m^3 = Micrograms per cubic meter
-- = No criteria specified in the Policy

4.2.3.2 Hydrocarbon Distribution in Soil Vapor

Soil vapor samples collected from on-Site soil vapor probes have contained up to 66,000,000 µg/m^3 TPHg, 25,000 µg/m^3 benzene, and 20,000 µg/m^3 ethylbenzene. No naphthalene has been detected in soil vapor samples. COC concentrations exceeding ESLs are found in the areas of the former third-generation USTs and former dispenser islands. Sub-slab soil vapor samples collected within the existing on-Site buildings demonstrate that vapor concentrations attenuate to below ESLs below the existing buildings.

No COCs were detected in samples collected from off-Site soil vapor probes at concentrations exceeding ESLs, with the exception 830,000 µg/m^3 TPHg in the sample from well V-16. Benzene, ethylbenzene, and naphthalene were not detected in the soil vapor, which demonstrates that the Site meets Policy media-specific residential soil vapor criteria.

4.3 Sensitive Receptors and Risk Assessment

In 2000, Cambria Environmental Technology, Inc. (Cambria) conducted a receptor survey.

4.3.1 Surface Waters

As stated above, a remaining day-lighted portion of Courtland Creek is approximately 1,500 feet to the north and a remaining day-lighted portion of Peralta Creek is approximately 0.4 mile to the northwest. A tidal canal that feeds into San Leandro Bay is approximately 1 mile to the southwest. Impact to surface water is unlikely because of the distance from the Site.

4.3.2 Water-Supply Wells

No domestic or municipal water-supply wells have been identified within one-half mile of the Site.

Three industrial water-supply wells have been identified within one-half mile of the Site: a 776-foot industrial well located almost one-half mile south-southwest of the Site, a 244-foot test well located almost one-half mile southwest of the Site, and a 235-foot test well located approximately 0.4 miles south-southwest of the Site. Due to depth and distance, it is unlikely that residual COCs from the Site will impact the industrial wells.

An irrigation well was located on the 4320 Bond Street, Oakland property located directly south of the Site, which was impacted with SPHs following a 1958 UST piping leak. The well's status cannot be determined due to an uncooperative property owner, but due to its age, it is likely not in use or has been abandoned.

4.3.3 On-Site Human Receptors

The Site is almost entirely paved and is occupied by various retail businesses, so potential on-Site receptors would be commercial workers and construction workers.

Because the Site is almost entirely paved, on-Site commercial workers have no direct contact with impacted soils, so direct soil contact by commercial workers is not a completed pathway. As stated above, sub-slab soil vapor sample results demonstrate that there is no unacceptable risk of soil vapor intrusion to indoor air.

On-Site construction workers may come into direct contact with impacted soil; however, any worker doing trenching or excavating at a former gasoline station would be properly trained and prepared for encountering potentially impacted soil and would wear personal protective equipment, as necessary.

4.3.4 Off-Site Receptors

Potential off-Site groundwater exposure pathways include consumption or direct contact. As stated above, no surface water or water-supply wells are likely to be impacted by the Site groundwater plume, so groundwater consumption is not a completed pathway. Due to the typical depth to groundwater at 8 to 10 fbg, direct contact with groundwater does not appear to be a completed pathway.

Soil vapor intrusion to indoor air in off-Site residences located directly southwest of the Site is a potentially completed pathway; however, as noted above, soil vapor samples collected from 5 fbg at 1724 to 1728 High Street, Oakland meet media-specific Policy residential soil vapor criteria. The residence at 1718 High Street, Oakland, located directly southwest of 1724 to 1728 High Street, Oakland, appears to have a basement, but the property owner has not responded to CRA's or ACEH's requests for more information about the building on the property.

5. Evaluation Against the Policy

Current Site data demonstrates that Site conditions meet the SWRCB Policy general and direct exposure and outdoor air criteria, but does not meet media-specific groundwater or vapor criteria. All criteria are addressed below.

5.1 General Criteria

5.1.1 Unauthorized Release is Located Within the Area of a Public Water System

The Site and surrounding area are located within the East Bay Municipal Utility District public water system service area.

5.1.2 Unauthorized Release Consists Only of Petroleum

The Site is a former Shell Service Station. Soil and groundwater impacts identified in Site investigations since 1992 consist only of petroleum hydrocarbons and fuel additives.

5.1.3 The Unauthorized ("Primary") Release From the UST System Has Been Stopped

The USTs were replaced in 1971 and 1984, the waste oil UST was removed in 1992, the fuel system was upgraded in 1998, and the USTs, dispensers, piping, and hydraulic hoists were removed in 2002.

5.1.4 Free Product Has Been Removed to the Maximum Extent Practicable

No SPHs have been reported at the Site since groundwater monitoring began in 1992; however, gasoline was reported in an irrigation well on an adjacent property (4320 Bond Street) after the 1958 piping release.

5.1.5 A CSM That Assessed the Nature, Extent, and Mobility of the Release Has Been Developed

The most recent CSM is presented herein.

5.1.6 The Secondary Source Has Been Removed to the Extent Practicable

Following a piping leak in 1958, approximately 650 gallons of gasoline and an unknown amount of groundwater were removed from a series of wells along the southwestern property boundary. From April to September 2001, Cambria conducted monthly mobile dual-phase extraction (DPE) from wells BW-A and S-2. Mobile DPE removed approximately 18,588 gallons of groundwater containing an estimated 1.05 pounds of TPHg and 0.39 pounds of MTBE. During station demolition in 2002, approximately 2,550 tons of impacted soils were removed from the area of the former third-generation USTs, dispensers, and hydraulic hoists and approximately 16,000 gallons of groundwater were removed from the excavations. Prior to backfilling the excavations, Paradiso placed 810 pounds of oxygen-release compound on the bottom of the excavation. In 2005, approximately 720 tons of soil were excavated from the area of the first- and second-generation USTs and transported for off-Site disposal.

5.1.7 Soil and Groundwater Have been Tested for MTBE

Soil samples collected since August 2008 and groundwater samples collected since September 1996 have been analyzed for MTBE.

5.1.8 Nuisance as Defined by Water Code Section 13050 Does Not Exist

Site conditions do not interfere with enjoyment of life or property, affect an entire community or neighborhood, or present a nuisance during or as a result of the treatment or disposal of wastes.

5.2 Media-Specific Criteria

5.2.1 Groundwater

As shown in Graphs 1 through 13, COCs exceeding RWQCB ESLs are stable or decreasing demonstrating that the groundwater plume that exceeds WQOs is stable or decreasing in areal extent. All COC groundwater concentrations are delineated to below RWQCB ESLs by down-gradient Chevron well C-11, with the exception of benzene. Benzene groundwater concentrations attenuate from 15,000 μg/L in on-Site well S-7 to 56 μg/L in well C-11, so the benzene plume likely is less than 250 feet long. Further, we note that well C-11 has only been sampled once. Subsequent groundwater monitoring data may provide delineation.

Based on current benzene concentrations up to 15,000 μg/L and the unknown status of the irrigation well on the 4320 Bond Street, Oakland property, the Site does not meet any of the five classes of the Policy media-specific groundwater criteria.

5.2.2 Vapor

There are no SPHs on Site, so Policy media-specific soil vapor criteria 1 and 2 do not apply. Residual TPHg soil concentrations within 5 feet below the building foundation are less than 100 mg/kg and groundwater is more than 5 feet below the on-Site building's foundation; however, benzene groundwater concentrations are greater than 1,000 μg/L, so the Site does not meet Policy media-specific criteria 3.

On-Site vapor probe data do not meet Policy criteria 4 for demonstrating a bioattenuation zone because oxygen concentrations are less than 4 percent (%) in several probes and benzene concentrations in probes V-2 and V-3 have consistently exceeded Policy criteria for sites without a bioattenuation zone. On-Site sub-slab soil vapor probe data are below ESLs and demonstrate that there is no significant risk to on-Site receptors.

Off-Site data appear to meet Policy residential criteria 4; however, additional information concerning the basement that appears to be present at 1718 High Street, Oakland is needed to complete this evaluation.

5.2.3 Direct Contact and Outdoor Air Exposure

As stated above, this Site meets the direct contact and outdoor air requirements for benzene and ethylbenzene in residential soil specified in scenario 1 in the Policy:

- *Benzene and ethylbenzene concentrations at 0 to 5 fbg are less than 1.9 mg/kg and 21 mg/kg, respectively:* Soil samples collected from 0 to 5 fbg have contained up to 0.011 mg/kg benzene and 0.021 mg/kg ethylbenzene.
- *Benzene and ethylbenzene concentrations at 5 to 10 fbg are less than 2.8 mg/kg and 32 mg/kg, respectively:* Soil samples collected from 5 to 10 fbg have contained up to 2.27 mg/kg benzene and 8.1 mg/kg ethylbenzene.

There are no soil sample results in the case record for naphthalene. However, the relative concentration of naphthalene can be conservatively estimated using the published relative concentrations of naphthalene and benzene in gasoline. Taken from Potter and Simmons (1998), gasoline mixtures contain approximately 2% benzene and 0.25% naphthalene. Therefore, benzene

can be directly substituted for naphthalene concentrations with a safety factor of eight. Benzene concentrations from the Site are below naphthalene thresholds in Table 1 of the Policy. Therefore, the estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact by a factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

6. Conclusions and Recommendations

GHD concludes that this Site meets Policy general and direct exposure and outdoor air criteria, but does not meet media-specific groundwater or vapor criteria. The following data gaps were identified in the CSM and closure evaluation.

- TPHd, TPHg, benzene, and ethylbenzene groundwater impacts are not delineated up gradient of well S-6 and benzene impacts are not delineated southwest of Chevron well C-11.
- The status of the irrigation well on the 4320 Bond Street, Oakland property is unknown.
- More information is needed concerning the basement of the building located at 1718 High Street, Oakland to properly evaluate the potential for soil vapor intrusion.

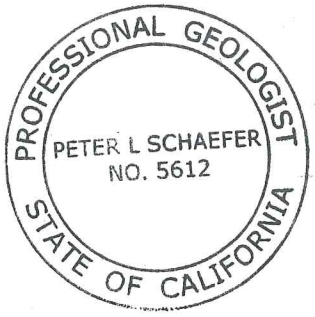
Since the Site's groundwater gradient is consistently westerly to southerly, which is consistent with the gradients at the nearby Chevron and BP service station sites and the groundwater impacts in well S-6 are likely from the former eastern dispenser islands, it does not appear that additional groundwater investigation is warranted. The plume likely attenuates to below WQOs and is likely less than 250 feet long. Further, we note that well C-11 has only been sampled once. Subsequent groundwater monitoring data may provide delineation.

GHD recommends additional effort to obtain information regarding the status of the irrigation well on the 4320 Bond Street, Oakland and the basement beneath the building located at 1718 High Street, Oakland in order provide a complete receptor survey and a formal human health risk assessment to further evaluate potential risks posed by residual COC impacts.

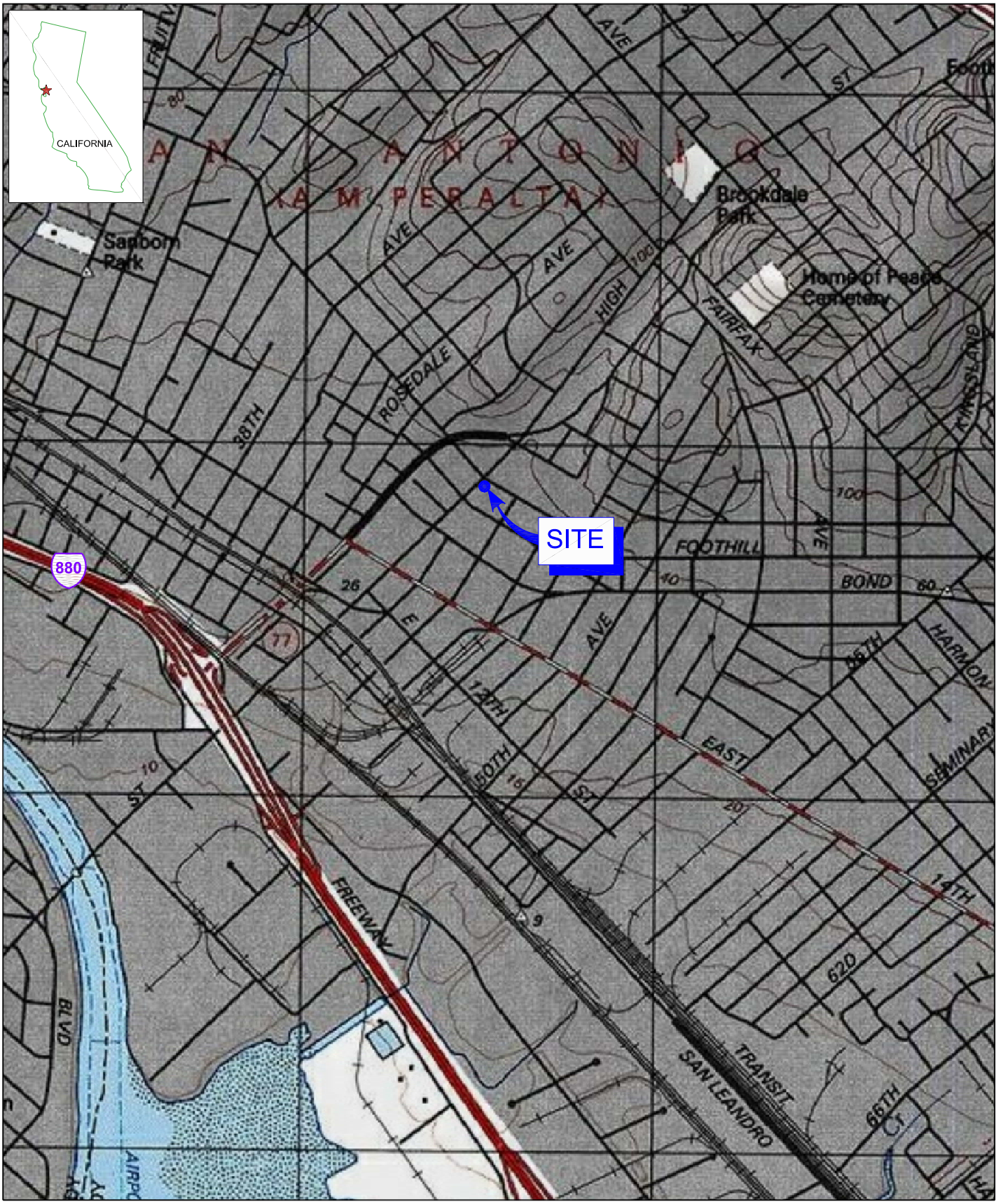
All of Which is Respectfully Submitted,

GHD

Peter Schaefer, CEG, CHG



Aubrey K. Cool, PG



Source: TOPO! MAPS

0 625 1250ft

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

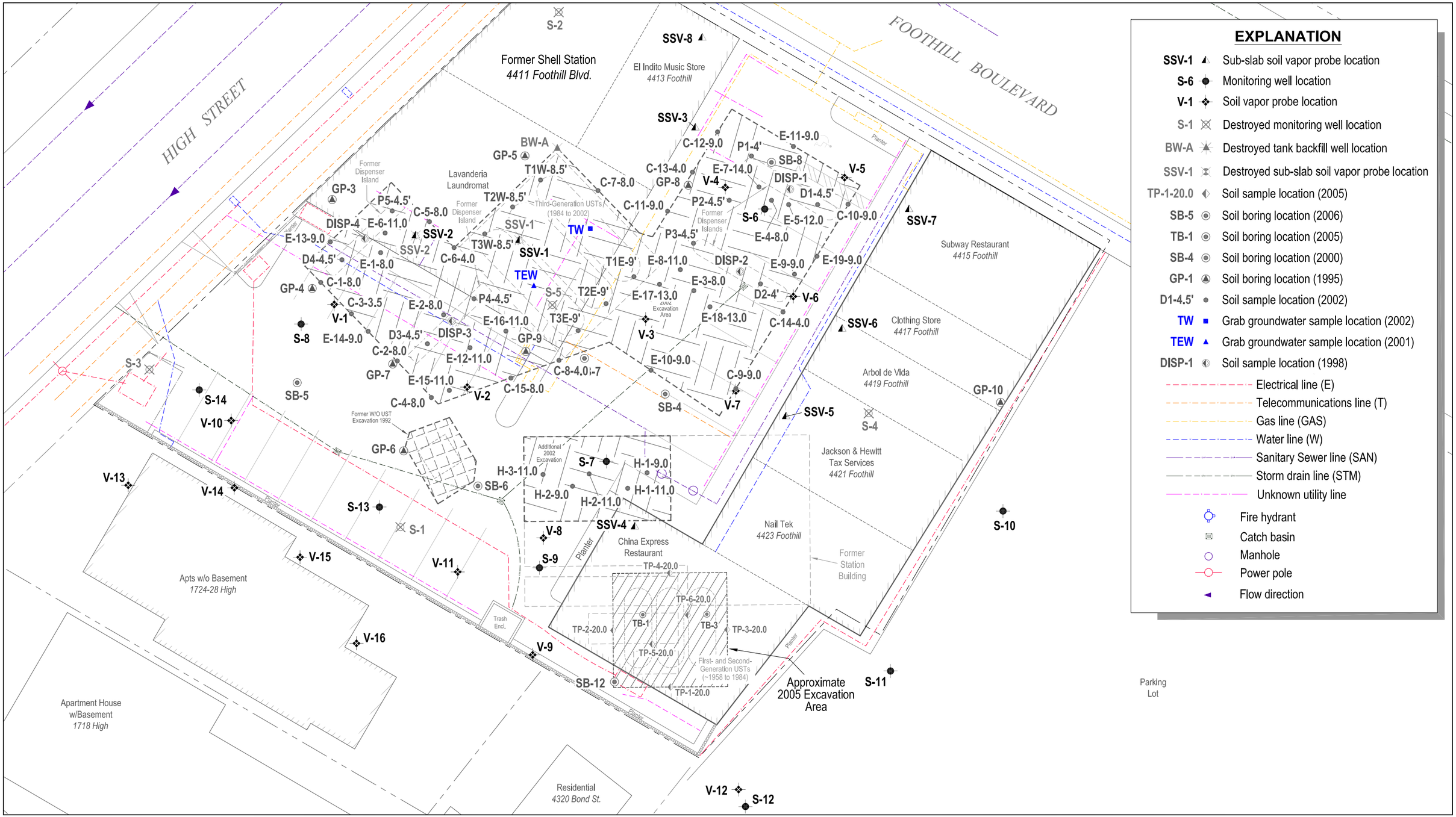
240897-15.04

Jul 27, 2015

VICINITY MAP

FIGURE 1

CAD File: I:\Shell\6-chars\2408--\240897-Oakland 4411 Foothill\240897-FIGURES\240897-32-FIGURES\240897-15.04(032)GN-EM001.DWG



EXPLANATION

- SSV-1 — Sub-slab soil vapor probe location
- S-6 — Monitoring well location
- V-1 — Soil vapor probe location
- S-1 — Destroyed monitoring well location
- BW-A — Destroyed tank backfill well location
- SSV-1 — Destroyed sub-slab soil vapor probe location
- TP-1-20.0 — Soil sample location (2005)
- SB-5 — Soil boring location (2006)
- TB-1 — Soil boring location (2005)
- SB-4 — Soil boring location (2000)
- GP-1 — Soil boring location (1995)
- D1-4.5' — Soil sample location (2002)
- TW — Grab groundwater sample location (2002)
- TEW — Grab groundwater sample location (2001)
- DISP-1 — Soil sample location (1998)
- Electrical line (E)
- Telecommunications line (T)
- Gas line (GAS)
- Water line (W)
- Sanitary Sewer line (SAN)
- Storm drain line (STM)
- Unknown utility line
- Fire hydrant
- Catch basin
- Manhole
- Power pole
- Flow direction

BASEMENT PRESENCE BASED ON FIELD OBSERVATIONS

GHD

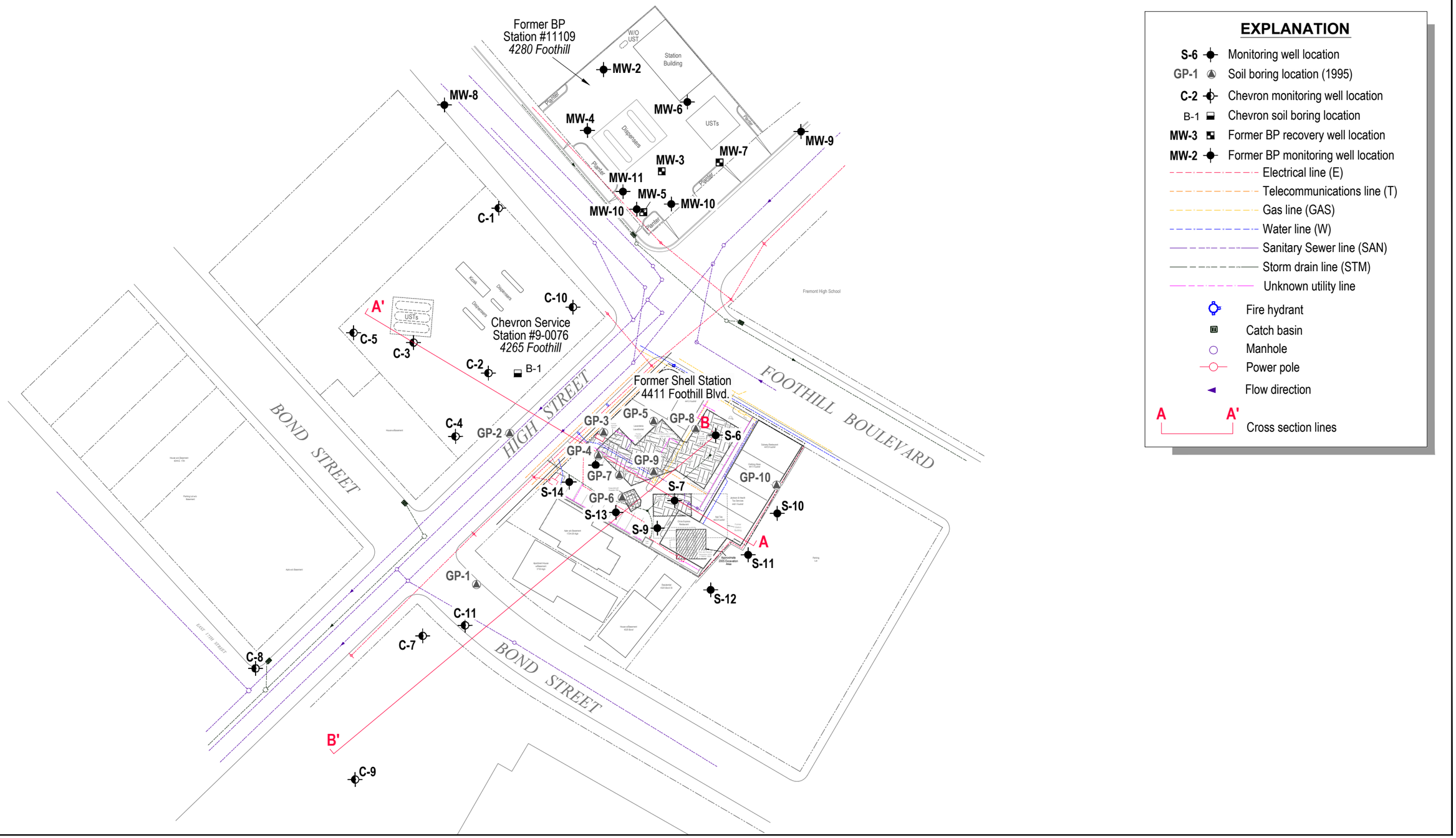
FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

SITE PLAN

240897-15.04
Jul 29, 2015

FIGURE 2

CAD File: I:\Shell\6-chars\2408-\240897-Oakland 4411 Foothill\240897-FIGURES\240897-32-FIGURES\240897-15.04(032)GN-EM002.dwg



EXPLANATION

- S-6 — Monitoring well location
- GP-1 — Soil boring location (1995)
- C-2 — Chevron monitoring well location
- B-1 — Chevron soil boring location
- MW-3 — Former BP recovery well location
- MW-2 — Former BP monitoring well location
- Electrical line (E)
- Telecommunications line (T)
- Gas line (GAS)
- Water line (W)
- Sanitary Sewer line (SAN)
- Storm drain line (STM)
- Unknown utility line
- Fire hydrant
- Catch basin
- Manhole
- Power pole
- Flow direction
- A — A' Cross section lines

BASEMENT PRESENCE BASED ON FIELD OBSERVATIONS

0 25 50ft

Coordinate System:
CA ZONE 6 STATE PLANE
COORD SYSTEM NAD 83

GHD

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

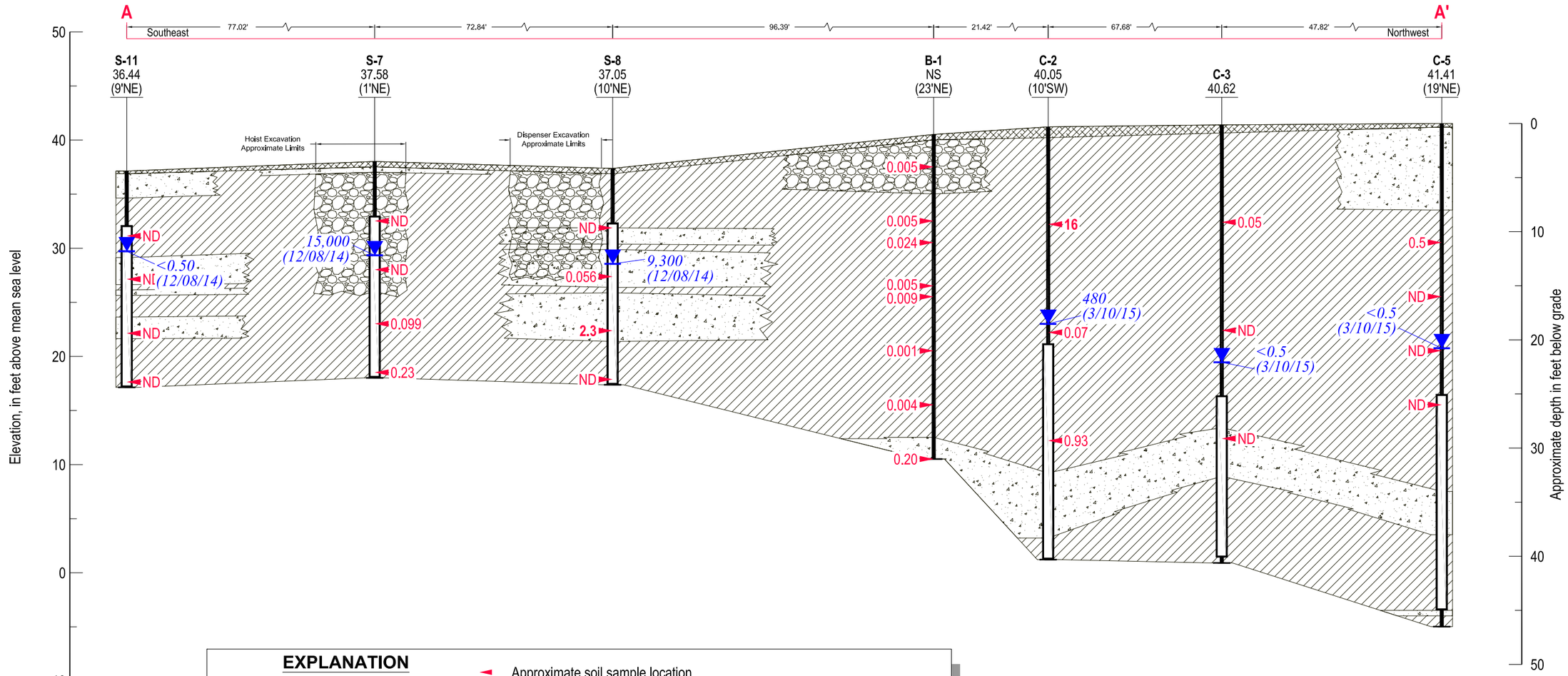
EXTENDED SITE PLAN

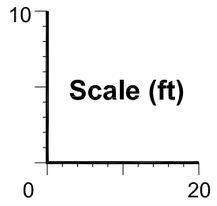
240897-15.04

Aug 7, 2015

FIGURE 3

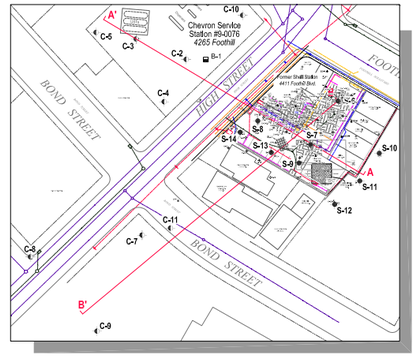
CAD File: I:\Shell\6-chars\2408--\240897-Oakland 4411 Foothill\240897-FIGURES\240897-32-FIGURES\240897-15.04(032)GN-EM002.dwg





EXPLANATION

- ID / Elev. / (offset): Well or boring designation; Top of casing elevation, in feet above mean sea level (where available); Offset distance and direction projected to cross-section line
- NS: Not surveyed
- Groundwater monitoring well or soil boring
- Well screen interval
- Bottom of boring
- fbg: Feet below grade
- Approximate soil sample location
- Interval of discrete soil sample results (grouped for clarity)
- Benzene: Concentrations in soil, in milligrams per kilogram
- ND: Not detected
- = Asphalt/ Concrete
- = Fine-Grained Soils **(CL, ML)**
- = Coarse-Grained Soils **(GC, GM, GW, GP, SC, SM, SW, SP/SM)**
- *Benzene (Date)*: Groundwater elevation and concentrations in micrograms per liter
- *<X*: Not detected at reporting limit X



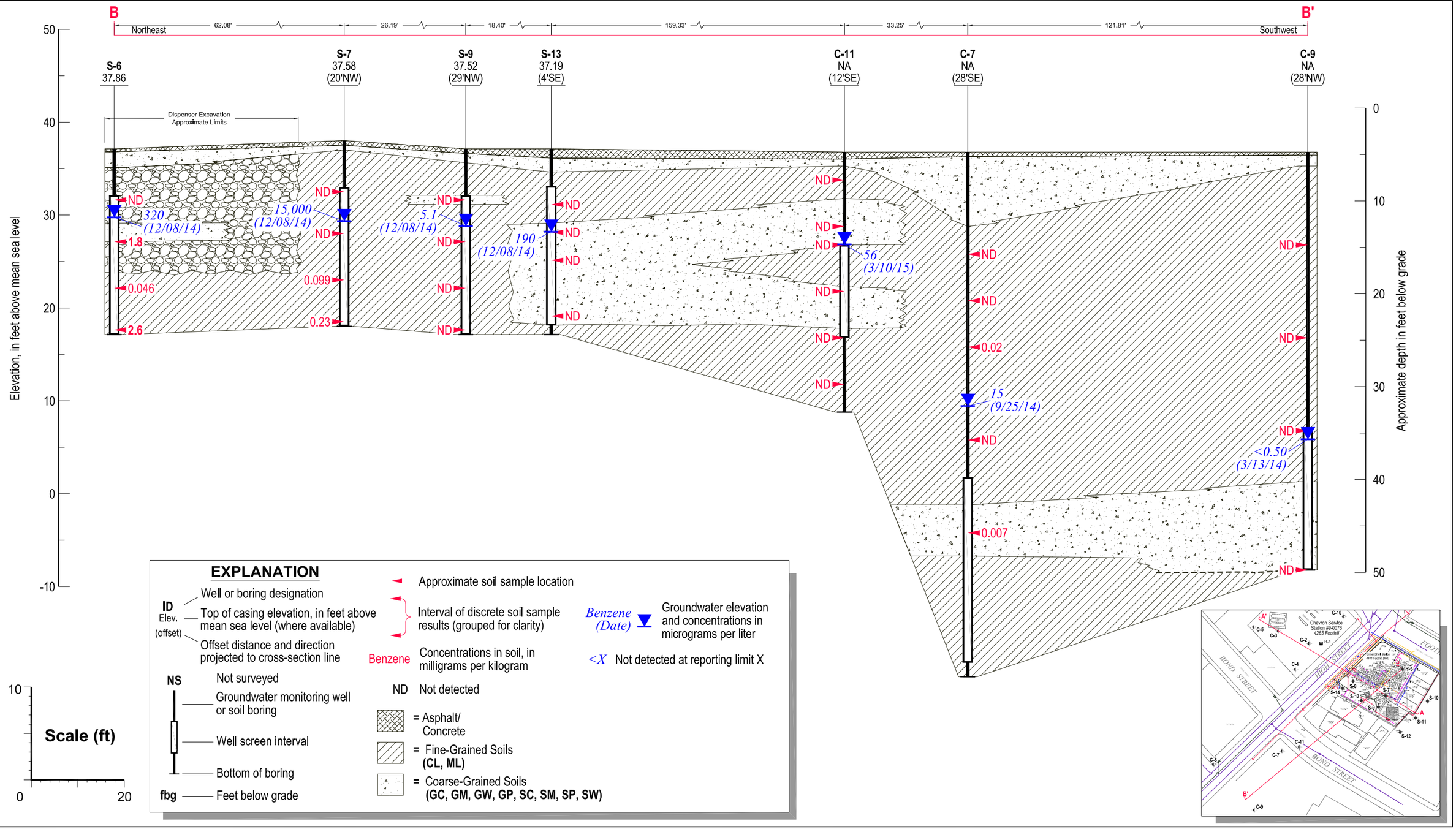
FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

GEOLOGIC CROSS SECTION A-A'

240897-15.04
Jul 28, 2015

FIGURE 4

CAD File: \\sfo-s1\shared\Shell\6-chars\2408--\240897-Oakland 4411 Foothill\240897-FIGURES\240897-32-FIGURES\240897-15.04(032)GN-EM002.dwg



EXPLANATION

- ID / Elev. / (offset): Well or boring designation; Top of casing elevation, in feet above mean sea level (where available); Offset distance and direction projected to cross-section line
- NS: Not surveyed
- Groundwater monitoring well or soil boring
- Well screen interval
- Bottom of boring
- fbg: Feet below grade
- Approximate soil sample location
- Interval of discrete soil sample results (grouped for clarity)
- Benzene: Concentrations in soil, in milligrams per kilogram
- ND: Not detected
- = Asphalt/ Concrete
- = Fine-Grained Soils (CL, ML)
- = Coarse-Grained Soils (GC, GM, GW, GP, SC, SM, SP, SW)
- Benzene (Date): Groundwater elevation and concentrations in micrograms per liter
- <X: Not detected at reporting limit X

Scale (ft): 10, 0, 20

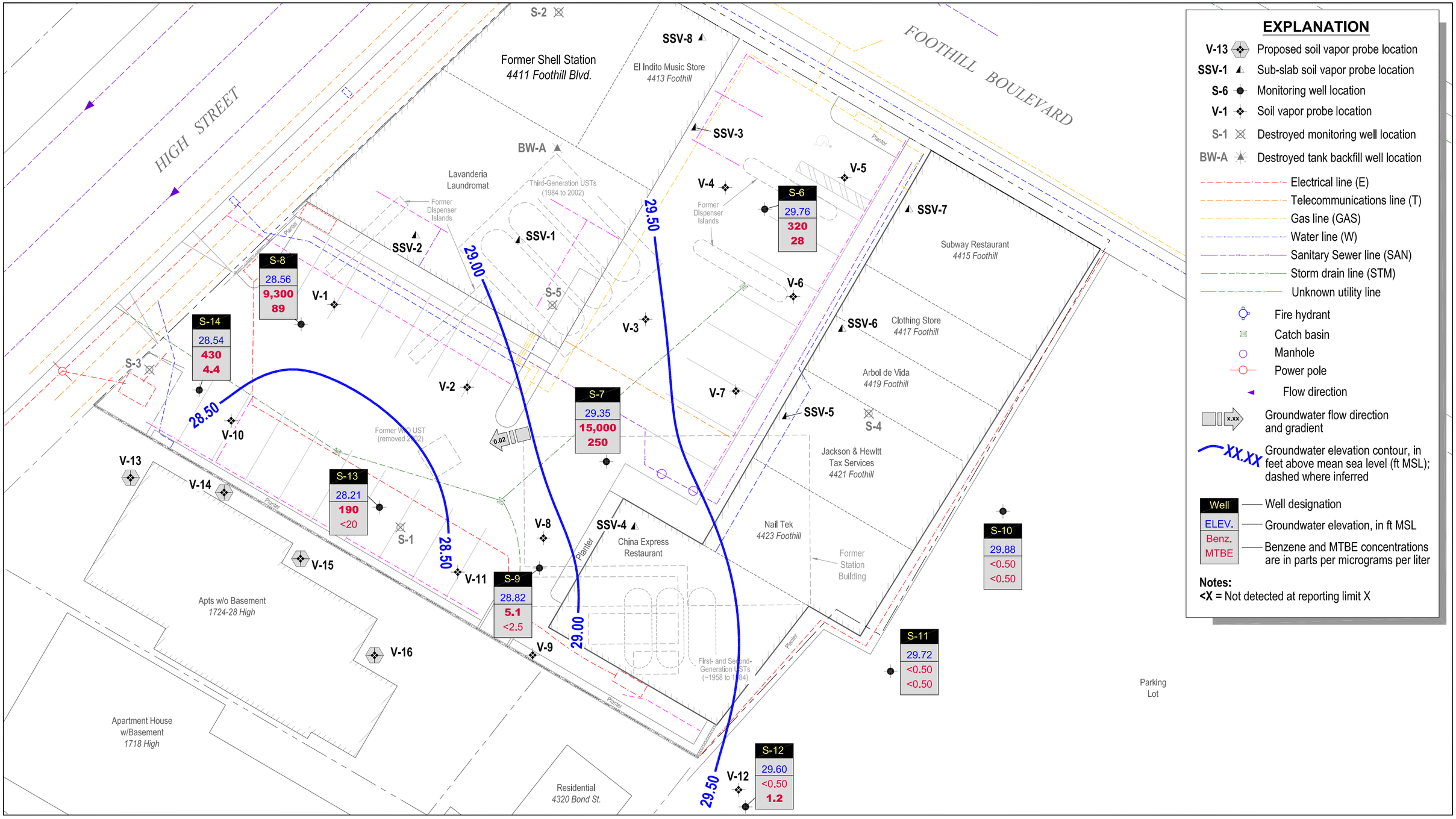
FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

240897-15.04
Jul 28, 2015

GEOLOGIC CROSS SECTION B-B'

FIGURE 5

CAD File: \\sfo-s1\shared\Shell\6-chars\2408-\240897-Oakland 4411 Foothill\240897-FIGURES\240897-32-FIGURES\240897-15.04(032)GN-EM002.dwg



EXPLANATION

- V-13 — Proposed soil vapor probe location
- SSV-1 — Sub-slab soil vapor probe location
- S-6 — Monitoring well location
- V-1 — Soil vapor probe location
- S-1 — Destroyed monitoring well location
- BW-A — Destroyed tank backfill well location
- Electrical line (E)
- Telecommunications line (T)
- Gas line (GAS)
- Water line (W)
- Sanitary Sewer line (SAN)
- Storm drain line (STM)
- Unknown utility line
- Fire hydrant
- Catch basin
- Manhole
- Power pole
- Flow direction
- x.xx — Groundwater flow direction and gradient
- XX.XX — Groundwater elevation contour, in feet above mean sea level (ft MSL); dashed where inferred

Well	Well designation
ELEV.	Groundwater elevation, in ft MSL
Benz. / MTBE	Benzene and MTBE concentrations are in parts per micrograms per liter

Notes:
<X = Not detected at reporting limit X

BASEMENT PRESENCE BASED ON FIELD OBSERVATIONS

0 10 20ft

Coordinate System:
CA ZONE 6 STATE PLANE
COORD SYSTEM NAD 83

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

GROUNDWATER CONTOUR AND CHEMICAL CONCENTRATION MAP - DECEMBER 8, 2014

240897-15.04
Jul 28, 2015

FIGURE 6

CAD File: \\sfo-s1\shared\Shell\6-chars\2408-\240897-Oakland 4411 Foothill\240897-FIGURES\240897-32-FIGURES\240897-15.04(032)GN-EM006.dwg

Table 1

Historical Soil Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Date	Depth (fbg)	TPHmo (mg/kg)	Hydraulic Oil (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Lead (mg/kg)
SW-1	02/05/1992	11.0	---	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	---
S-1-6.0	11/24/1992	6.0	<1.0	---	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	---	---	---	---	---	---	---
S-1-11.0	11/24/1992	11.0	390	---	**180**	110	0.45	<0.005	2.2	8	---	---	---	---	---	---	---	---
S-1-16.0	11/24/1992	16.0	<1.0	---	<1.0	2.8	<0.050	0.51	0.097	0.50	---	---	---	---	---	---	---	---
S-1-21.0	11/24/1992	21.0	<1.0	---	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	---	---	---	---	---	---	---
S-1-26.0	11/24/1992	26.0	<1.0	---	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	---	---	---	---	---	---	---
S-2-6.0	05/21/1993	6.0	---	---	<10	<0.5	<0.005	<0.005	<0.005	<0.005	---	---	---	---	---	---	---	---
S-2-10.5	05/21/1993	10.5	---	---	<10	95	<0.005	<0.005	0.52	0.56	---	---	---	---	---	---	---	---
S-2-15.0	05/21/1993	15.0	---	---	<10	<0.5	<0.005	<0.005	<0.005	0.013	---	---	---	---	---	---	---	---
S-3-6.5	05/21/1993	6.5	---	---	<10	<0.5	<0.005	<0.005	<0.005	<0.005	---	---	---	---	---	---	---	---
S-3-11.0	05/21/1993	11.0	---	---	36	**1,300**	<0.005	<0.005	**35**	**200**	---	---	---	---	---	---	---	---
S-3-15.0	05/21/1993	15.0	---	---	<10	<0.5	<0.005	0.019	0.020	0.11	---	---	---	---	---	---	---	---
GP-3-8.0	06/28/1995	8.0	---	---	2.0	ND	0.006	ND	ND	ND	---	---	---	---	---	---	---	---
GP-3-12.0	06/28/1995	12.0	---	---	3.7	8.4	0.13	0.029	0.14	0.36	---	---	---	---	---	---	---	---
GP-4-8.0	06/28/1995	8.0	---	---	2.9	7.2	0.098	0.009	0.054	0.13	---	---	---	---	---	---	---	---
GP-4-12.0	06/28/1995	12.0	---	---	3.7	280	ND	3.1	3.9	**25**	---	---	---	---	---	---	---	---
GP-5-8.0	06/28/1995	8.0	---	---	ND	ND	ND	ND	ND	ND	---	---	---	---	---	---	---	---
GP-5-12.0	06/28/1995	12.0	---	---	ND	ND	ND	ND	ND	ND	---	---	---	---	---	---	---	---
GP-6-8.0	06/27/1995	8.0	---	---	ND	87	**1.3**	2.2	**6.6**	7.3	---	---	---	---	---	---	---	---
GP-6-12.0	06/27/1995	12.0	---	---	ND	39	ND	0.14	0.29	5.4	---	---	---	---	---	---	---	---
GP-7-8.0	06/27/1995	8.0	---	---	ND	ND	ND	0.15	0.017	**180**	---	---	---	---	---	---	---	---
GP-7-12.0	06/27/1995	12.0	---	---	ND	840	**6.0**	**20**	**98**	**43**	---	---	---	---	---	---	---	---
GP-8-8.0	06/28/1995	8.0	---	---	ND	ND	ND	ND	ND	ND	---	---	---	---	---	---	---	---
GP-8-12.0	06/28/1995	12.0	---	---	ND	86	ND	1.0	2.0	**15**	---	---	---	---	---	---	---	---
GP-9-8.0	06/28/1995	8.0	---	---	ND	190	ND	3.6	**13**	**380**	---	---	---	---	---	---	---	---
GP-9-12.0	06/28/1995	12.0	---	---	ND	760	0.71	**17**	**76**	**41**	---	---	---	---	---	---	---	---
D-1(2.0)	08/26/1998	2.0	---	---	---	**1,100**	**9.2**	4.1	**15**	**61**	13 a/2.5	---	---	---	---	---	---	---

Table 1

Historical Soil Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Date	Depth (fbg)	TPHmo (mg/kg)	Hydraulic Oil (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Lead (mg/kg)
D-2(2.0)	08/26/1998	2.0	---	---	---	**1,500**	**3.6**	4.3	**7.1**	**21**	<6.2	---	---	---	---	---	---	---
D-3(2.0)	08/26/1998	2.0	---	---	---	160	**1.3**	0.61	2.9	2.0	1.4 a	---	---	---	---	---	---	---
D-4(2.0)	08/26/1998	2.0	---	---	---	180	0.29	0.17	0.10	0.43	0.83	---	---	---	---	---	---	---
SB-4-5.5	01/07/2000	5.5	---	---	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.025	---	---	---	---	---	---	---
SB-4-9.0	01/07/2000	9.0	---	---	244	**786**	**2.27**	1.68	**8.1**	**26.5**	<1.25	---	---	---	---	---	---	---
SB-4-16.0	01/07/2000	16.0	---	---	209	294	**1.5**	4.35	3.88	**15.7**	0.893	---	---	---	---	---	---	---
SB-4-19.5	01/07/2000	19.5	---	---	<1.0	2.08	0.212	0.0168	0.0168	0.0167	<0.025	---	---	---	---	---	---	---
SB-4-24.5	01/07/2000	24.5	---	---	<1.0	<1.0	0.00724	<0.005	<0.005	<0.005	<0.025	---	---	---	---	---	---	---
SB-4B-5.5 (S-4)	01/07/2000	5.5	---	---	27.2	28.2	0.0176	<0.01	0.0408	0.0738	0.0603 a/0.0345	---	---	---	---	---	---	---
SB-4B-10.5 (S-4)	01/07/2000	10.5	---	---	<5.0	6.19	0.0696	<0.025	0.0915	<0.025	<0.125	---	---	---	---	---	---	---
SB-4B-19.0 (S-4)	01/07/2000	19.0	---	---	<5.0	<1.0	0.0445	<0.005	<0.005	<0.005	0.233 a/0.0549	---	---	---	---	---	---	---
T1W-8.5' (A1)	12/01/2001	8.5	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	0.034	---	---	---	---	---	---	---
T1E-9' (A1)	12/01/2001	9.0	---	---	---	5.0	<0.005	<0.005	0.049	0.04	0.14	---	---	---	---	---	---	---
T2W-8.5' (A1)	12/01/2001	8.5	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	0.12	---	---	---	---	---	---	---
T2E-9' (A1)	12/01/2001	9.0	---	---	---	<1.0	<0.005	0.015	<0.005	0.020	0.012	---	---	---	---	---	---	---
T3W-8.5' (A1)	12/01/2001	8.5	---	---	---	1.8	<0.005	<0.005	<0.005	0.015	0.21	---	---	---	---	---	---	---
T3E-9' (A1)	12/01/2001	9.0	---	---	---	1.2	<0.005	<0.005	<0.005	<0.005	0.32	---	---	---	---	---	---	---
D1-4.5' (B)	12/01/2001	4.5	---	---	---	**1,000**	**1.4**	0.20	**15**	5.1	0.35	---	---	---	---	---	---	---
D2-4' (B)	12/01/2001	4.0	---	---	---	270	0.18	<0.050	0.11	0.094	1.4	---	---	---	---	---	---	---
D3-4.5' (A1)	12/01/2001	4.5	---	---	---	6.3	0.097	0.007	0.036	0.024	0.058	---	---	---	---	---	---	---
D4-4.5' (A1)	12/01/2001	4.5	---	---	---	4.9	0.12	<0.005	0.033	0.067	0.021	---	---	---	---	---	---	---
P1-4' (A1)	12/01/2001	4.0	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	0.009	---	---	---	---	---	---	---

Table 1

Historical Soil Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Date	Depth (fbg)	TPHmo (mg/kg)	Hydraulic Oil (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Lead (mg/kg)
P2-4.5' (A1)	12/01/2001	4.5	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	0.061	---	---	---	---	---	---	---
P3-4.5' (A1)	12/01/2001	4.5	---	---	---	4.1	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---	---	---	---	---
P4-4.5' (A1)	12/01/2001	4.5	---	---	---	11	0.035	<0.005	0.035	0.012	0.13	---	---	---	---	---	---	---
P5-4.5' (A1)	12/01/2001	4.5	---	---	---	51	<0.005	<0.005	<0.005	0.34	0.14	---	---	---	---	---	---	---
E-1-8.0 (A2)	01/02/2002	8.0	---	---	---	9.5	0.19	0.09	0.94	5.2	<0.02	---	---	---	---	---	---	---
E-2-8.0 (A2)	01/02/2002	8.0	---	---	---	7.5	0.23	0.04	0.91	2.0	0.23	---	---	---	---	---	---	---
E-3-8.0 (A2)	01/02/2002	8.0	---	---	---	3.7	0.46	0.06	3.9	0.52	0.54	---	---	---	---	---	---	---
E-4-8.0 (A2)	01/02/2002	8.0	---	---	---	1.5	0.093	0.005	0.005	0.006	0.041	---	---	---	---	---	---	---
E-5-12.0 (A2)	01/02/2002	12.0	---	---	---	54	0.71	0.46	2.6	**16**	<0.02	---	---	---	---	---	---	---
E-6-11.0 (A2)	01/02/2002	11.0	---	---	---	75	**2.9**	3.6	**12**	**54**	<0.02	---	---	---	---	---	---	---
E-7-14.0 (A2)	01/02/2002	14.0	---	---	---	41	1.0	0.53	2.2	**11**	<0.02	---	---	---	---	---	---	---
E-8-11.0 (A2)	01/02/2002	11.0	---	---	---	310	**2.0**	1.8	**14**	**77**	<0.02	---	---	---	---	---	---	---
E-9-9.0 (A2)	01/02/2002	9.0	---	---	---	55	0.06	0.03	0.05	0.08	0.03	---	---	---	---	---	---	---
E-10-9.0 (A2)	01/03/2002	9.0	---	---	---	<0.20	0.002	0.004	<0.002	0.007	0.082	---	---	---	---	---	---	---
E-11-9.0 (A2)	01/03/2002	9.0	---	---	---	<0.20	0.007	<0.002	<0.002	<0.002	0.010	---	---	---	---	---	---	---
E-12-11.0 (A2)	01/03/2002	11.0	---	---	---	23	1.1	0.12	2.0	**12**	0.48	---	---	---	---	---	---	---
E-13-9.0 (A2)	01/03/2002	9.0	---	---	---	<0.20	<0.002	<0.002	<0.002	<0.002	0.012	---	---	---	---	---	---	---
E-14-9.0 (A2)	01/03/2002	9.0	---	---	---	2.7	0.005	<0.002	0.19	0.23	0.024	---	---	---	---	---	---	---
E-15-11.0 (A2)	01/04/2002	11.0	---	---	---	**1,800**	**9.6**	**42**	**100**	**590**	0.33	---	---	---	---	---	---	---

Table 1

Historical Soil Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Date	Depth (fbg)	TPHmo (mg/kg)	Hydraulic Oil (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Lead (mg/kg)
E-16-11.0 (A2)	01/04/2002	11.0	---	---	---	770	**3.8**	2.8	**37**	**210**	<0.02	---	---	---	---	---	---	---
E-17-13.0 (A2)	01/04/2002	13.0	---	---	---	31	0.65	0.19	2.5	8.3	0.04	---	---	---	---	---	---	---
E-18-13.0 (A2)	01/04/2002	13.0	---	---	---	17	**1.2**	2.8	1.0	2.2	<0.02	---	---	---	---	---	---	---
E-19-9.0 (A2)	01/04/2002	9.0	---	---	---	0.54	0.002	<0.002	0.004	0.027	0.014	---	---	---	---	---	---	---
C-1-8.0 (B)	01/07/2002	8.0	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	---	---	---	---	---	---	---
C-2-8.0 (B)	01/07/2002	8.0	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.010	<0.5	---	---	---	---	---	---	---
C-3-3.5 (B)	01/07/2002	3.5	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	---	---	---	---	---	---	---
C-4-8.0 (B)	01/07/2002	8.0	---	---	---	290	0.15	<0.050	**4.9**	8.9	<0.5	---	---	---	---	---	---	---
C-5-8.0 (B)	01/07/2002	8.0	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	---	---	---	---	---	---	---
C-6-4.0 (B)	01/07/2002	4.0	---	---	---	6.5	<0.005	<0.005	<0.005	<0.010	<0.5	---	---	---	---	---	---	---
C-7-8.0 (B)	01/07/2002	8.0	---	---	---	87	<0.025	<0.025	0.43	<0.050	<0.5	---	---	---	---	---	---	---
C-8-4.0 (B)	01/07/2002	8.0	---	---	---	81	0.026	<0.025	0.038	<0.050	<0.5	---	---	---	---	---	---	---
C-9-9.0 (B)	01/07/2002	9.0	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	0.65	---	---	---	---	---	---	---
C-10-9.0 (B)	01/07/2002	9.0	---	---	---	84	0.039	<0.025	0.61	0.27	<0.5	---	---	---	---	---	---	---
C-11-9.0 (B)	01/07/2002	9.0	---	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.5	---	---	---	---	---	---	---
C-12-9.0 (B)	01/07/2002	9.0	---	---	---	6.6	<0.010	<0.010	0.013	<0.025	<0.5	---	---	---	---	---	---	---
C-13-4.0 (B)	01/07/2002	4.0	---	---	---	2.7	<0.005	<0.005	<0.005	<0.005	<0.5	---	---	---	---	---	---	---
C-14-4.0 (B)	01/07/2002	4.0	---	---	---	11	<0.050	<0.050	<0.050	<0.10	<0.5	---	---	---	---	---	---	---
C-15-8.0 (B)	01/07/2002	8.0	---	---	---	250	<0.050	<0.050	4.4	4.7	<0.5	---	---	---	---	---	---	---

Table 1

Historical Soil Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Date	Depth (fbg)	TPHmo (mg/kg)	Hydraulic Oil (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Lead (mg/kg)
H-1-9.0 (B)	01/17/2002	9.0	---	14,000	---	120	0.094	<0.025	0.047	0.18	<0.5	---	---	---	---	---	---	---
H-1-11.0 (B)	01/17/2002	11.0	---	230	---	210	0.2	0.071	2.2	10	<0.5	---	---	---	---	---	---	---
H-2-9.0 (B)	01/17/2002	9.0	---	<10	---	32	0.015	<0.005	0.048	0.053	<0.5	---	---	---	---	---	---	---
H-2-11.0 (B)	01/17/2002	11.0	---	78	---	400	0.54	0.1	**7.3**	**24**	<0.5	---	---	---	---	---	---	---
H-3-11.0 (B)	01/17/2002	11.0	---	<10	---	250	0.21	0.52	3.1	**14**	<0.5	---	---	---	---	---	---	---
TB-1-7.0	08/29/2005	7.0	---	---	---	2.2 b	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	21.2
TB-1-10.5	08/29/2005	10.5	---	---	---	**1,600**	<0.50	<0.50	1.5	0.84	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	10.9
TB-1-12.0	08/29/2005	12.0	---	---	---	570	**1.5**	<0.50	3.3	1.0	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	291
TB-1-15.0	08/29/2005	15.0	---	---	---	<50	0.86	<0.50	0.79	2.3	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	4.00
TB-1-18.0	08/29/2005	18.0	---	---	---	<50	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	3.81
TB-1-19.5	08/29/2005	19.5	---	---	---	<50	0.56	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	4.38
TB-3-3.0	08/29/2005	3.0	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	2.22
TB-3-6.0	08/29/2005	6.0	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	0.021	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	16.3
TB-3-9.0	08/29/2005	9.0	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	4.20
TB-3-12.0	08/29/2005	12.0	---	---	---	**1,100**	<0.50	<0.50	**11**	**48**	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	10.2
TB-3-15.0	08/29/2005	15.0	---	---	---	<50	**2.2**	<0.50	<0.50	1.8	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	5.60
TB-3-18.0	08/29/2005	18.0	---	---	---	<50	1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	3.85
TB-3-21.0	08/29/2005	21.0	---	---	---	<1.0	0.0070	<0.0050	<0.0050	0.009	0.0062	0.0062	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	3.20
TP-1-20.0	09/20/2005	20.0	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.023	<0.0050	<0.0050	---	---	---
TP-2-20.0	09/20/2005	20.0	---	---	---	<1.0	0.044	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0053	<0.0050	<0.0050	---	---	---
TP-3-20.0	09/20/2005	20.0	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.018	<0.0050	<0.0050	---	---	---
TP-4-20.0	09/20/2005	20.0	---	---	---	<1.0	0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0066	<0.0050	<0.0050	---	---	---
TP-5-20.0	09/20/2005	20.0	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.013	<0.0050	<0.0050	---	---	---
TP-6-20.0	09/20/2005	20.0	---	---	---	<1.0	0.0080	<0.0050	0.0083	0.040	<0.0050	<0.0050	0.012	<0.0050	<0.0050	---	---	---
SB-5-5	05/17/2006	5	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
SB-5-10	05/17/2006	10	---	---	23	2.2	<0.0050	<0.0050	0.020	0.017	<0.0050	<0.050	---	---	---	---	---	---
SB-5-15	05/17/2006	15	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
SB-5-20	05/17/2006	20	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
SB-5-23.5	05/17/2006	23.5	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---

Table 1

Historical Soil Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Date	Depth (fbg)	TPHmo (mg/kg)	Hydraulic Oil (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Lead (mg/kg)
SB-6-5	05/16/2006	5	---	---	3.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
SB-6-10	05/16/2006	10	---	---	5.8	390	<0.025	<0.025	<0.025	<0.050	<0.025	<0.25	---	---	---	---	---	---
SB-6-15	05/16/2006	15	---	---	<2.0	<5.0 c	<0.0050	0.010	0.068	0.20	<0.0050	<0.050	---	---	---	---	---	---
SB-6-20	05/16/2006	20	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
SB-6-25	05/16/2006	25	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
SB-7-5	05/17/2006	5	---	---	2.5	<50 c	0.011	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
SB-7-10	05/17/2006	10	---	---	20	290 c	<0.50 c	<0.50 c	3.2 c	3.0 c	<0.50 c	<5.0 c	---	---	---	---	---	---
SB-7-15	05/17/2006	15	---	---	110	**3,000 c**	**3.7**	**60 c**	**47 c**	**270 c**	<0.50	<5.0	---	---	---	---	---	---
SB-7-20	05/17/2006	20	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	0.034	0.46	---	---	---	---	---	---
SB-7-25	05/17/2006	25	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
SB-8-5[d]	05/15/2006	5	---	---	3.1	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
SB-8-5[d]	05/15/2006	10	---	---	3.1	<1.0 c	<0.0050 c	<0.0050 c	<0.0050 c	<0.010 c	<0.0050 c	<0.50 c	---	---	---	---	---	---
SB-12-5	05/16/2006	5	---	---	2.1	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
SB-12-10	05/16/2006	10	---	---	19	230	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	---	---	---	---	---	---
SB-12-15	05/16/2006	15	---	---	<2.0	<1.0	0.014	0.0062	0.0084	0.014	<0.0050	<0.050	---	---	---	---	---	---
SB-12-20	05/16/2006	20	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
SB-12-25	05/16/2006	25	---	---	4.0	<1.0	0.0074	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	---	---	---
S-6-5.5	02/07/2007	5.5	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	<0.0050	<0.0050	5.6
S-6-10	02/07/2007	10	---	---	9.6	230	**1.8**	0.17	**6.1**	2.4	<0.12	<1.2	---	---	---	<0.12	<0.12	3.4
S-6-15	02/07/2007	15	---	---	2.7	<25	0.046	<0.0050	0.093	0.16	<0.0050	<0.050	---	---	---	<0.0050	<0.0050	5.0
S-6-19.5	02/07/2007	19.5	---	---	62	69	**2.6**	0.28	**5.4**	5.9	0.14	<1.2	---	---	---	<0.12	<0.12	12
S-7-5.5	02/08/2007	5.5	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	<0.0050	<0.0050	5.6
S-7-10	02/08/2007	10	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	<0.0050	<0.0050	5.4
S-7-15	02/08/2007	15	---	---	9.6	30	0.099	0.15	0.31	2.3	<0.025	<0.25	---	---	---	<0.025	<0.025	4.3
S-7-19.5	02/08/2007	19.5	---	---	<2.0	<1.0	0.23	0.019	0.032	0.056	<0.0050	<0.050	---	---	---	<0.0050	<0.0050	5.0
S-8-5.5	02/07/2007	5.5	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	<0.0050	<0.0050	4.5
S-8-10	02/07/2007	10	---	---	15	220	0.056	0.07	3.8	**17**	<0.025	<0.25	---	---	---	<0.025	<0.025	5.3
S-8-15	02/07/2007	15	---	---	<2.0	37	**2.3**	2.5	7.1	**24**	<0.12	<1.2	---	---	---	<0.12	<0.12	7.1
S-8-19.5	02/07/2007	19.5	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	0.013	0.28	1.6	---	---	---	<0.0050	<0.0050	4.6

Historical Soil Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Date	Depth (fbg)	TPHmo (mg/kg)	Hydraulic Oil (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Lead (mg/kg)
S-9-5.5	02/08/2007	5.5	---	---	2.8	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	<0.0050	<0.0050	5.4
S-9-10	02/08/2007	10	---	---	16	23	<0.025	<0.025	<0.025	<0.050	<0.025	<0.25	---	---	---	<0.025	<0.025	4.9
S-9-13.5	02/08/2007	13.5	---	---	26	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	<0.0050	<0.0050	9.9
S-9-19.5	02/08/2007	19.5	---	---	<2.0	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	---	---	---	<0.0050	<0.0050	4.7
V-1-5	12/14/2007	5	---	---	<5.0 e	<0.50 f	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
V-2-5	12/14/2007	5	---	---	<5.0 e	13 f	<0.0050	<0.0050	0.021	0.022	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
V-3-5	12/14/2007	5	---	---	<5.0 e	0.85 f	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
V-4-5	12/14/2007	5	---	---	<5.0 e	<0.50 f	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
V-5-5	12/14/2007	5	---	---	<5.0 e	<0.50 f	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
V-6-5	12/14/2007	5	---	---	<5.0 e	11 f	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
V-7-5	12/14/2007	5	---	---	<5.0 e	<0.50 f	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
V-10-5	12/14/2007	5	---	---	<5.0 e	<0.50 f	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
V-11-5	12/14/2007	5	---	---	<5.0 e	<0.50 f	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
V-12-5	08/27/2009	5	---	---	<5.0 e	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-10-5.5	08/28/2009	5.5	---	---	<5.0 e	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-10-10	08/28/2009	10	---	---	<5.0 e	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-10-15	08/28/2009	15	---	---	<5.0 e	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-10-19.5	08/28/2009	19.5	---	---	<5.0 e	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-11-6	08/28/2009	6	---	---	<5.0 e	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-11-10	08/28/2009	10	---	---	<5.0 e	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-11-15	08/28/2009	15	---	---	<5.0 e	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-11-19.5	08/28/2009	19.5	---	---	32 e,g	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-12-5.5'	08/31/2009	5.5	---	---	**880 e,g**	<0.50 f	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-12-10'	08/31/2009	10	---	---	8.6 e	45 f,g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-12-15'	08/31/2009	15	---	---	<5.0 e	<0.50 f	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---
S-12-20'	08/31/2009	20	---	---	<5.0 e	<0.50 f	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.0050	<0.0050	---

Table 1

Historical Soil Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Date	Depth (fbg)	TPHmo (mg/kg)	Hydraulic Oil (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Lead (mg/kg)
S-13-6'	08/20/2013	6	---	---	---	<0.099	<0.00099	<0.00099	<0.00099	<0.0020	<0.0020	<0.050	<0.0020	<0.0020	<0.0020	---	---	---
S-13-9'	08/20/2013	9	---	---	---	16	<0.10	<0.10	0.24	0.34	<0.25	<5.0	<0.25	<0.25	<0.25	---	---	---
S-13-12'	08/20/2013	12	---	---	---	260	<0.10	0.79	**6.0**	**26**	<0.25	<5.0	<0.25	<0.25	<0.25	---	---	---
S-13-18'	08/20/2013	18	---	---	---	0.16	<0.00099	<0.00099	0.014	<0.0020	<0.0020	<0.050	<0.0020	<0.0020	<0.0020	---	---	---
S-14-8'	08/20/2013	8	---	---	---	<0.10	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	<0.050	<0.0020	<0.0020	<0.0020	---	---	---
S-14-12'	08/20/2013	12	---	---	---	400	<0.10	<0.10	0.34	0.35	<0.25	<5.0	<0.25	<0.25	<0.25	---	---	---
S-14-16'	08/20/2013	16	---	---	---	<0.10	0.0015	<0.0010	0.0017	<0.0020	<0.0020	<0.050	<0.0020	<0.0020	<0.0020	---	---	---
S-14-19'	08/20/2013	19	---	---	---	0.13	<0.00099	<0.00099	<0.00099	<0.0020	0.0021	<0.050	<0.0020	<0.0020	<0.0020	---	---	---
Shallow Soil (≤10 fbg) ESL[h]:			NA	NA	110	500	1.2	9.3	4.7	11	8.4	110	NA	NA	NA	0.91	0.51	320
Deep Soil (>10 fbg) ESL[h]:			NA	NA	110	1,000	1.2	9.3	4.7	11	8.4	110	NA	NA	NA	0.91	0.51	320

Notes:

TPHmo = Total petroleum hydrocarbons as motor oil analyzed by EPA Method 8015 (Modified)
Hydraulic oil analyzed by EPA Method 8260B
TPHd = Total petroleum hydrocarbons as diesel analyzed by EPA Method 8015 (Modified)
TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; before August 29, 2005, analyzed by EPA Method 8015 (Modified) unless otherwise noted
BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B;before August 29, 2005, analyzed by EPA Method 8020 (Modified)
MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B unless otherwise noted
TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B
DIPE = Di-isopropyl ether analyzed by EPA Method 8260B
ETBE = Ethyl tertiary-butyl ether analyzed by EPA Method 8260B
TAME = Tertiary-amyl methyl ether analyzed by EPA Method 8260B
1,2-DCA = 1,2-Dichloroethane, analyzed by modified EPA Method 8260B
EDB = Ethylene dibromide analyzed by modified EPA Method 8260B
Lead analyzed by EPA Method 7421
fbg = Feet below grade
mg/kg = Milligrams per kilogram
<x = Not detected at reporting limit x
--- = Not analyzed
ND = Concentration below reporting limit; reporting limit unknown
ESL = Environmental screening level
NA = No applicable ESL
Results in **bold** equal or exceed applicable ESL
Shading indicates that the soil sample location was subsequently excavated and the results are not representative of residual soil conditions

Table 1

Historical Soil Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Date	Depth (fbg)	TPHmo (mg/kg)	Hydraulic Oil (mg/kg)	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Lead (mg/kg)

a = Analyzed by EPA Method 8020.

b = Quantity of unknown hydrocarbon(s) in sample based on gasoline.

c = Analysis performed past the recommended hold time.

d = Soil samples in boring S-8 were not collected below 10 fbg because the water table in this boring was encountered at approximately 9.5 fbg.

e = The sample extract was subjected to silica gel treatment prior to analysis.

f = Analyzed by Modified EPA Method 8015B.

g = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

h = San Francisco Bay Regional Water Quality Control Board commercial/industrial ESL for soil where groundwater is not a source of drinking water (Tables B and D User's Guide: Derivation and Application of Environmental Screening Levels, RWQCB, Interim Final 2013).

Table 2

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-1	12/18/1992	---	41,000	3,100	1,100	1,200	8,700	---	---	---	---	---	---	---	---	38.31	9.06	---	---
S-1	05/26/1993	6,000	39,000	1,300	4,700	1,500	7,800	---	---	---	---	---	---	---	---	38.31	---	---	---
S-1	05/28/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.31	12.13	26.18	---
S-1	06/03/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.31	8.89	29.42	---
S-1	06/08/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.31	8.80	29.51	---
S-1	09/21/1993	5,900	34,000	480	5,000	3,800	18,000	---	---	---	---	---	---	---	---	38.31	10.40	27.91	---
S-1	12/14/1993	13,000	25,000	1,100	5,000	2,200	11,000	---	---	---	---	---	---	---	---	38.31	9.66	28.65	---
S-1	03/17/1994	1,600	57,000	1,300	5,400	2,100	11,000	---	---	---	---	---	---	---	---	38.31	8.20	30.11	---
S-1	06/16/1994	3,000	57,000	1,600	6,000	2,000	13,000	---	---	---	---	---	---	---	---	38.31	9.41	28.90	---
S-1	09/22/1994	<250	39,000	1,300	2,100	1,500	7,100	---	---	---	---	---	---	---	---	38.31	11.13	27.18	---
S-1	12/15/1994	3,100 g	30,000	1,100	4,700	1,600	10,000	---	---	---	---	---	---	---	---	38.31	7.15	31.16	---
S-1	03/30/1995	3,100 a,g	30,000 a	1,400 a	4,000 a	1,500 a	11,000 a	---	---	---	---	---	---	---	---	38.31	6.09	32.22	---
S-1	06/20/1995	2,100	28,000	1,100	2,300	1,100	8,300	---	---	---	---	---	---	---	---	38.31	7.30	31.01	---
S-1	09/20/1995	2,600	40,000	840	3,600	1,300	8,600	---	---	---	---	---	---	---	---	38.31	10.02	28.29	---
S-1	12/06/1995	6,400 g	38,000	920	3,200	1,500	9,400	---	---	---	---	---	---	---	---	38.31	11.64	26.67	---
S-1	03/21/1996	---	48,000	700	4,200	1,100	8,600	---	---	---	---	---	---	---	---	38.31	6.87	31.44	---
S-1	09/06/1996	4,100	41,000	830	2,600	2,100	12,000	<250	---	---	---	---	---	---	---	38.31	10.50	27.81	---
S-1	12/19/1996	2,500	40,000	540	3,100	1,900	9,800	920	---	---	---	---	---	---	---	38.31	8.24	30.07	---
S-1	03/17/1997	4,700	42,000	610	2,700	1,700	11,000	3,500	---	---	---	---	---	---	---	38.31	7.26	31.05	---
S-1	06/11/1997	4,000	28,000	540	960	1,300	5,300	220	---	---	---	---	---	---	---	38.31	10.69	27.62	---
S-1 (D)	06/11/1997	3,900	30,000	580	1,000	1,400	5,400	<125	---	---	---	---	---	---	---	38.31	10.69	27.62	---
S-1	09/17/1997	4,400	27,000	310	1,200	1,900	9,000	170	---	---	---	---	---	---	---	38.31	10.26	28.05	---
S-1 (D)	09/17/1997	4,400	27,000	270	1,200	1,900	9,000	170	---	---	---	---	---	---	---	38.31	10.26	28.05	---
S-1	12/11/1997	3,400	21,000	350	820	1,500	6,500	<125	---	---	---	---	---	---	---	38.31	6.96	31.35	---
S-1	03/16/1998	2,500	25,000	250	820	670	5,000	<125	---	---	---	---	---	---	---	38.31	6.00	32.31	---
S-1 (D)	03/16/1998	---	26,000	250	840	720	5,100	<125	---	---	---	---	---	---	---	38.31	6.00	32.31	5.3/3.7
S-1	06/23/1998	230	<1,000	280	14	23	15	6,100	7,800	---	---	---	---	---	---	38.31	6.31	32.00	3.8/2.4
S-1	09/01/1998	2,300	26,000	370	620	1,300	33	1,400	120	---	---	---	---	---	---	38.31	9.17	29.14	1.4/2.6
S-1	12/30/1998	1,970	29,900	174	732	1,680	5,740	182	---	---	---	---	---	---	---	38.31	8.99	29.32	1.6/2.0
S-1	03/30/1999	1,150	14,200	1,360	260	1,070	3,580	<500	90.0	---	---	---	---	---	---	38.31	6.10	32.21	1.2/1.8
S-1	03/31/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.31	7.84	30.47	---
S-1	06/14/1999	4,280	20,200	135	407	825	5,000	705	---	---	---	---	---	---	---	38.31	7.94	30.37	1.4/2.1
S-1	09/30/1999	3,120	18,300	189	531	1,250	4,740	322	---	---	---	---	---	---	---	38.31	10.04	28.27	4.3/2.0
S-1	12/22/1999	444 g	2,450	50.2	97.5	139	458	133	---	---	---	---	---	---	---	38.31	9.42	28.89	1.8/2.3
S-1	03/09/2000	1,200 g	1,230 a	21.2 a	115 a	116 a	411 a	45.1 a	---	---	---	---	---	---	---	38.30	6.21	32.09	2.0/2.9

Groundwater Data
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4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-1	06/20/2000	352 g	755	26.0	48.4	43.1	230	71.5	---	---	---	---	---	---	---	38.30	9.18	29.12	2.0/2.4
S-1	09/05/2000	783 g	2,980	43.5	117	168	871	192	---	---	---	---	---	---	---	38.30	10.14	28.16	0.6/0.3
S-1	12/04/2000	238 g	399	5.34	14.6	36.2	106	24.9	---	---	---	---	---	---	---	38.30	10.10	28.20	8.6/9.8
S-1	12/12/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.30	9.22	29.08	---
S-1	03/08/2001	1,390 g	2,940	49.6	52.9	21.8	749	87.6	---	---	---	---	---	---	---	38.30	5.84	32.46	2.7 b
S-1	06/07/2001	1,400	10,000	120	370	680	2,400	150	---	---	---	---	---	---	---	38.30	8.80	29.50	6.2/2.2
S-1	09/13/2001	<200	240	1.8	8.9	16	53	---	17	---	---	---	---	---	---	38.30	10.25	28.05	7.8/8.9
S-1	11/19/2001	<300	1,400	14	42	110	260	---	27	---	---	---	---	---	---	38.30	9.87	28.43	7.7/7.3
S-1	03/18/2002	<300	7,500	40	370	560	2,000	---	20	---	---	---	---	---	---	38.30	5.08	33.22	5.6/6.1
S-1	06/19/2002	180	1,000	4.7	36	68	250	---	14	---	---	---	---	---	---	38.30	9.26	29.04	---
S-1	09/11/2002	<350	2,100	8.1	68	180	820	---	7.1	---	---	---	---	---	---	38.30	10.54	27.76	6.5
S-1	12/11/2002	<500	4,100	16	93	310	900	---	<20	---	---	---	---	---	---	38.04	9.97	28.07	8.0
S-1	03/11/2003	<1,600	14,000	71	470	1,000	3,300	---	<50	---	---	---	---	---	---	38.04	7.31	30.73	5.2
S-1	06/10/2003	110 g	1,700	7.7	44	190	340	---	4.5	---	---	---	---	---	---	38.04	8.14	29.90	14.0
S-1	09/09/2003	96 g	3,200	11	110	350	1,100	---	5.8	---	---	---	---	---	---	38.04	9.31	28.73	7.5
S-1	12/09/2003	1,000 g	6,000	20	170	530	1,700	---	6.1	---	---	---	---	---	---	38.04	7.24	30.80	28.6
S-1	03/09/2004	300 g	390	5.8	30	67	160	---	5.6	---	---	---	---	---	---	38.04	5.56	32.48	6.4
S-1	06/08/2004	2,500 g	5,600	11	140	660	1,900	---	5.0	---	---	---	---	---	---	38.04	8.82	29.22	30.0
S-1	09/07/2004	130 e	<50	<0.50	<0.50	<0.50	<1.0	---	0.75	<5.0	<2.0	<2.0	<2.0	---	---	38.04	9.84	28.20	14.4
S-1	12/06/2004	Unable to sample		---	---	---	---	---	---	---	---	---	---	---	---	38.04	9.20	28.84	---
S-1	12/15/2004	120 e	560	2.2	26	67	220	---	1.4	---	---	---	---	---	---	38.04	5.39	32.65	31.7
S-1	03/07/2005	460 e	12,000	12	310	830	2,600	---	<5.0	---	---	---	---	---	---	38.04	5.77	32.27	16.1
S-1	06/10/2005	1,200 e	13,000	25	310	1,200	3,300	---	<10	---	---	---	---	---	---	38.04	5.39	32.65	0.17
S-1	07/14/2005	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-2	05/28/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.79	9.51	29.28	---
S-2	06/03/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.79	9.51	29.28	---
S-2	06/08/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.79	9.57	29.22	---
S-2	06/29/1993	---	1,300	290	35	38	130	---	---	---	---	---	---	---	---	38.79	---	---	---
S-2	09/21/1993	---	3,300	870	24	190	120	---	---	---	---	---	---	---	---	38.79	10.54	28.25	---
S-2	12/14/1993	---	1,300	400	16	36	27	---	---	---	---	---	---	---	---	38.79	9.76	29.03	---
S-2	03/17/1994	---	4,500	610	27	92	110	---	---	---	---	---	---	---	---	38.79	9.92	28.87	---
S-2 (D)	03/17/1994	---	4,000	610	26	93	120	---	---	---	---	---	---	---	---	38.79	9.92	28.87	---
S-2	06/16/1994	---	2,800	690	45	97	140	---	---	---	---	---	---	---	---	38.79	10.11	28.68	---
S-2	09/22/1994	---	4,000	630	94	64	230	---	---	---	---	---	---	---	---	38.79	10.51	28.28	---

Table 2

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-2	12/15/1994	---	1,600	450	300	67	130	---	---	---	---	---	---	---	---	38.79	9.12	29.67	---
S-2	03/30/1995	---	8,200 a	2,800 a	190 a	240 a	700 a	---	---	---	---	---	---	---	---	38.79	7.86	30.93	---
S-2	06/20/1995	---	9,600	2,600	160	170	500	---	---	---	---	---	---	---	---	38.79	9.51	29.28	---
S-2	09/20/1995	---	4,200	920	45	98	140	---	---	---	---	---	---	---	---	38.79	10.06	28.73	---
S-2	12/06/1995	---	<5,000	790	67	64	130	---	---	---	---	---	---	---	---	38.79	10.52	28.27	---
S-2	03/21/1996	---	3,700	850	45	96	170	---	---	---	---	---	---	---	---	38.79	8.60	30.19	---
S-2	09/06/1996	---	2,400	500	33	39	84	490	---	---	---	---	---	---	---	38.79	10.50	28.29	---
S-2	12/19/1996	---	1,200	330	15	24	31	430	---	---	---	---	---	---	---	38.79	9.40	29.39	---
S-2	03/17/1997	---	4,100	780	42	110	120	2,200	---	---	---	---	---	---	---	38.79	9.82	28.97	---
S-2	06/11/1997	---	760	120	<5.0	7.0	7.6	900	---	---	---	---	---	---	---	38.79	10.18	28.61	---
S-2	09/17/1997	---	1,500	230	8.6	40	27	480	---	---	---	---	---	---	---	38.79	9.90	28.89	---
S-2	12/11/1997	---	1,300	240	15	33	57	280	---	---	---	---	---	---	---	38.79	8.27	30.52	---
S-2	03/16/1998	---	1,100	830	48	<10	<10	4,700	4,800	---	---	---	---	---	---	38.79	7.97	30.82	7.0/4.3
S-2	06/23/1998	---	720	46	6.8	50	68	50	8.8	---	---	---	---	---	---	38.79	8.20	30.59	4.2/3.8
S-2 (D)	06/23/1998	---	810	49	7.1	50	70	49	8.8	---	---	---	---	---	---	38.79	8.20	30.59	4.2/3.8
S-2	09/01/1998	---	<2,000	170	<20	<20	<20	9,300	12,000	---	---	---	---	---	---	38.79	9.85	28.94	1.9/1.6
S-2	12/30/1998	---	<5,000	369	<50	<50	<50	14,300	---	---	---	---	---	---	---	38.79	9.84	28.95	2.0/1.8
S-2	03/30/1999	---	<2,000	234	<20.0	27.4	36.9	49,200	53,000	---	---	---	---	---	---	38.79	8.41	30.38	2.1/1.8
S-2	03/31/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.79	8.67	30.12	---
S-2	06/14/1999	---	<1,000	175	<10.0	<10.0	11.1	67,500	---	---	---	---	---	---	---	38.79	9.80	28.99	---
S-2	09/30/1999	177 g	678	135	8.22	14.9	25.8	17,100	17,000 a	---	---	---	---	---	---	38.79	10.58	28.21	5.1/4.8
S-2	12/22/1999	142 g	316	55.8	10.1	5.26	10.4	9,410	8,810	---	---	---	---	---	---	38.79	10.13	28.66	9.6/5.2
S-2	03/09/2000	630 g	2,670	1,190 a	62.7	84.1	125	29,200 a	31,400 a	---	---	---	---	---	---	38.78	7.88	30.90	7.6/5.0
S-2	06/20/2000	401 g	<5,000	348	<50.0	50.4	127	35,800	33,900 a	---	---	---	---	---	---	38.78	10.27	28.51	1.9/2.2
S-2	09/05/2000	373 g	<5,000	106	<50.0	<50.0	<50.0	25,800	37,100 a	---	---	---	---	---	---	38.78	10.19	28.59	0.5/1.6
S-2	12/04/2000	1,730 g	<250	4.37	<2.50	<2.50	<2.50	4,500	5,130 a	---	---	---	---	---	---	38.78	10.30	28.48	10.6/9.4
S-2	12/12/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38.78	9.66	29.12	---
S-2	03/08/2001	<51.3	<2,500	318	45.7	53.5	88.5	15,500	17,500	---	---	---	---	---	---	38.78	8.57	30.21	2.7 b
S-2	06/07/2001	11,000	18,000	450	170	390	2,200	13,000	18,000	---	---	---	---	---	---	38.78	9.39	29.39	1.1/2.0
S-2	09/13/2001	<5,000	13,000	140	110	350	1,400	---	9,200	---	---	---	---	---	---	38.78	10.34	28.44	11.0/4.5
S-2	11/19/2001	8,700	15,000	71	27	86	330	---	7,500	---	---	---	---	---	---	38.78	9.90	28.88	5.0/3.1
S-2	03/18/2002	14,000	3,700	93	<20	35	100	---	7,500	---	---	---	---	---	---	38.78	9.91	28.87	0.9/4.2
S-2	06/19/2002	<2,000	2,100	92	<10	24	50	---	4,700	---	---	---	---	---	---	38.78	9.98	28.80	---
S-2	09/11/2002	<450	2,100	54	<5.0	19	55	---	1,900	---	---	---	---	---	---	38.78	10.25	28.53	3.5
S-2	12/11/2002	1,900	570	9.4	<2.5	7.2	14	---	1,100	---	---	---	---	---	---	38.47	9.99	28.48	2.0

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-2	03/11/2003	<1,800	2,900	150	5.5	54	84	---	870	---	---	---	---	---	---	38.47	9.25	29.22	2.4
S-2	06/10/2003	840 g	2,200	83	<5.0	22	52	---	970	---	---	---	---	---	---	38.47	9.20	29.27	5.0
S-2	09/09/2003	270 g	1,200	57	<2.5	11	33	---	740	---	---	---	---	---	---	38.47	9.70	28.77	3.7
S-2	12/09/2003	1,900 g	3,100	84	<5.0	45	90	---	660	---	---	---	---	---	---	38.47	9.31	29.16	24.21
S-2	03/09/2004	990 g	1,600	140	<5.0	31	49	---	610	---	---	---	---	---	---	38.47	8.24	30.23	2.6
S-2	06/08/2004	400 g	640	40	<2.5	4.2	6.6	---	460	---	---	---	---	---	---	38.47	9.40	29.07	8.2
S-2	09/07/2004	240 e	<100	6.6	<1.0	1.3	2.3	---	140	450	<4.0	<4.0	<4.0	---	---	38.47	9.78	28.69	2.4
S-2	12/06/2004	140 g	260	26	<1.0	2.0	<2.0	---	270	---	---	---	---	---	---	38.47	9.45	29.02	8.5
S-2	03/07/2005	450 e	2,300	100	<5.0	11	<10	---	570	---	---	---	---	---	---	38.47	7.82	30.65	16.7
S-2	06/10/2005	550 g	<2,500	200	<25	<25	<50	---	630	---	---	---	---	---	---	38.47	8.37	30.10	0.70
S-2	07/14/2005	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-3	05/28/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.33	8.45	28.88	---
S-3	06/03/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.33	8.36	28.97	---
S-3	01/19/1900	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.33	8.41	28.92	---
S-3	06/29/1993	---	29,000	1,500	1,800	950	6,200	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	09/21/1993	---	15,000	900	2,200	2,600	11,000	---	---	---	---	---	---	---	---	37.33	10.08	27.25	---
S-3	12/14/1993	---	20,000	1,100	2,400	1,800	8,500	---	---	---	---	---	---	---	---	37.33	8.80	28.53	---
S-3	03/17/1994	---	14,000	580	190	750	1,700	---	---	---	---	---	---	---	---	37.33	8.34	28.99	---
S-3	06/16/1994	---	20,000	700	690	1,400	4,100	---	---	---	---	---	---	---	---	37.33	9.12	28.21	---
S-3 (D)	06/16/1994	---	19,000	680	560	1,300	3,700	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	09/22/1994	---	24,000	630	1,100	1,400	5,700	---	---	---	---	---	---	---	---	37.33	10.27	27.06	---
S-3 (D)	09/22/1994	---	25,000	720	1,100	1,500	6,100	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	12/15/1994	---	18,000	520	800	1,100	4,200	---	---	---	---	---	---	---	---	37.33	7.81	29.52	---
S-3 (D)	12/15/1994	---	23,000	1,000	1,900	2,000	8,600	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	03/30/1995	---	8,800 a	360 a	730 a	700 a	3,700 a	---	---	---	---	---	---	---	---	37.33	7.06	30.27	---
S-3 (D)	03/30/1995	---	7,600 a	330 a	570 a	600 a	2,600 a	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	06/20/1995	---	9,600	510	170	960	1,700	---	---	---	---	---	---	---	---	37.33	8.15	29.18	---
S-3 (D)	06/20/1995	---	9,800	500	170	950	1,700	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	09/20/1995	---	21,000	400	560	1,300	4,600	---	---	---	---	---	---	---	---	37.33	9.32	28.01	---
S-3	12/06/1995	---	24,000	630	1,400	1,400	6,000	---	---	---	---	---	---	---	---	37.33	10.53	26.80	---
S-3 (D)	12/06/1995	---	22,000	630	1,200	1,400	5,500	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	03/21/1996	---	9,100	290	110	490	1,600	---	---	---	---	---	---	---	---	37.33	7.32	30.01	---
S-3 (D)	03/21/1996	---	11,000	310	250	540	2,100	---	---	---	---	---	---	---	---	37.33	---	---	---
S-3	09/06/1996	---	15,000	440	300	1,100	3,000	500	---	---	---	---	---	---	---	37.33	10.10	27.23	---

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-3 (D)	09/06/1996	---	11,000	490	170	820	1,500	700	---	---	---	---	---	---	---	37.33	---	---	---
S-3	12/19/1996	---	12,000	600	380	850	2,500	380	---	---	---	---	---	---	---	37.33	8.36	28.97	---
S-3 (D)	12/19/1996	---	12,000	590	380	830	2,500	540	---	---	---	---	---	---	---	37.33	8.36	28.97	---
S-3	03/17/1997	---	12,000	520	140	740	1,400	320	---	---	---	---	---	---	---	37.33	8.57	28.76	---
S-3 (D)	03/17/1997	---	9,600	500	100	680	1,100	<250	---	---	---	---	---	---	---	37.33	8.57	28.76	---
S-3	06/11/1997	---	9,600	510	94	740	1,100	410	---	---	---	---	---	---	---	37.33	9.26	28.07	---
S-3	09/17/1997	---	21,000	140	560	1,800	7,200	130	---	---	---	---	---	---	---	37.33	9.62	27.71	---
S-3	12/11/1997	---	24,000	530	970	1,600	6,900	950	---	---	---	---	---	---	---	37.33	7.34	29.99	---
S-3 (D)	12/11/1997	---	29,000	520	1,000	1,600	7,300	970	---	---	---	---	---	---	---	37.33	7.34	29.99	---
S-3	03/16/1998	---	29,000	840	810	1,700	6,000	<250	---	---	---	---	---	---	---	37.33	5.75	31.58	3.0/3.4
S-3	06/23/1998	---	3,800	90	220	240	1,400	<50	---	---	---	---	---	---	---	37.33	5.98	31.35	4.2/2.0
S-3	09/01/1998	---	9,600	480	120	870	1,800	490	<50	---	---	---	---	---	---	37.33	8.98	28.35	1.9/2.8
S-3 (D)	09/01/1998	---	9,200	420	110	800	1,700	110	<50	---	---	---	---	---	---	37.33	8.98	28.35	1.9/2.8
S-3	12/30/1998	---	7,660	240	103	410	834	64.9	---	---	---	---	---	---	---	37.33	9.11	28.22	1.8/1.6
S-3	03/30/1999	---	2,070	195	10.0	<5.00	48.6	354	64.6	---	---	---	---	---	---	37.33	6.95	30.38	1.3/1.5
S-3	03/31/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.33	7.48	29.85	---
S-3	06/14/1999	---	1,250	37.4	17.4	110	109	118	---	---	---	---	---	---	---	37.33	8.85	28.48	---
S-3	09/30/1999	2,020 g	8,270	226	113	686	1,440	184	---	---	---	---	---	---	---	37.33	9.66	27.67	3.5/2.8
S-3	12/22/1999	2,270 g	9,530	207	132	603	1,450	616	---	---	---	---	---	---	---	37.33	9.50	27.83	0.98/0.8
S-3	03/09/2000	1,600 g	2,290 a	84.5 a	17.0 a	104 a	105 a	29.3 a	---	---	---	---	---	---	---	37.30	6.25	31.05	1.0/1.4
S-3	06/20/2000	2,900 g	5,570	117	41.6	395	393	354	---	---	---	---	---	---	---	37.30	9.67	27.63	1.8/2.0
S-3	09/05/2000	1,600 g	6,930	127	85.5	354	535	509	---	---	---	---	---	---	---	37.30	9.49	27.81	1.1/1.9
S-3	12/04/2000	1,460 g	8,390	217	82.4	471	952	436	---	---	---	---	---	---	---	37.30	9.23	28.07	1.1/1.5
S-3	12/12/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.30	9.23	28.07	---
S-3	03/08/2001	1,720 g	19,400	465	772	1,230	3,830	160	---	---	---	---	---	---	---	37.30	8.17	29.13	1.1 c
S-3	06/07/2001	1,400	12,000	230	110	900	1,100	120	---	---	---	---	---	---	---	37.30	8.78	28.52	0.8/0.9
S-3	09/13/2001	<2,000	32,000	400	880	2,000	7,000	---	<100	---	---	---	---	---	---	37.30	9.93	27.37	3.7/2.9
S-3	11/19/2001	<2,000	26,000	160	210	990	4,100	---	<50	---	---	---	---	---	---	37.30	9.33	27.97	2.9/1.9
S-3	03/18/2002	810	3,800	61	120	130	620	---	5.0	---	---	---	---	---	---	37.30	7.03	30.27	1.1/4.7
S-3	06/19/2002	<500	3,200	48	81	160	360	---	9.4	---	---	---	---	---	---	37.30	8.92	28.38	---
S-3	09/11/2002	<1,100	16,000	230	570	980	3,900	---	<50	---	---	---	---	---	---	37.30	9.54	27.76	3.0
S-3	12/11/2002	<1,500	16,000	130	270	770	3,000	---	<50	---	---	---	---	---	---	36.85	9.23	27.62	1.6
S-3	03/11/2003	<1,500	8,100	29	110	190	1,700	---	<20	---	---	---	---	---	---	36.85	7.32	29.53	3.9
S-3	06/10/2003	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	---	36.85	---	---	---
S-3	09/09/2003	640 g	5,900	44	140	130	1,500	---	4.4	---	---	---	---	---	---	36.85	8.99	27.86	2.2

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-3	12/09/2003	1,500 g	27,000	130	460	550	4,900	---	<20	---	---	---	---	---	---	36.85	7.67	29.18	1.6
S-3	03/09/2004	1,700 g	11,000	24	100	230	3,200	---	<5.0	---	---	---	---	---	---	36.85	6.35	30.50	2.1
S-3	06/08/2004	1,100 g	1,700	11	34	29	420	---	<2.5	---	---	---	---	---	---	36.85	8.25	28.60	0.1
S-3	09/07/2004	310 e	850	13	0.99	23	17	---	7.0	<5.0	<2.0	<2.0	<2.0	---	---	36.85	9.05	27.80	0.1
S-3	12/06/2004	Unable to sample		---	---	---	---	---	---	---	---	---	---	---	---	36.85	7.70	29.15	---
S-3	12/15/2004	270 e	620	1.9	7.8	10	180	---	<0.50	---	---	---	---	---	---	36.85	5.83	31.02	2.4
S-3	03/07/2005	400 e	4,500	<0.50	7.7	30	350	---	<0.50	---	---	---	---	---	---	36.85	4.58	32.27	4.4
S-3	06/10/2005	130 g	850	<0.50	1.3	7.4	53	---	<0.50	---	---	---	---	---	---	36.85	5.40	31.45	0.17
S-3	07/14/2005	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-4	03/29/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	39.06	8.37	30.69	---
S-4	03/31/2000	5,780 g	20,900	4,570	272	595	997	4,490	4,450 a	---	---	---	---	---	---	39.06	8.92	30.14	1.8/1.2
S-4	06/20/2000	244 g	19,500	4,590	309	723	1,290	3,740	---	---	---	---	---	---	---	39.06	8.77	30.29	2.7/2.9
S-4	09/05/2000	1,670 g	5,760	841	54.2	162	115	1,040	---	---	---	---	---	---	---	39.06	10.57	28.49	1.3/0.3
S-4	12/04/2000	1,050 g	3,990	949	<10.0	118	48.3	1,120	---	---	---	---	---	---	---	39.06	10.67	28.39	1.1/1.0
S-4	12/12/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	39.06	10.64	28.42	---
S-4	03/08/2001	5,840 g	20,100	5,210	105	381	281	2,520	---	---	---	---	---	---	---	39.06	8.44	30.62	1.0/0.9
S-4	06/07/2001	3,500	11,000	2,500	86	370	170	2,000	---	---	---	---	---	---	---	39.06	10.57	28.49	0.7/0.6
S-4	09/13/2001	<800	4,200	790	14	110	48	---	690	---	---	---	---	---	---	39.06	11.27	27.79	3.8/3.9
S-4	11/19/2001	<600	2,300	230	4.1	21	22	---	590	---	---	---	---	---	---	39.06	10.83	28.23	3.6/1.6
S-4	03/18/2002	Unable to sample		---	---	---	---	---	---	---	---	---	---	---	---	39.06	8.75	30.31	---
S-4	03/29/2002	---	14,000	1,700	30	280	250	---	960	---	---	---	---	---	---	39.06	8.85 d	30.21	3.0/3.1
S-4	06/19/2002	<1,500	4,700	620	9.5	84	37	---	490	---	---	---	---	---	---	---	10.37 d	---	---
S-4	09/11/2002	280	2,700	280	4.6	23	13	---	410	---	---	---	---	---	---	---	11.14	---	0.6
S-4	12/11/2002	<900	3,300	320	5.7	24	15	---	420	---	---	---	---	---	---	38.69	10.78	27.91	2.2
S-4	03/11/2003	<5,600	12,000	1,900	63	360	280	---	930	---	---	---	---	---	---	38.69	9.31	29.38	1.5
S-4	06/10/2003	3,100 g	13,000	2,400	86	650	380	---	1,100	---	---	---	---	---	---	38.69	9.77	28.92	0.8
S-4	09/09/2003	1,700 g	3,700	510	12	43	43	---	650	---	---	---	---	---	---	38.69	10.78	27.91	0.9
S-4	12/09/2003	390 g	3,900	150	4.2	7.5	13	---	510	---	---	---	---	---	---	38.69	10.20	28.49	0.1
S-4	03/09/2004	3,100 g	13,000	2,500	110	810	1,100	---	1,100	---	---	---	---	---	---	38.69	7.67	31.02	0.7
S-4	06/08/2004	1,400 g	6,100	870	30	120	150	---	420	---	---	---	---	---	---	38.69	10.27	28.42	0.3
S-4	09/07/2004	890 e	3,100	290	6.4	18	14	---	250	140	<10	<10	<10	---	---	38.69	10.91	27.78	0.1
S-4	12/06/2004	670 e	4,900	520	9.9	38	24	---	290	---	---	---	---	---	---	38.69	10.03	28.66	0.2
S-4	03/07/2005	2,900 e	28,000	2,300	130	690	770	---	770	---	---	---	---	---	---	38.69	6.20	32.49	0.2
S-4	06/10/2005	2,700 e	13,000	1,900	81	380	460	---	890	---	---	---	---	---	---	38.69	8.90	29.79	0.15
S-4	07/14/2005	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-5	05/31/2002	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.54	---	---
S-5	06/19/2002	<2,000	16,000	2,600	320	180	1,600	---	5,300	---	---	---	---	---	---	---	9.87	---	---
S-5	09/11/2002	<1,200	8,800	1,500	64	89	120	---	5,600	---	---	---	---	---	---	---	10.28	---	0.9
S-5	12/11/2002	<1,000	4,400	280	61	130	130	---	4,000	---	---	---	---	---	---	---	9.87	---	2.9
S-5	03/11/2003	<900	2,300	28	5.6	59	15	---	2,400	---	---	---	---	---	---	38.05	8.26	29.79	1.6
S-5	06/10/2003	620 g	2,400	11	7.2	56	38	---	1,100	---	---	---	---	---	---	38.05	8.51	29.54	0.1
S-5	09/09/2003	660 g	3,700	23	14	44	150	---	440	---	---	---	---	---	---	38.05	9.44	28.61	0.1
S-5	12/09/2003	600 g	12,000	200	80	41	320	---	580	---	---	---	---	---	---	38.05	9.50	28.55	0.4
S-5	03/09/2004	550 g	2,300	130	3.5	6.9	13	---	250	---	---	---	---	---	---	38.05	7.04	31.01	0.2
S-5	06/08/2004	490 g	2,900	11	<2.5	8.9	18	---	120	---	---	---	---	---	---	38.05	8.87	29.18	0.2
S-5	09/07/2004	650 e	3,600	17	11	12	30	---	120	3,700	<10	<10	<10	---	---	38.05	9.45	28.60	0.1
S-5	12/06/2004	460 e	4,700	99	28	14	69	---	180	---	---	---	---	---	---	38.05	8.75	29.30	0.1
S-5	03/07/2005	360 e	4,700	440	<2.5	<2.5	<5.0	---	200	---	---	---	---	---	---	38.05	7.28	30.77	0.1
S-5	06/10/2005	240 e	1,200	1.3	<0.50	<0.50	1.2	---	80	---	---	---	---	---	---	38.05	7.26	30.79	0.25
S-5	07/14/2005	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-6	02/22/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.86	8.18	29.68	---
S-6	03/02/2007	1,700	5,100 a	630 a	23	200	110	---	140	280	---	---	---	13	<0.50	37.86	7.73	30.13	---
S-6	05/23/2007	2,600	5,600 f	510	16	11	144	---	72	66	---	---	---	<2.5	<5.0	37.86	8.13	29.73	---
S-6	08/28/2007	6,100 g	13,000 f	650	32	480	242	---	78	320	6.1	<10	<10	<2.5	<5.0	37.86	8.44	29.42	---
S-6	11/13/2007	6,400 g	19,000 f	760	47	500	602	---	68	340	---	---	---	<5.0	<10	37.86	8.78	29.08	---
S-6	02/08/2008	2,200 g	6,800 f	380	14	130	87.0	---	75	200	---	---	---	<2.5	<5.0	37.86	7.06	30.80	---
S-6	05/20/2008	2,900 g	12,000 f	590	21	270	60	---	54	240	---	---	---	<2.5	<5.0	37.86	8.60	29.26	---
S-6	08/12/2008	7,100 g	22,000	890	75	450	1,170	---	71	200	<20	<20	<20	<5.0	<10	37.86	9.21	28.65	---
S-6	12/02/2008	4,600 g	26,000	1,500	170	670	1,500	---	87	260	---	---	---	<5.0	<10	37.86	8.72	29.14	---
S-6	02/05/2009	5,200 g	29,000	1,200	210	910	3,400	---	78	230	---	---	---	<5.0	<10	37.86	9.19	28.67	---
S-6	05/19/2009	1,900 g	8,600	660	22	120	110	---	94	460	---	---	---	<5.0	<10	37.86	8.26	29.60	---
S-6	09/29/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.86	6.70	31.16	---
S-6	12/23/2009	1,800 g	4,800	550	12	38	16	---	170	290	<20	<20	<20	<5.0	<10	37.86	6.01	31.85	---
S-6	03/16/2010	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.86	5.65	32.21	---
S-6	06/21/2010	2,700 g	8,300	360	11	67	56	---	130	250	---	---	---	<2.5	<5.0	37.86	8.89	28.97	---
S-6	12/28/2010	2,200 g	6,100	290	11	60	41	---	49	210	5.5	<4.0	<4.0	<1.0	<2.0	37.86	7.63	30.23	---
S-6	12/23/2011	2,400	12,000	760	24	76	49	---	61	320	<10	<10	<10	<5.0	<5.0	37.86	8.34	29.52	---
S-6	12/28/2012	1,400	6,500	350	12	14	<10	---	68	200	<5.0	<5.0	<5.0	---	---	37.86	6.50	31.36	---

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-6	09/19/2013	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.86	8.53	29.33	---
S-6	12/23/2013	2,600	16,000	970	43	340	260	---	45	200	7.0	<5.0	<5.0	---	---	37.86	8.77	29.09	---
S-6	03/05/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.86	8.57	29.29	---
S-6	06/06/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.86	8.44	29.42	---
S-6	**12/08/2014**	**2,400**	**12,000**	**320**	**15**	**73**	**50**	**---**	**28**	**110**	**<5.0**	**<5.0**	**<5.0**	**---**	**---**	**37.86**	**8.10**	**29.76**	**---**
S-7	02/22/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.58	7.39	30.19	---
S-7	03/02/2007	2,500	100,000 a	32,000 a	9,700 a	2,900 a	14,000 a	---	310 a	480	---	---	---	150	<0.50	37.58	7.42	30.16	---
S-7	05/23/2007	3,700	82,000 f,g	24,000	8,100	2,800	13,000	---	190	<200	---	---	---	<10	<20	37.58	8.38	29.20	---
S-7	08/28/2007	4,500 g	96,000 f	23,000	7,000	2,900	12,200	---	190 h	<2,000	<400	<400	<400	<100	<200	37.58	9.32	28.26	---
S-7	11/13/2007	25,000 g	100,000 f	22,000	6,500	3,000	12,400	---	<200	<2,000	---	---	---	<100	<200	37.58	9.60	27.98	---
S-7	02/08/2008	4,000 g	74,000 f	29,000	9,300	3,100	13,700	---	500	<2,000	---	---	---	<100	<200	37.58	6.57	31.01	---
S-7	05/20/2008	1,600 g	69,000 f	20,000	5,500	2,500	9,800	---	260	<2,000	---	---	---	<100	<200	37.58	9.00	28.58	---
S-7	08/12/2008	4,900 g	120,000	25,000	8,400	2,800	11,700	---	<200	<2,000	<400	<400	<400	<100	<200	37.58	9.81	27.77	---
S-7	12/02/2008	4,300 g	120,000	24,000	8,400	3,600	15,000	---	320	<2,000	---	---	---	<100	<200	37.58	9.91	27.67	---
S-7	02/05/2009	3,800 g	99,000	25,000	7,600	2,500	12,000	---	370	<2,000	---	---	---	<100	<200	37.58	9.30	28.28	---
S-7	05/19/2009	3,300 g	64,000	16,000	4,400	2,100	7,100	---	250	<2,000	---	---	---	<100	<200	37.58	8.30	29.28	---
S-7	09/29/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.57	6.13	31.44	---
S-7	12/23/2009	3,900 g	98,000	25,000	7,100	2,100	9,000	---	400	<2000	<400	<400	<400	<100	<200	37.57	5.32	32.25	---
S-7	03/16/2010	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.57	4.82	32.75	---
S-7	06/21/2010	2,400 g	42,000	11,000	2,300	1,300	4,600	---	180	<1,000	---	---	---	<50	<100	37.57	8.19	29.38	---
S-7	12/28/2010	3,500 g	48,000	13,000	3,700	1,800	7,200	---	160	<1,000	<200	<200	<200	<50	<100	37.57	7.05	30.52	---
S-7	12/23/2011	3,200	40,000	11,000	3,300	1,400	6,600	---	<200	<2,000	<200	<200	<200	<100	<100	37.57	8.02	29.55	---
S-7	12/28/2012	2,200	26,000	6,200	2,000	1,000	5,000	---	<100	<2,000	<100	<100	<100	---	---	37.57	5.88	31.69	---
S-7	09/19/2013	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.57	9.08	28.49	---
S-7	12/23/2013	1,600	28,000	9,900	1,200	750	3,300	---	<100	<2,000	<100	<100	<100	---	---	37.57	9.63	27.94	---
S-7	03/05/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.57	8.73	28.84	---
S-7	06/06/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.57	8.96	28.61	---
S-7	**12/08/2014**	**2,500**	**48,000 j**	**15,000**	**2,800**	**1,400**	**6,200**	**---**	**250**	**<2,000**	**<100**	**<100**	**<100**	**---**	**---**	**37.57**	**8.22**	**29.35**	**---**
S-8	02/22/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.05	6.65	30.40	---
S-8	03/02/2007	2,300	72,000 a	12,000 a	5,600 a	2,900 a	15,000 a	---	120	230	---	---	---	150	<2.5	37.05	6.60	30.45	---
S-8	05/23/2007	5,800	69,000 f,g	12,000	6,700	3,100	19,500	---	160	280	---	---	---	<10	<20	37.05	7.91	29.14	---
S-8	08/28/2007	6,700 g	69,000 f	11,000	4,800	3,100	16,800	---	170	<1,000	<200	<200	<200	<50	<100	37.05	8.79	28.26	---
S-8	11/13/2007	21,000 g	84,000 f	10,000	5,000	3,300	18,300	---	290	<1,000	---	---	---	<50	<100	37.05	8.93	28.12	---

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-8	02/08/2008	4,500 g	54,000 f	11,000	5,500	3,500	18,200	---	200	<1,000	---	---	---	<50	<100	37.05	6.26	30.79	---
S-8	05/20/2008	2,200 g	67,000 f	10,000	5,400	3,900	19,600	---	160	<1,000	---	---	---	<50	<100	37.05	7.40	29.65	---
S-8	08/12/2008	5,200 g	77,000	9,300	3,200	2,500	14,300	---	210	<1,000	<200	<200	<200	<50	<100	37.05	9.10	27.95	---
S-8	12/02/2008	3,600 g	70,000	9,500	2,700	2,500	12,300	---	290	1,200	---	---	---	<50	<100	37.05	9.39	27.66	---
S-8	02/05/2009	3,500 g	74,000	10,000	3,500	2,600	15,000	---	240	<1,000	---	---	---	<50	<100	37.05	8.75	28.30	---
S-8	05/19/2009	340 g	69,000	8,200	3,700	2,900	14,000	---	<100	<1,000	---	---	---	<50	<100	37.05	7.56	29.49	---
S-8	09/29/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.05	5.82	31.23	---
S-8	12/23/2009	4,400 g	58,000	7,800	2,000	2,100	11,000	---	170	<1000	<200	<200	<200	<50	<100	37.05	7.02	30.03	---
S-8	03/16/2010	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.05	4.26	32.79	---
S-8	06/21/2010	3,900 g	74,000	11,000	3,900	3,000	15,000	---	160	<1,000	---	---	---	<50	<100	37.05	7.77	29.28	---
S-8	12/28/2010	4,900 g	57,000	8,700	2,700	2,900	14,000	---	200	<1,000	<200	<200	<200	<50	<100	37.05	6.93	30.12	---
S-8	12/23/2011	4,300	55,000	9,500	3,000	3,700	15,000	---	<200	<2,000	<200	<200	<200	<100	<100	37.05	8.77	28.28	---
S-8	12/28/2012	3,500	55,000	8,300	2,600	3,600	15,000	---	180	<1,000	<50	<50	<50	---	---	37.05	5.92	31.13	---
S-8	09/19/2013	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.05	9.08	27.97	---
S-8	12/23/2013	2,800	55,000	11,000	2,400	3,400	12,000	---	210	<1,000	<50	<50	<50	---	---	37.05	9.49	27.56	---
S-8	03/05/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.05	8.65	28.40	---
S-8	06/06/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.05	8.68	28.37	---
S-8	**12/08/2014**	**3,000**	**49,000 i,j**	**9,300**	**1,800**	**2,500**	**8,900**	**---**	**89**	**<1,000**	**<50**	**<50**	**<50**	**---**	**---**	**37.05**	**8.49**	**28.56**	**---**
S-9	02/22/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.52	7.59	29.93	---
S-9	03/02/2007	1,400	12,000	150	200	1,200	2,500	---	5.8	<50	---	---	---	<5.0	<5.0	37.52	7.30	30.22	---
S-9	05/23/2007	2,300	8,200 f	13	38	2.5 h	1,453	---	5.2 h	<100	---	---	---	<5.0	<10	37.52	8.43	29.09	---
S-9	08/28/2007	2,800 g	9,500 f	21	49	540	789	---	<10	<100	<20	<20	<20	<5.0	<10	37.52	9.59	27.93	---
S-9	11/13/2007	2,100 g	12,000 f	19	35	450	499	---	<10	<100	---	---	---	<5.0	<10	37.52	9.91	27.61	---
S-9	02/08/2008	1,900 g	10,000 f	18	67	1,100	1,451	---	<10	<100	---	---	---	<5.0	<10	37.52	6.40	31.12	---
S-9	05/20/2008	1,500 g	11,000 f	150	770	13,000	17,460	---	<100	<1,000	---	---	---	<50	<100	37.52	8.79	28.73	---
S-9	08/12/2008	2,000 g	9,400	16	59	700	834	---	<10	<100	<20	<20	<20	<5.0	<10	37.52	10.00	27.52	---
S-9	12/02/2008	1,300 g	14,000	10	62	980	1,139	---	<10	<100	---	---	---	<5.0	<10	37.52	10.22	27.30	---
S-9	02/05/2009	1,400 g	6,300	11	33	480	600	---	<10	<100	---	---	---	<5.0	<10	37.52	9.49	28.03	---
S-9	05/19/2009	1,500 g	12,000	11	64	940	880	---	<5.0	<50	---	---	---	<2.5	<5.0	37.52	8.20	29.32	---
S-9	09/29/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.52	5.51	32.01	---
S-9	12/23/2009	200 g	890	1.4	<1.0	16	14	---	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	37.52	4.61	32.91	---
S-9	03/16/2010	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.52	5.95	31.57	---
S-9	06/21/2010	520 g	1,300	2.4	4.2	180	26	---	<1.0	<10	---	---	---	<0.50	<1.0	37.52	8.29	29.23	---
S-9	12/28/2010	1,100 g	7,200	3.8	12	650	510	---	<5.0	<50	<10	<10	<10	<2.5	<5.0	37.52	7.04	30.48	---

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-9	12/23/2011	1,300	6,500	6.7	16	240	200	---	<4.0	<40	<4.0	<4.0	<4.0	<2.0	<2.0	37.52	8.48	29.04	---
S-9	12/28/2012	490	2,600	3.4	5.6	91	87	---	<1.3	<25	<1.3	<1.3	<1.3	---	---	37.52	5.90	31.62	---
S-9	09/19/2013	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	---	37.52	---	---	---
S-9	12/23/2013	660	4,600	4.1	15	15	130	---	<0.50	<10	<0.50	<0.50	<0.50	---	---	37.52	9.88	27.64	---
S-9	03/05/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.52	9.11	28.41	---
S-9	06/06/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.52	9.19	28.33	---
S-9	**12/08/2014**	**810**	**3,900**	**5.1**	**8.5**	**11**	**92**	**---**	**<2.5**	**<50**	**<2.5**	**<2.5**	**<2.5**	**---**	**---**	**37.52**	**8.70**	**28.82**	**---**
S-10	09/22/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.43	4.98	32.45	---
S-10	09/29/2009	<50	320	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	37.43	5.07	32.36	---
S-10	12/23/2009	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	37.43	4.48	32.95	---
S-10	03/16/2010	<50	140	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	37.43	4.47	32.96	---
S-10	06/21/2010	<50	130	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	37.43	8.28	29.15	---
S-10	12/28/2010	<50	140	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	37.43	7.09	30.34	---
S-10	12/23/2011	<47	130	<0.50	<0.50	<0.50	<1.0	---	<1.0	<10	<1.0	<1.0	<1.0	<0.50	<0.50	37.43	8.20	29.23	---
S-10	12/28/2012	<48	180	<0.50	<0.50	<0.50	<1.0	---	<0.50	<10	<0.50	<0.50	<0.50	---	---	37.43	6.10	31.33	---
S-10	09/19/2013	Well not monitored		---	---	---	---	---	---	---	---	---	---	---	---	37.43	---	---	---
S-10	12/23/2013	<48	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	<10	<0.50	<0.50	<0.50	---	---	37.43	9.15	28.28	---
S-10	06/06/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.43	8.91	28.52	---
S-10	**12/08/2014**	**160 k**	**73**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**---**	**<0.50**	**<10**	**<0.50**	**<0.50**	**<0.50**	**---**	**---**	**37.43**	**7.55**	**29.88**	**---**
S-11	09/22/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	36.44	4.50	31.94	---
S-11	09/29/2009	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	36.44	3.88	32.56	---
S-11	12/23/2009	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	36.44	3.71	32.73	---
S-11	03/16/2010	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	36.44	3.30	33.14	---
S-11	06/21/2010	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	36.44	7.49	28.95	---
S-11	12/28/2010	<50	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	<0.50	<1.0	36.44	5.96	30.48	---
S-11	12/23/2011	<47	<50	<0.50	<0.50	<0.50	<1.0	---	<1.0	<10	<1.0	<1.0	<1.0	<0.50	<0.50	36.44	7.28	29.16	---
S-11	12/28/2012	<48	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	<10	<0.50	<0.50	<0.50	---	---	36.44	5.00	31.44	---
S-11	09/19/2013	Well not monitored		---	---	---	---	---	---	---	---	---	---	---	---	36.44	---	---	---
S-11	12/23/2013	<48	<50	<0.50	<0.50	<0.50	<1.0	---	0.55	<10	<0.50	<0.50	<0.50	---	---	36.44	9.82	26.62	---
S-11	06/06/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	---	36.44	8.16	28.28	---
S-11	**12/08/2014**	**77 k**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**---**	**<0.50**	**<10**	**<0.50**	**<0.50**	**<0.50**	**---**	**---**	**36.44**	**6.72**	**29.72**	**---**

Table 2

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
S-12	09/22/2009	Unable to access		---	---	---	---	---	---	---	---	---	---	---	---	36.00	---	---	---
S-12	09/25/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	---	36.00	5.10	30.90	---
S-12	09/29/2009	91 g	280	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	36.00	3.62	32.38	---
S-12	12/23/2009	120 g	340	<0.50	<1.0	<1.0	<1.0	---	<1.0	15	<2.0	<2.0	<2.0	<0.50	<1.0	36.00	2.91	33.09	---
S-12	03/16/2010	<50	78	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	---	---	---	<0.50	<1.0	36.00	2.78	33.22	---
S-12	06/21/2010	210 g	380	7.6	<1.0	<1.0	<1.0	---	4.8	50	---	---	---	<0.50	<1.0	36.00	8.48	27.52	---
S-12	12/28/2010	81	410	<0.50	<1.0	<1.0	<1.0	---	<1.0	30	2.4	<2.0	<2.0	<0.50	<1.0	36.00	5.60	30.40	---
S-12	12/23/2011	140	490	<0.50	<0.50	<0.50	<1.0	---	<1.0	14	1.4	<1.0	<1.0	<0.50	<0.50	36.00	7.01	28.99	---
S-12	12/28/2012	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	---	36.00	---	---	---
S-12	09/19/2013	Well not monitored		---	---	---	---	---	---	---	---	---	---	---	---	36.00	---	---	---
S-12	12/23/2013	80	180	<0.50	<0.50	<0.50	<1.0	---	1.7	51	3.7	<0.50	<0.50	---	---	36.00	8.35	27.65	---
S-12	06/06/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	---	36.00	7.99	28.01	---
S-12	**12/08/2014**	**110**	**400**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**---**	**1.2**	**29**	**2.5**	**<0.50**	**<0.50**	**---**	**---**	**36.00**	**6.40**	**29.60**	**---**
S-13	09/06/2013	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.19	9.34	27.85	---
S-13	09/19/2013	---	25,000	210	420	520	7,600	---	<20	<400	<20	<20	<20	---	---	37.19	9.33	27.86	---
S-13	12/23/2013	---	32,000	280	750	1,900	9,000	---	<10	<200	<10	<10	<10	---	---	37.19	9.82	27.37	---
S-13	03/05/2014	---	24,000	220	660	1,300	6,700	---	<20	<400	<20	<20	<20	---	---	37.19	8.85	28.34	---
S-13	06/06/2014	---	45,000 i	300	990	2,500	11,000	---	<20	<400	<20	<20	<20	---	---	37.19	8.81	28.38	---
S-13	**12/08/2014**	**---**	**19,000**	**190**	**380**	**950**	**4,000**	**---**	**<20**	**<400**	**<20**	**<20**	**<20**	**---**	**---**	**37.19**	**8.98**	**28.21**	**---**
S-14	09/06/2013	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.14	9.28	27.86	---
S-14	09/19/2013	---	7,600	360	48	140	490	---	8.8	<50	<2.5	<2.5	<2.5	---	---	37.14	9.41	27.73	---
S-14	12/23/2013	---	10,000	620	77	610	670	---	<5.0	<100	<5.0	<5.0	<5.0	---	---	37.14	9.71	27.43	---
S-14	03/05/2014	---	8,000	470	79	450	630	---	<2.5	<50	<2.5	<2.5	<2.5	---	---	37.14	8.63	28.51	---
S-14	06/06/2014	---	6,400 i	270	39	240	370	---	2.9	<50	<2.5	<2.5	<2.5	---	---	37.14	9.08	28.06	---
S-14	**12/08/2014**	**---**	**8,800**	**430**	**58**	**520**	**570**	**---**	**4.4**	**<50**	**<2.5**	**<2.5**	**<2.5**	**---**	**---**	**37.14**	**8.60**	**28.54**	**---**
BW-A	09/30/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10.55	---	2.3
BW-A	12/22/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.52	---	2.2
BW-A	03/09/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.99	---	1.5
BW-A	06/20/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.69	---	2.4
BW-A	09/05/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.43	---	1.0
BW-A	12/04/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.96	---	1.3
BW-A	12/12/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.71	---	---

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)
BW-A	03/08/2001	1,370 g	<2,500	46.6	<25.0	<25.0	<25.0	10,600	11,700	---	---	---	---	---	---	---	6.38	---	0.9/1.4
BW-A	06/07/2001	960	1,100	<10	<10	<10	17	7,200	---	---	---	---	---	---	---	---	9.82	---	3.6/0.8
BW-A	09/13/2001	460	<2,000	<20	<20	<20	<50	---	13,000	---	---	---	---	---	---	---	10.49	---	3.3/1.7
BW-A	11/19/2001	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.89	---	---

Notes:

TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015; after February 22, 2007, analyzed with silica gel cleanup
TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to September 13, 2001, analyzed by EPA Method 8015 unless otherwise noted
BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; prior to September 13, 2001, analyzed by EPA Method 8020
MTBE = Methyl tertiary-butyl ether analyzed by method noted
TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B
DIPE = Di-isopropyl ether analyzed by EPA Method 8260B
ETBE = Ethyl tertiary-butyl ether analyzed by EPA Method 8260B
TAME = Tertiary-amyl methyl ether analyzed by EPA Method 8260B
1,2-DCA = 1,2-Dichloroethane analyzed by EPA Method 8260B
EDB = 1,2-Dibromoethane analyzed by EPA Method 8260B
TOC = Top of casing elevation, in feet relative to mean sea level
GW = Groundwater
DO = Dissolved oxygen
µg/L = Micrograms per liter
ft = Feet
MSL = Mean sea level
mg/L = Milligrams per liter
<x = Not detected at reporting limit x
--- = Not analyzed or not available
x/x = Pre-purge/post-purge DO reading

a = Sample analyzed outside the EPA recommended holding time.
b = Post-purge DO reading.
c = Pre-purge DO reading.
d = Estimated depth to water.
e = Hydrocarbon reported is in the early diesel range and does not match the laboratory's standard.
f = Analyzed by EPA Method 8015B (M).
g = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

Table 2

Groundwater Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Well ID	Date	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	DO Reading (mg/L)

h = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
i = Concentration reported is due to the presence of discrete peaks of xylenes.
j = Concentration reported is due to the presence of discrete peak of benzene.
k= Hydrocarbon result partly due to individual peak in quantitation range.

Prior to December 12, 2002, depth to water referenced to top of well box elevation.
Wells S-1 through S-4 surveyed February 3, 2000 by Virgil Chavez Land Surveying.
Wells S-1 through S-4 surveyed March 5, 2002 by Virgil Chavez Land Surveying.
Well S-5 surveyed May 29, 2003 by Virgil Chavez Land Surveying.
Wells S-6 through S-9 surveyed February 21, 2007 by Virgil Chavez Land Surveying.
Wells S-6 through S-12 surveyed October 26, 2009 by Virgil Chavez Land Surveying.
Wells S-13 and S-14 surveyed on September 14, 2013 by Virgil Chavez Land Surveying.

Table 3

Historical Grab Groundwater Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Date	Depth (fbg)	TPHmo (µg/L)	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Ethanol (µg/L)	Lead (µg/L)
GP-2	06/27/1995	---	ND	**800**	**1,100**	**34**	ND	7.2	4.1	---	---	---	---	---	---	---	---	---
GP-10	06/28/1995	---	620	**860**	**820**	6.3	ND	41	71	---	---	---	---	---	---	---	---	---
TW (A)	12/11/2001	---	---	---	**680**	20	24	1.5	62	180	---	---	---	---	---	---	---	---
TEW (B)	01/03/2002	---	---	---	**590**	2.7	2.3	<2.0	6.4	**1,900**	<2.0	<2.0	<2.0	<2.0	---	---	<2.0	---
TB-1-W1	08/29/2005	20	---	---	**30,000**	**4,300**	**240**	**2,400**	**2,700**	<50	<500	<200	<200	<200	<50	<50	---	**13.4**
TB-3-W1	08/29/2005	22	---	---	**180,000**	**22,000**	**9,700**	**5,200**	**25,000**	890	<1,000	1,600	<400	<400	<100	<100	---	**3.37**
SB-5W	05/17/2006	40	---	120	440	1.2	11	1.1	4	550	<5.0	---	---	---	---	---	---	---
SB-8W	05/15/2006	9	---	**1,600**	**2,800**	**350**	24	14	22	880	590	---	---	---	---	---	---	---
SB-8W	05/15/2006	22	---	**2,400**	**3,400**	**890**	11	20	32	690	630	---	---	---	---	---	---	---
SB-12W	05/16/2006	0-27 [a]	---	**1,600**	**5,900**	**3,300** [b]	**470**	**260**	**420**	38	<25	---	---	---	---	---	---	---
SB-12W	05/16/2006	31	---	260	250	3.7	2.6	0.55	**1.6**	3.0	<5.0	---	---	---	---	---	---	---
Groundwater ESL[c]:			**640**	**640**	**500**	**27**	**130**	**43**	**100**	**1,800**	**18,000**	**NA**	**NA**	**NA**	**100**	**77**	**NA**	**2.5**

Notes:

TPHmo = Total petroleum hydrocarbons as motor oil analyzed by EPA Method 8015 (Modified)
TPHd = Total petroleum hydrocarbons as diesel analyzed by EPA Method 8015 (Modified)
TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; before 12/11/2001, analyzed by EPA Method 8015M unless otherwise indicated
TPH = Total petroleum hydrocarbons. Analytical method unknown
BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; before 11/30/2004, analyzed by EPA Method 8020 unless otherwise indicated
MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B
TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B
DIPE = Di-isopropyl ether analyzed by EPA Method 8260B
ETBE = Ethyl tertiary-butyl ether analyzed by EPA Method 8260B
TAME = Tertiary-amyl methyl ether analyzed by EPA Method 8260B

Table 3

Historical Grab Groundwater Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Date	Depth (fbg)	TPHmo (µg/L)	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Ethanol (µg/L)	Lead (µg/L)

1,2-DCA = 1,2-Dichloroethane analyzed by EPA Method 8260B
EDB = 1,2-Dibromoethane analyzed by EPA Method 8260B
Ethanol analyzed by EPA Method 6010B
Lead analyzed by EPA Method 7421
fbg = Feet below grade
µg/L = Micrograms per liter
<x = Not detected at reporting limit x
--- = Not analyzed
ND = Not detected
ESL = Environmental screening level
NA = No applicable ESL
Results in **bold** equal or exceed applicable ESL

a = Sample collected from temporary well casing screened from 0 to 27 fbg
b = Sample analyzed beyond recommended holding time
c = San Francisco Bay Regional Water Quality Control Board (RWQCB) ESL for groundwater where groundwater is a source of drinking water
(Tables A and C of *User's Guide: Derivation and Application of Environmental Screening Levels,* RWQCB, Interim Final - 2013)

Table 4

Historical Soil Vapor Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Depth (fbg)	Date	TPHg ($\mu g/m^3$)	B ($\mu g/m^3$)	T ($\mu g/m^3$)	E ($\mu g/m^3$)	X ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	TBA ($\mu g/m^3$)	Naph-thalene ($\mu g/m^3$)	Helium (%v)	Methane (%v)	Carbon Dioxide (%v)	Oxygen + Argon (%v)
V-1	4.5-4.8	01/14/2008	**16,000,000**	<1,200	<1,400	<1,700	<5,000	<5,500	<4,600	---	---	---	---	---
V-1	4.5-4.8	06/26/2008	1,000,000	<160	<190	<220	<220	<180	<610	---	---	---	---	---
V-1	4.5-4.8	10/22/2008	340,000	<45	<53	<61	<120	<51	<170	---	---	---	---	---
V-1	4.5-4.8	04/21/2009 b	---	58	<38	49	<170	---	---	---	<0.0100	---	---	---
V-1	4.5-4.8	05/09/2011 b	<7,000	<16	<19	110	160	<36	<30	---	<0.0100	<0.500	16.2	3.01
V-2	4.5-4.8	01/14/2008	**15,000,000**	**9,000**	<1,100	**20,000**	7,700	<4,100	<3,500	---	---	---	---	---
V-2	4.5-4.8	05/22/2008	**8,300,000**	**7,000**	2,400	**5,600**	<1,400	<1,200	<4,000	---	---	---	---	---
V-2	4.5-4.8	10/22/2008	**5,000,000 a**	**8,300**	<380	**9,800**	7,700	<360	<1,200	---	---	---	---	---
V-2	4.5-4.8	04/21/2009 b	---	**7,100**	2,900	3,100	<6,100	---	---	---	<0.0100	---	---	---
V-2	4.5-4.8	05/09/2011 b	**36,000,000**	**2,400**	<940	<1,100	<2,200	<1,800	<1,500	---	0.0161	<0.500	14.7	2.30
V-3	4.5-4.8	01/14/2008	**20,000,000**	**3,800**	<2,800	<3,300	<9,800	<11,000	<9,100	---	---	---	---	---
V-3	4.5-4.8	05/22/2008	**22,000,000**	**1,600**	1,700	<1,300	<1,300	<1,100	<3,700	---	---	---	---	---
V-3	4.5-4.8	10/22/2008	**51,000,000 a**	**4,200**	<4,600	<5,200	<10,000	<4,400	<15,000	---	---	---	---	---
V-3	4.5-4.8	04/21/2009 b	---	**25,000**	17,000	<8,700	<35,000	---	---	---	0.0205	---	---	---
V-3	4.5-4.8	05/09/2011 b	**66,000,000**	**8,100**	<3,800	<4,300	<8,700	<7,200	<6,100	---	<0.0100	4.59	13.7	2.14
V-4	4.5-4.8	01/14/2008	1,300,000	<150	<180	<210	<620	<680	<570	---	---	---	---	---
V-4	4.5-4.8	06/26/2008	980,000	<160	<190	<220	<220	<180	<620	---	---	---	---	---
V-4	4.5-4.8	10/22/2008	**4,300,000**	270	<240	<280	<560	<230	<780	---	---	---	---	---
V-4	4.5-4.8	04/21/2009 b	---	65	<75	360	520	---	---	---	0.0171	---	---	---
V-4	4.5-4.8	05/09/2011 b	**2,700,000**	<320	<380	<430	<870	<720	<610	---	<0.0100	0.964	7.98	2.18
V-5	4.5-4.8	01/14/2008	**2,500,000**	<290	<340	<400	<1,190	<1,300	<1,100	---	---	---	---	---
V-5	4.5-4.8	05/22/2008	**3,300,000**	<1,600	3,100	<2,200	<2,200	<1,800	<6,100	---	---	---	---	---
V-5	4.5-4.8	10/22/2008	2,400,000	<340	<400	<460	<920	<380	<1,300	---	---	---	---	---
V-5	4.5-4.8	04/21/2009 b	---	<64	110	350	510	---	---	---	1.24	---	---	---

Table 4

Historical Soil Vapor Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Depth (fbg)	Date	TPHg ($\mu g/m^3$)	B ($\mu g/m^3$)	T ($\mu g/m^3$)	E ($\mu g/m^3$)	X ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	TBA ($\mu g/m^3$)	Naph-thalene ($\mu g/m^3$)	Helium (%v)	Methane (%v)	Carbon Dioxide (%v)	Oxygen + Argon (%v)
V-5	4.5-4.8	05/09/2011 b	960,000	<130	<150	220	<350	<290	<240	---	<0.0100	<0.500	9.30	3.29
V-6	4.5-4.8	01/14/2008	**15,000,000**	**9,100**	<270	<310	<930	<1,000	<860	---	---	---	---	---
V-6	4.5-4.8	05/22/2008	2,300,000	<130	<150	<180	<180	<140	<490	---	---	---	---	---
V-6	4.5-4.8	10/22/2008	**5,400,000**	<970	<1,100	<1,300	<2,600	<1,100	<3,700	---	---	---	---	---
V-6	4.5-4.8	04/21/2009 b	---	<20	34	55	<110	---	---	---	<0.0100	---	---	---
V-6	4.5-4.8	05/09/2011 b	240,000	<40	<47	170	280	<90	<76	---	<0.0100	<0.500	8.67	6.92
V-7	4.5-4.8	01/14/2008	170,000	<19	<22	<25	<76	<84	<71	---	---	---	---	---
V-7	4.5-4.8	05/22/2008	790	<4.2	<5.0	<5.7	<5.7	<4.8	<16	---	---	---	---	---
V-7	4.5-4.8	10/22/2008	3,700	<2.6	<3.0	26	120	<2.9	<9.8	---	---	---	---	---
V-7	4.5-4.8	05/09/2011 b	<7,000	<16	<19	42	48	<36	<30	---	<0.0100	<0.500	4.95	15.2
V-8	5.0-5.2	10/23/2008	7,000	<3.8	<4.5	<5.2	<10	<4.3	<14	---	---	---	---	---
V-8	5.0-5.2	05/09/2011 b	250,000	<64	<75	150	<170	<140	<120	---	<0.0100	<0.500	13.9	6.39
V-9	5.0-5.2	10/23/2008	870	<3.7	<4.4	<5.0	<10	<4.2	<14	---	---	---	---	---
V-9	5.0-5.2	05/09/2011 b	<7,000	<16	<19	130	170	<36	<30	---	<0.0100	<0.500	6.75	16.4
V-9	5.0-5.2	02/20/2013	<3,800	<16	<19	<22	<43	<36	<30	<52	<0.0100	<0.500	6.18	16.4
V-10	4.5-4.8	01/14/2008	Unable to sample due to water in sample tube					---	---	---	---	---	---	---
V-10	4.5-4.8	05/22/2008	750	<4.1	<4.9	<5.6	<5.6	<4.6	<16	---	---	---	---	---
V-10	4.5-4.8	10/23/2008	280	<4.2	<5.0	<5.7	<11	<4.8	<16	---	---	---	---	---
V-10	4.5-4.8	05/09/2011	Unable to sample due to water in sample tube					---	---	---	---	---	---	---
V-10	4.5-4.8	02/20/2013	<3,800	<16	<19	<22	<43	<36	<30	<52	0.0726	<0.500	7.09	13.3
V-11	4.5-4.8	01/14/2008	18,000	<2.2	5.1	<3.0	<8.9	<9.8	<8.2	---	---	---	---	---
V-11	4.5-4.8	06/26/2008	<260	<4.0	<4.8	<5.5	<5.5	<4.6	<15	---	---	---	---	---

Table 4

Historical Soil Vapor Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Depth (fbg)	Date	TPHg ($\mu g/m^3$)	B ($\mu g/m^3$)	T ($\mu g/m^3$)	E ($\mu g/m^3$)	X ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	TBA ($\mu g/m^3$)	Naph-thalene ($\mu g/m^3$)	Helium (%v)	Methane (%v)	Carbon Dioxide (%v)	Oxygen + Argon (%v)
V-11	4.5-4.8	10/23/2008	<220	<3.5	<4.1	<4.8	<9.6	<4.0	<13	---	---	---	---	---
V-11	4.5-4.8	05/09/2011	<7,000	<16	<19	43	49	<36	<30	---	<0.0100	<0.500	7.76	12.6
V-11	4.5-4.8	02/20/2013	<3,800	<16	<19	<22	<43	<36	<30	<52	<0.0100	<0.500	6.40	14.5
V-12	4.2-4.3	10/01/2009	Unable to sample due to water in sample tube					---	---	---	---	---	---	---
V-12	4.2-4.3	11/19/2009	Unable to sample due to water in sample tube					---	---	---	---	---	---	---
V-12	4.2-4.3	07/29/2010 c	<5,700	<32	<38	<43	<87	<72	<61	---	<0.0100	---	---	---
V-12	4.2-4.3	05/09/2011	Unable to sample due to water in sample tube					---	---	---	---	---	---	---
SSV-1	0.58	05/19/2009	---	8.8	11	4.4	<12	---	---	---	0.251	---	---	---
SSV-1	0.5	10/23/2012 b	<3,800	<16	<19	26	<43	<36	63	---	0.0339	<0.500	<0.500	15.6
SSV-1	0.5	02/20/2013	<3,800	<16	<19	<22	<43	<36	<30	<52	0.0150	<0.500	<0.500	17.6
SSV-2	1	05/15/2009	---	<2.1	<2.4	<2.8	<11	---	---	---	0.261	---	---	---
SSV-2	1	10/23/2012 b	<3,800	<16	<19	<22	<43	<36	<30	---	<0.0100	<0.500	<0.500	21.1
SSV-2	1	02/20/2013	<3,800	<16	<19	<22	<43	<36	<30	<52	<0.0100	<0.500	<0.500	20.8
SSV-3	0.67	10/23/2012 b	<3,800	<16	<19	<22	<43	<36	<30	---	<0.0100	<0.500	<0.500	19.8
SSV-3	0.67	02/20/2013	**3,400,000**	<400	<470	<540	<1,100	<900	<760	<1,300	0.0192	0.883	5.52	2.81
SSV-4	0.5	10/23/2012 b	<3,800	<16	<19	<22	<43	<36	<30	---	0.0621	<0.500	<0.500	21.3
SSV-4	0.5	02/20/2013	<3,800	<16	<19	<22	<43	<36	<30	<52	<0.0100	<0.500	<0.500	21.0
SSV-5	0.5	10/23/2012 b	<3,800	<16	<19	30	<43	<36	37	---	0.235	<0.500	<0.500	21.8
SSV-5	0.5	02/20/2013	<3,800	<16	<19	<22	<43	<36	<30	<52	0.200	<0.500	<0.500	21.3
SSV-6	0.5	10/23/2012 b	<3,800	<16	<19	<22	<43	<36	<30	---	0.107	<0.500	<0.500	20.3
SSV-6	0.5	02/20/2013	<3,800	<16	<19	<22	<43	<36	<30	<52	<0.0100	<0.500	<0.500	20.3

Table 4

Historical Soil Vapor Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Depth (fbg)	Date	TPHg ($\mu g/m^3$)	B ($\mu g/m^3$)	T ($\mu g/m^3$)	E ($\mu g/m^3$)	X ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	TBA ($\mu g/m^3$)	Naph-thalene ($\mu g/m^3$)	Helium (%v)	Methane (%v)	Carbon Dioxide (%v)	Oxygen + Argon (%v)
SSV-7	0.5	10/23/2012 b	<3,800	<16	<19	25	<43	<36	44	---	<0.0100	<0.500	<0.500	21.4
SSV-7	0.5	02/20/2013	<3,800	<16	<19	<22	<43	<36	<30	<52	0.0416	<0.500	<0.500	21.2
SSV-8	0.5	09/04/2013	5,900	<16	26	<22	<22	---	---	<52	0.516	<0.500	<0.500	19.6
V-13	5	04/27/2015	7,600	<16	<19	<22	<22	---	---	<52	<0.0100	<0.500	1.35	20.9
V-14	5	04/27/2015	9,800	<16	<19	<22	<22	---	---	<52	<0.0100	<0.500	4.79	8.90
V-16	5	04/27/2015	**830,000**	<64	<75	<87	<87	---	---	<210	<0.0100	<0.500	3.72	7.82
Ambient Air	---	01/14/2008	<17,000	<2.4	4.1	<3.2	<9.7	<11	<9.0	---	---	---	---	---
RWQCB ESLs for Soil Gas[d]		**Commercial Land Use**	**2,500,000**	**420**	**1,300,000**	**4,900**	**440,000**	**47,000**	**NA**	**360**	**NA**	**NA**	**NA**	**NA**
		Residential Land Use	**300,000**	**42**	**160,000**	**490**	**52,000**	**4,700**	**NA**	**36**	**NA**	**NA**	**NA**	**NA**

Notes:

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method TO-3M; before 5/9/11, analyzed by modified EPA Method TO-3 GC/FID
BTEX = Benzene, toluene, ethylbenzene and total xylenes analyzed by EPA Method 8260B (M); before 7/29/09, analyzed by modified EPA Method TO-15
MTBE = Methyl-tertiary butyl ether analyzed by EPA Method 8260B (M); before 7/29/09, analyzed by modified EPA Method TO-15
TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B (M); before 7/29/09, analyzed by Modified EPA Method TO-15
Naphthalene analyzed by EPA Method 8260B (M)
Helium analyzed by ASTM D-1946 (M)
Methane, carbon dioxide, and oxygen + argon analyzed by ASTM D-1946
fbg = Feet below grade
$\mu g/m^3$ = Micrograms per cubic meter
%v = Percent by volume

Table 4

Historical Soil Vapor Analytical Data
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California

Sample ID	Depth (fbg)	Date	TPHg ($\mu g/m^3$)	B ($\mu g/m^3$)	T ($\mu g/m^3$)	E ($\mu g/m^3$)	X ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	TBA ($\mu g/m^3$)	Naph-thalene ($\mu g/m^3$)	Helium (%v)	Methane (%v)	Carbon Dioxide (%v)	Oxygen + Argon (%v)

<x = Not detected at reporting limit x
--- = Not analyzed
ESL = Environmental screening level
RWQCB = San Francisco Bay Regional Water Quality Control Board
NA = No applicable ESL
Results in **bold** exceed ESL for commercial land use
All samples were collected in Summa canisters unless otherwise noted

a = Exceeds quality control limits, possibly due to matrix effects
b = Samples collected in Tedlar bags
c = Sample received by laboratory with very low volume
d = San Francisco Bay Regional Water Quality Control Board (RWQCB) ESLs (Table E of *User's Guide: Derivation and Application of Environmental Screening Levels,* RWQCB, Interim Final 2013)

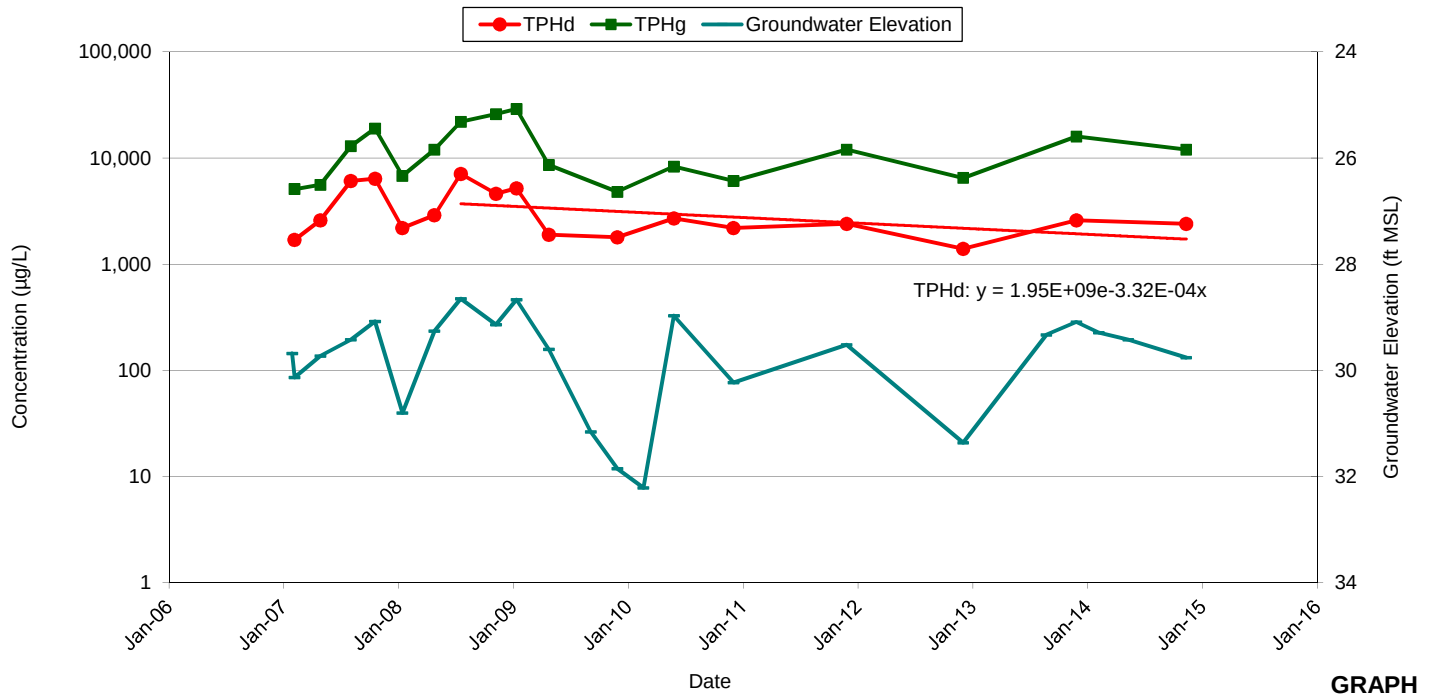
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-6

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Constituent	Total Petroleum Hydrocarbons as Diesel (TPHd)	Total Petroleum Hydrocarbons as Gasoline (TPHg)
Given			
WQO:	y	110	500
Constant:	b	1.95E+09	NA
Constant:	a	-3.32E-04	NA
Starting date for current trend:		8/12/2008	NA
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	5.72	NA
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Aug 2037	Stable



Trendline(s) begin at peak concentration

GRAPH 1

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-6:
TPHd AND TPHg CONCENTRATIONS AND
GROUNDWATER ELEVATION VS TIME

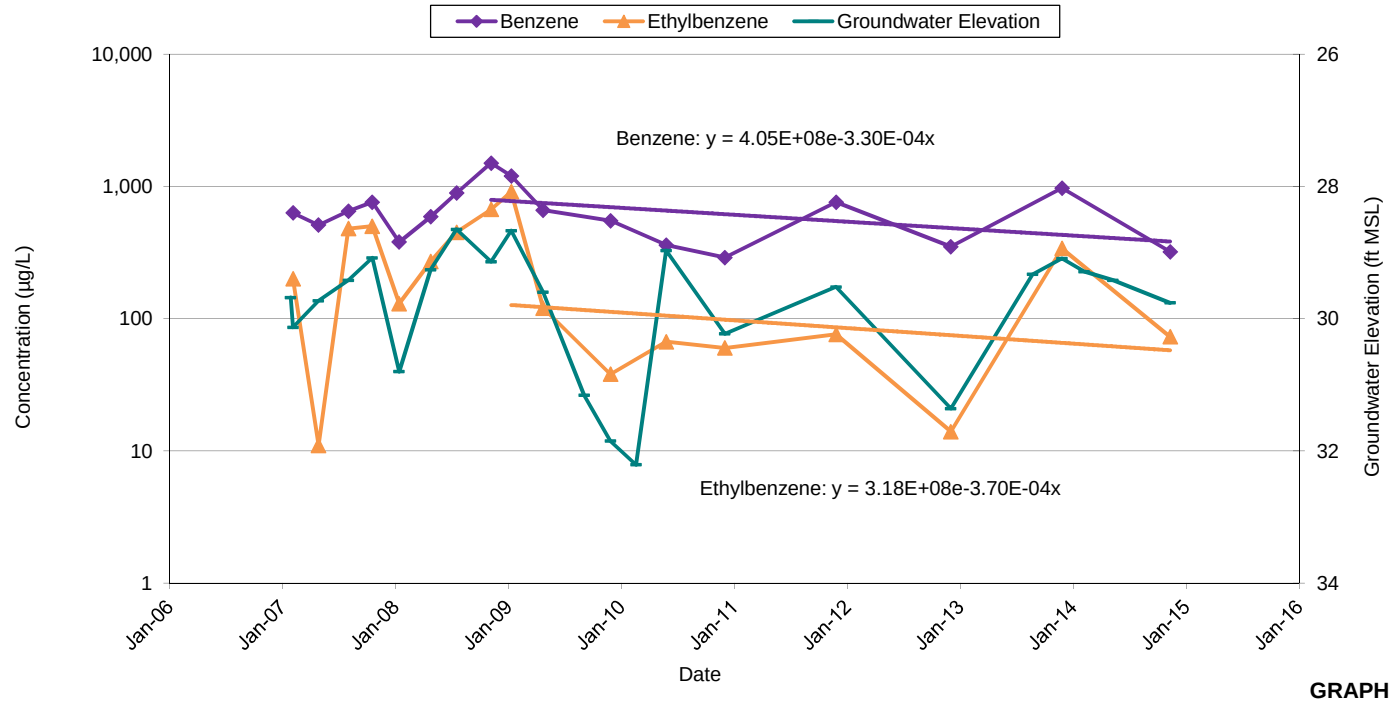
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-6

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Constituent	Benzene	Ethylbenzene
Given			
WQO:	y	27	43
Constant:	b	4.05E+08	3.18E+08
Constant:	a	-3.30E-04	-3.70E-04
Starting date for current trend:		12/2/2008	2/5/2009
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	5.75	5.13
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Jan 2037	Jan 2017



GRAPH 2

Trendline(s) begin at peak concentration

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-6:
BENZENE AND ETHYLBENZENE CONCENTRATIONS
AND GROUNDWATER ELEVATION VS TIME

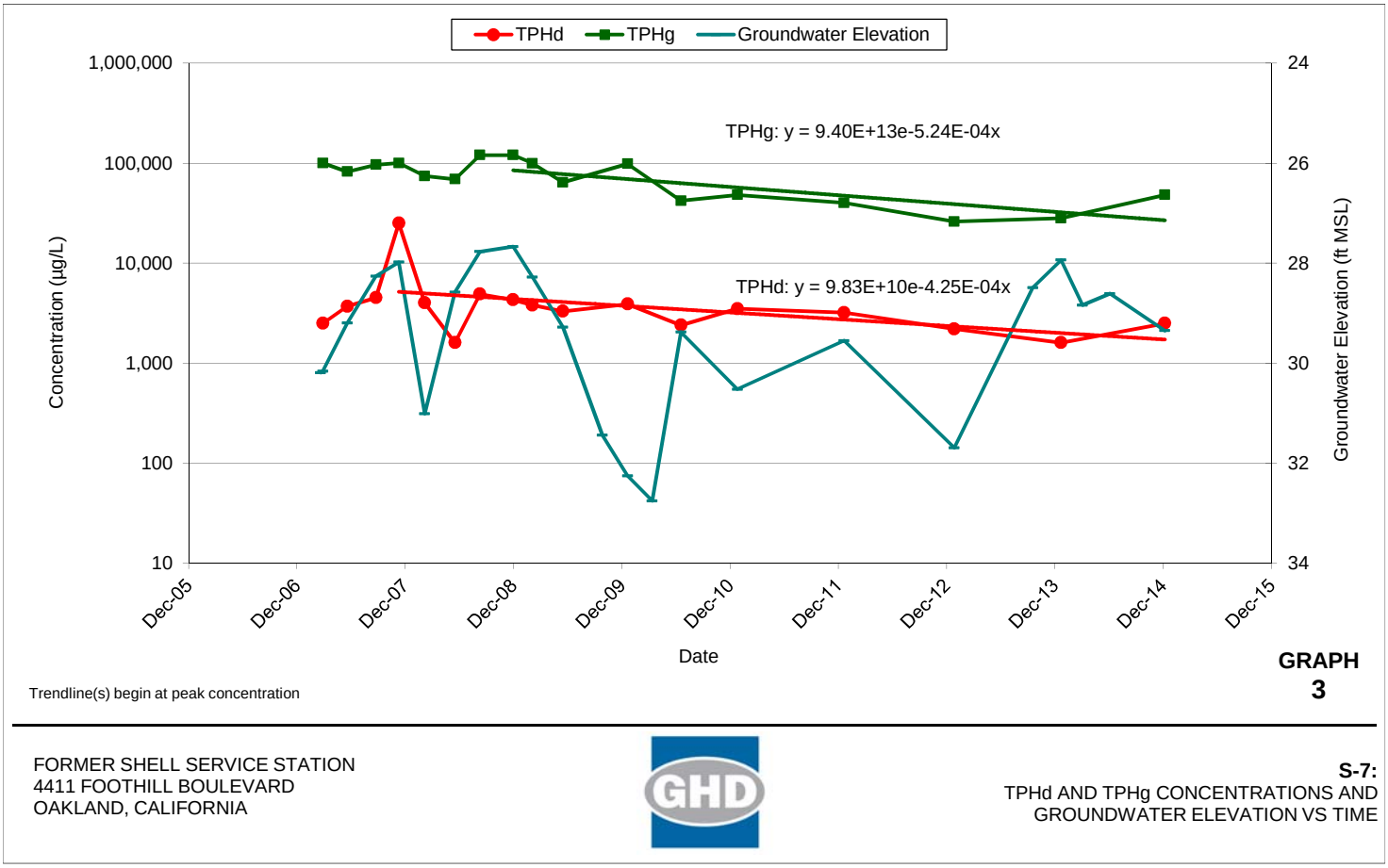
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-7

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

		Constituent	Total Petroleum Hydrocarbons as Diesel (TPHd)	Total Petroleum Hydrocarbons as Gasoline (TPHg)
Given				
	WQO:	y	110	500
	Constant:	b	9.83E+10	9.40E+13
	Constant:	a	-4.25E-04	-5.24E-04
	Starting date for current trend:		11/13/2007	12/2/2008
Calculate				
	Attenuation Half Life (years):	(-ln(2)/a)/365.25	4.47	3.62
	Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Oct 2032	Aug 2035



Trendline(s) begin at peak concentration

GRAPH 3

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-7:
TPHd AND TPHg CONCENTRATIONS AND GROUNDWATER ELEVATION VS TIME

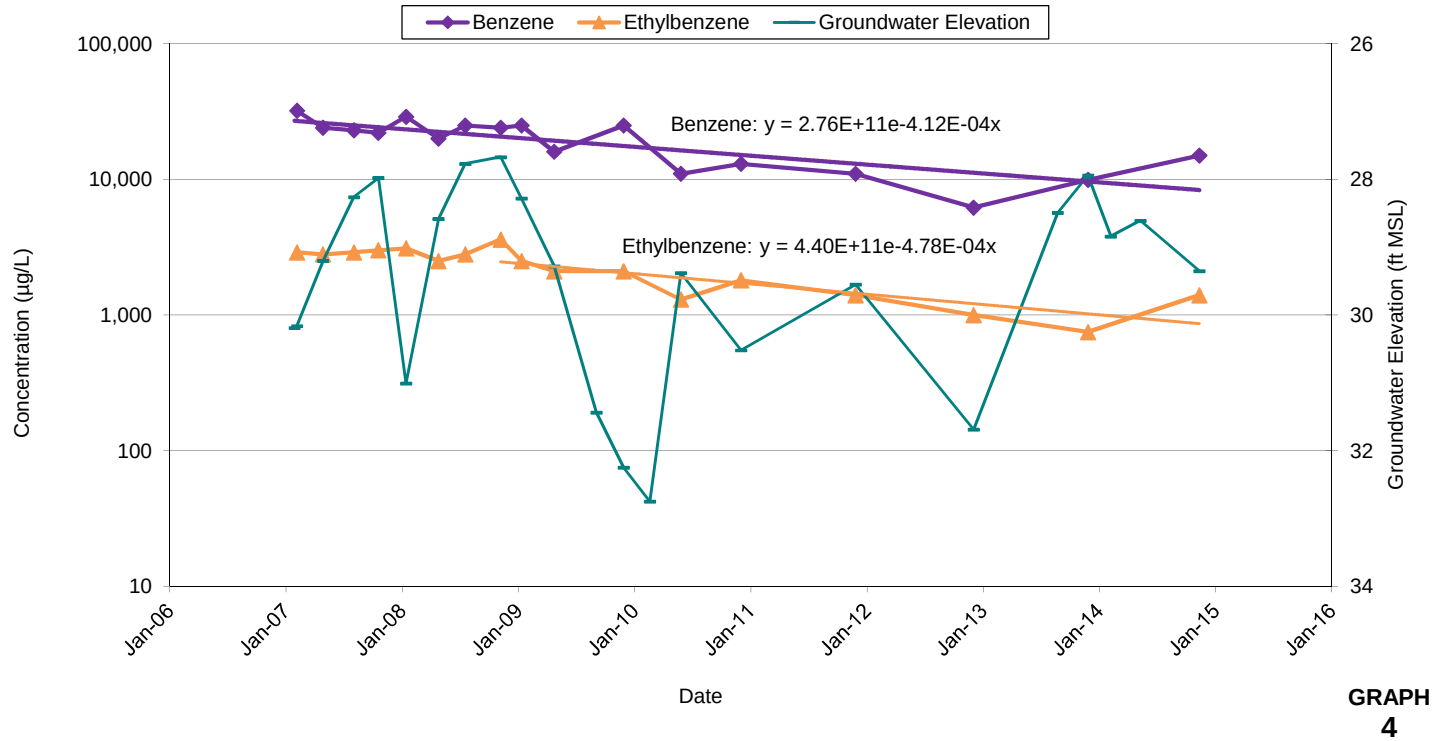
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-7

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Constituent	Benzene	Ethylbenzene
Given			
WQO:	y	27	43
Constant:	b	2.76E+11	4.40E+11
Constant:	a	-4.12E-04	-4.78E-04
Starting date for current trend:		3/2/2007	12/2/2008
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	4.61	3.97
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Feb 2053	Jan 2032



GRAPH 4

Trendline(s) begin at peak concentration

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-7:
BENZENE AND ETHYLBENZENE CONCENTRATIONS
AND GROUNDWATER ELEVATION VS TIME

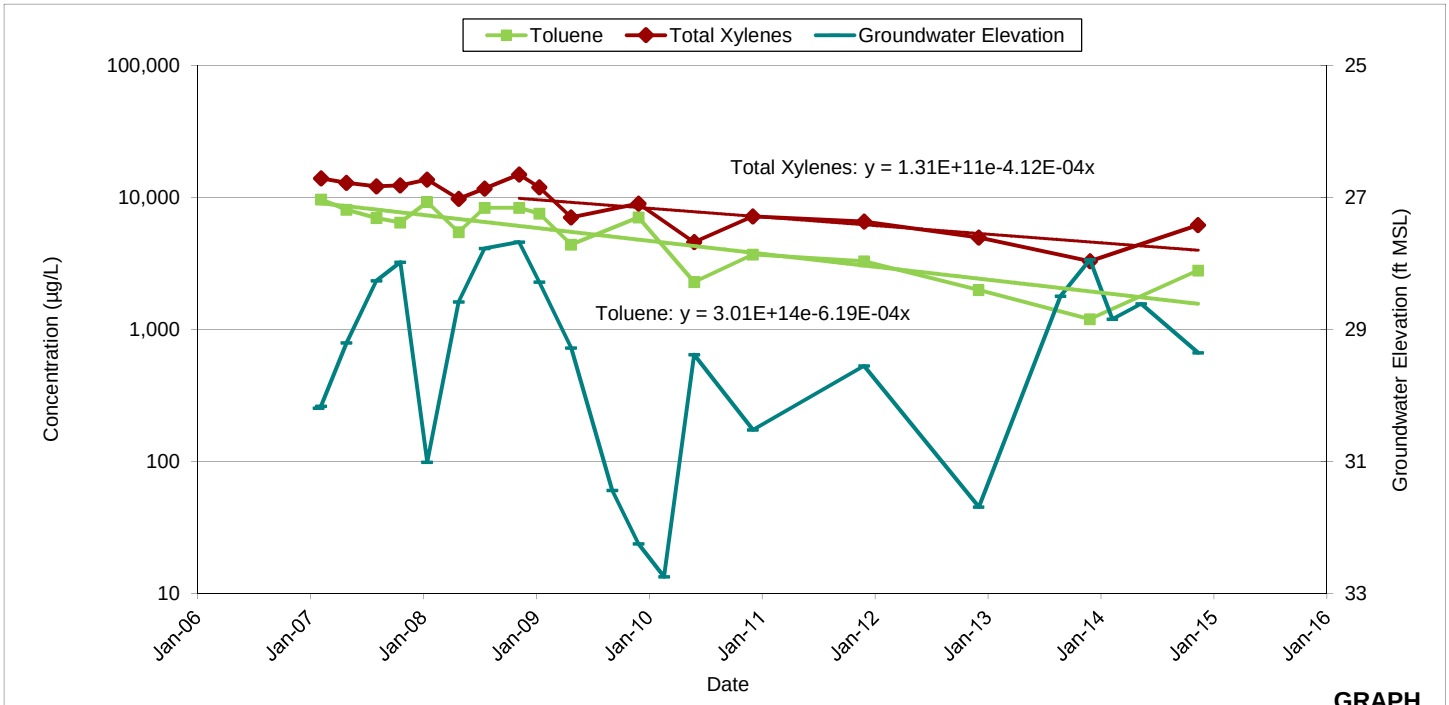
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-7

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L; b = concentration at time (x); a = decay constant; x = time (x) in days

	Constituent	Toluene	Total Xylenes
Given			
WQO:	y	130	100
Constant:	b	3.01E+14	1.31E+11
Constant:	a	-6.19E-04	-4.12E-04
Starting date for current trend:		3/2/2007	12/2/2008
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	3.07	4.61
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Dec 2025	Jul 2039



GRAPH 5

Trendline(s) begin at peak concentration

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-7:
TOLUENE AND TOTAL XYLENES CONCENTRATIONS
AND GROUNDWATER ELEVATION VS TIME

Predicted Time to Reach Water Quality Objectives (WQO) in Well S-8

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Constituent	Total Petroleum Hydrocarbons as Diesel (TPHd)	Total Petroleum Hydrocarbons as Gasoline (TPHg)
Given			
WQO:	y	110	500
Constant:	b	NA	NA
Constant:	a	NA	NA
Starting date for current trend:		NA	NA
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	NA	NA
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Stable	Stable

Trendline(s) begin at peak concentration

GRAPH 6

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-8:
TPHd AND TPHg CONCENTRATIONS AND GROUNDWATER ELEVATION VS TIME

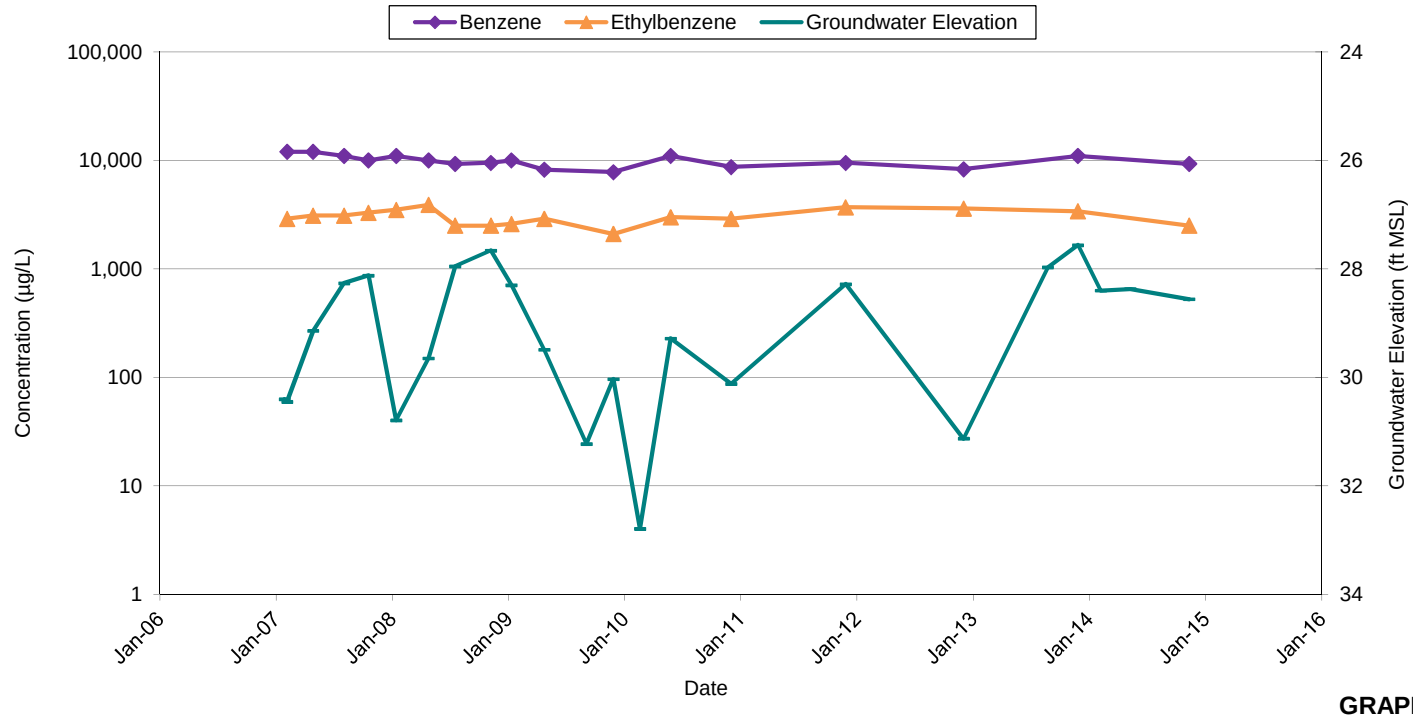
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-8

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L, a = decay constant
b = concentration at time (x), x = time (x) in days

	Constituent	Benzene	Ethylbenzene
Given			
WQO:	y	27	43
Constant:	b	NA	NA
Constant:	a	NA	NA
Starting date for current trend:		NA	NA
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	NA	NA
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Stable	Stable



GRAPH 7

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-8:
BENZENE AND ETHYLBENZENE CONCENTRATIONS
AND GROUNDWATER ELEVATION VS TIME

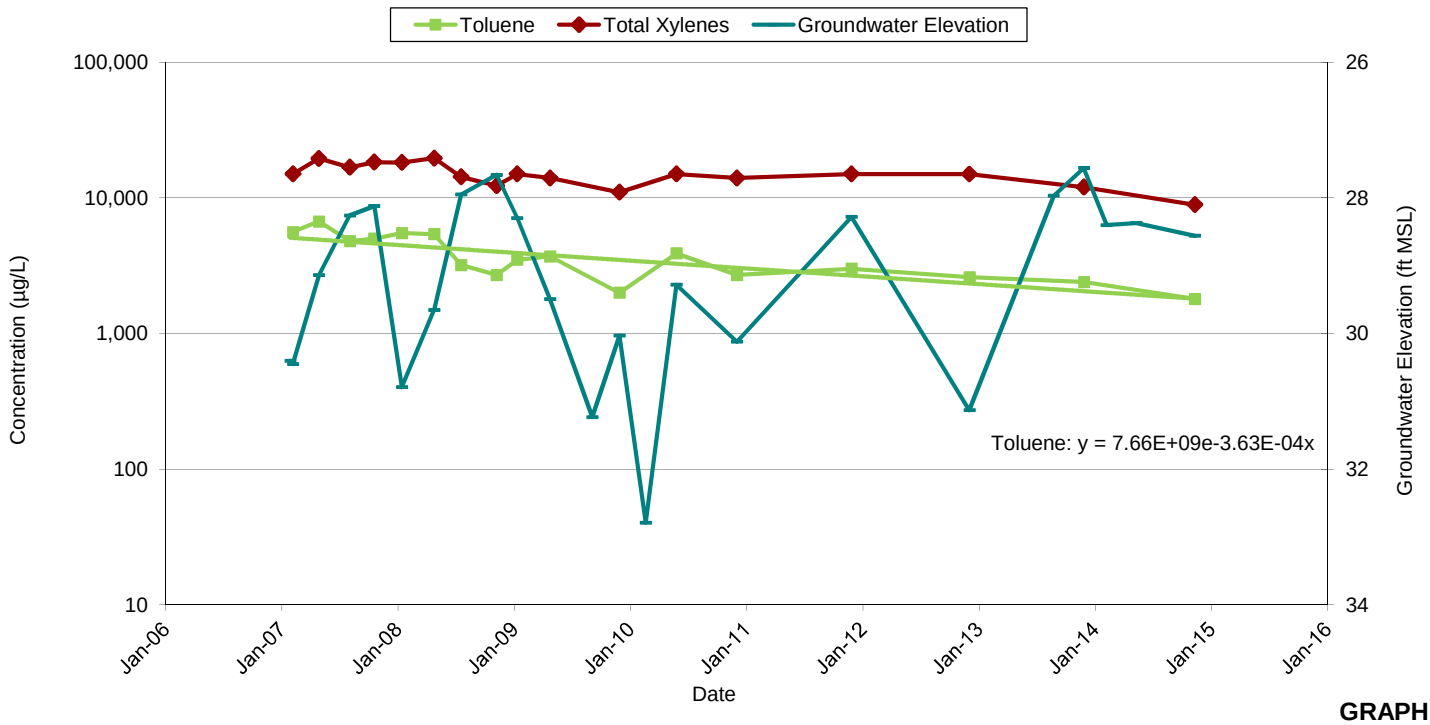
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-8

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Constituent	Toluene	Total Xylenes
Given			
WQO:	y	130	100
Constant:	b	7.66E+09	NA
Constant:	a	-3.63E-04	NA
Starting date for current trend:		3/2/2007	NA
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	5.23	NA
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Dec 2034	Stable



Trendline(s) begin at peak concentration

GRAPH 8

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-8:
TOLUENE AND TOTAL XYLENES CONCENTRATIONS AND GROUNDWATER ELEVATION VS TIME

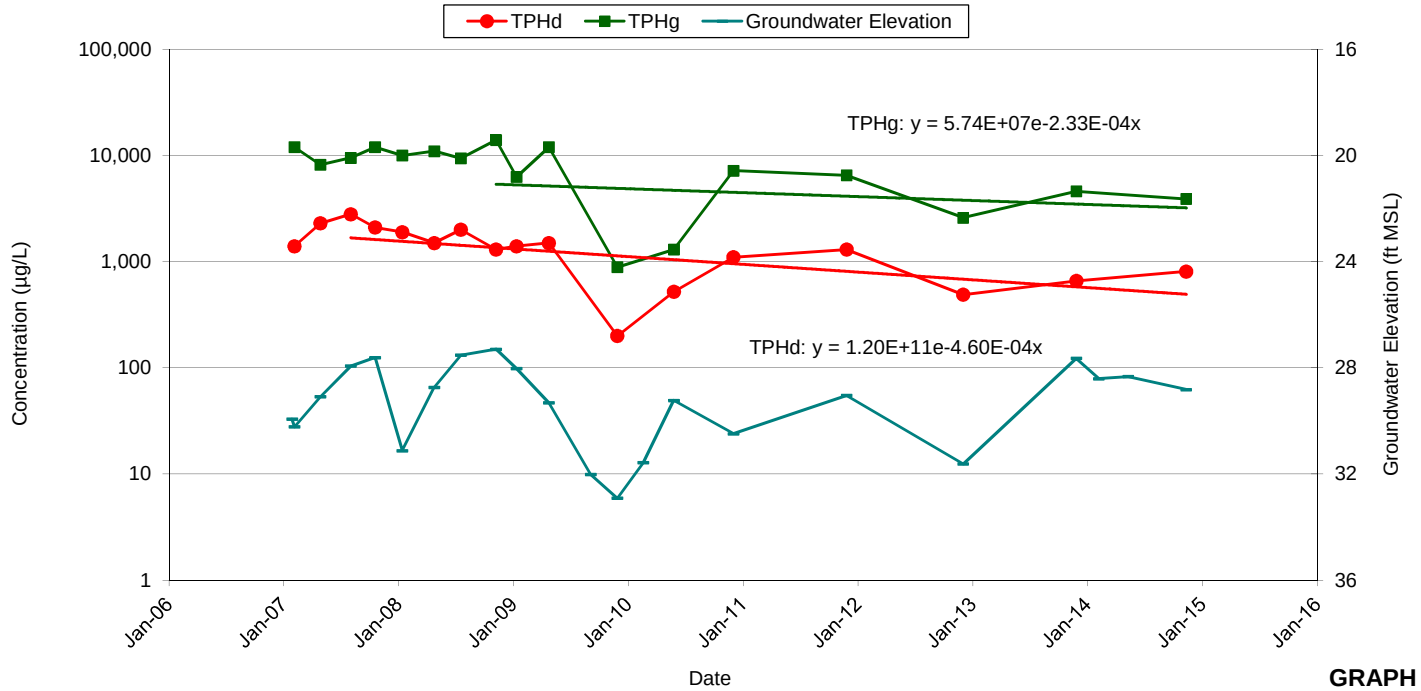
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-9

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

		Constituent	Total Petroleum Hydrocarbons as Diesel (TPHd)	Total Petroleum Hydrocarbons as Gasoline (TPHg)
Given				
	WQO:	y	110	500
	Constant:	b	1.20E+11	5.74E+07
	Constant:	a	-4.60E-04	-2.33E-04
	Starting date for current trend:		3/2/2007	3/2/2007
Calculate				
	Attenuation Half Life (years):	(-ln(2)/a)/365.25	4.13	8.14
	Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Nov 2023	Nov 2036



GRAPH 9

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-9:
TPHd AND TPHg CONCENTRATIONS AND GROUNDWATER ELEVATION VS TIME

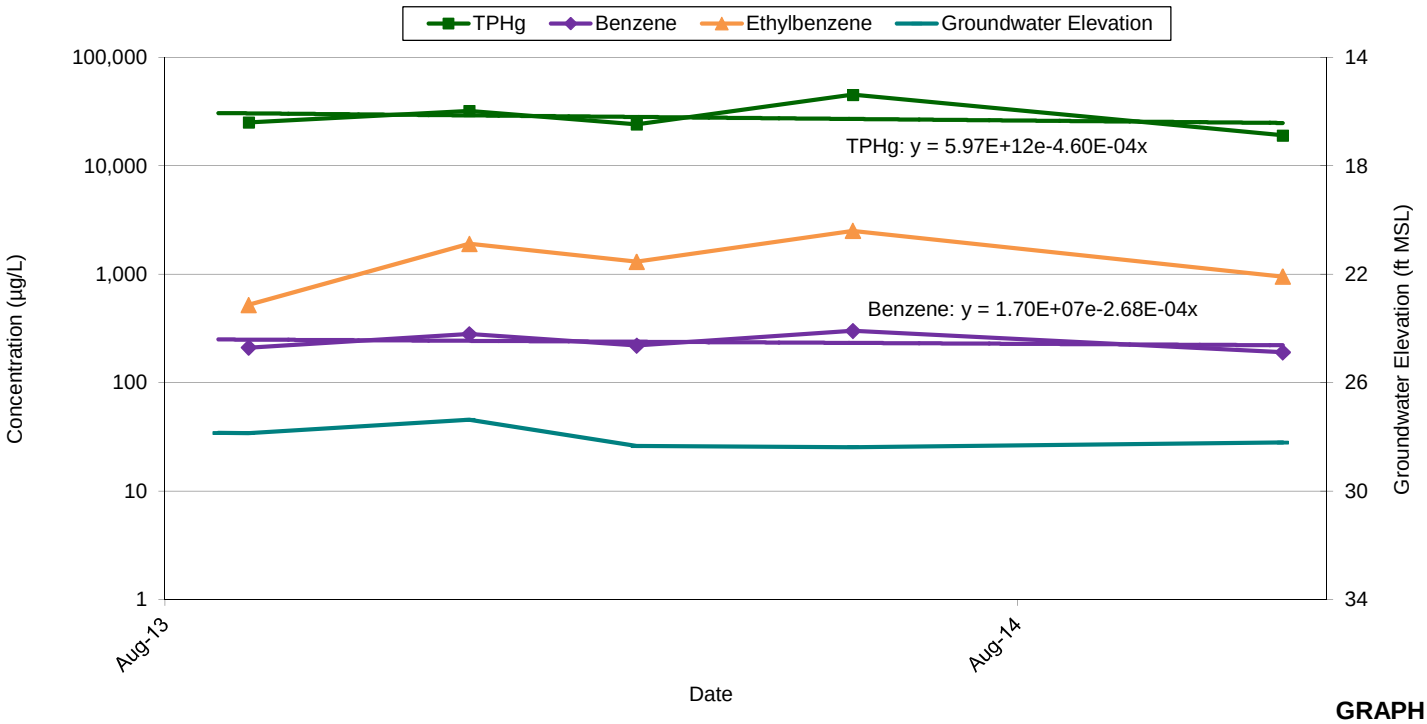
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-13

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Constituent	Total Petroleum Hydrocarbons as Gasoline (TPHg)	Benzene	Ethylbenzene
Given				
WQO:	y	500	27	43
Constant:	b	5.97E+12	1.70E+07	NA
Constant:	a	-4.60E-04	-2.68E-04	NA
Starting date for current trend:		9/19/2013	9/19/2013	NA
Calculate				
Attenuation Half Life (years):	(-ln(2)/a)/365.25	4.13	7.08	NA
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Feb 2038	May 2036	Stable



GRAPH 10

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-13:
TPHg, BENZENE, AND ETHYLBENZENE CONCENTRATIONS AND GROUNDWATER ELEVATION VS TIME

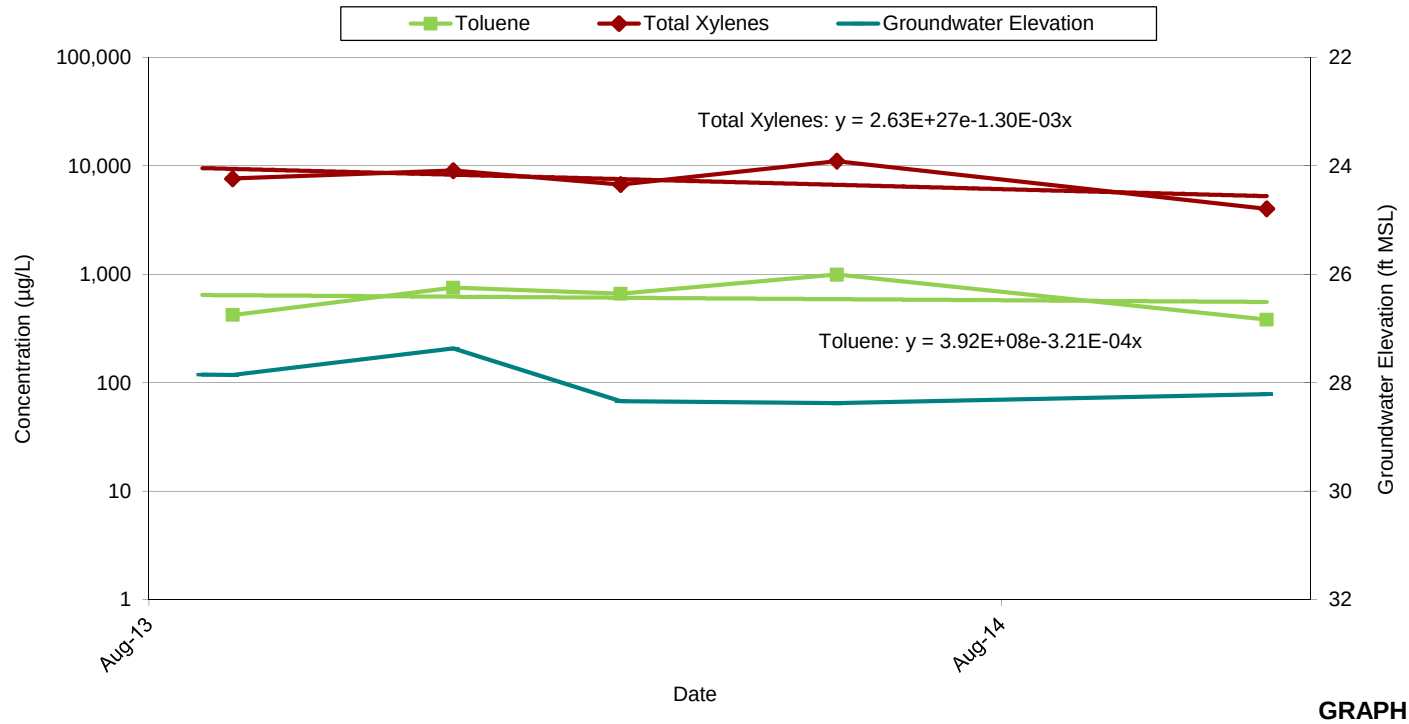
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-13

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L, a = decay constant
b = concentration at time (x), x = time (x) in days

	Constituent	Toluene	Total Xylenes
Given			
WQO:	y	130	100
Constant:	b	3.92E+08	2.63E+27
Constant:	a	-3.21E-04	-1.30E-03
Starting date for current trend:		9/19/2013	9/19/2013
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	5.91	1.46
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Mar 2027	Apr 2023



GRAPH 11

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-13:
TOLUENE AND TOTAL XYLENES CONCENTRATIONS
AND GROUNDWATER ELEVATION VS TIME

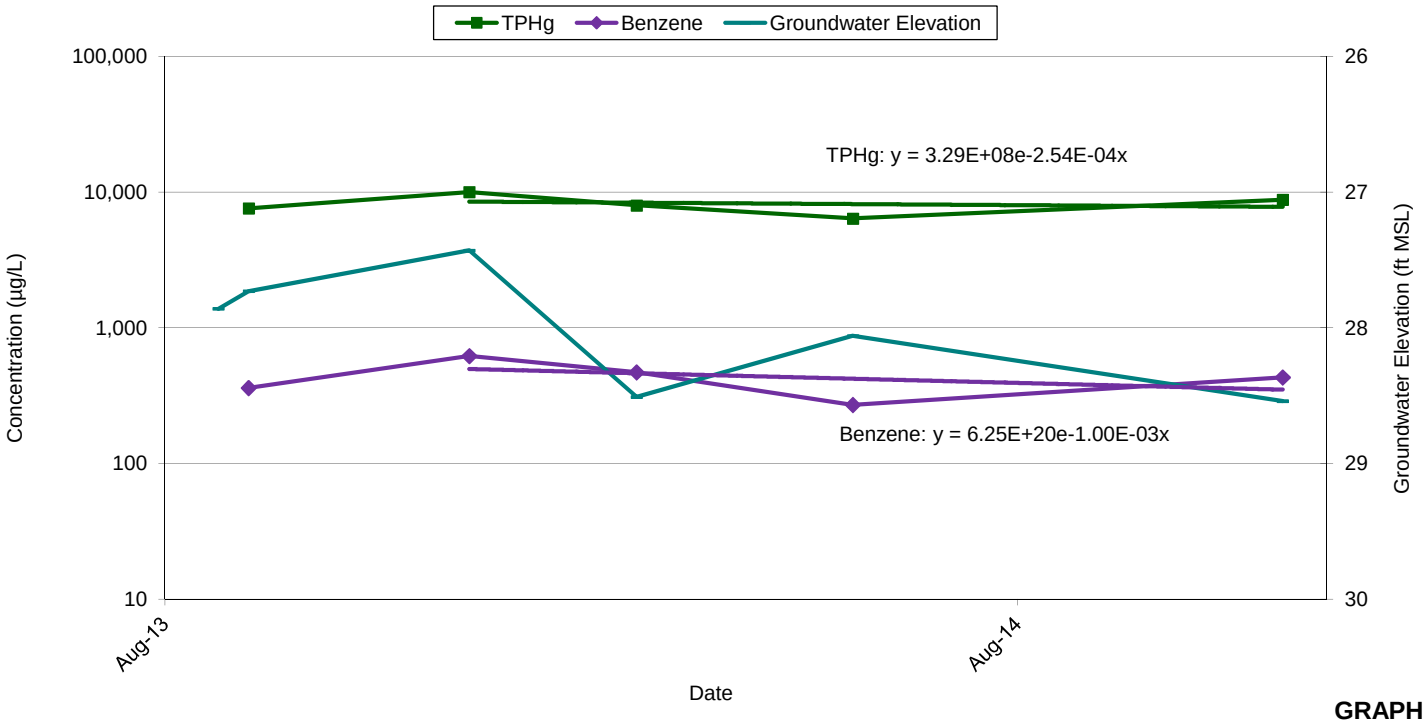
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-14

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

		Constituent	Total Petroleum Hydrocarbons as Gasoline (TPHg)	Benzene
Given				
WQO:		y	500	27
Constant:		b	3.29E+08	6.25E+20
Constant:		a	-2.54E-04	-1.00E-03
Starting date for current trend:			12/23/2013	12/23/2013
Calculate				
Attenuation Half Life (years):	(-ln(2)/a)/365.25		7.47	1.90
Estimated Date to Reach WQO:	(x = ln(y/b) / a)		May 2044	Jan 2022



Trendline(s) begin at peak concentration

GRAPH 12

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-14:
TPHg AND BENZENE CONCENTRATIONS AND GROUNDWATER ELEVATION VS TIME

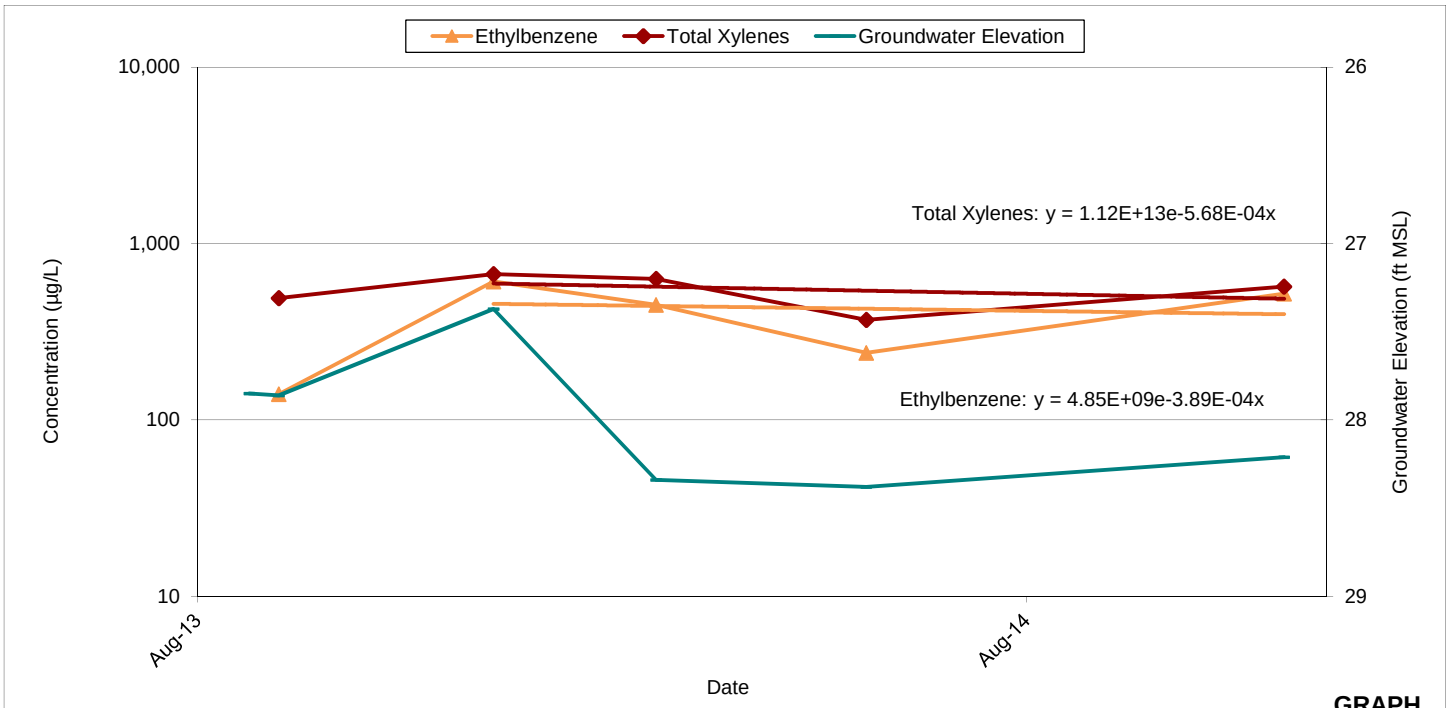
Predicted Time to Reach Water Quality Objectives (WQO) in Well S-14

FORMER SHELL SERVICE STATION, 4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Constituent	Ethylbenzene	Total Xylenes
Given			
WQO:	y	43	100
Constant:	b	4.85E+09	1.12E+13
Constant:	a	-3.89E-04	-5.68E-04
Starting date for current trend:		12/23/2013	12/23/2013
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	4.88	3.34
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Jun 2030	Aug 2022



Trendline(s) begin at peak concentration

GRAPH 13

FORMER SHELL SERVICE STATION
4411 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

S-14:
ETHYLBENZENE AND TOTAL XYLENES
CONCENTRATIONS AND GROUNDWATER ELEVATION
VS TIME

Appendix A
Site History

Site History

1958 Underground Storage Tank (UST) Piping Leak: On April 19, 1958, a gasoline shortage was discovered at the operating Shell-branded service station. It was determined that there was a piping leak into a concrete pump pit and then into the soil in the vicinity of the storage tanks. Separate phase hydrocarbons (SPHs) were found in an irrigation well located at 4320 Bond Street, adjacent to the Shell site. Shell Oil Products US (Shell) installed 22 8-inch diameter wells to depths of 15 feet below grade (fbg) along the property boundary and 1 well within the tank complex. Groundwater was pumped from the wells, and the extracted water was transported to a separator. Though the volume of the release is not known, Shell reported in a June 2, 1958 letter to Traveler's Insurance Company that they recovered 650 gallons of gasoline from the wells.

1971 UST Removal and Replacement: A Shell document dated July 15, 1971 notes plans to remove the then-existing 6,000-gallon USTs. An invoice dated September 17, 1971 indicates the delivery of one 10,000-gallon UST, one 8,000-gallon UST, and one 550-gallon underground waste oil tank.

1977 Dispenser Piping Leak*:* A Shell Oil Company *Oil Spill Report* dated October 19, 1977 documents the release of 2,000 gallons of gasoline from a leaking pipe that ran from the USTs to the dispenser located closest to High Street. The report noted that the damaged section of pipe was replaced and that leak detectors were installed on all systems.

1984 UST Removal and Replacement: A Shell purchase order dated October 1, 1984 indicates the removal of the then-existing USTs and installation of three 10,000-gallon fiberglass USTs.

1991 Waste Oil Tank Leak*:* On June 5, 1991, Shell submitted an Underground Storage Tank Unauthorized Release (Leak)/Site Contamination Report (Unauthorized Release Report) detailing a release from the 550-gallon waste oil tank at the site. The report stated that the release was caused by tank failure, that the volume of release was unknown, and that the contents of the tank had been removed.

1992 Waste Oil Tank Removal: In February 1992, Delta/Bay Builders, Inc. removed the 550-gallon waste oil tank. GeoStrategies Inc. (GeoStrategies) collected a soil sample from the bottom of the excavation at a depth of approximately 11 fbg. No total petroleum hydrocarbons as diesel (TPHd), total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), oil and grease, halogenated volatile organic compounds, or cadmium were detected in the sample. The soil sample contained 79 milligrams per kilogram (mg/kg) chromium, 6.7 mg/kg lead, 180 mg/kg nickel, and 56 mg/kg zinc. Details of the waste oil tank removal and sampling activities are presented in GeoStrategies' March 26, 1992 report.

1992 Subsurface Investigation: In November 1992, GeoStrategies installed one groundwater monitoring well (S-1) in the vicinity of the waste oil UST. Soil samples collected from the well boring contained up to 390 mg/kg total petroleum hydrocarbons as motor oil (TPHmo), 180 mg/kg TPHd, 110 mg/kg TPHg, 0.45 mg/kg benzene, 0.51 mg/kg toluene, 2.2 mg/kg ethylbenzene, and 8 mg/kg total xylenes. GeoStrategies' January 19, 1993 *Monitoring Well Installation Report* provides well installation details.

1993 Subsurface Investigation: In May 1993, Hydro Environmental Technologies, Inc. (HETI) installed two groundwater monitoring wells (S-2 and S-3). Soil samples collected from the well borings contained up to 36 mg/kg TPHd, 1,300 mg/kg TPHg, 0.019 mg/kg toluene, 35 mg/kg ethylbenzene, and 200 mg/kg

total xylenes. No benzene was detected in soil samples from the well borings. Well installation details are presented in HETI's July 22, 1993 report.

1995 Subsurface Investigation: In June 1995, Pacific Environmental Group (PEG) drilled eight on-site soil borings and two off-site borings. Soil samples collected from the borings contained up to 380 mg/kg TPHd, 840 mg/kg TPHg, 0.13 mg/kg benzene, 6.0 kg/kg toluene, 20 mg/kg ethylbenzene, and 98 mg/kg total xylenes. Grab groundwater samples collected from borings GP-2 and GP-10 contained up to 820 micrograms per liter (µg/L) TPHmo, 850 µg/L TPHd, 1,100 µg/L TPHg, 34 µg/L benzene, 41 µg/L ethylbenzene, and 71 µg/L total xylenes. No toluene was detected in the grab groundwater samples. PEG's September 12, 1995 *Site Investigation* report presents investigation details.

1998 Fuel System Upgrades: In November 1998, Paradiso Mechanical (Paradiso) upgraded the service station by adding secondary containment to the gasoline turbines and dispensers. Cambria Environmental Technology Inc. (Cambria) collected soil samples (D-1 through D-4) from beneath each of the dispensers. These soil samples contained up to 1,500 mg/kg TPHg, 9.2 mg/kg benzene, 4.3 mg/kg toluene, 15 mg/kg ethylbenzene, 61 mg/kg total xylenes, and 13 mg/kg methyl tertiary-butyl ether (MTBE). Details of dispenser upgrade and sampling activities are presented in Cambria's November 30, 1998 *Dispenser Soil Sampling Report*.

1999 - 2000 Oxygen Releasing Compound (ORC) Remediation: In September 1999, Cambria purged well BW-A with a vacuum truck and installed ORC socks in wells S-1, S-2, and BW-A. These activities are detailed in Cambria's October 15, 1999 *Second Quarter 1999 Monitoring Report*. According to field notes attached to Blaine Tech Services, Inc.'s (Blaine's) January 23, 2001 *Fourth Quarter 2000 Groundwater Monitoring* report, Blaine removed the ORC socks in December 2000.

1999 Site Conceptual Model (SCM) and Conduit Study: In December 1999, Cambria conducted a subsurface conduit study which identified several conduits that may provide limited preferential groundwater flow at times of shallow groundwater depth. Cambria also submitted additional data and analysis to complete the SCM for the site. Cambria's December 13, 1999 *Letter Response and Work Plan* presents the conduit study results and the additional portions of the SCM.

2000 Subsurface Investigation: In January 2000, Cambria installed one well (S-4) adjacent to the southeast corner of the station building and drilled one soil boring (SB-4) northwest of the station building. Soil samples contained up to 244 mg/kg TPHd, 786 mg/kg TPHg, 2.27 mg/kg benzene, 4.35 mg/kg toluene, 8.1 mg/kg ethylbenzene, 26.5 mg/kg total xylenes, and 0.893 mg/kg MTBE. Grab groundwater samples collected from boring SB-4 contained up to 180,000 µg/L TPHg, 31,000 µg/L benzene, 6,900 µg/L toluene, 5,900 µg/L ethylbenzene, 26,000 µg/L total xylenes, and 7,100 µg/L MTBE. Investigation details are contained in Cambria's November 17, 2000 *Site Investigation Report*.

2000 Sensitive Receptor Survey (SRS): In February 2000, Cambria conducted an SRS which identified 58 monitoring, test, or industrial wells located within a ½-mile radius of the site. No municipal, domestic, or irrigation wells were identified. The SRS is included in Cambria's November 17, 2000 *Site Investigation Report*.

2001 Mobile Dual-Phase Extraction (DPE): From April to September 2001, Cambria conducted monthly mobile DPE from wells BW-A and S-2. Mobile DPE removed approximately 18,588 gallons of groundwater containing an estimated 1.05 pounds of TPHg and 0.39 pounds of MTBE. Mobile DPE results are summarized in Cambria's November 7, 2001 *Third Quarter 2001 Monitoring Report.*

2001 Preferential Pathway Analysis: In June 2001, Cambria conducted a preferential pathway analysis using a San Francisco Bay Regional Water Quality Control Board (RWQCB) dilution attenuation factor (DAF) analysis originally developed for a similar analysis at San Francisco International Airport in 1998. The analysis determined that groundwater containing approximately 10 µg/L benzene and 218 µg/L MTBE could potentially reach San Francisco Bay (the nearest groundwater receptor). The DAF analysis is summarized in Cambria's June 26, 2001 First Quarter 2001 *Monitoring Report and Letter Response*.

2001 Corrective Action Plan (CAP): In November 2001, Cambria submitted a CAP in preparation for impending site demolition and fueling facility removal which recommended over-excavation following removal of the underground facilities, removing groundwater from the excavation, and placing ORC at the base of the excavation to enhance biological degradation of residual-impacted soil and groundwater. Cambria's November 12, 2001 *CAP* details these recommendations.

2002 UST Removal: In February 2002, Paradiso removed the gasoline USTs and hydraulic hoists and over-excavated approximately 2,549.72 tons of impacted soil around and beneath the USTs, product dispenser islands, and hydraulic hoists. Phillips Services Corporation extracted approximately 16,000 gallons of groundwater from the excavations. Cambria collected 54 soil samples and 2 grab groundwater samples from the excavation. Soil samples collected following the over-excavation contained up to 230 mg/kg hydraulic oil, 1,800 mg/kg TPHg, 9.6 mg/kg benzene, 42 mg/kg toluene, 100 mg/kg ethylbenzene, 590 mg/kg total xylenes, and 0.48 mg/kg MTBE. The grab groundwater sample collected following over-excavation contained 590 µg/L TPHg, 2.7 µg/L benzene, 2.3 µg/L toluene, 6.4 µg/L total xylenes, and 1,900 µg/L MTBE. No ethylbenzene, di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), tertiary butyl alcohol (TBA), or ethanol was detected in this sample. Following over-excavation, Paradiso placed 810 pounds of ORC powder on the bottom of the excavation. Details of the fuel facilities removal and corrective action are presented in Cambria's February 25, 2002 *Underground Storage Tank Closure Report*.

2002 Subsurface Investigation: In May 2002, Cambria installed one groundwater monitoring well (S-5). The well installation is described in Cambria's July 2, 2002 *Monitoring Well Installation Report*.

2005 SCM: In August 2005, Cambria submitted an SCM which recommended destroying all on-site wells and replacing them after site development was completed, defining the horizontal extent of soil and groundwater impacts southeast of well S-4 and south of the 1958 fuel release, and continued groundwater monitoring. Cambria's August 16, 2005 *Subsurface Investigation Work Plan and Site Conceptual Model* details these recommendations.

2005 Well Destructions: In anticipation of redevelopment of the site, Cambria properly destroyed five wells (S-1 through S-5) in July 2005. The well destructions are described in Cambria's August 19, 2005 *Well Destruction Report*.

2005 Subsurface Investigation and Over-Excavation*:* In August 2005, Cambria drilled two soil borings (TB-1 and TB-3) to investigate the extent of petroleum-hydrocarbon-impacted soil and groundwater from the 1958 piping leak. Soil samples from the borings contained up to 1,600 mg/kg TPHg, 2.2 mg/kg benzene, 11 mg/kg ethylbenzene, 48 mg/kg total xylenes, 0.0062 mg/kg MTBE, 0.021 mg/kg TBA, and 291 mg/kg lead. No toluene, DIPE, ETBE, TAME, 1,2-dichloroethane (1,2-DCA), or ethylene dibromide (EDB) was detected in the soil samples from the borings. Grab groundwater samples from the borings contained up to 180,000 µg/L TPHg, 22,000 µg/L benzene, 9,700 µg/L toluene, 5,200 µg/L ethylbenzene, 25,000 µg/L total xylenes, 890 µg/L MTBE, 1,600 µg/L DIPE, and 13.4 µg/L lead. No TBA, ETBE, TAME, 1,2-DCA, or EDB was detected in the samples. Because the former UST area was located within the proposed footprint of a new building to be constructed at the site, K.E. Curtis Construction excavated soil

to the extent feasible in order to remove hydrocarbon-impacted soil beneath the building prior to site redevelopment. The excavation was completed to dimensions of 20 feet long by 25 feet wide by 20 feet deep and approximately 719.61 tons of soil were transported for off-site disposal. Following excavation, Cambria collected one confirmation soil sample from each sidewall and two soil samples from the excavation base. The excavation soil samples contained up to 0.050 mg/kg benzene, 0.0083 mg/kg ethylbenzene, 0.040 mg/kg xylenes, 0.029 mg/kg TBA, and 0.023 mg/kg DIPE. No TPHg, toluene, MTBE, ETBE, or TAME was detected in the excavation samples. No water was observed in the bottom of the excavation. The activities are described in their entirety in Cambria's November 16, 2005 *Subsurface Investigation and Over-Excavation Report.*

2006 Subsurface Investigation: In May 2006, Cambria drilled five soil borings (SB-5 through SB-8, and SB-12) to assess the vertical extent of soil and groundwater impacts. Soil samples collected from the borings contained up to 110 mg/kg TPHd, 3,000 mg/kg TPHg, 3.7 mg/kg benzene, 60 mg/kg toluene, 47 mg/kg ethylbenzene, 270 mg/kg total xylenes, and 0.46 mg/kg MTBE. Grab groundwater samples contained up to 2,400 μg/L TPHd, 5,900 μg/L TPHg, 3,300 μg/L benzene, 470 μg/L toluene, 260 μg/L ethylbenzene, 420 μg/L total xylenes, 880 μg/L MTBE, and 630 μg/L TBA. The vertical extent of petroleum constituents in groundwater at the site was defined by the groundwater results from boring SB-12, located down gradient of the first- and second-generation USTs. The results from the grab groundwater sample from 31 to 35 fbg in this boring indicated that the petroleum constituent concentrations attenuate by one to two orders of magnitude with depth. The activities are described in Cambria's July 25, 2006 *Subsurface Investigation Report and Monitoring Well Installation Work Plan.*

2007 Subsurface Investigation: In February 2007, Cambria installed four replacement wells (S-6 through S-9). Soil samples collected from the well borings contained up to 62 mg/kg TPHd, 230 mg/kg TPHg, 2.6 mg/kg benzene, 2.5 mg/kg toluene, 7.1 mg/kg ethylbenzene, 24 mg/kg total xylenes, 0.28 mg/kg MTBE, 1.6 mg/kg TBA, and 12 mg/kg lead. No 1,2-DCA or EDB was detected in the soil samples. The well reinstallation activities are described in Conestoga-Rovers & Associates' (CRA's) April 19, 2007 *Site Investigation and First Quarter 2007 Groundwater Monitoring Report.*

2007 Soil Vapor Investigation: In December 2007, CRA installed nine on-site soil vapor probes (V-1 through V-7, V-10, and V-11) at depths of approximately 5 fbg. The probe installation details are presented in CRA's March 13, 2008 *Soil Vapor Probe Installation and Sampling Report*.

2008 Soil Vapor Monitoring: In January, June, and October 2008, CRA conducted soil vapor monitoring from the on-site soil vapor probes. TPHg, benzene, and ethylbenzene were detected at concentrations exceeding RWQCB environmental screening levels (ESLs) for soil gas with commercial land use[1]. The monitoring results are presented in CRA's November 10, 2008 *Soil Vapor Probe Installation and Sampling Report.*

2009 Sub-Slab Soil Vapor Investigation: In March 2009, CRA installed two sub-slab soil vapor probes (SSV-1 and SSV-2) into the subsurface beneath the on-site laundromat's building footprint to further assess soil vapor concentrations beneath the site. The sub-slab soil vapor probe sample collected from SSV-2 did not contain BTEX, and BTEX detections in SSV-1 were below ESLs. Details of this investigation are presented in CRA's June 22, 2009 *Sub-Slab Soil Vapor Probe Installation and Sampling Report.*

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1 *User's Guide: Derivation and Application of Environmental Screening Levels*, RWQCB, Interim Final 2013

2009 Subsurface Investigation: In August and September 2009, CRA installed three off-site groundwater monitoring wells (S-10 though S-12) and one off-site soil vapor probe (V-12) and destroyed two on-site sub-slab soil vapor probes (SSV-1 and SSV-2). BTEX, fuel oxygenates, and lead scavengers were not detected in soil samples collected during this investigation. All TPHg detections in soil samples collected during this investigation were below RWQCB ESLs. Only one TPHd detection in soil exceeded ESLs (S-12-5.5'; 880 mg/kg). The laboratory noted that the TPHd reported does not match the diesel standard chromatographic pattern. The soil vapor probe could not be sampled because water was present in the probe's Teflon® tubing. CRA's January 5, 2010 *Subsurface Investigation Report* provides investigation details.

2010 Soil Vapor Monitoring: In July 2010, CRA conducted soil vapor monitoring from off-site soil vapor probe V-12. No TPHg, BTEX, MTBE, or TBA was detected in the soil vapor sample. The monitoring results are presented in CRA's August 16, 2010 *Soil Vapor Sampling Report.*

2011 Soil Vapor Monitoring: In May 2011, CRA conducted soil vapor monitoring from soil vapor probes V-1 through V-9 and V-11. Soil vapor probes V-10 and V-12 could not be sampled due to water in the sampling tubing. No toluene, ethylbenzene, total xylenes, MTBE, or TBA was detected at concentrations exceeding RWQCB ESLs for soil gas with commercial land use. Soil vapor probes V-2 and V-3 contained TPHg at concentrations exceeding RWQCB ESLs. It should be noted that RWQCB ESL guidance advises that "TPH ESLs must be used in conjunction with ESLs for related chemicals (e.g., BTEX, polynuclear aromatic hydrocarbons, oxidizers, etc.)." In this case, BTEX, MTBE, and TBA would be the appropriate related chemicals. Soil vapor probes V-2 and V-3 contained benzene at concentrations exceeding RWQCB ESLs for commercial land use. The monitoring results are presented in CRA's August 3, 2011 *Soil Vapor Sampling Report.*

2012 Sub-Slab Soil Vapor Investigation: In October 2012, CRA installed seven sub-slab soil vapor probes (SSV-1 through SSV-7) into the subsurface beneath the on-site buildings to further assess soil vapor concentrations beneath the site. Due to access issues, one of the probes (SSV-3) had to be installed outside the building adjacent to the proposed indoor location. The soil vapor samples contained up to 30 micrograms per cubic meter ($\mu g/m^3$) ethylbenzene and 63 $\mu g/m^3$ TBA. TPHg, benzene, toluene, total xylenes, and MTBE were not detected in the samples. No soil vapor concentrations exceeded ESLs. CRA's December 10, 2012 *Subsurface Investigation Report* presents investigation details.

2013 Soil Vapor Monitoring: In February 2013, CRA sampled sub-slab soil vapor probes SSV-1 through SSV-7 and soil vapor probes V-9 through V-11. No constituents of concern (COCs) were detected in the soil vapor samples, with the exception of 3,400,000 $\mu g/m^3$ TPHg in the near sub-slab soil vapor sample SSV-3, located adjacent to the former music store. CRA's April 22, 2013 *Soil Vapor Sampling Report and Subsurface Investigation Work Plan* provides investigation details.

2013 Subsurface Investigation: In August 2013, CRA installed two on-site groundwater monitoring wells (S-13 and S-14) and one on-site sub-slab soil vapor probe (SSV-8) located inside the former music store. All COC concentrations in soil samples collected from the well borings were below RWQCB ESLs, with the exception of 6.0 mg/kg ethylbenzene and 26 mg/kg total xylenes in a soil sample from well boring S-13 at 12 fbg. Groundwater in this well is generally approximately 10 fbg, so it is likely that the detections in this sample are due to impacted groundwater. TPHg was the only COC detected in the soil vapor sample collected from SSV-8, and the concentration was below the RWQCB ESL. CRA's November 13, 2013 *Subsurface Investigation Report* details investigation results.

2015 Subsurface Investigation: In April 2015, CRA installed and sampled four off-site soil vapor probes (V-13 through V-16) to assess the potential for soil gas migration to indoor air to the residence at

1724-1728 High Street, Oakland. TPHg was the only constituent of concern detected in the soil vapor samples at concentrations ranging from 7,600 to 830,000 $\mu g/m^3$. CRA's June 5, 2015 *Subsurface Investigation Report* presents investigation details.

Groundwater Monitoring Program: Groundwater has been monitored at the site since December 1992. Groundwater depths have ranged from approximately 6 to 12 fbg. The calculated groundwater gradient typically trends southwesterly.

Appendix B
Boring Logs

Field location of boring:

(See Plate 2)

Project No.: 768101	Date: 11/24/92	Boring No: S-1	
Client: Shell Oil Company			
Location: 4411 Foothill			
City: Oakland		Sheet 1 of 2	
Logged by: MCC	Drilled: Gregg		

Casing installation data:

See Well Installation Detail

Drilling method: Hollow-Stem Auger

Hole diameter: 10-inches

Top of Box Elevation: N/A Datum: N/A

Water Level:	9.37			
Time:	09:15			
Date:	12/9/92			

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
								PAVEMENT SECTION - 0.5 ft.
				1				
				2				CLAYEY GRAVEL (GC) - strong brown (7.5 YR-5/6); medium dense, damp; 50% clay, 20% coarse sand, 30% gravel up to 3 inches in diameter (fill).
				3				
				4				
				5				CLAY (CL) - black (5Y-2.5/1); stiff, damp; 80% clay, 20% coarse sand.
			S-1					
3	14	S&H	6.0	6				
				7				
				8				
				9				
				10		▽		CLAYEY SAND (SC) - olive gray (5Y-5/3); medium dense, damp; 50% fine sand, 40% clay, 10% silt.
			S-1					
500	15	S&H	11.0	11				
				12				
				13				
				14				SAND (SP) - dark gray-brown (2.5Y-4/2); dense, saturated; 80% coarse sand and rock fragments, 20% silt and clay.
				15				
			S-1					
450	38	S&H	16.0	16				
				17				
				18				
				19				
				20				

Remarks:

* Converted to equivalent Standard Penetration blows/ft.

GeoStrategies Inc.

Log of Boring

BORING NO. S-1

JOB NUMBER	REVIEWED BY REVIEW	DATE	REVISED DATE	REVISED DATE
768101	MCC	11/92		

Field location of boring:

(See Plate 2)

Project No.: 768101	Date: 11/24/92	Boring No.: S-1	
Client: Shell Oil Company			
Location: 4411 Foothill			
City: Oakland		Sheet 2 of 2	
Logged by: MCC	Driller: Gregg		

Drilling method: Hollow-Stem Auger

Hole diameter: 10-inches

Casing installation data:

See Well Installation Detail

Top of Box Elevation: N/A | Datum:

Water Level:				
Time				
Date				

PID (ppm)	Blowslft. * or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
			S-1					
7	22	S&H	21.0	21				SILTY CLAY (CL) - yellowish brown (10YR-5/4); very stiff, damp; 80% silty clay, 20% fine sand.
				22				
				23				
				24				
				25				
			S-1					
3	37	S&H	26.0	26				
				27				Bottom of boring at 26.0 ft.
								11/24/92
				28				
				29				
				30				
				31				
				32				
				33				
				34				
				35				
				36				
				37				
				38				
				39				
				40				

Remarks:

GSI GeoStrategies Inc.

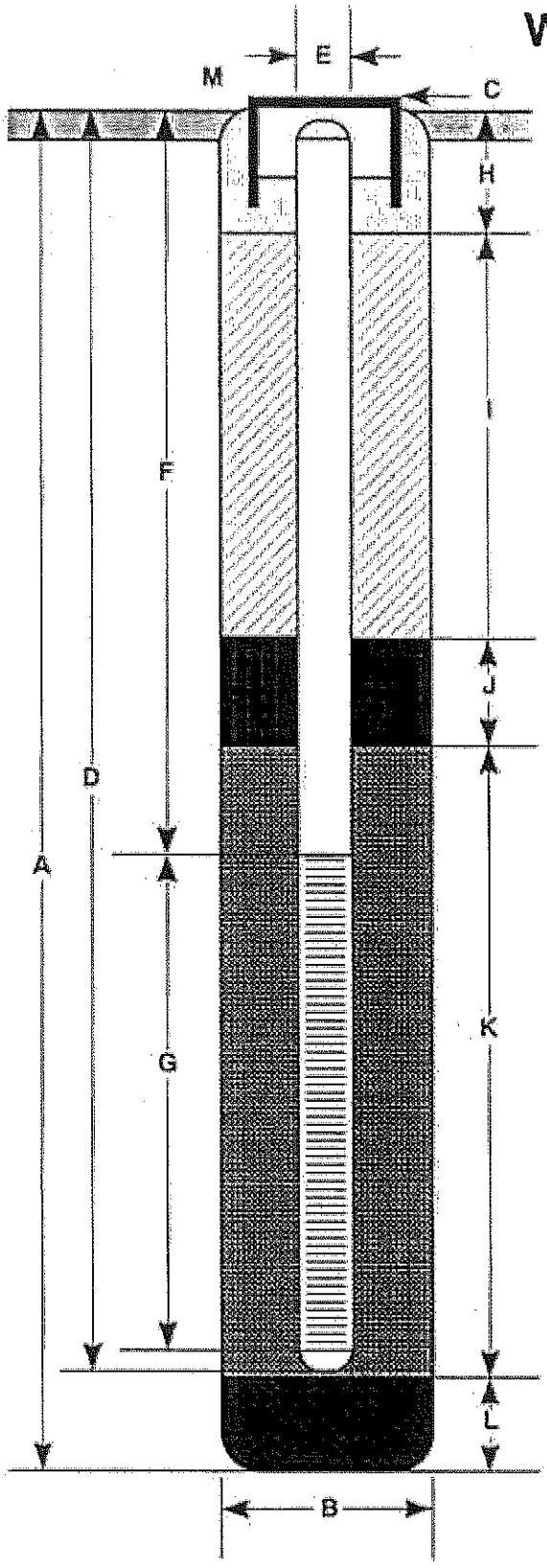
Log of Boring

BORING NO.

S-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
768101	MCC	11/92		

WELL CONSTRUCTION DETAIL



A	Total Depth of Boring	26.0	ft.
B	Diameter of Boring	10.0	in.
	Drilling Method	Hollow-Stem Auger	
C	Top of Box Elevation	N/A	ft.
	☐ Referenced to Mean Sea Level		
	☐ Referenced to Project Datum		
D	Casing Length	24.5	ft.
	Material	Schedule 40 PVC	
E	Casing Diameter	4	in.
F	Depth to Top Perforations	9.5	ft.
G	Perforated Length	15.0	ft.
	Perforated Interval from	24.5 to 9.5	ft.
	Perforation Type	Machine-Slotted	
	Perforation Size	0.020	in.
H	Surface Seal from	0 to 1.5	ft.
	Seal Material	Concrete	
I	Backfill from	1.5 to 7.0	ft.
	Backfill Material	Neat Cement	
J	Seal from	7.0 to 8.0	ft.
	Seal Material	Bentonite	
K	Gravel Pack from	8.0 to 24.5	ft.
	Pack Material	Lonestar #2/12 Sand	
L	Bottom Seal	1.5	ft.
	Seal Material	Soil	
M	Traffic-rated vault box with locking well cap and lock.		

Note: Depths measured from initial ground surface.

GeoStrategies Inc.

Well Construction Detail

WELL NO

S-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
768101		11/92		

SITE/LOCATION	BEGUN	BORING DIAMETER	ANGLE/BEARING	BORING NO
4411 Foothill Boulevard, Oakland, CA	5/21/93	10 Inches	90 Degrees	S-2
DRILLING CONTRACTOR	**COMPLETED**	**FIRST ENCOUNTERED WATER DEPTH**		**BOTTOM OF BORING**
Gregg Drilling	5/21/93	14 Feet		22 Feet
OPERATOR	**LOGGED BY**	**STATIC WATER DEPTH/DATE**		
Moe Ruud	Tony Ramirez	9 Feet		
DRILL MAKE & MODEL	**SAMPLING METHOD**			**WELL NO.**
Mobile B-53	Continuous sample			S-2
WELL MATERIAL	**SLOT SIZE**	**FILTER PACK**	**WELL SEAL**	**BOTTOM OF WELL**
4" SCH 40 PVC	0.020"	#2/12	Neat cement over hydrated pellets	22 Feet

BLOWS/ FOOT	FIELD HEAD-SPACE*	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
							ASPHALT
							BASEROCK
		1					Sandy Lean CLAY (CL); black; moderate plasticity; 30% fine to coarse, angular to sub-rounded sand; dry.
		2					
		3					
		4					
	6.5	5					Sandy Lean CLAY (CL); olive-grey; moderate plasticity; 35% fine to coarse, angular to sub-rounded sand; dry.
38		6					
		7					Same as above, but moist.
33		8					
37		9		▼			Clayey SAND (SC); brown-grey; poorly graded; fine to coarse, angular to sub-rounded sand; 40% clay; moist.
	68.8	10					
52							Clayey GRAVEL (GC); brown; poorly graded; fine, sub-angular gravel; 30% clay; 10% fine to coarse sand; moist.
		11					
31	*PID (ppm)	12					Clayey SAND (SC); brown-grey; poorly graded; fine to coarse, angular to sub-rounded sand; 40% clay; moist.

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE: June 7, 1993

APPROVED BY: John H. Turney, P.E.

SOIL BORING LOG S-2 AND WELL CONSTRUCTION S-2

Shell Service Station
4411 Foothill Boulevard
Oakland, CA
WIC #204-5508-3400

PLATE
C-2
SHEET 1 OF 2

JOB NO.
12-010

SITE/LOCATION	BEGUN	BORING DIAMETER	ANGLE/BEARING	BORING NO
4411 Foothill Boulevard, Oakland, CA	5/21/93	10 Inches	90 Degrees	S-2
DRILLING CONTRACTOR	**COMPLETED**	**FIRST ENCOUNTERED WATER DEPTH**		**BOTTOM OF BORING**
Gregg Drilling	5/21/93	14 Feet		22 Feet
OPERATOR	**LOGGED BY**	**STATIC WATER DEPTH/DATE**		
Moe Ruud	Tony Ramirez	9 Feet		
DRILL MAKE & MODEL	**SAMPLING METHOD**			**WELL NO.**
Mobile B-53	Continuous sample			S-2
WELL MATERIAL	**SLOT SIZE**	**FILTER PACK**	**WELL SEAL**	**BOTTOM OF WELL**
4" SCH 40 PVC	0.020"	#2/12	Neat cement over hydrated pellets	22 Feet

BLOWS/FOOT	FIELD HEAD-SPACE *	DEPTH	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
			Clayey SAND (SC); continued from sheet 1.
		13	Clayey GRAVEL (GC); same as 10' to 11'.
26			Clayey SAND (SC); same as 11' to 12.5'.
		14	Silty SAND (SM); light brown; poorly graded; fine to medium, angular to sub-rounded sand; 20% silt; wet.
	10.8		
31		15	Clayey SAND (SC); brown-grey; poorly graded; fine to coarse, angular to sub-rounded sand; 40% clay; wet.
		16	
21			
		17	Fat CLAY (CH); light brown; high plasticity; 10% fine to medium, angular to sub-rounded sand; wet.
18		18	
			Fat CLAY (CH); light brown; high plasticity; moist.
		19	
26			
		20	
27			
		21	Same as above.
43			
		22	
		23	
		24	

*PID (ppm)

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE: June 7, 1993

APPROVED BY: John H. Turney, P.E.

SOIL BORING LOG S-2 AND WELL CONSTRUCTION S-2

Shell Service Station
4411 Foothill Boulevard
Oakland, CA
WIC #204-5508-3400

PLATE C-2

SHEET 2 OF 2

JOB NO. 12-010

SITE/LOCATION	BEGUN	BORING DIAMETER	ANGLE/BEARING	BORING NO
4411 Foothill Boulevard, Oakland, CA	5/21/93	10 Inches	90 Degrees	S-3
DRILLING CONTRACTOR	**COMPLETED**	**FIRST ENCOUNTERED WATER DEPTH**		**BOTTOM OF BORING**
Gregg Drilling	5/21/93	14 Feet		20 Feet
OPERATOR	**LOGGED BY**	**STATIC WATER DEPTH/DATE**		
Ted Hogan	Tony Ramirez	9 Feet		
DRILL MAKE & MODEL	**SAMPLING METHOD**			**WELL NO.**
Mobile B-53	Continuous sample			S-3
WELL MATERIAL	**SLOT SIZE**	**FILTER PACK**	**WELL SEAL**	**BOTTOM OF WELL**
4" SCH 40 PVC	0.020"	#2/12	Neat cement over hydrated pellets	20 Feet

BLOWS/FOOT	FIELD HEAD-SPACE *	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
							ASPHALT
							BASEROCK
		1					Sandy Lean CLAY (CL); black; moderate plasticity; 30% fine to coarse, angular to sub-rounded sand; dry.
		2					
		3					
		4					
		5					
	2.1	6					Sandy Lean CLAY (CL); olive-grey; moderate plasticity; 25% fine to coarse, angular to sub-rounded sand; dry.
38		7					Clayey SAND (SC); brown-grey; poorly graded; fine to coarse, angular to sub-rounded sand; 25% clay; 10% fine, sub-angular to sub-rounded gravel; moist.
39		8					
		9		▼			
32							
		10					Clayey SAND (SC); olive-grey; poorly graded; fine to coarse, angular to sub-rounded sand; 25% clay; moist.
	916						
42		11					Clayey SAND (SC); olive-grey; poorly graded; fine to coarse, angular to sub-rounded sand; 25% clay; 15% fine, sub-angular to sub-rounded gravel; moist.
	*PID (ppm)	12					Sandy GRAVEL (GP); explanation on sheet 2.

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE: June 7, 1993

APPROVED BY: John H. Turney, P.E.

SOIL BORING LOG S-3
AND
WELL CONSTRUCTION S-3

Shell Service Station
4411 Foothill Boulevard
Oakland, CA
WIC #204-5508-3400

PLATE
C-3

SHEET 1 OF 2

JOB NO.
12-010

SITE/LOCATION	BEGUN	BORING DIAMETER	ANGLE/BEARING	BORING NO
4411 Foothill Boulevard, Oakland, CA	5/21/93	10 Inches	90 Degrees	S-3
DRILLING CONTRACTOR	**COMPLETED**	**FIRST ENCOUNTERED WATER DEPTH**		**BOTTOM OF BORING**
Gregg Drilling	5/21/93	14 Feet		20 Feet
OPERATOR	**LOGGED BY**	**STATIC WATER DEPTH/DATE**		
Ted Hogan	Tony Ramirez	9 Feet		
DRILL MAKE & MODEL	**SAMPLING METHOD**			**WELL NO.**
Mobile B-53	Continuous sample			S-3
WELL MATERIAL	**SLOT SIZE**	**FILTER PACK**	**WELL SEAL**	**BOTTOM OF WELL**
4" SCH 40 PVC	0.020"	#2/12	Neat cement over hydrated pellets	20 Feet

BLOWS/FOOT	FIELD HEAD-SPACE *	DEPTH	SAMPLER	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
90		13					Sandy GRAVEL (GP); brown; poorly graded; fine sub-angular gravel; 35% fine to coarse sand; 10% clay; moist.
32		14		▽			Clayey GRAVEL (GC); brown; poorly graded; fine sub-angular gravel; 30% clay; 10% fine to coarse sand; wet.
29	244	15					Fat CLAY (CH); light brown with grey mottling; high plasticity; 10% fine to medium, angular to sub-rounded sand; wet.
33		16					Clayey SAND (SC); brown; poorly graded; fine to coarse, angular to rounded sand; 20% clay; 10% fine gravel; wet.
26		17					Fat CLAY (CH); light brown; high plasticity; moist.
22		18					
		19					
		20					Same as above.
		21					
		22					
		23					
	*PID (ppm)	24					

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE: June 7, 1993

APPROVED BY: John H. Turney, P.E.

SOIL BORING LOG S-3
AND
WELL CONSTRUCTION S-3

Shell Service Station
4411 Foothill Boulevard
Oakland, CA
WIC #204-5508-3400

PLATE
C-3

SHEET 2 OF 2

JOB NO.
12-010

Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	**BORING/WELL NAME**	S-4 (SB-4B)
JOB/SITE NAME	Shell-branded Service Station	**DRILLING STARTED**	07-Jan-00
LOCATION	4411 Foothill Blvd, Oakland	**DRILLING COMPLETED**	07-Jan-00
PROJECT NUMBER	242-0897	**WELL DEVELOPMENT DATE (YIELD)**	29-Mar-00
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	39.06 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	38.70 ft above msl
BORING DIAMETER	10"	**SCREENED INTERVAL**	5 to 20 ft bgs
LOGGED BY	M. Gaffney	**DEPTH TO WATER (First Encountered)**	14.8 ft (07-Jan-00) ▽
REVIEWED BY	S. Bork, RG# 5620	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Hand Augered to 5 fbg		

TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
					SP		**ASPHALT** **SAND:** (SP); light brown; loose; dry; 10% silt, 80% medium to coarse grained sand, 10% gravel; high estimated permeability.	0.3	Portland Type I/II
					ML		**SILT:** (ML); light brown; medium stiff; dry; 5% clay, 85% silt, 10% fine grained sand; medium plasticity, medium estimated permeability. @ 4.0' - 5% clay, 75% silt, 15% sand; medium plasticity, low estimated permeability.	3.0	Bentonite Seal Monterey Sand #2/16
N/A N/A		SB-4B 5.5		5					
					SP		**SAND:** (SP); grey green; loose; dry; 10% silt, 80% medium grained sand, 10% gravel; high estimated permeability.	7.5	
N/A N/A		SB-4B 10.5		10					
N/A N/A N/A				15			▽		4"-diam., 0.010" Slotted Schedule 40 PVC
N/A N/A N/A		SB-4B 19.0		20	ML		@ 19' - wet. **Clayey SILT:** (ML); light brown with black and red spots; hard; wet; 20% clay, 75% silt, 5% fine grained gravel; medium plasticity, low estimated permeability.	19.3 20.0	Bottom of Boring @ 20 ft

WELL LOG (SHELL DRAWINGS\DESKTOP\GINT.GPJ DEFAULT.GDT 1/4/2010

Camprid Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	S-5
JOB/SITE NAME	Shell-branded Service Station	DRILLING STARTED	09-May-02
LOCATION	4411 Foothill Blvd, Oakland	DRILLING COMPLETED	09-May-02
PROJECT NUMBER	244-0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION	NA
BORING DIAMETER	10"	SCREENED INTERVAL	5 to 22 ft bgs
LOGGED BY	S. Couch	DEPTH TO WATER (First Encountered)	9.0 ft (09-May-02) ▽
REVIEWED BY	M. Derby, PE# 55475	DEPTH TO WATER (Static)	NA ▼
REMARKS	Hand Augered to 5 fbg. Well located 50' southeast of the middle of northwest driveway.		

TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT		
							FILL light brown; damp; silty, sandy.	0.3	Portland Type I/II Cement
									Bentonite Seal
				5					2"-diameter, 0.010" Slotted Schedule 40 PVC
							@ 9 fbg - wet. ▽		
				10					
							SAND (SP) grayish brown; saturated; 10% silt, 90% sand.	12.0	
	17								4"-diam., 0.010" Slotted Schedule 40 PVC
	30			15	SP		@ 15.0 fbg - strong odor detected.		
	37								
	18			20			**SILT** (ML); light grayish brown; wet; 10% clay, 80% silt, 10% sand; odor detected.	20.0	
	50				ML			22.0	Bottom of Boring @ 22 ft

WELL LOG (SHELL) G:\OAF450-1\GINT\GINT.GPJ DEFAULT.GDT 6/26/02

Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, CA 95476
Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	S-6
JOB/SITE NAME	Former Shell Branded Service Station	**DRILLING STARTED**	07-Feb-07
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	07-Feb-07
PROJECT NUMBER	0897	**WELL DEVELOPMENT DATE (YIELD)**	22-Feb-07 (72 gallons)
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	38.23 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	37.86 ft above msl
BORING DIAMETER	10"	**SCREENED INTERVAL**	5 to 20 fbg
LOGGED BY	S. Lewis	**DEPTH TO WATER (First Encountered)**	11.0 ft (07-Feb-07)
REVIEWED BY	A. Friel, PG 6452	**DEPTH TO WATER (Static)**	7.73 ft (02-Mar-07)
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					CONCRETE		**CONCRETE**	0.4	Portland Type I/II
					SM		**Silty SAND with Gravel (SM)**; dark yellowish brown (10YR 4/4); moist; 35% silt, 45% fine to coarse sand, 20% fine gravel.	2.0	Bentonite Seal
							SILT with Gravel (ML) ; dark yellowish brown (10YR 4/4); moist; 20% clay, 65% silt, 5% fine sand, 10% fine to coarse gravel; low to medium plasticity.		Monterey Sand #2/12
				5	ML		@ 3' - **SILT with Cobbles (ML)** ; dark yellowish brown (10YR 4/4); moist; 15% clay, 45% silt, 40% fine to coarse gravel; low plasticity.		
0.0		S-6-5.5'					@ 3.5' - **SILT (ML)** ; dark yellowish brown (10YR 4/4); moist; 25% clay, 70% silt, 5% fine to coarse sand; medium plasticity.	8.0	
					GM		@ 4' - **SILT with Gravel and Cobbles (ML)** ; dark yellowish brown (10YR 4/4); moist; 20% clay, 45% silt, 5% fine to coarse sand, 30% fine to coarse gravel and cobbles; low to medium plasticity.		
743		S-6-10'		10			@ 5' - **SILT (ML)** ; brown (10YR 4/3); moist; 25% clay, 70% silt, 5% fine to coarse sand; medium plasticity.	10.0	
							Silty Gravel with Sand (GM); brown (10YR 4/3); moist; 15% silt, 25% fine to coarse sand, 75% fine gravel.		4"-diam., 0.010" Slotted Schedule 40 PVC
							SILT (ML) ; dark greenish gray (10Y 4/1); moist; 20% clay, 75% silt, 5% fine to coarse sand; medium plasticity.		
					ML		@ 11' - wet.		
1020		S-6-15'		15			@ 12' - **Sandy SILT with Gravel (ML)**; dark greenish gray (10Y 4/1); moist to wet; 5% clay, 50% silt, 30% fine to medium sand, 15% fine gravel and cobbles.		
							@ 15' - 5% clay, 60% silt, 35% fine to medium sand.		
258		S-6-19.5'		20			@ 19.5' - **SILT with Sand (ML)** ; dark greenish gray (10Y 4/1); moist to wet; 15% clay, 70% silt, 15% fine to medium sand.	20.0	Bottom of Boring @ 20 ft
				25					
				30					
				35					

WELL LOG (PID) I:\SONOMA~1.SHE\OAF450~1\GINT\0897.GPJ DEFAULT.GDT 4/16/07

Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, CA 95476
Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	S-7
JOB/SITE NAME	Former Shell Branded Service Station	**DRILLING STARTED**	08-Feb-07
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	08-Feb-07
PROJECT NUMBER	0897	**WELL DEVELOPMENT DATE (YIELD)**	22-Feb-07 (48 gallons)
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	38.02 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	37.58 ft above msl
BORING DIAMETER	10"	**SCREENED INTERVAL**	5 to 20 fbg
LOGGED BY	S. Lewis	**DEPTH TO WATER (First Encountered)**	11.0 ft (08-Feb-07) ▽
REVIEWED BY	A. Friel, PG 6452	**DEPTH TO WATER (Static)**	7.42 ft (02-Mar-07) ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						CONCRETE	**CONCRETE**	0.5	Portland Type I/II
						GP	**GRAVEL with Sand (GP)**; dark yellowish brown (10YR 4/4); moist; 5% silt, 35% fine to coarse sand, 60% fine gravel.	1.0	Bentonite Seal
							SILT with Sand, Gravel, and Cobbles (ML); yellowish brown (10YR 5/4); moist; 10% clay, 55% silt, 20% fine to coarse sand, 15% fine gravel and cobbles.		Monterey Sand #2/12
				5			@ 2.5' - **SILT with Cobbles (ML)**; yellowish brown (10YR 5/4); moist; 10% clay, 45% silt, 5% fine to coarse sand, 40% fine to coarse cobbles.		
0.0		S-7-5.5'					@ 3' - dark yellowish brown (10YR 4/4); 10% clay, 55% silt, 5% fine to coarse sand, 30% fine to coarse cobbles. ▼		
							SILT with Sand and Gravel (ML); dark yellowish brown (10YR 4/4); moist; 15% clay, 55% silt, 15% fine to coarse sand, 15% fine gravel; low plasticity.		
				10			**SILT with Sand (ML)**; dark greenish gray (10Y 4/1); moist; 15% clay, 60% silt, 25% fine to coarse sand; low plasticity. ▽		
10.2		S-7-10'			ML		@11' - moist to wet.		
							@ 12' - **SILT (ML)**; dark yellowish brown (10YR 4/4); moist to wet; 20% clay, 70% silt, 10% fine to coarse sand; low to medium plasticity; moist to wet.		4"-diam., 0.010" Slotted Schedule 40 PVC
				15			@ 13' - **Sandy SILT (ML)**; dark greenish gray (10Y 4/1); moist to wet; 5% clay, 60% silt, 30% fine to coarse sand, 5% fine gravel.		
285		S-7-15'							
1284							@ 18' - 55% silt, 45% fine to coarse sand.		
297		S-7-19.5'		20			@ 19' - **SILT (ML)**; dark yellowish brown (10YR 4/4); moist; 20% clay, 70% silt, 10% fine to coarse sand; low to medium plasticity.	20.0	Bottom of Boring @ 20 ft
				25					
				30					
				35					

WELL LOG (PID) I:\SONOMA~1.SHE\OAF450~1\GINT\0897.GPJ DEFAULT.GDT 4/16/07

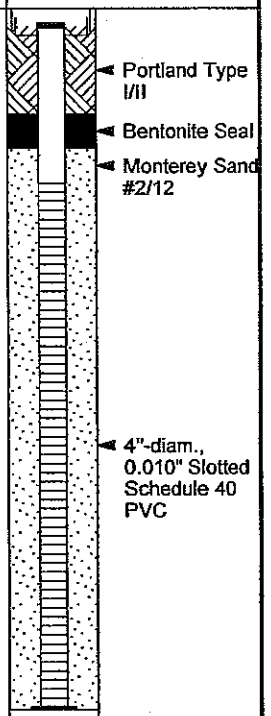
Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, CA 95476
Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	S-8
JOB/SITE NAME	Former Shell Branded Service Station	**DRILLING STARTED**	07-Feb-07
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	07-Feb-07
PROJECT NUMBER	0897	**WELL DEVELOPMENT DATE (YIELD)**	22-Feb-07 (42 gallons)
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	37.38 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	37.05 ft above msl
BORING DIAMETER	10"	**SCREENED INTERVAL**	5 to 20 fbg
LOGGED BY	S. Lewis	**DEPTH TO WATER (First Encountered)**	11.0 ft (08-Feb-07)
REVIEWED BY	A. Friel, PG 6452	**DEPTH TO WATER (Static)**	6.60 ft (02-Mar-07)
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)
					CONCRETE		**CONCRETE**	0.5
					ML		**SILT with Gravel and Cobbles (ML)** ; dark yellowish brown (10YR 4/6); moist; 25% clay, 45% silt, 10% fine to coarse sand, 20% fine to coarse gravel; low to medium plasticity. @ 1' - low plasticity. **SILT (ML)** ; black (10YR 2/1); moist; 30% clay, 65% silt, 5% fine to coarse sand; medium plasticity. @ 4' - dark gray (5Y 4/1). @ 5' - dark greenish gray (10Y 4/1).	
12.7		S-8-5.5'		5				6.5
					SM		**Silty SAND (SM)** ; dark greenish gray (10Y 4/1); moist; 20% silt, 80% fine to medium sand.	7.0
					ML		**SILT with Sand (SM)** ; dark greenish gray (10Y 4/1); moist; 20% clay, 65% silt, 15% fine to medium sand; low to medium plasticity.	7.5
					GM		**Silty GRAVEL with Sand (GM)**; dark greenish gray (10Y 4/1); moist; 30% silt, 30% fine to coarse sand, 40% fine gravel.	10.0
1318		S-8-10'		10	SM		**Silty SAND (SM)** ; dark greenish gray (10Y 4/1); moist; 30% silt, 70% fine to medium sand.	11.0
					ML		**SILT with Sand (SM)** ; dark greenish gray (10Y 4/1); moist to wet; 70% silt, 30% fine to medium sand.	11.5
					GM		**Silty GRAVEL with Sand (GM)** ; dark greenish gray (10Y 4/1); moist to wet; 30% silt, 30% fine to coarse sand, 40% fine gravel.	
385		S-8-15'		15				16.0
					ML		**SILT with Sand and Gravel (ML)** ; dark greenish gray (10Y 4/1); moist to wet; 55% clay, 25% fine to coarse sand; 20% fine gravel.	
52.2		S-8-19.5'		20			@ 19' - **SILT (ML)** ; brown (10YR 4/3); moist; 25% clay, 70% silt, 5% fine to medium sand.	20.0
				25				
				30				
				35				

WELL DIAGRAM



WELL LOG (PID) I:\SONOMA~1.SHE\OAF450~1\GINT\0897.GPJ DEFAULT.GDT 4/16/07

Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, CA 95476
Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	S-9
JOB/SITE NAME	Former Shell Branded Service Station	**DRILLING STARTED**	08-Feb-07
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	08-Feb-07
PROJECT NUMBER	0897	**WELL DEVELOPMENT DATE (YIELD)**	22-Feb-07 (32 gallons)
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	37.91 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	37.52 ft above msl
BORING DIAMETER	10"	**SCREENED INTERVAL**	5 to 20 fbg
LOGGED BY	S. Lewis	**DEPTH TO WATER (First Encountered)**	11.0 ft (08-Feb-07)
REVIEWED BY	A. Friel, PG 6452	**DEPTH TO WATER (Static)**	7.30 ft (02-Mar-07)
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)
					CONCRETE		**CONCRETE**	0.5
					GP		**GRAVEL with Sand (GP)** ; dark yellowish brown (10YR 4/4); moist; 5% silt, 35% fine to coarse sand, 60% fine gravel.	1.5
					ML		**SILT (ML)** ; dark yellowish brown (10YR 4/4); moist; 20% clay, 70% silt, 5% fine to coarse sand, 5% fine to coarse gravel; low to medium plasticity.	
				5	SP		@ 2.5' - **Cobbly SILT (ML)** ; dark yellowish brown (10YR 4/4); moist; 5% clay, 50% silt, 5% fine to coarse sand, 40% fine to coarse cobbles; low plasticity.	5.0
0.0		S-9-5.5'					@ 3' - **SILT (ML)** ; very dark gray (10YR 3/1); moist; 25% clay, 70% silt, 5% fine to medium sand; medium plasticity.	6.0
							SAND (SP) ; yellowish brown (10YR 5/4); moist; 100% fine sand.	
1306		S-9-10'		10			**SILT with Sand and Gravel (ML)** ; dark greenish gray (10Y 4/1); moist; 10% clay, 50% silt, 15% fine to coarse sand, 25% fine gravel.	
					ML		@ 8' - **Sandy SILT (ML)** ; dark greenish gray (10Y 4/1); moist; 5% clay, 60% silt, 35% fine to coarse sand.	
598		S-9-13.5'		15			@ 11' - moist to wet.	
							@ 13.5' - **SILT (ML)** ; dark greenish gray (10Y 4/1); moist; 30% clay, 70% silt; medium plasticity.	
							@ 16' - **Sandy SILT (ML)** ; dark greenish gray (10Y 4/1); moist to wet; 5% clay, 60% silt, 35% fine to coarse sand.	
43.7		S-9-19.5'		20			@ 18' - **SILT (ML)** ; dark greenish gray (10Y 4/1); moist; 30% clay, 70% silt; medium plasticity.	
							@ 19' - dark yellowish brown (10YR 4/4).	20.0
				25				
				30				
				35				

WELL DIAGRAM

- Portland Type I/II
- Bentonite Seal
- Monterey Sand #2/12
- 4"-diam., 0.010" Slotted Schedule 40 PVC
- Bottom of Boring @ 20 ft

WELL LOG (PID) I:\SONOMA~1.SHE\OAF450~1\GINT\0897.GPJ DEFAULT.GDT 4/16/07

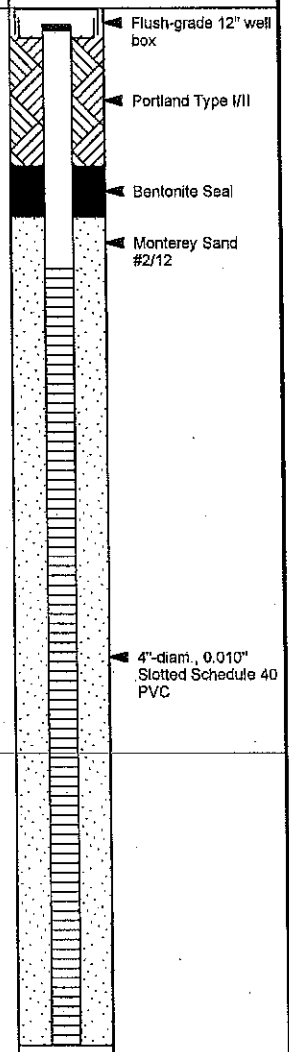
Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	S-10
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	27-Aug-09
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	28-Aug-09
PROJECT NUMBER	240897	**WELL DEVELOPMENT DATE (YIELD)**	22-Sep-09 (125 gallons)
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	37.93 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	37.43 ft above msl
BORING DIAMETER	10"	**SCREENED INTERVALS**	5 to 20 fbg
LOGGED BY	C. Rodriquez	**DEPTH TO WATER (First Encountered)**	10.75 fbg
REVIEWED BY	P. Schaefer	**DEPTH TO WATER (Static)**	5.7 fbg (22-Sep-09)
REMARKS	Located at 4340 Bond St.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							ASPHALT / CONCRETE SLURRY	0.3
					SM		**SILTY SAND with Gravel**; (SM); gray (5YR 5/1); dry; 35% silt, 40% fine to coarse grained sand, 25% fine to coarse gravel.	2.5
					ML		**SILT**; (ML); very dark grayish brown (2.5Y 3/2); dry; 10% clay, 90% silt; low plasticity.	
				5			@ 5 ft- dark brown (7.5YR 3/2)	5.5
980	10 8 12	S-10- 5.5			SM		**SILTY SAND with Gravel**; (SM); dark yellowish brown (10YR 4/4); moist; 20% silt, 55% fine to coarse grained sand, 25% angular gravel.	6.5
0					ML		**SILT**; (ML); brown (10YR 5/3); dry; 20% clay, 80% silt; low to medium plasticity; iron and carbon staining.	7.5
					SM		**SILTY SAND**; (SM); brown (10YR 5/3); moist; 20% silt, 70% grained sand, 10% gravel.	9.0
					ML		**SILT**; (ML); brown (10YR 5/3); dry; 20% clay, 80% silt; medium plasticity.	9.5
363 229	20 30 13 7 12 14	S-10- 10		10	SM		**SILTY SAND with Gravel**; (SM); brown (10YR 5/3); moist; 15% silt, 55% fine to coarse grained sand, 30% gravel.	
							@ 10.75 ft- very dark greenish gray (10Y 3/1); wet	11.5
					ML		**SILT with Sand**; (ML); light olive brown (2.5Y 5/3); moist; 80% silt, 20% sand; low plasticity.	12.0
	18 17 21				SP-SM		**SAND with Silt**; (SP-SM); light olive brown (2.5Y 4/4); wet; 10% silt, 90% medium grained sand.	12.5
					GP		**GRAVEL with Sand**; (GP); light olive brown (2.5Y 4/4); wet; 40% fine to coarse grained sand, 60% angular poorly graded gravel.	14.5
0	11 24 23 10 10 15	S-10- 15		15	SM		**SILTY SAND with Gravel**; (SM); light olive brown (2.5Y 4/4); wet; 15% silt, 60% fine to coarse grained sand, 25% gravel. @ 15.5 ft- medium to coarse grained sand.	17.0
	5 6 7				ML		**SILT**; (ML); light olive brown (2.5Y 4/4); wet; 15% clay, 85% silt; low plasticity; carbon staining.	19.8
0	10 17 17	S-10- 19.5		20	SP-SC		**SAND with Clay and Gravel**; (SP-SC); light olive brown (2.5Y 4/4); wet; 10% clay, 75% coarse grained poorly graded sand, 15% gravel.	20.0

WELL DIAGRAM



WELL LOG (PID) I:\SHELL\6-CHARS\2408--\240897--\240897--110897.GPJ DEFAULT.GDT 1/5/10

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	S-11
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	27-Aug-09
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	28-Aug-09
PROJECT NUMBER	240897	**WELL DEVELOPMENT DATE (YIELD)**	22-Sep-09 (97 gallons)
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	37.14 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	36.44 ft above msl
BORING DIAMETER	10"	**SCREENED INTERVALS**	5 to 20 fbg
LOGGED BY	C. Rodriguez	**DEPTH TO WATER (First Encountered)**	9.50 fbg (28-Aug-09)
REVIEWED BY	P. Schaefer	**DEPTH TO WATER (Static)**	3.88 fbg (22-Sep-09)
REMARKS	Located at 4340 Bond St.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	DEPTH (fbg)	U.S.C.S.	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
			0		**ASPHALT / CONCRETE SLURRY**	0.3
				SM	**SILTY SAND with Gravel**; (SM); gray (5YR 5/1); dry; 25% silt, 40% fine to coarse grained sand, 35% fine to coarse gravel.	2.5
					SILT; (ML); very dark grayish brown (2.5Y 3/2); dry; 20% clay, 80% silt; medium plasticity. ▼	
	5		5	ML	@5 ft- dark greenish gray (5GY 4/1); 15% clay, 85% silt; low plasticity.	
1.4	6 8	S-11-6			@ 6ft- **SILT with Sand**; 15% clay, 70% silt, 15% coarse grained sand.	
1.9	4 7 16 7					8.0
1.9	16 16 4			SM	**SILTY SAND with Gravel**; (SM); olive brown (2.5Y 4/4); dry; 30% silt, 45% fine to coarse grained sand, 25% fine gravel. ▼ @ 9 ft- moist.	
1.3	5 6	S-11-10	10		@ 9.5 ft- wet; 20% silt, 30% fine to coarse grained sand, 30% fine gravel.	10.5
0	4 4 5 7			ML	**SILT**; (ML); dry; 20% clay, 80% silt; medium plasticity.	11.0
				SM	**SILTY SAND**; (SM); wet; 35% silt, 65% fine to coarse grained sand.	11.5
0.4	4 9 11			ML	**SILT**; (ML); brown (10YR 4/3); moist; 10% clay, 80% silt, 10% coarse sand; low plasticity; mottling with very dark greenish gray (5G 3/1).	
					@ 13 ft- dry; 30% clay, 65% silt, 5% fine gravel; medium plasticity.	13.5
				SP-SM	**SAND with Silt**; (SP-SM); wet; 10% silt, 80% medium grained poorly graded sand, 10% fine gravel.	
0	4 6 8 4 7 11	S-11-15	15			15.5
				ML	**SILT**; (ML); moist; 20% clay, 80% silt; medium plasticity.	
0	4 8 12					
0	5 8 17	S-11-19.5	20			20.0

WELL DIAGRAM: Flush-grade 12" well box; Portland Type I/II; Bentonite Seal; Monterey Sand #2/12; 4"-diam., 0.010" Slotted Schedule 40 PVC; Bottom of Boring @ 20 fbg

WELL LOG (PID) I:\SHELL\6-CHARS\2408--1240897--1240897--110897.GPJ DEFAULT.GDT 12/31/09

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	S-12
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	27-Aug-09
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	31-Aug-09
PROJECT NUMBER	240897	**WELL DEVELOPMENT DATE (YIELD)**	25-Sep-09 (94 gallons)
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	36.43 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	36.00 ft above msl
BORING DIAMETER	10"	**SCREENED INTERVALS**	5 to 20 fbg
LOGGED BY	E. Reinhart-Koylu	**DEPTH TO WATER (First Encountered)**	13.00 fbg (31-Aug-09) ▽
REVIEWED BY	P. Schaefer	**DEPTH TO WATER (Static)**	3.62 fbg (25-Sep-09) ▼
REMARKS	Located at 4340 Bond St.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT / CONCRETE SLURRY	0.3	Flush-grade 12" well box
					SM		**SILTY SAND with Gravel**; (SM); gray (5YR 5/1); dry; 25% silt, 40% fine to coarse grained sand, 35% fine to coarse gravel.	2.5	Portland Type I/II
					ML		@ 6.5 ft- **SILT**; (ML); very dark grayish brown (2.5Y 3/2); dry; 20% clay, 80% silt; low plasticity. ▼		Bentonite Seal
0		S-12- 5.5		5			@ 5 ft- dark grayish brown (2.5Y 4/2); moist; 10% clay, 90% silt; medium plasticity.		Monterey Sand #2/12
0							**SILTY SAND**; (SM); dark yellowish brown (10YR 4/4); moist; 30% silt, 70% medium grained sand.	6.5	
23	Direct	S-12- 10		10			@ 9 ft- olive gray (5Y 4/2).		
6	Push				SM		@ 13 ft- wet; 20% silt, 80% medium to coarse grained sand. ▽		4"-diam., 0.010" Slotted Schedule 40 PVC
33		S-12- 15		15					
28								18.0	
					ML		@ 6.5 ft- **SILT**; (ML); brown (10YR 4/3); moist; 20% clay, 80% silt; medium plasticity; iron staining.		
1.3		S-12- 20		20				20.0	Bottom of Boring @ 20 fbg

WELL LOG (PID) I:\SHELL\16-CHARS\2408--\240897--\10897.GPJ DEFAULT.GDT 1/4/10

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510.420.0700
Fax: 510.420.9170

BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	S-13
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	20-Aug-13
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	20-Aug-13
PROJECT NUMBER	240897	**WELL DEVELOPMENT DATE (YIELD)**	06-Sep-13 (30.1 gallons)
DRILLER	Vapor Tech Services C-57, #916085	**GROUND SURFACE ELEVATION**	37.55 ft above msl
DRILLING METHOD	Hollow-stem auger/Direct-push	**TOP OF CASING ELEVATION**	37.19 ft above msl
BORING DIAMETER	10"	**SCREENED INTERVALS**	4 to 19 fbg
LOGGED BY	P. O'Connell	**DEPTH TO WATER (First Encountered)**	9.00 fbg (20-Aug-13)
REVIEWED BY	P. Schaefer, PG 5612	**DEPTH TO WATER (Static)**	9.33 fbg (19-Sep-13)
REMARKS	Direct-push (2.25" OD) to 20 fbg, HSA to 19 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							CONCRETE	0.5
					SM		**Silty SAND with Gravel [SM]:** Strong brown (7.5YR 4/6); 5% clay, 15% silt, 60% fine-to-coarse sand, 20% fine-to-coarse gravel; moist.	1.5
					SM		@ 1.5 fbg: 5% clay, 15% silt, 45% fine-to-coarse sand, 35% medium-to-coarse gravel (cobbles up to 9" diameter).	2.5
					ML		**Gravelly SILT with Sand [ML]:** Black (5YR 2.5/1); 10% clay, 45% silt, 20% fine-to-coarse sand, 25% fine gravel; moist; medium plasticity.	4.5
				5	ML		@ 4.5 fbg: Grayish brown (10YR 5/2), mottled yellowish brown (10YR 5/6); 15% fine-to-coarse sand, 30% fine gravel.	5.0
0.0		S-13-6'			ML		**SILT with Gravel [ML]:** Dark gray (2.5Y 4/1); 5% clay, 70% silt, 10% fine-to-coarse sand, 15% medium gravel; moist; low plasticity.	8.0
332.4		S-13-9'		10	SM		**Silty SAND with Gravel [SM]:** Dark greenish gray (4/10 GY), mottled yellowish brown (10YR 5/6); 5% clay, 20% silt, 60% fine-to-coarse sand, 15% fine gravel; moist. ▽ @ 9 fbg: Wet.	9.0
562.3		S-13-12'			SM			
					SM		@ 13 fbg: Grayish brown (2.5Y 4/2).	13.0
				15				
								17.0
605.6		S-13-18'			SM		**Silty SAND [SM]:** Dark gray (2.5Y 4/2); 5% clay, 25% silt, 70% fine-to-coarse sand; wet.	19.0
				20	ML		**SILT with Sand [ML]:** Light yellowish brown (2.5Y 6/3); 5% clay, 70% silt, 25% fine sand; wet; low plasticity.	20.0

WELL DIAGRAM

- Flush-grade 12" well box
- Portland Type I/II
- Bentonite Seal
- Monterey Sand #2/12
- 4"-diam., 0.020" Slotted Schedule 40 PVC

Bottom of Boring @ 20 fbg

WELL LOG (PID) I:\SONOMA-1.PUB\0-USERS\MDUTRA\DRAFTR~1\0897.GPJ DEFAULT.GDT 11/7/13

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510.420.0700
Fax: 510.420.9170

BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	S-14
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	20-Aug-13
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	20-Aug-13
PROJECT NUMBER	240897	**WELL DEVELOPMENT DATE (YIELD)**	06-Sep-13 (27.3 gallons)
DRILLER	Vapor Tech Services C-57, #916085	**GROUND SURFACE ELEVATION**	37.50 ft above msl
DRILLING METHOD	Hollow-stem auger/Direct-push	**TOP OF CASING ELEVATION**	37.14 ft above msl
BORING DIAMETER	10"	**SCREENED INTERVALS**	4 to 19 fbg
LOGGED BY	P. O'Connell	**DEPTH TO WATER (First Encountered)**	9.00 fbg (20-Aug-13)
REVIEWED BY	P. Schaefer, PG 5612	**DEPTH TO WATER (Static)**	9.41 fbg (19-Sep-13)
REMARKS	Direct-push (2.25" OD) to 20 fbg, HSA to 19 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							CONCRETE	0.5	Flush-grade 12" well box
					SM		**Silty SAND with Gravel [SM]:** Strong brown (7.5YR 4/6); 5% clay, 15% silt, 60% fine-to-coarse sand, 20% fine-to-coarse gravel; moist.	1.0	Portland Type I/II
					ML		**Gravelly SILT with Sand [ML]:** Black (5YR 2.5/1); 10% clay, 45% silt, 15% fine-to-coarse sand, 30% fine-to-coarse gravel; moist; medium plasticity.		Bentonite Seal
							@ 3.5 fbg: Grayish brown (10YR 5/2), mottled yellowish brown (10YR 5/6).	3.5	Monterey Sand #2/12
				5	ML			6.0	
					SM		**SAND with Silt and Gravel [SM]:** Yellowish brown (10YR 5/6); 10% silt, 75% fine-to-medium sand, 15% fine gravel; moist.	8.0	
0.5		S-14-8'			SM		**Silty SAND with Gravel [SM]:** Dark greenish gray (4/10 GY), mottled yellowish brown (10 YR 5/6); 5% clay, 20% silt, 60% fine-to-coarse sand, 15% fine gravel. ▽ @ 9 fbg: Wet.	9.0	
				10				10.0	
					GM		**GRAVEL [GM]:** Dark greenish gray (4/10 GY), mottled yellowish brown (10YR 5/6); 5% silt, 10% fine-to-coarse sand; 85% fine-to-coarse gravel; wet.	10.5	4"-diam., 0.020" Slotted Schedule 40 PVC
527.0		S-14-12'			SM		**Silty SAND with Gravel [SM]:** Dark greenish gray (4/10 GY), mottled yellowish brown (10YR 5/6); 5% clay, 20% silt, 60% fine-to-coarse sand, 15% medium gravel; wet.		
							@ 14 fbg: Gray (2.5Y 6/1), mottled reddish yellow (7.5YR 6/8).	14.0	
				15					
354.6		S-14-16'			SM			17.0	
					ML		**SILT with Sand [ML]:** Grayish brown (2.5Y 5/2); 5% clay, 70% silt, 25% fine sand; wet; low plasticity.		
3.6		S-14-19'						19.5	
				20	ML		**SILT [ML]:** Light yellowish brown (2.5Y 6/3); 20% clay, 80% silt; high plasticity.	20.0	Bottom of Boring @ 20 fbg

WELL LOG (PID) I:\SONOMA~1.PUB\0-USERS\MDUTRA\DRAFTR~1\0897.GPJ DEFAULT.GDT 11/7/13

Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, CA 95476
Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	V-1
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	14-Dec-17
LOCATION	4411 Foothill Blvd, Oakland, California	DRILLING COMPLETED	14-Dec-07
PROJECT NUMBER	0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	4"	SCREENED INTERVAL	4.5 to 4.8 fbg
LOGGED BY	S. Lewis	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	D. Baertschi	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					CONCRETE		**CONCRETE**	0.5	1/4" diam., Teflon Tubing
					ML		**SILT with Gravel (ML)** ; dark brown (10YR 3/3); moist; 15% clay, 50% silt, 5% fine to coarse sand, 30% fine to coarse gravel; low plasticity. @ 1' - **SILT (ML)** ; black (10YR 2/1); moist; 15% clay, 80% silt, 5% fine to coarse sand; low to medium plasticity. @ 4' - 20% clay, 80% silt.		Bentonite Slurry with Pellet Base #2/12 Sand 3" length of Stainless Steel Screen
1.2		V-1-5'		5				5.2	Bottom of Boring @ 5.16 ft
				10					

WELL LOG (PID) I:\SONOMA.SHELL\OAKLAND 4411 FOOTHILL\GINT\0897.GPJ DEFAULT.GDT 12/27/07

Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, CA 95476
Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	V-2
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	14-Dec-07
LOCATION	4411 Foothill Blvd, Oakland, California	DRILLING COMPLETED	14-Dec-07
PROJECT NUMBER	0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	4"	SCREENED INTERVAL	4.5 to 4.8 fbg
LOGGED BY	S. Lewis	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	D. Baertshci	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				CONCRETE			**CONCRETE**	0.5	1/4" diam., Teflon Tubing
					ML		**SILT (ML)**; brown (10YR 4/3); moist; 10% clay, 80% silt, 5% fine to coarse sand, 510% fine to coarse gravel; low plasticity.		Bentonite Slurry with Pellet Base
51.7		V-2-5'		5			@ 4' - 10% clay, 85% silt, 5% fine to coarse sand.	5.2	#2/12 Sand 3" length of Stainless Steel Screen
				10					Bottom of Boring @ 5.25 ft

WELL LOG (PID) I:\SONOMA.SHELL\OAKLAND 4411 FOOTHILL\GINT\0897.GPJ DEFAULT.GDT 12/27/07

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Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	V-3
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	13-Dec-07
LOCATION	4411 Foothill Blvd, Oakland, California	DRILLING COMPLETED	13-Dec-07
PROJECT NUMBER	0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	4"	SCREENED INTERVAL	4.5 to 4.8 fbg
LOGGED BY	S. Lewis	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	D. Baertshci	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					CONCRETE		**CONCRETE**	0.5	1/4" diam., Teflon Tubing
					ML		**SILT (ML)**: dark grayish brown (2.5Y 4/2); moist; 15% clay, 80% silt, 5% fine sand; low plasticity.		Bentonite Slurry with Pellet Base
							@ 2' - very dark gray (10YR 3/1).		
0.0		V-3-5'		5				5.5	#2/12 Sand
				10					3" length of Stainless Steel Screen
									Bottom of Boring @ 5.5 ft

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BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	V-4
JOB/SITE NAME	Former Shell Branded Service Station	**DRILLING STARTED**	13-Dec-07
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	13-Dec-07
PROJECT NUMBER	0897	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Airknife	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	4"	**SCREENED INTERVAL**	4.5 to 4.8 fbg
LOGGED BY	S. Lewis	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	D. Baertshci	**DEPTH TO WATER (Static)**	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				0	CONCRETE		**CONCRETE**	0.5	1/4" diam., Teflon Tubing; Bentonite Slurry with Pellet Base; #2/12 Sand; 3" length of Stainless Steel Screen
0.0		V-4-5'		5	ML		**SILT with Gravel (ML)** ; yellowish brown (10YR 5/4); moist; 10% clay, 70% silt, 5% fine to coarse sand, 5% fine to coarse gravel; low plasticity. @ 1' - **SILT (ML)** ; yellowish brown (10YR 5/4); moist; 10% clay, 80% silt, 5% fine to coarse sand, 5% fine to coarse gravel; low plasticity.	5.2	Bottom of Boring @ 5.25 ft
				10					

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Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	V-5
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	13-Dec-07
LOCATION	4411 Foothill Blvd, Oakland, California	DRILLING COMPLETED	13-Dec-07
PROJECT NUMBER	0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	4"	SCREENED INTERVAL	4.5 to 4.8 fbg
LOGGED BY	S. Lewis	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	D. Baertshci	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					CONCRETE		**CONCRETE**	0.8	1/4" diam., Teflon Tubing
					ML		**Gravelly SILT (ML)**: brown (10YR 5/3); moist; 5% clay, 65% silt, 5% fine to coarse sand, 25% fine to coarse gravel. @ 2' - **SILT with Sand (ML)**: brown (10YR 5/3); moist; 5% clay, 70% silt, 25% fine to coarse sand. @ 3' - **SILT (ML)**: dark grayish brown (2.5Y 4/2); moist; 5% clay, 85% silt, 5% fine to coarse sand, 5% fine to coarse gravel.	5.3	Bentonite Slurry with Pellet Base #2/12 Sand 3" length of Stainless Steel Screen Bottom of Boring @ 5.3 ft
0.0		V-5-5'		5					
				10					

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Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	V-6
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	14-Dec-07
LOCATION	4411 Foothill Blvd, Oakland, California	DRILLING COMPLETED	14-Dec-07
PROJECT NUMBER	0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	4"	SCREENED INTERVAL	4.5 to 4.8 fbg
LOGGED BY	S. Lewis	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	D. Baertshci	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					CONCRETE		**CONCRETE**	0.5	
					ML		**SILT (ML)**; yellowish brown (10YR 5/4); moist; 10% clay, 80% silt, 5% fine to coarse sand, 5% fine to coarse gravel; low plasticity.		1/4" diam., Teflon Tubing
							@ 2' - 10% clay, 85% silt, 5% fine to coarse sand.		Bentonite Slurry with Pellet Base
3.3		V-6-5'		5			@ 4.5' - 15% clay, 85% silt; low to medium plasticity.	5.3	#2/12 Sand 3" length of Stainless Steel Screen
				10					Bottom of Boring @ 5.25 ft

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Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	V-7
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	14-Dec-07
LOCATION	4411 Foothill Blvd, Oakland, California	DRILLING COMPLETED	14-Dec-07
PROJECT NUMBER	0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	4"	SCREENED INTERVAL	4.5 to 4.8 fbg
LOGGED BY	S. Lewis	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	D. Baertshci	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						CONCRETE	**CONCRETE**	0.5	1/4" diam., Teflon Tubing
					ML		**SILT (ML)** ; dark grayish brown (10YR 4/2); moist; 10% clay, 80% silt, 5% fine to coarse sand, 5% fine to coarse gravel; low plasticity. @ 1' - 10% clay, 85% silt, 5% fine to coarse sand.		Bentonite Slurry with Pellet Base
0.2		V-7-5'		5				5.3	#2/12 Sand 3" length of Stainless Steel Screen
				10					Bottom of Boring @ 5.25 ft

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Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	V-10
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	14-Dec-07
LOCATION	4411 Foothill Blvd, Oakland, California	DRILLING COMPLETED	14-Dec-07
PROJECT NUMBER	0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	4"	SCREENED INTERVAL	4.5 to 4.8 fbg
LOGGED BY	S. Lewis	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	D. Baertshci	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					CONCRETE		**CONCRETE**	0.5	1/4" diam., Teflon Tubing
					ML		**SILT (ML)**; brown (7.5YR 4/4); moist; 10% clay, 80% silt, 5% fine to coarse sand, 5% fine to coarse gravel; low plasticity. @ 1.5' - black (10YR 2/1).		Bentonite Slurry with Pellet Base
0.5		V-10-5'		5			@ 4' - dark grayish brown (2.5Y 4/2); 20% clay, 80% silt; medium plasticity.	5.2	#2/12 Sand 3" length of Stainless Steel Screen
				10					Bottom of Boring @ 5.16 ft

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Telephone: 707-935-4850
Fax: 707-935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	V-11
JOB/SITE NAME	Former Shell Branded Service Station	**DRILLING STARTED**	13-Dec-07
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	13-Dec-07
PROJECT NUMBER	0897	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Airknife	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	4"	**SCREENED INTERVAL**	4.5 to 4.8 fbg
LOGGED BY	S. Lewis	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	D. Baertschi	**DEPTH TO WATER (Static)**	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	SOIL DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					CONCRETE		**CONCRETE**	0.5	1/4" diam., Teflon Tubing
					ML		**SILT with Gravel (ML)** ; olive brown (2.5Y 4/3); moist; 10% clay, 75% silt, 5% fine to coarse sand, 10% fine to coarse gravel; low plasticity. @ 1' - **SILT (ML)** ; olive brown (2.5Y 4/3); moist; 10% clay, 80% silt, 5% fine to coarse sand, 5% fine to coarse gravel; low plasticity. @ 3' - black (10YR 2/1); 15% clay, 85% silt; low to medium plasticity.		Bentonite Slurry with Pellet Base #2/12 Sand 3" length of Stainless Steel Screen
0.0		V-11-5'		5				5.2	Bottom of Boring @ 5.16 ft
				10					

WELL LOG (PID) I:\SONOMA\SHELL\OAKLAND 4411 FOOTHILL\GINT\0897.GPJ DEFAULT.GDT 12/27/07

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	V-12
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	27-Aug-09
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	27-Aug-09
PROJECT NUMBER	240897	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Airknife	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3"	**SCREENED INTERVALS**	4.16 to 4.25 fbg
LOGGED BY	C. Rodriguez	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	P. Schaefer	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Located at 4340 Bond St.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT / CONCRETE SLURRY	0.3	Flush-grade 5" well box
					ML		**SILT (ML)** ; very dark grayish brown (2.5Y 3/2); dry; 25% clay, 75% silt; low plasticity.		Bentonite Seal 1/4" OD teflon tubing
		V-12-5		5					1" Polyethylene vapor screen Monterey Sand #2/12 Bentonite Seal
								5.5	Bottom of Boring @ 5.5 fbg

WELL LOG (PID) I:\SHELL\6-CHARS\2408--\240897-1\240897-1\0897.GPJ DEFAULT.GDT 12/31/09

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Telephone: 510-420-0700
Fax:

BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	V-13
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	14-Apr-15
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	14-Apr-15
PROJECT NUMBER	240897	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	National Exploration,Wells & Pumps C-57#953646	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3.25"	**SCREENED INTERVALS**	4.9 to 5 fbg
LOGGED BY	B. Yifru	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	P. Schaefer, PG 5612	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand Augered to 5.5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							CONCRETE	0.5	Bentonite Seal
					ML		**SILT With Sand (ML)** ; Dark gray (7.5YR 3/1); moist; 5% clay, 80% silt, 15% ; non plastic.		1/4" teflon sample tubing
0				5			@ 4 fbg - light brown (7.5YR 6/4); low plasticity.	5.5	Sand #2/12 1" Stainless Steel Screen Bottom of Boring @ 5.5 fbg

WELL LOG (PID) I:\SHELL\6-CHARS\2408--\240897-OAKLAND 4411 FOOTHILL\240897-GINT\0897.GPJ DEFAULT.GDT 5/21/15

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Emeryville, CA 94608
Telephone: 510-420-0700
Fax:

BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	V-14
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	14-Apr-15
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	14-Apr-15
PROJECT NUMBER	240897	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	National Exploration,Wells & Pumps C-57#953646	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3.25"	**SCREENED INTERVALS**	4.9 to 5 fbg
LOGGED BY	B. Yifru	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	P. Schaefer, PG 5612	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Hand Augered to 5.5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							TOP SOIL	0.5	Bentonite Seal
					ML		**SILT (ML)** ; Dark gray (7.5YR 3/1); moist; 25% clay, 70% silt, 15% ; medium plastic.	4.0	1/4" teflon sample tubing
0				5	CL		**CLAY (CL)** ; Light brown (7.5YR 6/4); moist; 25% clay, 70% silt, 15% ; high plasticity.	5.0	Sand #2/12 1" Stainless Steel Screen Bottom of Boring @ 5.5 fbg

WELL LOG (PID) I:\SHELL\6-CHARS\2408--\240897-OAKLAND 4411 FOOTHILL\240897-GINT0897.GPJ DEFAULT.GDT 5/21/15

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Telephone: 510-420-0700
Fax:

BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	V-15
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	14-Apr-15
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	14-Apr-15
PROJECT NUMBER	240897	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	National Exploration,Wells & Pumps C-57#953646	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3.25"	**SCREENED INTERVALS**	4.9 to 5 fbg
LOGGED BY	B. Yifru	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	P. Schaefer, PG 5612	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand Augered to 5.5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							CONCRETE	0.5	Bentonite Seal
					ML		**SILT (ML)** ; Dark gray (7.5YR 3/1); moist; 25% clay, 70% silt, 5% ; medium plasticity.		1/4" teflon sample tubing
0				5			@ 4 fbg - light brown (7.5YR 6/4).	5.5	Sand #2/12 1" Stainless Steel Screen Bottom of Boring @ 5.5 fbg

WELL LOG (PID) I:\SHELL\6-CHARS\2408--1240897-OAKLAND 4411 FOOTHILL\240897-GINT\0897.GPJ DEFAULT.GDT 5/21/15

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5900 Hollis Street Suite A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax:

BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	V-16
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	14-Apr-15
LOCATION	4411 Foothill Blvd, Oakland, California	**DRILLING COMPLETED**	14-Apr-15
PROJECT NUMBER	240897	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	National Exploration,Wells & Pumps C-57#953646	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3.25"	**SCREENED INTERVALS**	4.9 to 5 fbg
LOGGED BY	B. Yifru	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	P. Schaefer, PG 5612	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Hand Augered to 5.5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							CONCRETE	0.5	Bentonite Seal
					ML		**SILT With Sand (ML)** ; Dark gray (7.5YR 3/1); moist; 25% clay, 70% silt, 5% ; medium plasticity.		1/4" teflon sample tubing
0				5			@ 3.5 fbg - light brown (7.5YR 6/4).	5.5	Sand #2/12 1" Stainless Steel Screen Bottom of Boring @ 5.5 fbg

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Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	**BORING/WELL NAME**	SB-4
JOB/SITE NAME	Shell-branded Service Station	**DRILLING STARTED**	07-Jan-00
LOCATION	4411 Foothill Blvd, Oakland	**DRILLING COMPLETED**	07-Jan-00
PROJECT NUMBER	242-0897	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	10"	**SCREENED INTERVAL**	NA
LOGGED BY	M. Gaffney	**DEPTH TO WATER (First Encountered)**	20.0 ft (07-Jan-00)
REVIEWED BY	S. Bork, RG# 5620	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand Augered to 5 ftbg		

TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
					SP		**ASPHALT** **SAND**; (SP); light brown to dark grey; loose; dry; 10% silt, 80% fine to medium grained sand, 10% gravel; high estimated permeability.	0.3 4.0	
	N/A N/A	SB-4 5.5		5	ML		**Clayey Sandy SILT**; (ML); dark gray; stiff; dry; 20% clay, 60% silt, 20% fine grained sand; medium plasticity, low estimated permeability.		Portland Type I/II
	N/A N/A N/A N/A N/A	SB-4 9.0		10				11.0	
	N/A N/A				SW		**Silty SAND**; (SW); grey; loose; dry; 10% clay, 40% silt, 40% coarse grained sand, 10% gravel; low plasticity; medium estimated permeability.	12.0	
	N/A N/A N/A N/A N/A	SB-4 16.0		15			**Clayey SILT**; (ML); green; soft; dry; 15% clay, 80% silt, 5% fine grained sand; medium plasticity, low estimated permeability.		
	N/A N/A N/A	SB-4 18.5 SB-4 19.5		20	ML		@ 19.5' - light brown; 20 % clay, 80% silt; medium plasticity, low estimated permeability . ▽		Bentonite Seal
	N/A N/A N/A	SB-4 24.5		25			@ 24.0' - light brown with black spots; hard; damp; medium plasticity, low estimated permeability.	25.0	Bottom of Boring @ 25 ft

WELL LOG (SHELL) C:\WINDOWS\DESKTOP\SHELL.GPJ DEFAULT.GDT 1/16/00

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Emeryville, CA 94608
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Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SB-5
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	15-May-06
LOCATION	4411 Foothill Blvd, Oakland	DRILLING COMPLETED	17-May-06
PROJECT NUMBER	248-0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vironex	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3.25"	SCREENED INTERVALS	NA
LOGGED BY	B. Deboer	DEPTH TO WATER (First Encountered)	15.0 fbg (15-May-06)
REVIEWED BY	D. Gibbs, PG #2804	DEPTH TO WATER (Static)	NA
REMARKS	Air Knife to 5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Gravelly SILT (ML); dark yellowish brown (10YR 4/4); dry; 15% clay, 55% silt, 30% coarse-grained gravel; medium plasticity.		
0		SB-5-5		5	ML			7.0	
							SILT (ML); dark greenish gray (Gley1 4/5g); dry; 30% clay, 65% silt 5% coarse-grained sand; medium plasticity.		
0		SB-5-10		10			@ 9 fbg 10% clay, 75% silt, 10% coarse-grained sand, 5% fine-grained gravel; medium plasticity.	11.0	
							SILT with Sand (ML); greenish grey (Gley1 5/5g); dry; 10% clay, 65% silt, 20% coarse-grained sand, 5% fine-grained gravel; medium plasticity.	13.0	
10		SB-5-15		15	SP SM		**Poorly Graded SAND with Silt (SP-SM)** moist; 10% silt, 80% coarse-grained sand, 10% fine gravel. ▽	16.0	
							Gravely SILT (ML); yellowish brown (10YR 5/6); dry; 15% clay, 55% silt, 30% coarse gravel; medium plasticity.	17.0	
							SILT (ML); dry; 30% clay, 70% silt, medium plasticity.		
0		SB-5-20		20	ML		@ 20 fbg; dry; 40% clay, 55% silt, 5% fine-grained sand; medium plasticity.		
							@ 22 fbg; dry; 30% clay, 60% silt, 10% fine-grained sand; medium plasticity.		
0		SB-5-23.5		25				24.0	
							* Refusal with Geoprobe used for the collection of soil samples was encountered at 24 fbg. Hydropunch sampler was then used in an adjacent boring for the collection of groundwater samples at intervals of 13 -17 fbg, 31 - 35 fbg, and 40 - 44 fbg; of which only the sample at 40 fbg yielded sufficient groundwater.		
				30					
				35					
				40					

Portland Type I/II Cement

Bottom of Boring @ 44 fbg

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Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SB-6
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	15-May-06
LOCATION	4411 Foothill Blvd, Oakland	DRILLING COMPLETED	17-May-06
PROJECT NUMBER	248-0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vironex	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3.25"	SCREENED INTERVALS	NA
LOGGED BY	B. Deboer	DEPTH TO WATER (First Encountered)	7.5 fbg (15-May-06)
REVIEWED BY	D. Gibbs, PG #2804	DEPTH TO WATER (Static)	NA
REMARKS	Air Knife to 5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					ML		Sandy SILT with Gravel (ML);dark brown (10yr 3/3); Dry; 15% clay, 50% silt, 20% coarse-grained sand, 15% coarse-grained gravel; medium plasticity.	5.0	
4		SB-6-5		5	SM		Silty SAND (SM); dark brown (10yr 3/3); dry; 25% silt, 65% fine-grained sand, 10% fine-grained gravel.	7.0	
					SP		Poorly Graded SAND with Gravel (SP)wet; 5% silt, 70% coarse-grained sand, 25% fine-grained gravel, high plasticity.	8.0	
225		SB-6-10		10	ML		Gravelly SILT (ML); grayish green with green mottling (Gley1 5/5g); moist; 60% silt, 40% fine gravel.	10.0	
							SILT (ML); very dark grayish green (Gley 1 3/5g); dry; 20% clay, 70% silt, 10% fine-grained sand; medium plasticity. @ 12 fbg; 25% clay, 75% silt; medium plasticity.	15.0	
583		SB-6-15		15	SM		Silty SAND (SM); dark greenish gray (Gley 1 4/10gy); dry; 30% silt, 70% fine-grained sand.	16.0	
							Silty SAND with Gravel (SM) (Gley1 4/4); dry; 40% silt, 45% fine-grained sand, 15% coarse gravel.	17.0	
							Silty SAND (ML); moist; 30% silt, 70% fine-grained sand.	18.0	
105		SB-6-20		20	ML		SILT with Sand (ML); dark yellowish brown with black spotting (10yr 4/6); dry; 25% clay, 60% silt, 15% fine-grained sand; medium plasticity.		◄ Portland Type I/II Cement
							SILT (ML); dry; 40% clay, 60% silt; medium plasticity.	23.0	
0		SB-6-25		25			* Refusal with Geoprobe used for the collection of soil samples was encountered at 26 fbg. Hydropunch sampler was then used in an adjacent boring for the collection of groundwater samples at intervals of 26 -30 fbg, 31 - 35 fbg, and 40 - 44 fbg; of which none of these samples yielded sufficient groundwater.	26.0	
				30					
				35					
				40					Bottom of Boring @ 44 fbg

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Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SB-7
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	15-May-06
LOCATION	4411 Foothill Blvd, Oakland	DRILLING COMPLETED	18-May-06
PROJECT NUMBER	248-0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vironex	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3.25"	SCREENED INTERVALS	NA
LOGGED BY	B. Deboer	DEPTH TO WATER (First Encountered)	15.0 fbg (15-May-06) ▽
REVIEWED BY	D. Gibbs, PG #2804	DEPTH TO WATER (Static)	NA ▼
REMARKS	Air Knife to 5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Sandy SILT with Gravel (ML) dark brown (10yr 3/3); dry; 15% clay, 50% silt, 20% coarse-grained sand, 15% coarse-grained gravel; meduim plasticity.	5.0	
17		SB7-5		5	ML		SILT (ML); black (10yr 2/1); dry; 20% clay, 70% silt, 10% coarse gravel; medium plasticity.	7.0	
							SILT with Gravel (ML) dark greenish grey (Gley1 4/5g); dry; 30% clay, 45% silt, 10% fine-grained sand, 15% fine gravel; medium plasticity.	10.0	
225		SB7-10		10			SILT (ML); yellowish brown (10yr 5/5g); dry; 35% clay, 50% silt, 10% fine-grained sand, 5% fine gravel, medium plasticity.	11.0	
							Gravelley SILT (ML); dry; 30% clay, 45% silt, 10% fine-grained sand, 25% fine gravel; medium plasticity.	12.0	
					SM		Silty SAND (SM); dry; 10% clay, 35% silt, 45% coarse-grained sand, 10% fine gravel; medium plasticity. ▽		
422		SB7-15		15			@ 16 fbg; wet; 15% silt, 85% coarse-grained sand.	16.0	
							Gravelly SILT (ML); dry; 15% clay, 55% silt, 30% fine gravel; medium plasticity.	18.0	
							SILT (ML); dry; 35% clay, 55% silt, 10% fine-grained sand; high plasticity.		
7		SB7-20		20	ML				Portland Type I/II Cement
0		SB7-25		25				26.0	
							* Refusal with Geoprobe used for the collection of soil samples was encountered at 26 fbg. Hydropunch sampler was then used in an adjacent boring for the collection of groundwater samples at intervals of 24 -28 fbg, 28 - 32 fbg, 32 - 36 fbg, 36 – 40 fbg, and 40 - 44 fbg; of which none of these samples yielded sufficient groundwater.		
				30					
				35					
				40					Bottom of Boring @ 44 fbg

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Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SB-8
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	15-May-06
LOCATION	4411 Foothill Blvd, Oakland	DRILLING COMPLETED	15-May-06
PROJECT NUMBER	248-0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vironex	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3.25"	SCREENED INTERVALS	NA
LOGGED BY	B. Deboer	DEPTH TO WATER (First Encountered)	9.0 fbg (15-May-06) ▽
REVIEWED BY	D. Gibbs, PG #2804	DEPTH TO WATER (Static)	NA ▼
REMARKS	Hand Augered to 5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		SB-8-5		5	SP SM		**Poorly Graded SAND with Silt and Gravel (SP-SM)** dark yellowish brown (10yr 4/4); dry; 10% silt, 55% medium-grained sand, 35% coarse gravel. @ 1 fbg; dark brown (10yr 3/3); dry; 10% silt, 70% medium-grained sand, 20% coarse gravel.	7.0	
0		SB-8-10		10	ML		**SILT with Sand (ML)**; dark yellowish brown (10yr 3/4); moist; 20% clay, 60% silt, 20% fine-grained sand; medium plasticity. ▽ @ 9 fbg; grayish green (Gley1 4/5g); wet; 80% silt, 20% fine-grained sand; medium plasticity. @ 11 fbg; dark yellowish brown (10yr 3/4); moist; 20% clay, 60% silt, 20% fine-grained sand; medium plasticity.		◄ Portland Type I/II Cement
				15					
				20	SM		**Silty SAND with Gravel (SM)** grayish green (Gley1 4/4g); dry; 10% clay, 30% silt, 45% fine/medium-grained sand, 15% fine gravel; medium plasticity.	18.0	
							CLAY (CL); dark yellowish brown (10yr 3/4); dry; 80% clay, 20% silt; medium plasticity.	20.0	
				25	CL		**CLAY with Sand (CL)**; dark yellowish brown (10yr 4/4); dry; 60% clay, 20% silt, 20% fine-grained sand; medium plasticity.	23.0	
								29.0	
				30	ML		**SILT with Sand (ML)** dark yellowish brown (10yr 4/4); wet; 40% clay, 40% silt, 20% fine-grained sand; medium plasticity.	30.0	Bottom of Boring @ 31 fbg

* Refusal with Geoprobe used for the collection of soil samples was encountered at 30 fbg. Hydropunch sampler was then used in an adjacent boring for the collection of groundwater samples at intervals of 9 -12 fbg, 22 - 25 fbg, and 28 - 31 fbg; of which only the samples at 9 and 22 fbg yielded sufficient groundwater.

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Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SB-12
JOB/SITE NAME	Former Shell Branded Service Station	DRILLING STARTED	15-May-06
LOCATION	4411 Foothill Blvd, Oakland	DRILLING COMPLETED	16-May-06
PROJECT NUMBER	248-0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vironex	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3.25"	SCREENED INTERVALS	NA
LOGGED BY	B. Deboer	DEPTH TO WATER (First Encountered)	11.0 fbg (15-May-06)
REVIEWED BY	D. Gibbs, PG #2804	DEPTH TO WATER (Static)	NA
REMARKS	Hand Augered to 5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		SB-12-5		5	ML		Sandy SILT with Gravel (ML) dark yellowish brown (10yr 3/6); dry; 15% clay, 50% silt, 20% coarse-grained sand; 15% coarse gravel; medium plasticity.		
					SM		@ 7 fbg; very dark grayish brown (10yr 3/2); dry; 10% clay, 30% silt, 40% coarse-grained sand, 20% coarse gravel; low plasticity.	8.0	
647		SB-12-10		10	ML		Silty SAND (SM); dry/moist; 25% silt, 75% coarse-grained sand.	10.0	
					SM		SILT with Sand (ML); grayish green (Gley1 5/5g); dry; 85% silt, 15% fine-grained sand; medium plasticity.	11.0	
					SP SM		Silty SAND (SM); moist; 20% silt, 70% coarse-grained sand, 10% fine gravel.	13.0	
28		SB-12-15		15	ML		Poorly Graded SAND with Silt (SP-SM)dry; 10% silt, 90% fine-grained sand.	15.0	
							SILT with Sand (ML); moist; 85% silt, 15% fine-grained sand; medium plasticity.	17.0	Portland Type I/II Cement
6		SB-12-20		20	CL		SILT (ML); yellowish brown (10yr 5/6); moist; 40% clay, 60% silt; high plasticity.	19.5	
0		SB-12-25		25			CLAY (CL); dark yellowish brown (10yr 4/6); dry; 90% clay, 10% silt; medium plasticity.	27.0	
				30			* Refusal with Geoprobe used for the collection of soil samples was encountered at 27 fbg. Grab groundwater sample was then collected from open bore between 0 -27 fbg. Hydropunch sampler was then used in an adjacent boring for the successful collection of groundwater sample at interval of 31 – 35 fbg.		Bottom of Boring @ 35 fbg
				35					

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Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	TB-1
JOB/SITE NAME	Former Shell Branded Station	**DRILLING STARTED**	29-Aug-05
LOCATION	4411 Foothill Blvd, Oakland	**DRILLING COMPLETED**	29-Aug-05
PROJECT NUMBER	247-0897	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	2"	**SCREENED INTERVALS**	NA
LOGGED BY	Ron Barone	**DEPTH TO WATER (First Encountered)**	12.0 ft bgs (29-Aug-05) ▽
REVIEWED BY	M. Derby, PE # 55475	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					GM		**Silty GRAVEL**(GM); brown; dry; 50% silt, 50% gravel; no plasticity.	4.0	
206		TB-1-7.0		5	CL		**Sandy CLAY with Grave**(CL); dark gray; dry to moist; 50% clay, 30% sand, 20% gravel; low plasticity.	10.0	
1000		TB-1-10.5		10	SM		**Silty SAND**(SM); dark gray; wet; 5% clay, 45% silt, 50% sand; no plasticity.	12.0 ▽	Portland Type I/II
1000		TB-1-12.0					**Sandy SILT**(ML); dark green gray; moist; 30% clay, 55% silt, 15% sand; medium plasticity.		
1000		TB-1-15.0		15	ML		**Sandy SILT**(ML); dark green gray; moist; 15% clay, 60% silt, 25% sand; low plasticity.		
75		TB-1-18					**Gravelly SILT**(ML); brown, moist; 5% clay, 60% silt, 10% sand, 25% gravel; no plasticity.	19.5	
560		TB-1-19.5 TB-1-W		20	SM		**Silty SAND**(SM); gray; moist; 5% clay, 45% silt, 50% sand; no plasticity.	20.0	
							Grab groundwater sample collected from temporary well casing		
				25					
				30			No groundwater samples recovered from hydropunch 29' to 32'.		Bottom of Boring @ 32 ft bgs

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Telephone: 510-420-0700
Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	TB-3
JOB/SITE NAME	Former Shell Branded Station	**DRILLING STARTED**	29-Aug-05
LOCATION	4411 Foothill Blvd, Oakland	**DRILLING COMPLETED**	29-Aug-05
PROJECT NUMBER	247-0897	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	2"	**SCREENED INTERVALS**	NA
LOGGED BY	Ron Barone	**DEPTH TO WATER (First Encountered)**	12.0 ft bgs (29-Aug-05) ▽
REVIEWED BY	M. Derby, PE # 55475	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		TB-3-3.0		5	ML		**Gravelly SILT** (ML); brown; dry; 5% clay, 50% silt, 45% gravel; no plasticity.		
0		TB-3-6.0					**Gravelly SILT** (ML); dark brown; dry; 5% clay, 65% silt; 30% gravel; no plasticity.		
0		TB-3-9.0		10			**SILT** (ML); dark brown; dry; 15% clay, 85% silt; no plasticity.		
1000		TB-3-12.0					▽ **Sandy SILT** (ML); grayish brown; moist; 5% clay, 70% silt, 25% sand; no plasticity.	14.0	Portland Type I/II
1000		TB-3-15.0		15	SW		**Gravelly SAND** (SW); gray; moist; 5% silt, 80% sand, 15% gravel; no plasticity.	17.0	
1000		TB-3-18.0		20	SM		**Silty SAND** (SM); gray; moist to wet; 35% silt, 65% sand; no plasticity.	21.0	
65		TB-3-21.0			CL		**CLAY** (CL); brown; dry to moist; 90% clay, 10% silt; low to medium plasticity.	22.5	Bottom of Boring @ 22.5 ft bgs
		TB-3-W					Grab groundwater sample collected from temporary well casing		

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