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1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RECEIVED

By Alameda County Environmental Health 3:35 pm, Dec 15, 2017

Re: Chevron Service Station No. 90076
4265 Foothill Boulevard
Oakland, CA

I have read and acknowledged the content, recommendations and/or conclusions contained in the attached *Soil Vapor Site Assessment Report* submitted on my behalf to Alameda County Department of Public Health's (ACEDH) FTP server and the State Water Resource Control Board's GeoTracker website.

This report was prepared by GHD Services Inc., upon whose assistance and advice I have relied. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

Sincerely,

A handwritten signature in blue ink, appearing to read "D. Patten", written over a light blue horizontal line.

Dave Patten
Project Manager

Attachment: *Soil Vapor Site Assessment Report*



Soil Vapor Intrusion Assessment

Chevron Service Station 90076
4265 Foothill Boulevard
Oakland, California
Fuel Leak Case No. RO0000427

Prepared for:

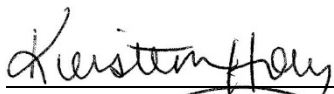
Mark E. Detterman
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California


GHD | 5900 Hollis Street, Suite A, Emeryville, CA
311977 | 2017.3 | 04.05 | Report No 33 | December 15, 2017



Soil Vapor Intrusion Assessment

Chevron Service Station 90076
4265 Foothill Boulevard
Oakland, California
Fuel Leak Case No. RO0000427


Kiersten Hoey


Greg Barclay PG 6260

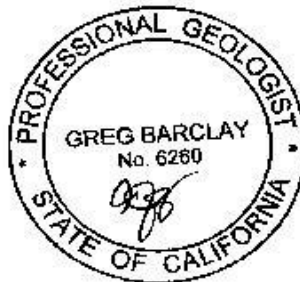




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1. Introduction

GHD is submitting this *Soil Vapor Intrusion Assessment* for the Chevron Service Station 90076, located at 4265 Foothill Boulevard in Oakland, California (Figure 1) on behalf of Chevron Environmental Management Company (CEMC). One soil vapor probe was installed to further assess the potential vapor intrusion risk to the residential building southwest of the site (1723 High Street). The probe was installed per GHD's July 25, 2017 *Soil Vapor Intrusion Assessment Work Plan* and approved by Alameda County Department of Environmental Health (ACDEH) in a September 18, 2017 letter (Appendix A). The proposed collection of crawl space and outdoor ambient air samples from the apartment building at 4237 Foothill Boulevard has not been completed due to property owner's lack of response to access agreement request.

This report describes field procedures, results of the soil vapor assessment, and conclusions and recommendations.

2. Site Background

2.1 Site Description

The site is an active Chevron branded service station located on the western corner of the intersection of Foothill Boulevard and High Street in Oakland, California. Surrounding land use is mixed commercial and residential. A Westco station (former BP station Fuel Leak Case RO0426) is located northeast (upgradient) across Foothill Boulevard, and a former Shell station (Fuel Leak Case RO415) is located southeast (crossgradient) across High Street. Foothill High School is located east across the intersection of Foothill Boulevard and High Street, a single family home is located adjacent to the site to the southwest, and an apartment building is located adjacent to the site to the northwest.

Chevron purchased the subject property, developed it into a service station, and began operation in 1966. The station and all site facilities were reconstructed in 1987 into its current configuration. Dispenser and product line replacements occurred sometime in the 1980s and in 1997. Current site facilities consist of a kiosk, five dispenser islands beneath a common canopy and a building which appears to be a storage and restroom facility. Three 10,000-gallon double-walled fiberglass gasoline underground storage tanks (USTs) are located in a common pit, located directly southwest of the kiosk. The previous USTs were located in the same location. A former used-oil UST, located between the kiosk and gasoline UST complex, was removed in 1987 and was not replaced. The station manager has indicated that a hand car wash is operated during the weekends on the southwest side of the site.

2.2 Previous Environmental Investigations and Remediation

The site has been an open environmental case since 1989 under ACEH jurisdiction (Fuel Leak Case Number RO0427 and GeoTracker Global ID T0600100339). Since 1987, a total of seven soil borings have been advanced, and seven vapor probes and twelve monitoring wells have been



installed. A groundwater extraction system operated from 1991 to 1993 in well C-2 and extracted approximately 10,200 gallons of groundwater. A summary of environmental investigation and remediation is presented in Appendix B.

2.3 Site Geology and Hydrogeology

The site is predominantly underlain by clays and silts to the maximum depth explored of approximately 59 feet below grade (fbg). A sand unit with an average thickness of 5 feet is encountered in several borings at depths ranging from 10 to 20 fbg, and a gravel unit is encountered in some borings between 45 to 55 fbg. Shallow sands and/or gravels are also encountered intermittently at depths above 10 fbg in some areas of the site.

The site elevation is approximately 40 feet above mean sea level (msl). Topography in the area slopes gently southwest, towards the San Francisco Bay. The nearest surface water is the Oakland Inner Harbor, approximately 0.9 miles southwest. Groundwater monitoring has been ongoing since 1989. Historically, depth to groundwater in onsite wells has ranged from approximately 7 to 30 fbg, but is typically between 10 and 20 fbg; depth to water in offsite downgradient wells has historically ranged from 20 to 44 fbg, but is typically between 20 and 25 fbg. Depth to groundwater in onsite wells C-4 and C-10 is generally a few feet shallower than the other onsite wells. Both wells are located adjacent to onsite catch basins, which may contribute to the shallower groundwater at these locations (Figure 2). Groundwater flow is typically west-southwest.

3. Soil Vapor Probe Installation

According to the State Water Resource Control Board (SWRCB) *Low-Threat Underground Storage Tank Case Closure Policy* (LTCP) Media-Specific Criteria for Petroleum Vapor Intrusion to Indoor Air, soil gas samples must be collected at least 5 feet below the bottom of the building foundation. The property owner of 1723 High Street indicated the basement depth is 2 fbg. Therefore, on November 2, 2017, GHD oversaw VTS Drilling, LLC (VTS) of Hayward, California, install onsite soil vapor probe VP-7 at 7 fbg along the southwestern property boundary. However, due to water in the VP-7 tubing, no soil vapor sample was collected. Details of the onsite assessment are provided in the following sections.

3.1 Permits and Access Agreements

GHD obtained drilling permit #W2017-0829 from the Alameda County Public Works Agency Water Resources Section (ACPWA) for the advancement and installation of soil vapor probe VP-7 (Appendix C). All onsite work on private property was conducted under current access agreements with the property owner.

3.2 Site-Specific Health and Safety Plan

GHD prepared a site- and activity-specific health and safety plan (HASP) to inform site workers of known hazards and to provide health and safety guidance. The HASP was reviewed and signed by all site workers and visitors each day, prior to start of work. The HASP was kept onsite during all field activities.



3.3 Utility Survey

GHD notified Underground Service Alert (USA) at least 48 hours prior to boring advancement to clear the proposed drilling location with public utility companies. On October 26, 2017, GHD oversaw Pacific Coast Locators (PCL) conduct a utility survey to identify potential private utilities in the area of the proposed drilling activities. No utilities were found in conflict with proposed location VP-7.

3.4 GHD Personnel and Drilling Company

VTS (C57 License No. 916085) was contracted to complete the soil vapor probe installation. All work completed by VTS was performed under the direct supervision of GHD field personnel. GHD staff conducted the field work under supervision of California Professional Geologist Brandon Wilken, P.G.

3.5 Soil Boring and Sampling

On November 2, 2017, GHD oversaw the advancement of soil vapor boring VP-7 near the southwestern border of the site (Figure 2). Prior to soil boring advancement, GHD tagged the depth to groundwater in nearby well C-4 to confirm groundwater was deeper than 7 fbg; depth to groundwater was measured at approximately 12 fbg. Therefore, the boring was advanced to a total depth of 7.5 fbg using a 2.75-inch outside diameter hand auger. A GHD geologist logged soil using the ASTM D2488-06 Unified Soil Classification System. Soil was field-screened using a photo-ionization detector (PID). A boring log showing lithology and PID data collected in the field is included in Appendix D.

Soil samples were collected at 3 and 7 fbg for laboratory analysis of total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, total xylenes (BTEX), and naphthalene. Soil samples collected were retained by driving a 6-inch stainless steel sample sleeve into the hand auger bucket until no head space was observed. Each sample was labeled, logged on a chain-of-custody form, placed on ice, and transported to Eurofins Lancaster Laboratories (Lancaster) of Lancaster, Pennsylvania, a California State-certified laboratory.

3.6 Soil Vapor Probe Installation

Soil vapor probe VP-7 was constructed using a 1-inch long, stainless steel vapor screen with an approximately 50 micron pore diameter and a ¼-inch push-to-connect fitting connected to ¼-inch outside diameter Teflon® tubing. The probe was placed at approximately 7 fbg and surrounded by a 12-inch sand pack. Above the sand pack, 12-inches of dry granulated bentonite was topped with hydrated bentonite to 1 fbg. The probe was labeled and capped, and a sealed, traffic-rated well vault was installed slightly above grade to ensure surface water runoff away from the location. Soil vapor probe construction details are provided on the boring log presented in Appendix D. On November 8, 2017, Morrow Surveying Land Surveyors surveyed the northing and easting location of VP-7 (Appendix E).



3.7 Soil Vapor Sampling

On November 8, 2017, GHD field staff attempted to purge and collect soil vapor samples from vapor probe VP-7 using 100 percent laboratory certified 1 liter Summa™ canisters to collect a vapor sample for analyses by TO-15 method and 100 percent laboratory certified Sorbent Tubes and a syringe assembly to a collect sample for analyses by TO-17 method.

Although depth to groundwater in nearby well C-4 was measured at approximately 12 fbg, due to the presence of water in the vapor probe tubing, GHD field staff was unable to collect the necessary samples for TO-15 and TO-17 analysis. When the field staff began purging the required three purge volumes from the sampling tubing before sampling begins, a column of water entered the vapor probe tubing. Purging and sampling was terminated to prevent water from entering the sampling train manifolds or the summa canisters. A photo of the tubing with water is included as Appendix F.

3.8 Chemical Analysis

Soil samples were transported to Eurofins Lancaster for laboratory analysis of the following:

- TPHg by EPA Method 8015M
- BTEX and naphthalene by EPA Method 8260

The laboratory analytical results for soil are provided in Appendix G. Cumulative soil analytical results are included in Table 1, 1A, and 1B. No soil vapor samples were collected.

3.9 Waste Disposal

Soil cuttings are temporarily stored onsite in a sealed and labeled Department of Transportation-approved 55-gallon steel drum pending waste characterization. The waste will be transported by licensed waste haulers to a Chevron and State of California-approved disposal facility following receipt and approval of the analytical profile.

4. Investigation Results

Soil encountered in the vapor probe boring consisted of silt with sand to approximately 3 fbg, underlain by silty sand and gravel with silt and sand (Appendix D). No hydrocarbons were detected in the soil samples collected from VP-7 (Table 1). No soil vapor sample was collected due to water in the tubing.

5. Recommendations

Although depth to groundwater in nearby well C-4 was measured at approximately 12 fbg, a column of water entered the VP-7 probe/tubing and therefore no soil vapor sample was collected. Based on the fact water entered VP-7 at 7 fbg and previously entered VP-2 at 5 fbg, but not VP-3 and VP-4 at 5 fbg, it appears intermittent shallow perched water exists in the southwestern portion of the site (Figure 2). The station operates a hand car wash on weekends in the southwestern portion of the site. An onsite catch basin located in the southwestern corner of the site (Figure 2) catches water



from the hand car wash as well as rainwater, which may be contributing to shallow perched water entering VP-7 and VP-2 tubing. Therefore, GHD proposes the following order of approaches:

- Purge VP-7 tubing using a vacuum pump. If the tubing can successfully be cleared of water, a soil vapor sample will be collected from VP-7 as described in GHD's July 25, 2017 *Soil Vapor Intrusion Assessment Work Plan*.
- If the tubing cannot successfully be cleared of water via vacuum pump purging, CEMC and GHD propose pushing the water back into the formation and waiting approximately 10 days for the subsurface to equilibrate. If water does not re-enter the probe, a soil vapor sample will be collected from VP-7 as described in GHD's July 25, 2017 *Soil Vapor Intrusion Assessment Work Plan*.
- If clearing the VP-7 tubing of water is not successful, then GHD proposes installing an offsite vapor probe on 1723 High Street, adjacent to the residential building, and collecting a soil vapor sample to evaluate the potential vapor intrusion risk to the indoor air of the residential building (Figure 2). Prior to installing the probe, the probe boring will be left open to see if water enters the boring. If no water enters the boring, a probe will be installed. If water does enter the boring, then an alternative location will be attempted. The proposed vapor probe will be installed and sampled as outlined in the work plan in GHD's July 25, 2017 *Soil Vapor Intrusion Assessment Work Plan*.

GHD and CEMC are currently working on obtaining access to the offsite property located at 4237 Foothill Boulevard to collect one to two ambient air samples from within the crawl space beneath the apartment building and one outdoor ambient air sample nearby. When access is obtained, GHD will collect the samples as proposed in the July 25, 2017 *Soil Vapor Intrusion Assessment Work Plan*.

6. Schedule and Reporting

Following approval, GHD and Chevron will work with the offsite property owner of 1723 High Street (and continue to work with the property owner of 4237 Foothill Boulevard) to obtain access to conduct the assessments. Based on previous experience with the offsite property owners to obtain information on the structure of their building, assistance may be required of ACDEH. Once access is obtained, GHD will work with the property owner to establish a date and time to install the proposed vapor probe and collect the soil vapor sample. Prior to work, GHD will provide ACDEH the schedule for the work.

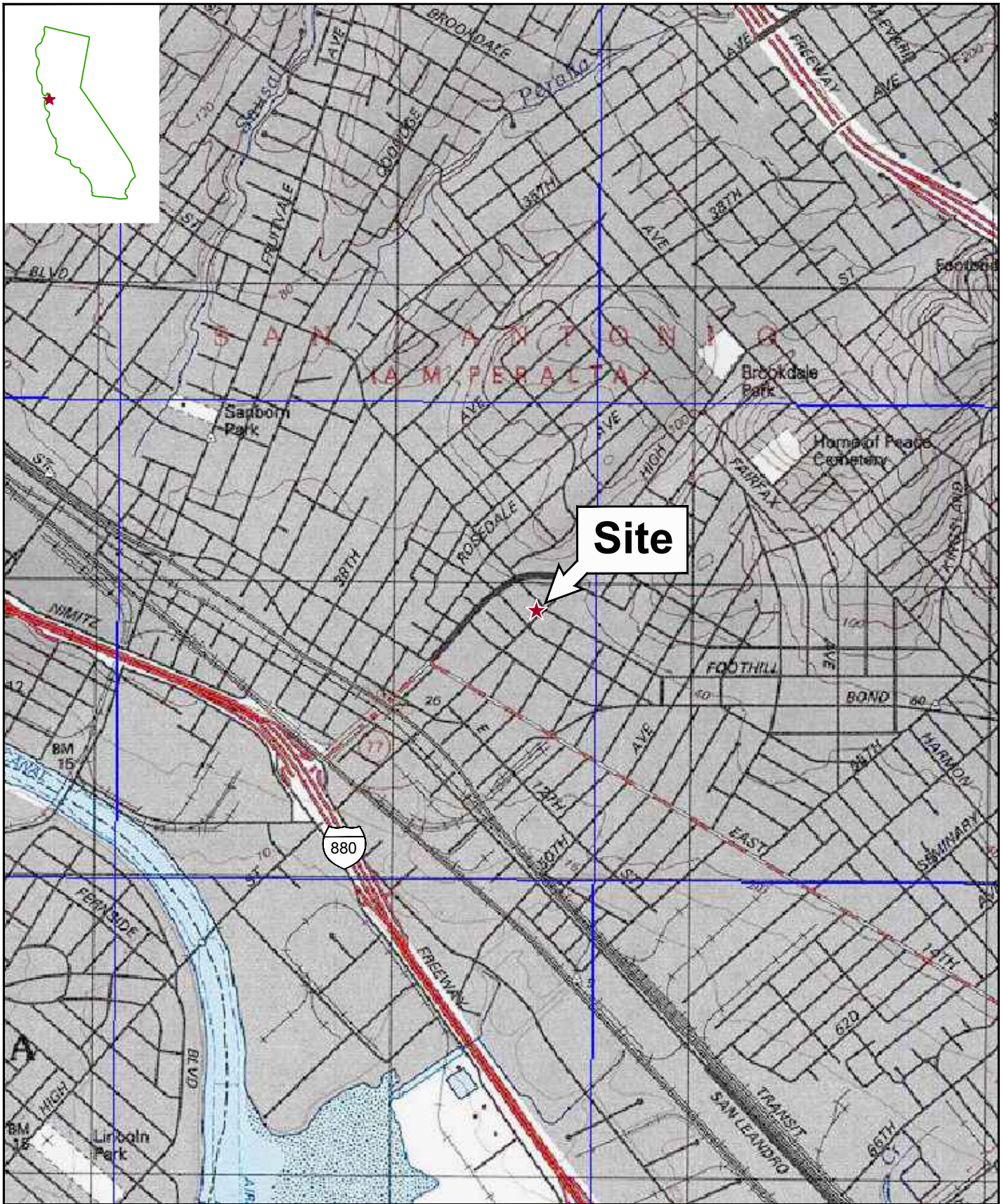
GHD will prepare and submit a Site Investigation Report and Updated Focused Site Conceptual Model following ambient air sampling at 4237 Foothill Boulevard and installation and sampling of the offsite site vapor probe at 1723 High Street. The report, at a minimum, will contain:

- Boring logs
- Sampling methodology
- Tabulated soil and vapor data
- Summary of results

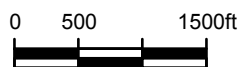


- Analytical data comparison
- Analytical reports and chain-of-custody forms
- Updated focused site conceptual model
- Conclusions and recommendations

Figures



SOURCE: TOPO! MAPS



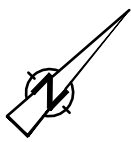
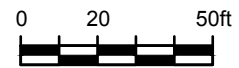
CHEVRON SERVICE STATION 90076
 4265 FOOTHILL BOULEVARD
 OAKLAND, CALIFORNIA

311977-2017.3

Nov 10, 2017

VICINITY MAP

Figure 1



SOURCE: MORROW SURVEYING .DWG DRAWING DATED MARCH, 2015 FOR CRA. SURVEYED DATE 2/25/15. COORDINATES BASED ON CA STATE PLANE ZONE 3. COORDINATES FROM GPS OBSERVATIONS USING CSDS VIRTUAL SURVEY NETWORK. COORDINATE DATUM IS NAD 83.
NOTE: BASEMENT PRESENCE BASED ON FIELD OBSERVATIONS



CHEVRON SERVICE STATION 90076
4265 FOOTHILL BOULEVARD
OAKLAND, CALIFORNIA

SITE PLAN

311977-2017.3
Dec 11, 2017

Figure 2

Tables

Table 1
Cumulative Soil Analytical Data
Former Chevron Service Station 90076
4265 Foothill Boulevard
Oakland, California

Sample ID	Date	Depth (fbg)	TOG	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Naphthalene	DIPE	TAME	TBA	ETBE	1,2-DCA	EDB	Other	VOCs	SVOCs	Pesticides/PCBs	Cadmium	Total Chromium	Lead	Nickel	Zinc	Concentrations reported in milligrams per kilogram (mg/kg)	
LTC - Direct Contact- 0 to 5 fbg ^a	Residential		--	--	--	--	1.9	--	21	--	--	9.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Commercial		--	--	--	--	8.2	--	89	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
LTC Outdoor Air - 5 to 10 fbg ^a	Residential		--	--	--	--	2.8	--	32	--	--	9.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Commercial		--	--	--	--	12	--	134	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
LTC - Utility Worker - 0 to 10 fbg ^a	Utility Worker		--	--	--	--	14	--	314	--	--	219	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
ESL - Direct Contact Table S-1-(Metals) ^d	Commercial		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	580	No Value	320	11,000	350,000		
	Construction Worker		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	43	No Value	160	86	110,000		
2017 Soil Vapor Probe																													
VP-7	11/02/17	3	--	--	--	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7	11/02/17	7	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
2016 Site Investigation																													
C-13	02/23/16	3	--	--	--	<4.9	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-13	02/23/16	5	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-13	02/23/16	10	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.001	0.001 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-13	02/23/16	15	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	0.0005 J	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-13	02/23/16	20	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	0.13	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-13	02/23/16	25	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	0.51	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B-7	02/23/16	5	--	--	--	320	<0.025	<0.050	0.71	1.0	<0.025	1.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B-7	02/23/16	10	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
2015 Site Investigation																													
C-11	02/02/15	3	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-11	02/02/15	8	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-11	02/03/15	10	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-11	02/03/15	15	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-11	02/03/15	20	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-11	02/03/15	25	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-12*	02/02/15	3	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-12*	02/02/15	8	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-12*	02/03/15	10	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-12*	02/03/15	15	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-12*	02/03/15	20	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-12*	02/03/15	25	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-12*	02/03/15	30	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	0.0009 J	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B1	02/05/15	3	--	--	--	3.8	0.005 J	<0.001	<0.001	0.002 J	0.001 J	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B1	02/05/15	8	--	--	--	2.5	0.005 J	<0.001	0.003 J	<0.001	0.0006 J	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B1	02/06/15	10	--	--	--	45	0.024 ^b	<0.0009 ^b	0.26 ^b	0.13 ^b	0.001 ^b J	0.21 ^b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B1	02/06/15	14	--	--	--	26	0.005 J	<0.001	0.26	0.094	<0.0005	0.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B1	02/06/15	15	--	--	--	29	0.009	0.005 J	0.23	0.74	<0.0005	0.089	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B1	02/06/15	20	--	--	--	<0.5	0.001 J	<0.001	0.002 J	0.007	0.004 J	0.002 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B1	02/06/15	25	--	--	--	3.8	0.004 J	0.001 J	0.083	0.35	<0.0005	0.066	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B1	02/06/15	30	--	--	--	140	0.20 J	<0.054	0.45	0.97	<0.027	0.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B2	02/06/15	3	--	--	--	1.0	0.001 J	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B2	02/06/15	8	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B2	02/06/15	10	--	--	--	<0.5	<0.004 J	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B2	02/06/15	15	--	--	--	4.4	0.013	<0.0009	0.002 J	<0.0009	0.002 J	0.001 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B2	02/06/15	20	--	--	--	0.9 J	0.006	<0.001	0.001 J	<0.001	0.001 J	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B2	02/06/15	25	--	--	--	<0.5	0.005	<0.001	0.001 J	<0.001	0.002 J	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B2	02/06/15	30	--	--	--	100	0.071 J	<0.052	0.27	1.1	<0.026	0.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B3	02/05/15	3	--	--	--	0.7 J	0.003 J	<0.001	<0.001	0.003 J	0.002 J	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B3	02/05/15	8	--	--	--	250	0.24 J	<0.050	5.1	6.9	<0.025	5.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B3	02/05/15	10	--	--	--	270	0.15 J	<0.050	3.4	8.6	0.029 J	1.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B3	02/05/15	15	--	--	--	3.6	0.035	<0.001	0.020	0.009	0.011	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B3	02/05/15	20	--	--	--	120	0.17 J	<0.053	4.8	13	<0.026	2.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B3	02/05/15	25	--	--	--	<0.5	0.003 J	<0.0009	0.001 J	0.003 J	0.013	&																	

Table 1
Cumulative Soil Analytical Data
Former Chevron Service Station 90076
4265 Foothill Boulevard
Oakland, California

Sample ID	Date	Depth (fbg)	TOG	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Naphthalene	DIPE	TAME	TBA	ETBE	1,2-DCA	EDB	Other	VOCs	SVOCs	Pesticides/PCBs	Cadmium	Total Chromium	Lead	Nickel	Zinc	
																												Concentrations reported in milligrams per kilogram (mg/kg)
LTC - Direct Contact- 0 to 5 fbg ^a	Residential		--	--	--	--	1.9	--	21	--	--	9.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Commercial		--	--	--	--	8.2	--	89	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
LTC Outdoor Air - 5 to 10 fbg ^a	Residential		--	--	--	--	2.8	--	32	--	--	9.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Commercial		--	--	--	--	12	--	134	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
LTC - Utility Worker - 0 to 10 fbg ^a	Utility Worker		--	--	--	--	14	--	314	--	--	219	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
ESL - Direct Contact Table S-1-(Metals) ^d	Commercial		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	580	No Value	320	11,000	350,000	
	Construction Worker		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	43	No Value	160	86	110,000	
B4	02/05/15	3	--	--	--	0.8 J	0.002 J	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B4	02/05/15	8	--	--	--	<0.5	0.001 J	<0.001	<0.001	<0.001	0.0007 J	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B4	02/05/15	10	--	--	--	16	0.005	<0.001	0.011	0.004 J	0.017	0.013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B4	02/05/15	15	--	--	--	22	0.076	0.001 J	0.21	0.31	0.052	0.23 ^c J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B4	02/05/15	20	--	--	--	74	0.14 J	<0.051	0.82	1.2	<0.026	0.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B4	02/05/15	25	--	--	--	320	0.87	<0.055	4.3	4.0	0.28	0.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B4	02/05/15	30	--	--	--	7.7	0.27	<0.001	0.098	0.006	0.11	0.006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B5	02/04/15	3	--	85	68	<0.5	0.001 J	<0.0009	<0.0009	<0.0009	0.001 J	<0.0009	<0.0009	<0.0009	<0.019	<0.0009	<0.0009	<0.0009	See Table 1A	See Table 1B	ND	0.712	61.8	325	68.5	365		
B5	02/04/15	8	--	<9.9	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	See Table 1A	See Table 1B	ND	<0.0324	70.5	12.4	115	58.4		
B5	02/04/15	10	--	<10	<4.0	<0.5	0.0008 J	<0.0009	<0.0009	0.001 J	0.002 J	<0.0009	<0.0009	<0.018	<0.0009	<0.0009	<0.0009	<0.0009	See Table 1A	See Table 1B	ND	0.0760 J	58.2	3.17	142	35.0		
B5	02/04/15	15	--	<9.9	86	590	0.035 J	1.4	13	55	<0.025	3.2	<0.051	<0.051	<1.0	<0.051	<0.051	<0.051	See Table 1A	See Table 1B	ND	0.0680 J	43.9	3.69	81.4	33.8		
B5	02/04/15	20	--	<10	32	61	<0.025	0.067 J	3.5	13.8	<0.025	1.4	<0.050	<0.050	<0.99	<0.050	<0.050	<0.050	See Table 1A	See Table 1B	ND	0.0843 J	83.9	3.77	127	39.2		
B5	02/04/15	25	--	<9.9	9.2 J	4.1	0.074	0.002 J	0.026	0.045	0.28	0.006	<0.001	<0.001	0.23	<0.001	<0.001	<0.001	See Table 1A	See Table 1B	ND	0.0431 J	41.3	4.97	70.7	44.4		
B5	02/04/15	30	--	<9.9	27	48	<0.026	0.18 J	1.8	8.1	0.055 J	0.20 J	<0.052	<0.052	<1.0	<0.052	<0.052	<0.052	See Table 1A	See Table 1B	ND	0.123 J	46.9	4.55	57.3	39.1		
B6	02/06/15	3	--	--	--	<0.5	0.004 J	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B6	02/06/15	8	--	--	--	18	0.056	0.001 J	0.020	0.004 J	0.011	0.088	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B6	02/06/15	10	--	--	--	130	0.050 J	<0.052	0.28	<0.052	<0.026	0.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B6	02/06/15	15	--	--	--	180	1.4	0.15 J	8.3	0.97	0.088 J	1.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B6	02/06/15	20	--	--	--	940	0.57	0.11 J	10	0.79	<0.025	2.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B6	02/06/15	25	--	--	--	160	0.37	<0.054	0.96	0.057 J	<0.027	0.12 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B6	02/06/15	30	--	--	--	250	0.72	0.61	3.0	6.7	<0.023	0.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-4	02/05/15	3	--	--	--	<0.5	0.001 J	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-4	02/05/15	6	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-5	02/04/15	3	--	--	--	1.2	0.0008 J	<0.001	<0.001	<0.001	0.002 J	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-5	02/04/15	6	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	0.01	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-6	02/04/15	3	--	--	--	<0.5	0.010	<0.001	0.002 J	0.003 J	0.002 J	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-6	02/04/15	6	--	--	--	<0.5	<0.0005	<0.001	<0.001	<0.001	0.0009 J	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
2005 Soil Vapor Probe Installation																												
VP-1	11/21/05	7.0-7.5	--	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	0.001	--	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--
VP-2	11/21/05	6.5-7.0	--	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	0.002	--	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	
VP-3	11/21/05	5.5-6.0	--	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	0.002	--	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	
2003 Well Installation Sampling																												
C-10	08/08/03	10	--	--	--	<1.0	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--
C-10	08/08/03	15	--	--	--	<1.0	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	
C-10	08/08/03	20	--	--	--	<1.0	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	
C-10	08/08/03	25	--	--	--	<1.0	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	
C-10	08/08/03	30	--	--	--	<1.0	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	
1997 Dispenser Island Upgrade and Product Piping Replacement Sampling																												
PL1	07/21/97	4	--	--	--	1.8	0.031	0.016	0.023	0.19	2.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PL2	07/21/97	4	--	--	--	210	0.64	0.90	3.6	11	<2.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PL3	07/21/97	4	--	--	--	34	0.20	0.15	0.88	4.4	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PL4	07/21/97	4	--	--	--	45	<0.0050	<0.0050	0.87	3.5	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PL5	07/21/97	4	--	--	--	130	0.64	0.25	0.71	0.51	6.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1987 - 1996 Well Installation and Soil Boring Sampling																												
C-A	08/13/87	8.5	--	--	--	3,600	33	12	--	350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-A	08/13/87	19	--	--	--	63	2.0	0.1	--	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-A	08/13/87	23.5	--	--	--	52	1.8																					

Table 1
Cumulative Soil Analytical Data
Former Chevron Service Station 90076
4265 Foothill Boulevard
Oakland, California

Sample ID	Date	Depth (fbg)	TOG	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Naphthalene	DIPE	TAME	TBA	ETBE	1,2-DCA	EDB	Other	VOCs	SVOCs	Pesticides/PCBs	Cadmium	Total Chromium	Lead	Nickel	Zinc	Concentrations reported in milligrams per kilogram (mg/kg)
LTC - Direct Contact- 0 to 5 fbg ^a	Residential		--	--	--	--	1.9	--	21	--	--	9.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Commercial		--	--	--	--	8.2	--	89	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
LTC Outdoor Air - 5 to 10 fbg ^a	Residential		--	--	--	--	2.8	--	32	--	--	9.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Commercial		--	--	--	--	12	--	134	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
LTC - Utility Worker - 0 to 10 fbg ^a	Utility Worker		--	--	--	--	14	--	314	--	--	219	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
ESL - Direct Contact Table S-1-(Metals) ^d	Commercial		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	580	No Value	320	11,000	350,000	
	Construction Worker		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	43	No Value	160	86	110,000	
C-1	08/13/87	9	--	--	--	<5	<0.05	<0.1	--	<0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-1	08/13/87	19	--	--	--	<5	<0.05	<0.1	--	<0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-1	08/13/87	29	--	--	--	<5	<0.05	<0.1	--	<0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-2	08/13/87	9	--	--	--	1,200	16	54	--	120	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-2	08/13/87	19	--	--	--	<5	0.07	0.8	--	<0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-2	08/13/87	29	--	--	--	48	0.93	0.1	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-3	08/13/87	9	--	--	--	7	0.05	<0.1	--	0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-3	08/13/87	19	--	--	--	<5	<0.05	<0.1	--	<0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-3	08/13/87	29	--	--	--	<5	<0.05	<0.1	--	<0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-4	08/13/87	9	--	--	--	580	3.9	23	--	46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-4	08/13/87	19	--	--	--	<5	<0.05	<0.1	--	<0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-4	08/13/87	29	--	--	--	<5	<0.05	<0.1	--	<0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-5 (BH-E)	08/01/90	11	--	--	--	54	0.5	1.7	0.8	4.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-5 (BH-E)	08/01/90	16	--	--	--	<10	<0.005	<0.005	<0.005	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-5 (BH-E)	08/01/90	21	--	--	--	<10	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-5 (BH-E)	08/01/90	26	--	--	--	<10	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-6 (BH-F)	08/01/90	16	--	--	--	<10	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-6 (BH-F)	08/01/90	21	--	--	--	<10	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-6 (BH-F)	08/01/90	31	--	--	--	42	0.2	<0.005	0.1	0.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-6 (BH-F)	08/01/90	41	--	--	--	<10	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-7 (BH-G)	07/31/90	11	--	--	--	<10	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-7 (BH-G)	07/31/90	16	--	--	--	<10	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-7 (BH-G)	07/31/90	21	--	--	--	<10	0.02	<0.005	<0.005	<0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-7 (BH-G)	07/31/90	31	--	--	--	<10	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-7 (BH-G)	07/31/90	41	--	--	--	<10	0.007	<0.005	<0.005	<0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-8 (BH-H)	11/01/90	5.5	--	--	--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-8 (BH-H)	11/01/90	40	--	--	--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-8 (BH-H)	11/01/90	45	--	--	--	<10	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-9	07/10/96	10	--	--	--	1.2	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-9	07/10/96	20	--	--	--	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-9	07/10/96	30	--	--	--	1.1	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
C-9	07/10/96	45	--	--	--	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1987 Underground Storage Tank Removal Sampling																												
#1	05/22/87	13.5	--	--	--	<1	<0.005	<0.005	--	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
#2	05/22/87	13.5	--	--	--	<1	<0.005	<0.005	--	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
#3	05/22/87	13.5	--	--	--	<1	<0.005	<0.005	--	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
#4	05/22/87	13.5	--	--	--	<1	0.014	0.038	--	0.020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
#5	05/22/87	12.5	--	--	--	21	0.057	0.092	--	0.029	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
#6	05/22/87	13.5	--	--	--	15	0.010	<0.005	--	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
#7	05/21/87	9.5	100	63	--	--	0.005	0.020	<0.005	<0.005	--	--	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	
#8	05/21/87	9.5	<100	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Table 1
Cumulative Soil Analytical Data
Former Chevron Service Station 90076
4265 Foothill Boulevard
Oakland, California

Sample ID	Date	Depth (fbg)	TOG	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Naphthalene	DIPE	TAME	TBA	ETBE	1,2-DCA	EDB	Other	VOCs	SVOCs	Pesticides/PCBs	Cadmium	Total Chromium	Lead	Nickel	Zinc	
																												Concentrations reported in milligrams per kilogram (mg/kg)
LTC - Direct Contact- 0 to 5 fbg ^a		Residential	--	--	--	--	1.9	--	21	--	--	9.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Commercial	--	--	--	--	8.2	--	89	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LTC Outdoor Air - 5 to 10 fbg ^a		Residential	--	--	--	--	2.8	--	32	--	--	9.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Commercial	--	--	--	--	12	--	134	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LTC - Utility Worker - 0 to 10 fbg ^a		Utility Worker	--	--	--	--	14	--	314	--	--	219	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ESL - Direct Contact Table S-1-(Metals) ^d		Commercial	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	580	No Value	320	11,000	350,000	
		Construction Worker	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	43	No Value	160	86	110,000	

Abbreviations/Notes:

TOG = Total oil and grease analyzed by EPA Method 8015, unless otherwise noted

TPHmo = Total petroleum hydrocarbons as motor oil by EPA Method 8015

TPHd = Total petroleum hydrocarbons as diesel by EPA Method 8015

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8015 unless otherwise noted

Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; before 2003, analyzed by EPA Method 8020 unless otherwise noted

MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B, unless otherwise noted

DIPE = di-isopropyl ether, TAME = t-amyl methyl ether, TBA = tert-butyl alcohol, ETBE = ethyl tertiary butyl ether, 1,2-DCA = 1,2-dichloroethane and EDB = 1,2-Dibromoethane analyzed by EPA Method 8260B, unless otherwise noted.

VOC = Volatile organic compounds by EPA Method 8260B

SVOC = Semi-volatile organic compounds by EPA Method 8270C

Pesticides and polychlorinated biphenyls (PCBs) by EPA Method 8082

Cadmium, chromium, lead, nickel, and zinc by EPA Method 6010B

fbg = feet below grade

-- = not analyzed, not established, or not applicable

<x = Not detected at or above stated laboratory method detection limits

ND = Not detected at or above stated laboratory method detection limits

J = Estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

* Well boring was not converted to a well due to lack of encountered water

a = Low-Threat Underground Storage Tank Case Closure Policy Criteria (LTC) - California State Water Resources Control Board (SWRCB), August 2012, Low-Threat Underground Storage Tank Policy.

b = The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: The secondary vial leaked during re-analysis therefore the matrix effects observed in the initial analysis could not be confirmed. The values reported here are from the initial analysis.

c = The concentration reported for Naphthalene is estimated since it exceeds the calibration range of the instrument when determined by the low level method, but is less than the quantitation limit when determined by the high level method. The result reported is from the high level determination.

d = San Francisco Regional Water Quality Control Board, *Environmental Screening Levels*(ESLs) February 2016 (Rev. 3)

Table 1A

Cumulative Soil Analytical Data - Volatile Organic Compounds (VOCs)
Former Chevron Service Station 90076
4265 Foothill Boulevard
Oakland, California

Sample ID	Date	Depth (fbg)	Acetone	t-Amyl methyl ether	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	2-Butanone	t-Butyl alcohol	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	2-Chloroethyl Vinyl Ether	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	Dibromochloromethane	1,2-Dibromomethane	Dibromomethane	1,2-Dichlorobenzene				
Concentrations in milligrams per kilogram (mg/kg)																																	
B5	02/04/15	3	0.12	<0.0009	0.001 J	<0.0009	<0.0009	<0.0009	<0.0009	<0.002	0.02	<0.019	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.002	<0.002	<0.0009	<0.002	<0.0009	<0.0009	<0.0009	<0.002	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009
B5	02/04/15	8	0.01 J	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
B5	02/04/15	10	<0.006	<0.0009	0.0008 J	<0.0009	<0.0009	<0.0009	<0.0009	<0.002	<0.004	<0.018	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.002	<0.002	<0.0009	<0.002	<0.0009	<0.0009	<0.002	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009
B5	02/04/15	15	<0.35	<0.051	0.035 J	<0.051	<0.051	<0.051	<0.051	<0.10	<0.20	<1.0	1.2	0.47	0.49	<0.051	<0.051	<0.051	<0.10	<0.10	<0.051	<0.10	<0.051	<0.051	<0.10	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051
B5	02/04/15	20	<0.35	<0.050	<0.025	<0.050	<0.050	<0.050	<0.050	<0.099	<0.20	<0.99	0.80	0.27	0.34	<0.050	<0.050	<0.050	<0.099	<0.099	<0.050	<0.10	<0.050	<0.050	<0.099	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
B5	02/04/15	25	0.19	<0.001	0.074	<0.001	<0.001	<0.001	<0.001	<0.002	0.054	0.23	0.018	0.007	0.004 J	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.002	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
B5	02/04/15	30	<0.37	<0.052	<0.026	<0.052	<0.052	<0.052	<0.052	<0.10	<0.21	<1.0	0.17	0.075 J	0.054 J	<0.052	<0.052	<0.052	<0.10	<0.10	<0.052	<0.10	<0.052	<0.052	<0.10	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	
Sample ID	Date	Depth (fbg)	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	1,3-Dichloropropane	2,2-Dichloropropane	1,1-Dichloropropene	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	Ethanol	Ethyl tertiary butyl ether	Ethylbenzene	Freon 113	Hexachlorobutadiene	2-Hexanone	di-Isopropyl ether	Isopropylbenzene	p-Isopropyltoluene	Methyl Tertiary Butyl Eth	4-Methyl-2-pentanone	Methylene Chloride	Naphthalene				
Concentrations in milligrams per kilogram (mg/kg)																																	
B5	02/04/15	3	<0.0009	<0.0009	<0.002	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.094	<0.0009	<0.0009	<0.002	<0.002	<0.003	<0.0009	<0.0009	<0.0009	0.001 J	<0.003	0.003 J	<0.0009				
B5	02/04/15	8	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.10	<0.001	<0.001	<0.002	<0.002	<0.003	<0.001	<0.001	<0.001	<0.0005	<0.003	<0.002	<0.001				
B5	02/04/15	10	<0.0009	<0.0009	<0.002	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.091	<0.0009	<0.0009	<0.002	<0.002	<0.003	<0.0009	<0.0009	<0.0009	0.002 J	<0.003	<0.002	<0.0009				
B5	02/04/15	15	<0.051	<0.051	<0.10	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<5.1	<0.051	13	<0.10	<0.10	<0.051	<0.051	1.1	0.24 J	<0.025	<0.15	<0.10	3.2				
B5	02/04/15	20	<0.050	<0.050	<0.099	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<5.0	<0.050	3.5	<0.099	<0.099	<0.15	<0.050	0.50	0.13 J	<0.025	<0.15	<0.099	1.4				
B5	02/04/15	25	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.10	<0.001	0.026	<0.002	<0.002	<0.003	<0.001	0.008	0.004 J	0.28	<0.003	<0.002	0.006				
B5	02/04/15	30	<0.052	<0.052	<0.10	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<5.2	<0.052	1.8	<0.10	<0.10	<0.16	<0.052	0.16 J	<0.052	0.055 J	<0.16	<0.10	0.20 J				
Sample ID	Date	Depth (fbg)	n-Propylbenzene	Styrene	1,1,1,2-Tetrachloroethane	1,1,1,2,2-Tetrachloroethane	Tetrachloroethene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	m+p-Xylene	o-Xylene													
Concentrations in milligrams per kilogram (mg/kg)																																	
B5	02/04/15	3	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.002	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009													
B5	02/04/15	8	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001													
B5	02/04/15	10	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.002	<0.0009	<0.0009	<0.0009	<0.0009	0.001 J	<0.0009													
B5	02/04/15	15	4.3	<0.051	<0.051	<0.051	<0.051	1.4	0.059 J	<0.051	<0.051	<0.051	<0.051	<0.10	<0.051	24	8.4	<0.051	41	14													
B5	02/04/15	20	2.3	<0.050	<0.050	<0.050	<0.050	0.067 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099	<0.050	13	4.4	<0.050	11	2.8													
B5	02/04/15	25	0.028	<0.001	<0.001	<0.001	<0.001	0.002 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	0.040	0.014	<0.001	0.033	0.012													
B5	02/04/15	30	0.68	<0.052	<0.052	<0.052	<0.052	0.18 J	<0.052	<0.052	<0.052	<0.052	<0.052	<0.10	<0.052	3.2	1.1	<0.052	6.3	1.8													

Notes:

All analytes were analyzed by EPA Method 8260 Full Scan.

<x = Not detected above method detection limit

a = Low-Threat Underground Storage Tank Case Closure Policy Criteria - California State Water Resources Control Board (SWRCB), August 2012, Low-Threat Underground Storage Tank Policy.

Table 1B

Cumulative Soil Analytical Data - Semi Volatile Organic Compounds (SVOCs)
Former Chevron Service Station 90076
4265 Foothill Boulevard
Oakland, California

Sample ID	Date	Depth (fbg)	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene *	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	4-Bromophenyl-phenylether	Butylbenzylphthalate	Di-n-butylphthalate	Carbazole	4-Chloro-3-methylphenol	4-Chloroaniline	Bis (2-Chloroethoxy) methi	Bis (2-Chloroethyl) ether	2-Chloronaphthalene	2-Chlorophenol	4-Chlorophenyl-phenyleth	2,2'-oxybis (1-Chloroprope	Chrysene	Dibenz (a,h) anthracene	Dibenzofuran	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	3,3'-Dichlorophenol	2,4-Dichlorophenol				
Concentrations in milligrams per kilogram (mg/kg)																																		
B5	02/04/15	3	0.005 J	0.010 J	0.017	0.056	0.078	0.078	0.073	0.050	<0.017	<0.066	<0.066	<0.017	<0.017	<0.017	<0.017	<0.017	<0.007	<0.017	<0.017	<0.017	0.094	0.007 J	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	
B5	02/04/15	8	<0.003	<0.003	<0.003	0.006 J	0.007 J	0.008 J	0.006 J	0.005 J	<0.017	<0.066	<0.066	<0.017	<0.017	<0.017	<0.017	<0.017	<0.007	<0.017	<0.017	<0.017	0.008 J	<0.003	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017
B5	02/04/15	10	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.017	<0.066	<0.066	<0.017	<0.017	<0.017	<0.017	<0.017	<0.007	<0.017	<0.017	<0.017	<0.003	<0.003	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017
B5	02/04/15	15	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.017	<0.067	<0.067	<0.017	<0.017	<0.017	<0.017	<0.017	<0.007	<0.017	<0.017	<0.017	<0.003	<0.003	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017
B5	02/04/15	20	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.018	<0.073	<0.073	<0.018	<0.018	<0.018	<0.018	<0.018	<0.008	<0.018	<0.018	<0.018	<0.004	<0.004	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018
B5	02/04/15	25	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.017	<0.067	<0.067	<0.017	<0.017	<0.017	<0.017	<0.017	<0.007	<0.017	<0.017	<0.017	<0.003	<0.003	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017
B5	02/04/15	30	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.017	<0.067	<0.067	<0.017	<0.017	<0.017	<0.017	<0.017	<0.007	<0.017	<0.017	<0.017	<0.003	<0.003	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017
Sample ID	Date	Depth (fbg)	Diethyl phthalate	2,4-Dimethylphenol	Dimethylphthalate	4,6-Dinitro-2-methylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	bis (2-Ethylhexyl) phthalat	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadie	Hexachloroethane	Indeno (1,2,3-cd) pyrene	Isophorone	2-Methylnaphthalene	2-Methylphenol	4-Methylphenol	Naphthalene	2-Nitroaniline	3-Nitroaniline	4-Nitroaniline	Nitrobenzene	2-Nitrophenol	4-Nitrophenol	N-nitroso-di-n-propylamir					
Concentrations in milligrams per kilogram (mg/kg)																																		
B5	02/04/15	3	<0.066	<0.017	<0.066	<0.17	<0.30	<0.066	<0.017	<0.066	0.15	0.006 J	<0.003	<0.017	<0.17	<0.033	0.053	<0.017	0.009 J	<0.017	<0.017	0.020	<0.017	<0.066	<0.066	<0.017	<0.017	<0.17	<0.017	<0.017	<0.017	<0.017		
B5	02/04/15	8	<0.066	<0.017	<0.066	<0.17	<0.30	<0.066	<0.017	<0.066	0.013 J	<0.003	<0.003	<0.017	<0.17	<0.033	0.006 J	<0.017	<0.003	<0.017	<0.017	<0.003	<0.017	<0.066	<0.066	<0.017	<0.017	<0.17	<0.017	<0.017	<0.017	<0.017		
B5	02/04/15	10	<0.066	<0.017	<0.066	<0.17	<0.30	<0.066	<0.017	<0.066	<0.003	<0.003	<0.003	<0.017	<0.17	<0.033	<0.003	<0.017	<0.003	<0.017	<0.017	<0.003	<0.017	<0.066	<0.066	<0.017	<0.017	<0.17	<0.017	<0.017	<0.017	<0.017		
B5	02/04/15	15	<0.067	<0.017	<0.067	<0.17	<0.30	<0.067	<0.017	<0.067	<0.003	<0.003	<0.003	<0.017	<0.17	<0.033	<0.003	<0.017	0.18	<0.017	<0.017	0.19	<0.017	<0.067	<0.067	<0.017	<0.017	<0.17	<0.017	<0.017	<0.017	<0.017		
B5	02/04/15	20	<0.073	<0.018	<0.073	<0.18	<0.33	<0.073	<0.018	<0.073	<0.004	<0.004	<0.004	<0.018	<0.18	<0.037	<0.004	<0.018	0.011 J	<0.018	<0.018	0.008 J	<0.018	<0.073	<0.073	<0.018	<0.018	<0.18	<0.018	<0.018	<0.018	<0.018		
B5	02/04/15	25	<0.067	<0.017	<0.067	<0.17	<0.30	<0.067	<0.017	<0.067	<0.003	<0.003	<0.003	<0.017	<0.17	<0.033	<0.003	<0.017	0.009 J	<0.017	<0.017	0.006 J	<0.017	<0.067	<0.067	<0.017	<0.017	<0.17	<0.017	<0.017	<0.017	<0.017		
B5	02/04/15	30	<0.067	0.068	<0.067	<0.17	<0.30	<0.067	<0.017	<0.067	<0.003	<0.003	<0.003	<0.017	<0.17	<0.033	<0.003	<0.017	0.075	<0.017	<0.017	0.085	<0.017	<0.067	<0.067	<0.017	<0.017	<0.17	<0.017	<0.017	<0.017	<0.017		
Sample ID	Date	Depth (fbg)	N-Nitrosodiphenylami	Di-n-octylphthalate	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	1,2,4-Trichlorobenzen	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol																							
Concentrations in milligrams per kilogram (mg/kg)																																		
B5	02/04/15	3	<0.017	<0.066	<0.033	0.099	<0.017	0.16	<0.017	<0.017	<0.017																							
B5	02/04/15	8	<0.017	<0.066	<0.033	0.007 J	<0.017	0.015 J	<0.017	<0.017	<0.017																							
B5	02/04/15	10	<0.017	<0.066	<0.033	<0.003	0.91	<0.003	<0.017	<0.017	<0.017																							
B5	02/04/15	15	<0.017	<0.067	<0.033	0.004 J	0.81	0.003 J	<0.017	<0.017	<0.017																							
B5	02/04/15	20	<0.018	<0.073	<0.037	<0.004	1.1	<0.004	<0.018	<0.018	<0.018																							
B5	02/04/15	25	<0.017	<0.067	<0.033	<0.003	1.6	<0.003	<0.017	<0.017	<0.017																							
B5	02/04/15	30	<0.017	<0.067	<0.033	<0.003	2.0	0.004 J	<0.017	<0.017	<0.017																							

Notes:

All analytes were analyzed by EPA Method 8270 Full Scan.

<x = Not detected above method detection limit

* = According to the California State Water Resources Control Board (SWRCB), August 2012, Low-Threat Underground Storage Tank Policy, Table 1 "Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health"

Benzo(a)pyrene maximum concentrations in soil are as follows:

Commercial Direct Contact (0-5 fbg): 0.68 mg/kg

Commercial Volatilization to Outdoor Air (5-10 fbg): NA

Utility Worker Direct Contact (0-10 fbg): 4.5 mg/kg

Table 2
Cumulative Soil Vapor Analytical Results
Former Chevron Service Station 90076
4265 Foothill Boulevard
Oakland, California

Sample ID	Date	Probe Depth (fbg)	TPHg	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylenes	MTBE	Naphthalene	Naphthalene (TO-17)	Aliphatic Hydrocarbons				Aromatic Hydrocarbons		O ₂	Nitrate as Nitrogen	CO ₂	CH ₄	He	
												C5 - C6	>C6 - C8	>C8 - C10	>C10 - C12	>C8 - C10	>C10 - C12						
												Concentrations are in micrograms per cubic meter (µg/m ³)				Reported in % Volume							
LTC - Soil Gas Criteria			Residential	NE	85	NE	1,100	NE	NE	NE	93	93	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
No Bioattenuation Zone (02<4%)^a			Commercial	NE	280	NE	3,600	NE	NE	NE	310	310	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
LTC - Soil Gas Criteria			Residential	NE	85,000	NE	1,100,000	NE	NE	NE	93,000	93,000	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Bioattenuation Zone (02>4%)^a			Commercial	NE	280,000	NE	3,600,000	NE	NE	NE	310,000	310,000	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
VP-1	08/13/12	5.25-5.75	650	<2.7	12	29	96	69	<3.1	<18	--	<55	<70	<100	<120	410	<94	1.7	81	17	0.00020	<0.086	
VP-1	02/17/15	5.25-5.75	<470	<3.7	<4.4	<5.0	<5.0	<5.0	<4.2	<24	<4.2	<75	<65	<130	<160	<110	<130	10	83	7.2	<0.00023	<0.12	
VP-2	08/13/12	5.25-5.75	<3,400	<54	<63	<73	<73	<73	<60	<350	--	<1,100	6,600	<2,000	<2,300	<1,600	<1,800	1.9	82	15	0.77	<0.084	
VP-2	02/17/15	5.25-5.75	Not Sampled Due to Water in the Tubing																				
VP-3	08/13/12	5.25-5.75	<160	<2.5	<3.0	<3.4	<3.4	<3.4	<2.8	<16	--	<51	<65	<92	<110	<78	<87	3.1	84	13	0.00016	<0.079	
VP-3 DUP	08/13/12	5.25-5.75	<160	<2.5	<3.0	<3.4	<3.4	<3.4	<2.8	<16	--	<51	<65	<92	<110	<78	<87	2.8	84	13	<0.00016	<0.079	
VP-3	02/17/15	5.25-5.75	<490	<3.8	<4.5	<5.2	8.0	5.7	<4.3	<25	4.5	<78	<98	<140	<170	<120	<130	5.5	85	9.5	<0.00024	<0.12	
VP-4	02/17/15	5.50-5.75	<470	<3.7	<4.4	<5.0	<5.0	<5.0	<4.2	<24	<4.2	<75	<95	<140	<160	<110	<130	4.3	88	7.4	<0.00023	<0.12	
VP-5	02/17/15	5.50-5.75	23,000	220	130	16	41	17	1,500	<25	10	7,600	11,000	1,000	230	<120	<130	2.5	78	12	7.9	<0.12	
VP-5 DUP	02/17/15	5.50-5.75	25,000	220	130	16	42	16	1,500	<24	--	7,600	11,000	940	170	<110	<130	2.4	77	12	8.0	0.22	
VP-5	02/24/16	5.50-5.75	86,000	54	<33	<38	<38	<38	1,800	<91	<5.0	30,000	69,000	2,200	<1,200	<860	<960	1.5	76	17	5.2	<0.13	
VP-6	02/17/15	5.50-5.75	62,000	92	150	61	170	86	<20	<110	4.3	24,000	10,000	2,900	<760	<540	<600	6.1	94	0.10	0.0035	<0.11	
VP-6	02/24/16	5.50-5.75	<570	<4.5	<5.3	<6.1	<6.1	<6.1	<5.0	<15	<5.0	<91	<110	<160	<200	<140	<150	13	81	6.20	<0.00028	<0.14	
VP-6 DUP	02/24/16	5.50-5.75	<570	<4.4	<5.2	<6.0	<6.0	<6.0	<5.0	<14	<5.0	<90	<110	<160	<190	<140	<150	13	81	6.1	<0.00028	<0.14	
VP-7	11/08/17	7.0	Not Sampled Due to Water in the Tubing																				

Notes:

TPHg, Benzene, toluene, ethylbenzene, m,p-xylene, o-xylene, MTBE, and naphthalene by Modified EPA Method TO-15
 Oxygen (O₂), methane (CH₄), and carbon dioxide (CO₂) analyzed by ASTM D-1946M
 Aliphatic Hydrocarbons (C5-C6 Pentane + Hexane; >C6-C8 Heptane; >C8-C10 Decane; and >C10-C12 Dodecane) by Modified EPA Method TO-15 APH
 Aromatic Hydrocarbons (>C8-C10 1,2,3-TMB and >C10-C12 1,2,4,5-TMB) by Modified EPA Method TO-15 APH
 TPHg = Totally petroleum hydrocarbons as gasoline
 MTBE = Methyl tertiary butyl ether
 ESL = Environmental screening levels
 <x = Not detected above method detection limit
 fbg = Feet below grade
 DUP = Field duplicate
bold = concentrations detected at or above Soil Gas ESLs
 a = Table E-2 - Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns from Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater prepared by the California Regional Water Quality Control Board - San Francisco Bay Region, Interim Final November 2007, revised May 2008.
 b = Field duplicate collected simultaneously with original sample
 NE = Not established

Appendix A

Regulatory Correspondence

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

REBECCA GEBHART, Interim Director



DEPARTMENT OF ENVIRONMENTAL HEALTH
LOCAL OVERSIGHT PROGRAM (LOP)
For Hazardous Materials Releases
1131 HARBOR BAY PARKWAY, SUITE 250
ALAMEDA, CA 94502
(510) 567-6700
FAX (510) 337-9335

September 18, 2017

Mr. David Patten
Chevron Environmental Management Co.
6101 Bollinger Canyon Rd.
San Ramon, CA 94583
(Sent via electronic mail to: drpatten@chevron.com)

Loi Van Le & Josephine N. Le
4265 Foothill Blvd.
Oakland, CA 94601

Subject: Modified Work Plan Approval; Fuel Leak Case No. RO0000427 and GeoTracker Global ID T0600100339, Chevron #9-0076, 4265 Foothill Blvd, Oakland, CA 94601

Dear Mr. Patten and Mr. and Ms. Le:

Alameda County Department of Environmental Health (ACDEH) staff has reviewed the case file for the above referenced site including the *First Quarter 2017 Groundwater Monitoring and Sampling Report*, dated May 5, 2017, and the *Sol Vapor Intrusion Assessment Work Plan*, dated July 25, 2017. These documents

Based on ACEH staff review of the work plan, the proposed scope of work is conditionally approved for implementation provided that the technical comments below are incorporated during the proposed work. Submittal of a revised work plan or a work plan addendum is not required unless an alternate scope of work outside that described in the work plan or these technical comments is proposed. We request that you address the following technical comments, perform the proposed work, and send us the report described below. Please provide 72-hour advance written notification to this office (e-mail preferred to: mark.detterman@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Modified Work Plan Addendum Approval** –The referenced work plan proposes a series of actions with which ACDEH is in general agreement of undertaking; however, ACDEH requests several modifications to the approach. Please submit a report by the date specified below.
 - a. **Outdoor Ambient Air Sample Location** – Consistent with the Department of Toxic Substances Control (DTSC) *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance or VIG)*, dated October 2011, ACDEH requests the relocation of the outdoor ambient air sample to a location upwind of the subsurface contaminant plume. The VIG states that ambient air samples should be collected at locations not influenced by subsurface contamination, and lists seven considerations when collecting outdoor ambient air samples, including location away from service stations and upwind of a building at a distance equal to twice the height of the building. This appears to necessitate the relocation of the outdoor ambient sample west of the apartment building of interest. Should an outdoor ambient sample be additionally collected as proposed it can be used to assess the potential vapor content input from the service station or contaminant plume to the crawl space of the apartment building.
2. **Semi-Annual Groundwater Monitoring** – Please continue to conduct semi-annual groundwater monitoring at the subject site. Please submit groundwater monitoring reports by the date identified below.

Mr. Horne and Mr. and Ms. Le
RO0000427
September 18, 2017, Page 2

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACDEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the following specified file naming convention, and in Attachment 1, and schedule:

- **December 18, 2017** – Site Investigation Report and Updated Focused Site Conceptual Model
File to be named RO427_SWI_R_YYYY-mm-dd
- **December 18, 2017** – Second Semi-Annual 2017 Groundwater Monitoring Report (Can be combined with above report); File to be named: RO427_GWM_R_YYYY-mm-dd
- **May 25, 2018** – First Semi-Annual 2018 Groundwater Monitoring Report
File to be named: RO427_GWM_R_YYYY-mm-dd

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

Online case files are available for review at the following website: <http://www.acgov.org/aceh/index.htm>.

If your email address does not appear on the cover page of this notification, ACDEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

Should you have any questions, please contact me at (510) 567--6876 or send me an electronic mail message at mark.detterman@acgov.org.

Sincerely,



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

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

cc: Kiersten Hoey, GHD, Inc., 5900 Hollis Street, Suite A, Emeryville, CA 94608
(Sent via electronic mail to: Kiersten.Hoey@ghd.com)

Greg Barclay, GHD, Inc., 5900 Hollis Street, Suite A, Emeryville, CA 94608
(Sent via electronic mail to: Greg.Barclay@ghd.com)

Dilan Roe, ACDEH, (Sent via electronic mail to: dilan.roe@acgov.org)
Paresh Khatri, ACDEH; (Sent via electronic mail to: paresh.khatri@acgov.org)
Mark Detterman, ACDEH, (Sent via electronic mail to: mark.detterman@acgov.org)
Electronic File; GeoTracker

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

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

ELECTRONIC SUBMITTAL OF REPORTS

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

ACKNOWLEDGEMENT STATEMENT

All work plans, technical reports, or technical documents submitted to ACDEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6731, 6735, and 7835) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately licensed or certified professional. For your submittal to be considered a valid technical report, you are to present site-specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this case meet this requirement. Additional information is available on the Board of Professional Engineers, Land Surveyors, and Geologists website at: <http://www.bpelsq.ca.gov/laws/index.shtml>.

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

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

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	REVISION DATE: December 1, 2016
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010; May 15, 2014, November 29, 2016
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions


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

REQUIREMENTS

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

RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

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

Appendix B

Summary of Environmental Investigation and Remediation

Appendix B

Summary of Environmental Investigations and Remediation – Former Chevron 90076

May 1987 Tank Removal and Replacement

In May 1987, Blaine Tech Services removed three (8,000-, 6,000-, and 3,000-gallon) steel fuel underground storage tanks (USTs) and one 1,000-gallon fiberglass used-oil UST. An unknown volume of excavated backfill material was aerated and reused onsite. Additional impacted soil was disposed of at a Chevron approved, non-hazardous landfill. Three 10,000-gallon double-walled fiberglass USTs were installed in the same excavation in June 1987. The used-oil UST was not replaced. Soil samples were collected beneath the former fuel USTs and use-oil UST. Details are available in Blaine Tech's August 14, 1987 *Product and Waste Oil Tank Removal*.

July 1987 Excavation

On July 8, 1987, during excavation work to install a sign along Foothill Boulevard, petroleum hydrocarbon odors and a small amount of water with product sheen was reported in the excavated pit at 11 feet below grade (fbg). Details are available in Weiss Associates' (Weiss) December 18, 1990 *Subsurface Investigation Report*.

August 1987 Well Installation

In August 1987, Pacific Environmental Group, Inc. (PEG) oversaw the advancement of soil boring C-A and drilling/ installation of 3-inch diameter groundwater monitoring wells C-1 through C-4. Light non-aqueous phase liquid (LNAPL) at a measured thickness of greater than 2.0 feet was reported in well C-2. As a result, well C-2 was not sampled. Details are available in PEG's September 23, 1987 *Soil and Groundwater Investigation Report*.

July/August 1990 Monitoring Well Installation

In July and August 1990, Weiss oversaw the drilling /installation of 2-inch diameter wells C-5 through C-7. Well C-8 was subsequently installed in November 1990. No hydrocarbons were detected in soil samples collected from C-8. Weiss also conducted a well survey within a one-half mile radius of the site. Forty wells were identified within the search area. Of these, two were cathodic protection wells, one was identified as irrigation well and one other identified as industrial. The remaining 36 wells were identified as monitoring wells. The irrigation well was reported less than 0.75 miles upgradient of the site. No domestic or municipal water supply wells were identified within the search area. Based on depth to water measurements, Weiss suggested that groundwater beneath the site may be perched. Depth to water in onsite well C-4 and offsite well C-6 differed by approximately 14 feet in 1990. Details are available in Weiss's December 18, 1990 *Subsurface Investigation Report*.

November 1991 Groundwater Extraction

In an attempt to achieve hydraulic control of dissolved-phase hydrocarbons, Weiss began operating a groundwater extraction system in well C-2 in November 1991. The system operated until October 1993 and extracted approximately 10,200 gallons of impacted groundwater. System operations were terminated due to noise complaints from the neighbors and low flow rates. Details were obtained from Weiss's July 30, 1993 *Monthly Monitoring Report*.

July 1996 Well Installation

PEG oversaw the drilling/installation of 2-inch diameter well C-9 on July 10, 1996, downgradient of C-7, in the Albertson's supermarket parking lot (currently, a Mi Pueblo Supermarket). Details are available in PEG's October 2, 1996 *Off-Site Monitoring Well Installation Report*.

July 1997 Product Line Upgrades

In July 1997, Gettler-Ryan (G-R) collected soil samples during partial product piping replacement in conjunction with dispenser and UST containment upgrades. Soil was excavated beneath the dispensers to accommodate new containment requirements and beneath the product piping. Compliance soil samples PL1 through PL5 were collected at approximately 4 fbg. Approximately 46 tons of soil were excavated and disposed of offsite. Details are available in G-R's September 24, 1997, *Soil Sampling During Product Dispenser Upgrade and Partial Product Line Replacement Report*.

1998-2000 Site Conceptual Model and Risk-Based Corrective Action (RBCA) Plan

In May 1998, Delta Environmental Consultants, Inc. (Delta) completed a RBCA evaluation using analytic results from previous soil and groundwater assessment activities. This was followed by a site conceptual model (SCM) and proposed RBCA plan. The SCM indicated that the primary potential exposure receptors are current and future residents of properties near the intersection of High and Bond Streets and, possibly, workers and customers in the Albertson's parking lot. The only complete exposure pathway would be hydrocarbon volatilization from groundwater to outdoor and indoor air. Secondary potential exposure pathways are hydrocarbon volatilization from soil or direct dermal contact. A Tier 2 RBCA analysis was performed and showed that onsite and offsite representative concentrations exceeded the site-specific target levels for benzene. Delta concluded the adjacent residence with a basement may be at risk for benzene inhalation and recommended that site specific soil vapor samples be collected to evaluate current soil vapor levels. Delta also recommended continued use of oxygen releasing compound to enhance bioremediation and a continuation of over-purging C-1 through C-4. Details are available in Delta's July 28, 2000 *Site Conceptual Model and Risk-Based Corrective Action Plan*.

August 2003 Well Installation

In August 2003, Cambria Environmental Technology, Inc (Cambria) oversaw the drilling/installation of monitoring well C-10 in the eastern corner of the site to further evaluate subsurface conditions onsite and possible offsite impacts from the adjacent station. Details are available in Cambria's October 8, 2003 *Well Installation Report/Site Summary*.

November 2005 Vapor Probe Installation

In November 2005, Cambria oversaw the installation of soil vapor probes VP-1, VP-2, and VP-3 on the southern corner of the site to determine soil vapor concentrations along the downgradient property boundary. No formal report was submitted to the agency, detailing the work; however details of this investigation were submitted to ACEH on July 12, 2012.

August 2012 Soil Vapor Sampling and Preferential Pathway Study

In August 2012, Conestoga-Rovers & Associates (CRA) collected soil vapor samples from vapor probes VP-1, VP-2, and VP-3 to assess vapor conditions downgradient of well C-2. Hydrocarbons were only detected in the sample from VP-1. CRA also conducted a preferential pathway study. Based on historic groundwater monitoring and sampling data and depth of water, electrical, natural gas, and telecommunication utilities, it is unlikely that these utilities serve as preferential pathways. Sanitary sewer and storm drain lines are generally gravity fed, installed at depths deeper than 10 fbg, and backfilled with native material (permeability likely similar to native soils). Based on this, although it is possible that the

deeper sanitary sewer and/or storm drain lines may act as a preferential pathway during high groundwater conditions, these conditions are not typical. Additional information is available in CRA's September 14, 2012 *Soil Vapor Sampling, Preferential Pathway Study, and Work Plan*.

February 2015 Subsurface Investigation

In February 2015, CRA advanced soil borings B-1 through B-6 to assess the first generation dispensers, including the area of former boring C-A and the former used-oil UST areas. To further evaluate dissolved hydrocarbon concentrations in shallow groundwater downgradient, CRA installed offsite monitoring well C-11 to 20 fbg, adjacent to well C-7. CRA attempted to install a shallow well adjacent to offsite well C-6, but no water was encountered, so a well was not installed. To assess potential vapor intrusion risks to adjacent properties, CRA installed soil vapor probes VP-4, VP-5, and VP-6 along the southern and western property boundaries. Additional information is available in CRA's April 15, 2015 *Site Investigation Report, Updated Focused Site Conceptual Model, and Work Plan*.

February 2016 Subsurface Investigation

In February 2016, GHD installed monitoring well C-13 to assess the groundwater concentrations along the western perimeter of the site and investigate an apparent vapor source, and advanced soil boring B-7 to confirm soil concentrations along the southern margin of the site. GHD also sampled existing soil vapor probes VP-5 and VP-6. Additional information is available in GHD's June 3, 2016 *Site Investigation Report and Updated Focused Site Conceptual Model*.

Appendix C Drilling Permit

Alameda County Public Works Agency - Water Resources Well Permit



Public Works Agency
—Alameda County—

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 10/30/2017 By jamesy

Permit Numbers: W2017-0829
Permits Valid from 11/02/2017 to 11/02/2017

Application Id: 1508983193193
Site Location: 4265 Foothill Blvd, Oakland, CA, USA
Project Start Date: 11/02/2017
Assigned Inspector: Contact Marcelino Vialpando at (510) 670-5760 or Marcelino@acpwa.org

City of Project Site:Oakland

Completion Date:11/02/2017

Applicant: GHD Services - Jessica Hudnall
5900 Hollis Street, Suite A, Emeryville, CA 94608
Property Owner: Dave Patten
6001 Bollinger Canyon Rd, San Ramon, CA 94583
Client: Jessica Hudnall
5900 Hollis Street, Suite A, Emeryville, CA 94608

Phone: 510-420-3372

Phone: 925-842-7877

Phone: 510-420-0700

Receipt Number: WR2017-0513 Total Due: \$265.00
Payer Name : GHD Services, Inc. Total Amount Paid: \$265.00
Paid By: CHECK PAID IN FULL

Works Requesting Permits:

Borehole(s) for Investigation-Vapor Sampling 24 to 48 hours only - 1 Boreholes
Driller: VTS Drilling LLC - Lic #: 916085 - Method: Hand

Work Total: \$265.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2017-0829	10/30/2017	01/31/2018	1	4.00 in.	7.00 ft

Specific Work Permit Conditions

1. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
2. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, property damage, personal injury and wrongful death.
3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned.
4. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost and liability in connection with or resulting from the exercise of this Permit including, but not limited to, property damage, personal injury and wrongful death.
5. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting,

Alameda County Public Works Agency - Water Resources Well Permit

once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

7. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

8. Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site. Submission dates are set by a Regional Water Board or by a regulatory agency. Once a report/data is successfully uploaded, as required, you have met the reporting requirement (i.e. the compliance measure for electronic submittals is the actual upload itself). The upload date should be on or prior to the regulatory due date.

9. NOTE:

Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

10. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Temp Vapor wells shall not be converted to monitoring Vapor wells, without a separate permit application process.

11. Vapor monitoring wells constructed with tubing shall be decommissioned by complete removal of tubing, grout seal, and fill material of sand or bentonite. Fill material may be removed by hand auger if material can be removed completely.

Vapor monitoring wells constructed with pvc pipe less than 2" shall be overdrilled to total depth.

Vapor monitoring wells constructed with 2" pvc pipe or larger may be grouted by tremie pipe (any depth) or pressure grouted (less than 30', 25 psi for 5 min).

Appendix D Boring Log



GHD Services Inc.
 5900 Hollis Street, Suite A
 Emeryville, California
 Telephone: 510-420-0700
 Fax: 510-420-9170

BORING / WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	VP-7
JOB/SITE NAME	Chevron Service Station 90076	DRILLING STARTED	02-Nov-17
LOCATION	4265 Foothill Boulevard, Oakland, CA	DRILLING COMPLETED	02-Nov-17
PROJECT NUMBER	311977	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	VTS Drilling LLC, C-57# 916085	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Hand auger	TOP OF CASING ELEVATION	NA
BORING DIAMETER	2.75"	SCREENED INTERVALS	NA
LOGGED BY	J.Hudnall	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Wilken, PG# 7564	DEPTH TO WATER (Static)	NA

REMARKS

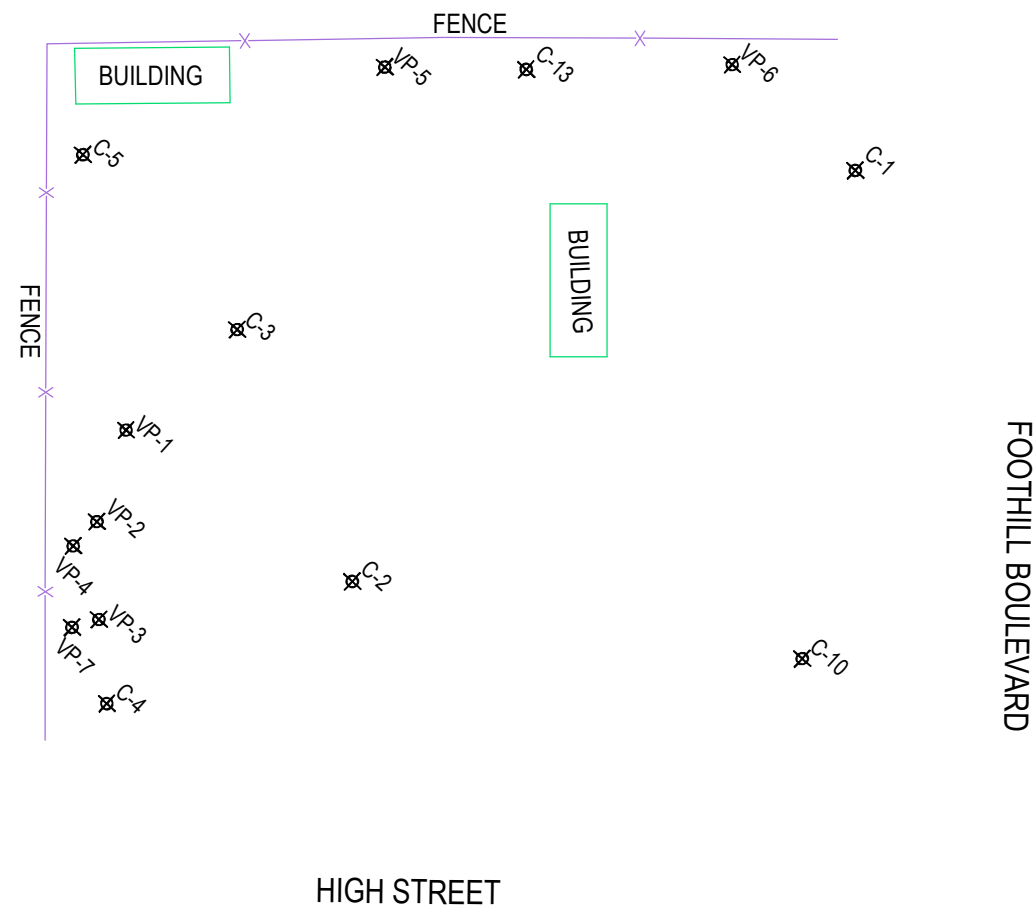
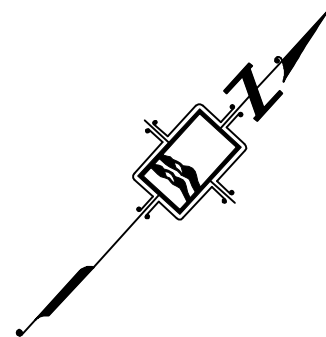
WELL LOG (PID) C:\USERS\BFG\APPDATA\LOCAL\MICROSOFT\WINDOWS\TEMPORARY INTERNET FILES\CONTENT\OUTLOOK\5508AA0D\311977-33-APPD VP7.GPJ DEFAULT.GDT 13/12/17

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				0.0			ASPHALT	0.3	<p>Hydrated Bentonite</p> <p>Dry Bentonite</p> <p>Monterey Sand #2/12 1/4" stainless steel screen Monterey Sand #2/12</p> <p>Bottom of Boring @ 7.5 fbg</p>
				0.5			FILL: well graded gravel with silt, dark brown, rounded gravel, dry.		
					ML		SILT with Sand: Grayish brown; 65% silt, 25% fine sand, 10% clay, moist, high plasticity.		
0.0		VP7-S-3-171102					@ 2.5fbg: Black, increase clay.	3.0	
					SM		Silty SAND: Light brown; 70% medium to coarse sand, 20% silt, 10% fine gravel, mottled orange-red, moist.		
				5					
					GM		Well graded GRAVEL with silt and sand: Light brown; 70% fine to coarse gravel, %20 fine to medium sand, 10% silt, moist, angular gravel.		
0.0		VP7-S-7-171102					@ 6.5fbg: Grayish brown.	5.0	
					SM		Silty SAND: Light grayish brown; 70% fine to coarse sand, 15% silt, 15% fine gravel, moist.	7.0	
								7.5	

Appendix E

VP-7 Location Survey

DESC.	NORTHING	EASTING	LATITUDE	LONGITUDE	EL. PVC	EL. RIM
C-1	2109146.1	6066818.3	37.7748960	-122.2122443	40.69	41.44
C-2	2109012.1	6066798.7	37.7745271	-122.2123036	40.05	41.22
C-3	2109034.7	6066745.6	37.7745947	-122.2124889	40.62	41.41
C-4	2108958.9	6066778.1	37.7743799	-122.2123715	38.69	39.56
C-5	2109039.9	6066697.3	37.7745983	-122.2126562	41.11	41.53
C-6	2108887.0	6066696.7	37.7741784	-122.2126486	37.94	38.52
C-7	2108807.1	6066745.4	37.7739615	-122.2124750	N/A	38.04
C-8	2108769.3	6066598.6	37.7738520	-122.2129805	37.22	37.72
C-9	2108700.9	6066677.3	37.7736664	-122.2127039	N/A	36.98
C-10	2109063.5	6066878.7	37.7746722	-122.2120301	40.96	41.26
C-11	2108808.1	6066772.0	37.7739656	-122.2123831	36.79	37.43
C-13	2109115.2	6066753.5	37.7748080	-122.2124666	42.02	42.47
VP-1	2109003.6	6066742.6				
VP-2	2108985.4	6066751.0				
VP-3	2108970.7	6066765.1				
VP-4	2108978.4	6066750.1				
VP-5	2109095.8	6066731.4				
VP-6	2109145.1	6066748.5				
VP-7	2108965.8	6066762.0				



1255 Starboard Drive
 West Sacramento ~ CA ~ 95691
 Phone: 916-372-8124
 Fax: 916-372-8538
 Email: matt@morrowssurveying.com
 www.morrowssurveying.com

DATE: March, 2015
 DATE SURVEYED: 2-25-15,
 2-29-16 SF, 11-8-17
 SCALE: 1"=40'
 SHEET 1 OF 1
 FIELD BOOK: DRAWING NO. :
 0857-184
 DRAWN BY: MM

BASIS OF COORDINATES & ELEVATIONS:

COORDINATES ARE CALIFORNIA STATE PLANE ZONE 3
 COORDINATES FROM GPS OBSERVATIONS USING CSDS
 VIRTUAL SURVEY NETWORK.

COORDINATE DATUM IS NAD 83.

REFERENCE GEOID IS GEOID03.

VERTICAL DATUM IS NAVD 88 FROM GPS OBSERVATIONS.

Monitoring Well Exhibit
 Prepared for:
 GHD

PROJECT

4265 Foothill Blvd.
 City of Oakland Alameda County
 California

Appendix F

Photo VP-7 Tubing

Appendix F

VP-7 Tubing



Appendix G

Laboratory Analytical Reports for Soil



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Report Date: November 13, 2017 22:50

Project: 90076

Account #: 10880
Group Number: 1871215
PO Number: 0015260665
Release Number: PATTEN
State of Sample Origin: CA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/> . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To GHD
Electronic Copy To Chevron

Attn: Kiersten Hoey
Attn: GHD EDD

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
VP7-S-3-171102 Grab Soil	11/02/2017 08:20	9300056
VP7-S-7-171102 Grab Soil	11/02/2017 08:40	9300057

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: VP7-S-3-171102 Grab Soil
Facility# 90076 CRAW
4265 Foothill Blvd-Oakland T0600100339

ChevronTexaco
ELLE Sample #: SW 9300056
ELLE Group #: 1871215
Matrix: Soil

Project Name: 90076

Submittal Date/Time: 11/03/2017 09:45
Collection Date/Time: 11/02/2017 08:20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260B	mg/kg	mg/kg	
10237	Benzene	71-43-2	N.D.	0.0005	0.005	1.01
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.005	1.01
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	1.01
10237	Naphthalene	91-20-3	N.D.	0.001	0.005	1.01
10237	Toluene	108-88-3	N.D.	0.001	0.005	1.01
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1.01
GC Volatiles			SW-846 8015B modified	mg/kg	mg/kg	
01725	TPH-GRO N. CA soil C6-C12	n.a.	N.D.	0.5	1	24.63

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs 8260 BTEX/MTBE/Naph Soil	SW-846 8260B	1	B173151AA	11/11/2017 17:13	Jennifer K Howe	1.01
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201730847772	11/04/2017 18:02	Rebecca Williams	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201730847772	11/04/2017 18:02	Rebecca Williams	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201730847772	11/04/2017 17:41	Rebecca Williams	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	17312A34A	11/09/2017 17:48	Jeremy C Giffin	24.63
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201730847772	11/04/2017 17:43	Rebecca Williams	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: VP7-S-7-171102 Grab Soil
Facility# 90076 CRAW
4265 Foothill Blvd-Oakland T0600100339

ChevronTexaco
ELLE Sample #: SW 9300057
ELLE Group #: 1871215
Matrix: Soil

Project Name: 90076

Submittal Date/Time: 11/03/2017 09:45
Collection Date/Time: 11/02/2017 08:40

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260B	mg/kg	mg/kg	
10237	Benzene	71-43-2	N.D.	0.0005	0.005	1
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.005	1
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	1
10237	Naphthalene	91-20-3	N.D.	0.001	0.005	1
10237	Toluene	108-88-3	N.D.	0.001	0.005	1
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1
GC Volatiles			SW-846 8015B modified	mg/kg	mg/kg	
01725	TPH-GRO N. CA soil C6-C12	n.a.	N.D.	0.5	1.0	25.2

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	VOCs 8260 BTEX/MTBE/Naph Soil	SW-846 8260B	1	B173151AA	11/11/2017 17:35	Jennifer K Howe	1
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201730847772	11/04/2017 18:02	Rebecca Williams	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201730847772	11/04/2017 18:03	Rebecca Williams	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201730847772	11/04/2017 17:48	Rebecca Williams	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	17312A34A	11/09/2017 18:23	Jeremy C Giffin	25.2
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201730847772	11/04/2017 17:50	Rebecca Williams	n.a.

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: ChevronTexaco
Reported: 11/13/2017 22:50

Group Number: 1871215

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result mg/kg	MDL** mg/kg	LOQ mg/kg
Batch number: B173151AA	Sample number(s): 9300056-9300057		
Benzene	N.D.	0.0005	0.005
Ethylbenzene	N.D.	0.001	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005
Naphthalene	N.D.	0.001	0.005
Toluene	N.D.	0.001	0.005
Xylene (Total)	N.D.	0.001	0.005
Batch number: 17312A34A	Sample number(s): 9300056-9300057		
TPH-GRO N. CA soil C6-C12	N.D.	0.5	1.0

LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: B173151AA	Sample number(s): 9300056-9300057								
Benzene	0.0200	0.0223	0.0200	0.0207	112	103	80-120	8	30
Ethylbenzene	0.0200	0.0223	0.0200	0.0208	111	104	80-120	7	30
Methyl Tertiary Butyl Ether	0.0200	0.0185	0.0200	0.0173	92	86	66-123	7	30
Naphthalene	0.0200	0.0226	0.0200	0.0214	113	107	54-132	6	30
Toluene	0.0200	0.0220	0.0200	0.0205	110	103	80-120	7	30
Xylene (Total)	0.0600	0.0658	0.0600	0.0614	110	102	80-120	7	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 17312A34A	Sample number(s): 9300056-9300057								
TPH-GRO N. CA soil C6-C12	11	10.63	11	10.48	97	95	73-122	1	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 11/13/2017 22:50

Group Number: 1871215

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: VOCs 8260 BTEX/MTBE/Naph Soil

Batch number: B173151AA

	D	12-D	- 4	T	- 8	4-B
9300056	105	105		98		88
9300057	106	110		97		90
Blank	101	104		99		91
LCS	101	109		103		99
LCSD	102	107		103		98
Limits:	50-141	54-135		52-141		50-131

Analysis Name: TPH-GRO N. CA soil C6-C12

Batch number: 17312A34A

	T	-F
9300056	87	
9300057	81	
Blank	98	
LCS	96	
LCSD	97	
Limits:	50-142	

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.



Client: CA Office

Delivery and Receipt Information

Delivery Method:	<u>BASC</u>	Arrival Timestamp:	<u>11/03/2017 9:45</u>
Number of Packages:	<u>11</u>	Number of Projects:	<u>9</u>
State/Province of Origin:	<u>CA</u>		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Timothy Cubberley (6520) at 12:02 on 11/03/2017

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	0.5	DT	Wet	Y	Bagged	N
2	DT131	0.3	DT	Wet	Y	Bagged	N
3	DT131	1.8	DT	Wet	Y	Bagged	N
4	DT131	1.2	DT	Wet	Y	Bagged	N
5	DT131	0.9	DT	Wet	Y	Bagged	N
6	DT131	1.5	DT	Wet	Y	Bagged	N
7	DT131	1.7	DT	Wet	Y	Bagged	N
8	DT131	2.2	DT	Wet	Y	Bagged	N
9	DT131	1.1	DT	Wet	Y	Bagged	N
10	DT131	1.2	DT	Wet	Y	Bagged	N
11	DT131	0.3	DT	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mg	milligram(s)
C	degrees Celsius	mL	milliliter(s)
cfu	colony forming units	MPN	Most Probable Number
CP Units	cobalt-chloroplatinate units	N.D.	non-detect
F	degrees Fahrenheit	ng	nanogram(s)
g	gram(s)	NTU	nephelometric turbidity units
IU	International Units	pg/L	picogram/liter
kg	kilogram(s)	RL	Reporting Limit
L	liter(s)	TNTC	Too Numerous To Count
lb.	pound(s)	µg	microgram(s)
m3	cubic meter(s)	µL	microliter(s)
meq	milliequivalents	umhos/cm	micromhos/cm
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.