Mark Horne
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RECEIVED
By Alameda County Environmental Health 10:10 am, Dec 15, 2016

Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Texaco Service Station No. 359766
2700 23rd Avenue
Oakland, CA

I have reviewed the attached report titled *Low Threat Case Closure Request*

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

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.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Mark E. Horne

Mark Horne
Project Manager

Attachment: *Low Threat Case Closure Request*

Low-Threat Case Closure Request

Former Texaco Service Station 359766
2700 23rd Avenue
Oakland, California
ACEH Case RO0003098

Prepared For:

Ms. Karel Detterman

Alameda County Environmental Health Services (ACEH)

1131 Harbor Bay Parkway, Suite 250

Alameda, California 4502-6577

December 2, 2016

5900 Hollis Street, Suite A, Emeryville, California 94608

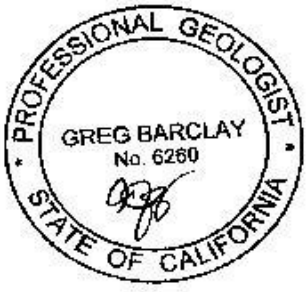
062086 | 2016.2 | 04.94 | Report No. 9

Low-Threat Case Closure Request

Former Texaco Service Station 359766
2700 23rd Avenue
Oakland, California
ACEH Case RO0003098

Kiersten Hoey

Greg Barclay PG 6260



December 2, 2016

5900 Hollis Street, Suite A, Emeryville, California 94608

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Appendices

1. Introduction

GHD Services, Inc. (GHD) is submitting this *Low-Threat Closure Request* for Former Texaco Service Station 359766 located at 2700 23rd Avenue in Oakland, California (Figure 1) on behalf of Chevron Environmental Management Company (EMC). This report demonstrates that site conditions meet State Water Resources Control Board's (SWRCB's) *Low-Threat Underground Storage Tank Case Closure Policy* (Policy).

2. Site Description and Background

The site is a former Texaco service station located at the northeast corner of 23rd Avenue and East 27th Street in a mixed commercial and residential area of Oakland, California (Figure 1). According to a previously completed Phase I investigation, the site operated as a gasoline service station from 1928 to 1964. The former dispenser island was located at the southwestern corner and the former station's kiosk was located in the northeastern corner. The locations of the former underground storage tanks (USTs) are unknown. In 1964, a demolition permit was issued for the service station. In 1968, the current building was constructed, which is now operated as a liquor store (Figure 2).[1, 2]

Conestoga-Rovers and Associates' (CRA) August 29, 2014 *Subsurface Investigation Report and Conceptual Site Model* (CSM) and April 17, 2015 *Subsurface Investigation Report and Updated Conceptual Site Model* (Updated CSM) present cumulative historical site data and additional background information, which is not repeated herein. The 2015 Updated CSM concluded that the site satisfied Policy criteria, but quarterly groundwater monitoring of all wells and sampling of offsite well MW-5 would be continued for one year. All quarterly groundwater monitoring reports have been submitted to ACEH. The most recent third quarter 2016 groundwater elevation contour and hydrocarbon concentration map is presented in Figure 3. Cumulative soil, groundwater, and soil vapor analytical data are presented in Tables 1 through 5. Nearby sensitive receptors are listed in Table 6. A summary of historical environmental investigations and remediation is included in Appendix A. A Policy checklist is provided in Appendix B.

3. Policy Evaluation

3.1 General Criteria Requirements

The general criteria requirements that must be satisfied by candidate sites are listed as follows:

a. *The unauthorized release is located within the service area of a public water system.*

[1] Schutze & Associates, Inc., Historical Research Project: 2700 23rd Avenue Property Ownership and Contamination Responsibility Update, July 21, 2011.

[2] Schutze & Associates, Inc., Summary of Previous Investigations, Installation and Sampling of Four Monitoring Wells, and Excavation of Test Pits, Soil Testing, and Limited Soil Removal, March 16, 2011.

- **Satisfied:** The site is served by municipal water supplied by the East Bay Municipal Utility District (EBMUD).

b. *The unauthorized release consists only of petroleum.*

- **Satisfied**: The site's unauthorized release has been characterized as a release of petroleum-based products from gasoline underground storage tanks and product piping that operated between approximately 1928 and 1964.

c. *The unauthorized ("primary") release from the UST system has been stopped*.

- **Satisfied**: The service station was demolished by 1967, and a 2014[3] geophysical survey showed no subsurface anomalies that would indicate any remaining USTs or product piping. Therefore, any potential sources of the primary release have been removed/stopped.

d. Free product has been removed to the maximum extent practicable.

- **Satisfied**: No light non-aqueous petroleum liquid (LNAPL) has been detected in any of the site monitoring wells.

e. A conceptual site model has been developed.

- **Satisfied**: CRA's August 29, 2014 CSM and April 17, 2015 Updated CSM constitute a comprehensive CSM.

f. *Secondary source removal has been addressed.*

- **Satisfied**: In 2010, a geophysical survey revealed a metallic utility line in the central area of the parking lot and miscellaneous debris at the southeast corner of the parking lot. These areas were subsequently excavated and the utility line and debris were removed.

g. *Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code section 25296.15.*

- **Satisfied**: Soil and groundwater samples have been tested for MTBE. The results of the analytical testing have been reported to ACEH and the San Francisco Bay Regional Water Quality Control Board (RWQCB), per California Health and Safety Code 25296.15.

h. *Nuisance as defined by Water Code section 13050 does not exist at the site.*

- **Satisfied**: Conditions satisfying the definition of a nuisance as defined in Water Code section 13050 do not exist at the site.

3.2 Media-Specific Criteria

Media-specific criteria are related to the most common exposure scenarios, which in the Policy have been combined into three media-specific criteria:

[3] CRA, *Subsurface Investigation Report and Conceptual Site Model*, August 29, 2014

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

3.2.1 Groundwater

The Policy requires that water quality objectives (WQOs) will be attained through natural attenuation within a reasonable amount of time, the contaminant plume that exceeds WQOs is stable or decreasing in areal extent, and meets the additional characteristics of one of the five classes of sites listed in the Policy.

The five classes of sites are stated in the Policy as follows:

1. a. The contaminant plume that exceeds WQOs is less than 100 feet in length.
    a. There is no free product.
    b. The nearest existing water supply well and/or surface water body is greater than 250 feet from the defined plume boundary.
2. a. The contaminant plume that exceeds WQOs is less than 250 feet in length.
    a. There is no free product.
    b. The nearest existing water supply well and/or surface water body is greater than 1,000 feet from the defined plume boundary.
    c. The dissolved concentration of benzene is less than 3,000 μg/l and the dissolved concentration of MTBE is less than 1,000 μg/l.
3. a. The contaminant plume that exceeds WQOs is less than 250 feet in length.
    a. Free product may be present below the site but does not extend off-site.
    b. The plume has been stable or decreasing for a minimum of 5 years.
    c. The nearest existing water supply well and/or surface water body is greater than 1,000 feet from the defined plume boundary.
    d. The property owner is willing to accept a deed restriction if the regulatory agency requires a deed restriction as a condition of closure.
4. a. The contaminant plume that exceeds WQOs is less than 1,000 feet in length.
    a. There is no free product.
    b. The nearest existing water supply well and/or surface water body is greater than 1,000 feet from the defined plume boundary.
    c. The dissolved concentration of benzene is less than 1,000 μg/l and the dissolved concentration of MTBE is less than 1,000 μg/l.
5. a. An analysis of site specific conditions determines that the site under current and reasonable anticipated near-term future scenarios poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame.

Satisfied: The site satisfies Class 2 criteria as follows:

Groundwater in the East Bay Plain basin is designated as a potential drinking water source;[4] however, no municipal wells were identified within a half mile radius, and the site is provided water by the EBMUD which relies solely on imported water to supply the region with drinking water.[4,5] Therefore, non-drinking water WQOs are appropriate for this site.

- The dissolved hydrocarbon plume from the source area (the southwest corner of the site, near MW-4) that exceeds WQOs is less than 250 feet in length in all directions (Figures 4 and 5). Downgradient well MW-5, where no hydrocarbons are detected, is approximately 120 feet from the plume center (MW-4).
- No LNAPL has been observed in any monitoring wells.
- No drinking water wells were identified by Alameda County Public Works Agency, California Department of Water Resources, and Geotracker's Groundwater Ambient Monitoring and Assessment. One irrigation well was identified 700 feet upgradient of the site. Due to its upgradient location and distance from site, it is not at risk of being affected by hydrocarbons originating at the site.
- The nearest surface water body is the Central Reservoir, located just over 1,000 feet to the northeast (upgradient).
- Onsite wells MW-1 through MW-4 were previously sampled twice in 2010 and 2012. Methyl tertiary butyl ether (MTBE) concentrations were below 1,000 micrograms per liter (μg/L); only 1.3 μg/L detected. It should be noted that operation of a service station at the site (up to 1964) predates the widespread use of MTBE in gasoline. Benzene was only detected in well MW-4; in 2010 it was detected at 2,800 μg/L, then in 2012 at 1,500 μg/L, which are both below 3,000 μg/L. Additionally, based on the concentration reduction in two years and the lack of residual hydrocarbon source and natural attenuation processes, concentrations have likely continued to decrease over the past 4 years.

3.2.2 Vapor Intrusion to Indoor Air

The Policy describes conditions, including bioattenuation zones (soil conditions that support biodegradation of hydrocarbon vapors), which, if met, will assure that exposure to petroleum vapors in indoor air will not pose unacceptable health risks. In many petroleum release cases, potential human exposures to vapors are mitigated by bioattenuation processes as vapors migrate toward the ground surface. The low-threat vapor-intrusion criteria described below apply to sites where the release originated and impacted or potentially impacted adjacent parcels when: (1) existing buildings are occupied or may be reasonably expected to be occupied in the future, or (2) buildings for human occupancy are reasonably expected to be constructed in the future. Petroleum release sites shall satisfy the media-specific criteria for petroleum vapor intrusion to indoor air and be considered low-threat for the vapor-intrusion-to-indoor-air pathway if:

4 http://www.ebmud.com/our-water/water-supply

5 California Regional Water Quality Control Board San Francisco Bay Region, East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties, CA, June 1999.

a. Site-specific conditions at the release site satisfy all of the characteristics and criteria of scenarios 1 through 3 as applicable, or all of the characteristics and criteria of scenario 4 as applicable; or

b. A site-specific risk assessment for the vapor intrusion pathway is conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency; or

c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, the regulatory agency determines that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health.

Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities.

Satisfied: Site conditions meet criteria (a), scenario 4, 1 of 2, of the Policy (direct measurements of soil gas concentrations – soil gas sampling – with no bioattenuation zone). Soil vapor analytical results indicate a bioattenuation zone, with oxygen levels between 8.5% and 10%; however, detected concentrations are below the more stringent criteria of Scenario 1 of 2 with no bioattenuation zone. Historical soil vapor data are presented in Tables 4 and 5.

Table 3.1 Soil Gas Criteria – No Bioattenuation Zone

Constituent	Residential	Commercial	Maximum Detected Concentration
	Concentrations in µg/m^3		
Benzene	<85	<280	79
Ethylbenzene	<1,100	<3,600	11
Naphthalene	<93	<310	<320
µg/m^3 = micrograms per cubic meter			

3.2.3 Direct Contact and Outdoor Air Exposure

The Policy describes conditions where direct contact with contaminated soil or inhalation of contaminants volatized to outdoor air poses an insignificant threat to human health. Release sites where human exposure may occur must satisfy the media-specific criteria for direct contact and outdoor air exposure and are considered low-threat if they meet any one of the following:

a. Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in the table below for the specified depth below ground surface. The limits from 0 to 5 fbg protect from ingestion, dermal contact, and outdoor inhalation of volatile and particulate emissions. The 5 to 10 fbg limits protect from inhalation of volatile emissions only; the ingestion and dermal contact pathways are not considered significant. In addition, if exposure to construction workers or utility trench workers is reasonably anticipated, the concentration limits for Utility Worker must also be satisfied.

Table 3.2 Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health

Constituent	Residential		Commercial/ Industrial		Utility Worker	Maximum Concentration	Maximum Concentration
	0 – 5 fbg mg/kg	Volatilization to outdoor air *5 – 10 fbg mg/kg*	*0 – 5 fbg mg/kg*	Volatilization to outdoor air *5 – 10 fbg mg/kg*	*0 – 10 fbg mg/kg*	*0 – 5 fbg mg/kg*	*>5-10 fbg mg/kg*
Benzene	1.9	2.8	8.2	12	14	0.16	1.05
Ethylbenzene	21	32	89	134	314	1.7	1.9
Naphthalene	9.7	9.7	45	45	219	0.16	0.27
PAH*	0.063	NA	0.68	NA	4.5	0.26	<0.00067

Notes:
mg/kg = Milligrams per kilogram
NA = Not Analyzed
* Based on the seven carcinogenic polynuclear aromatic hydrocarbons (PAHs) as benzo(a)pyrene toxicity equivalent [BaPe]. The PAH screening level is only applicable where soil is affected by either waste oil and/or Bunker C fuel.

b. Maximum concentrations of petroleum constituents in soil are less than levels that a site-specific risk assessment demonstrates will have no significant risk of adversely affecting human health.

c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, the regulatory agency determines that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health.

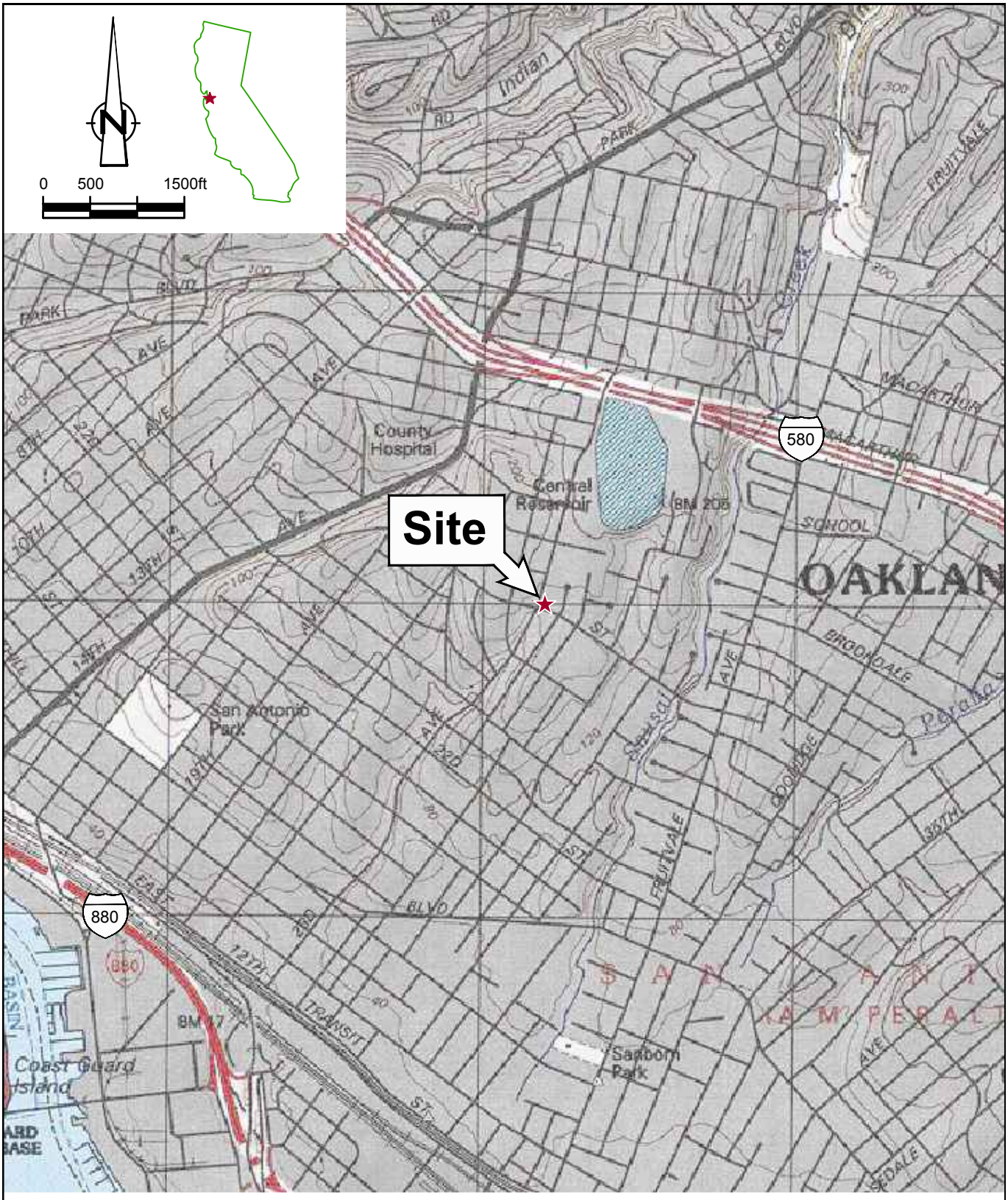
Satisfied: The site satisfies criteria (a). Of the 61 samples analyzed to date, no soil samples exceeded the Policy commercial criteria for direct contact and outdoor air exposure.

4. Conclusions and Recommendations

This site has been adequately assessed and remediated. Based on our review, site conditions meet the general and media-specific criteria established in the Policy, and therefore pose a low threat to human health, safety, and the environment. Site conditions satisfy the case-closure requirements of Health and Safety Code section 25296.10, and case closure is consistent with Resolution 92-49 that requires that cleanup goals be met within a reasonable time frame.

Groundwater data, as presented in this *Low-Threat Closure Request*, support our conclusion that the site and the impacted groundwater pose no significant threat to human health or the environment. Therefore, EMC requests to cease groundwater monitoring and sampling activities.

Figures



LEGEND

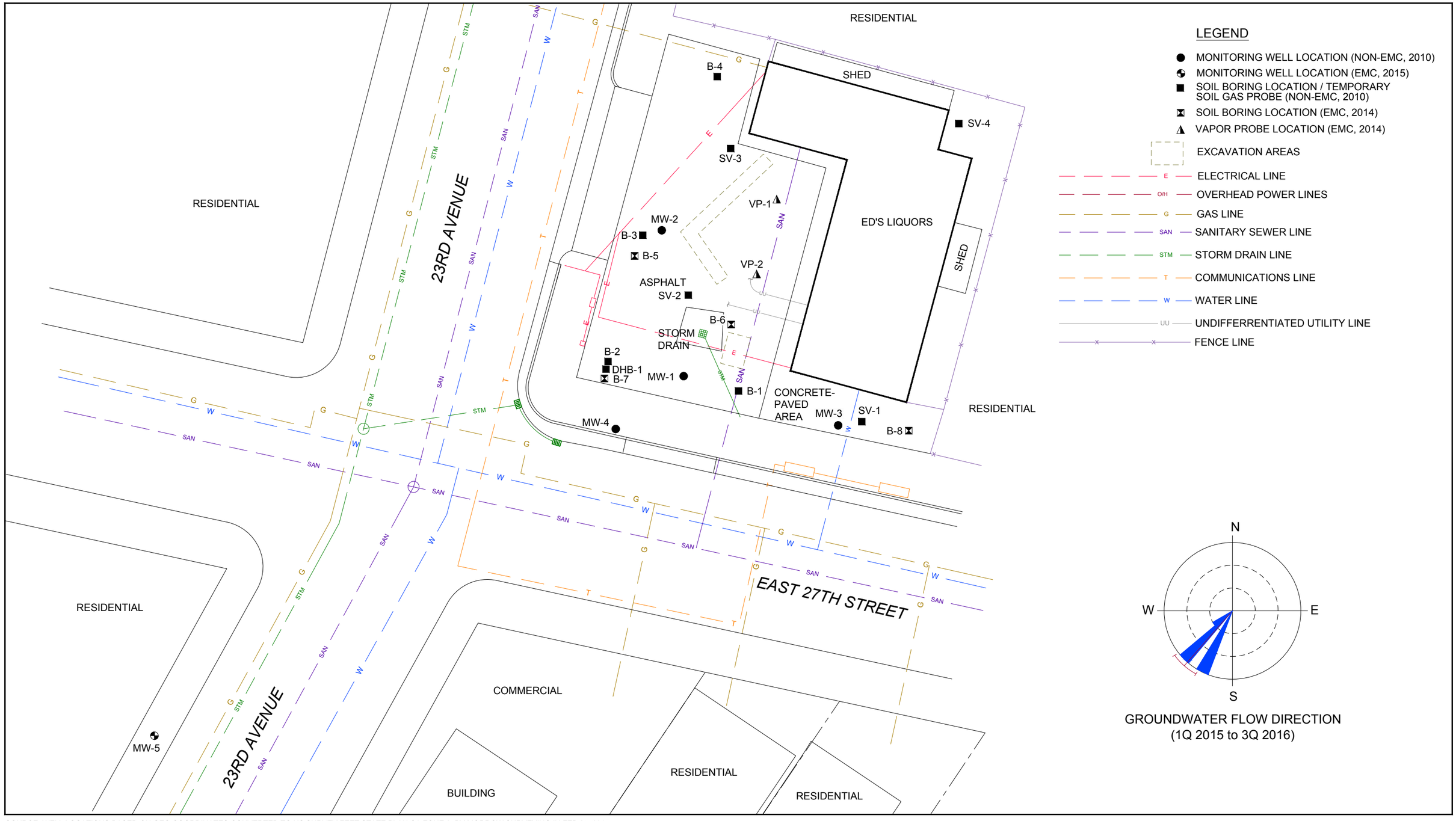
★ SITE LOCATION

Figure 1

VICINITY MAP
FORMER TEXACO STATION 359766 (ED's LIQUORS)
2700 23rd AVENUE
Oakland, California

GHD

062086-2016.2(009)GN-SO001 JUL 7, 2016



GROUNDWATER FLOW DIRECTION
(1Q 2015 to 3Q 2016)

SOURCE: WELL LOCATIONS BASED ON GEO COORDINATES CONVERTED TO US SURVEY FEET STATE PLAN CA ZONE 3, BY MORROW SURVEYING IN FEB 24, 2015

0 10 20ft

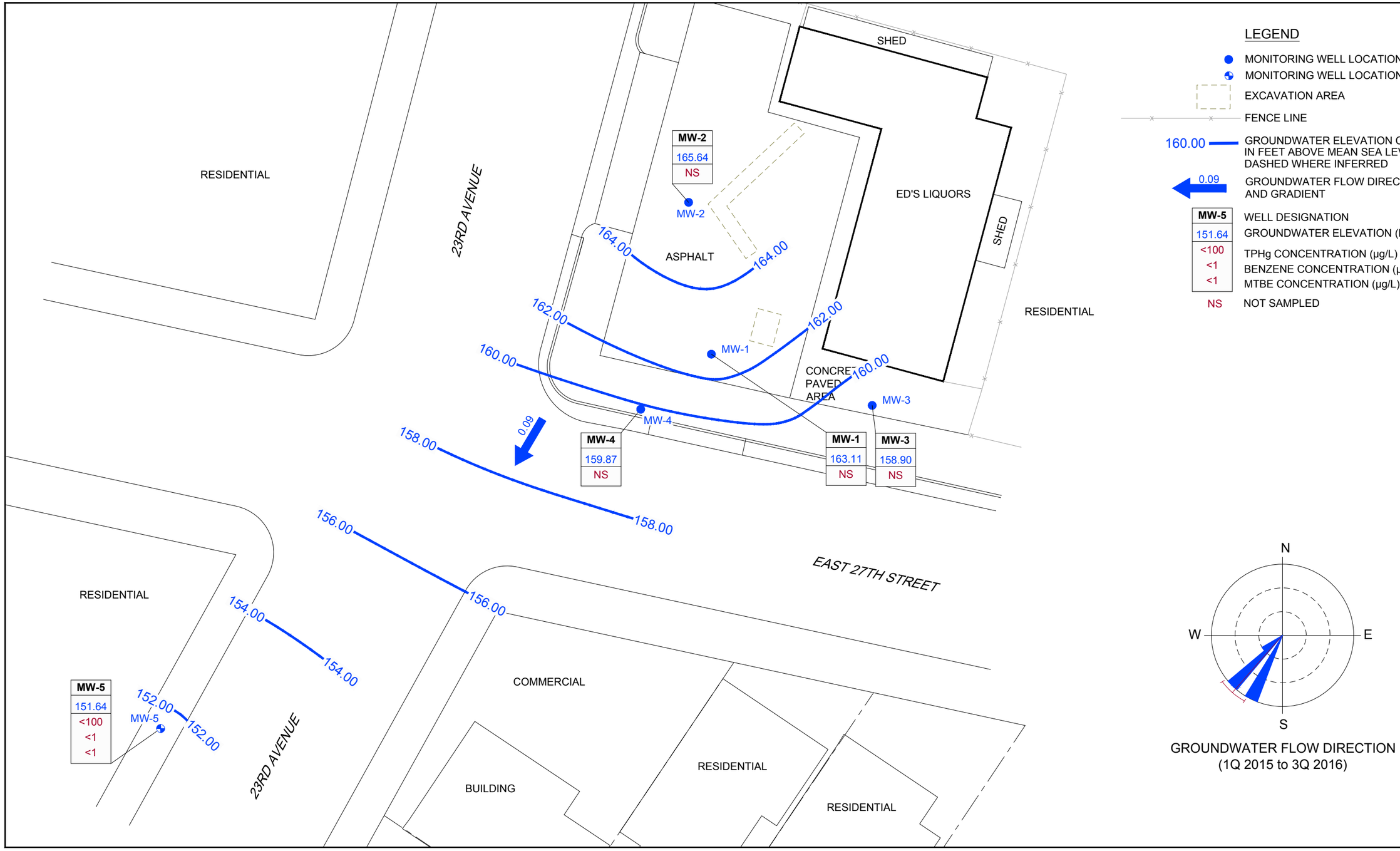
FORMER TEXACO STATION 359766
2700 23rd AVENUE
OAKLAND, CALIFORNIA

SITE PLAN

062086-2016.2
Nov 1, 2016

FIGURE 2

CAD File: 062086-2016.2(009)GN-SO002.DWG



GROUNDWATER FLOW DIRECTION
(1Q 2015 to 3Q 2016)

SOURCE: WELL LOCATIONS BASED ON GEO COORDINATES CONVERTED TO US SURVEY FEET STATE PLAN CA ZONE 3, BY MORROW SURVEYING IN FEB 24, 2015

0 10 20ft

FORMER TEXACO STATION 359766
2700 23rd AVENUE
OAKLAND, CALIFORNIA

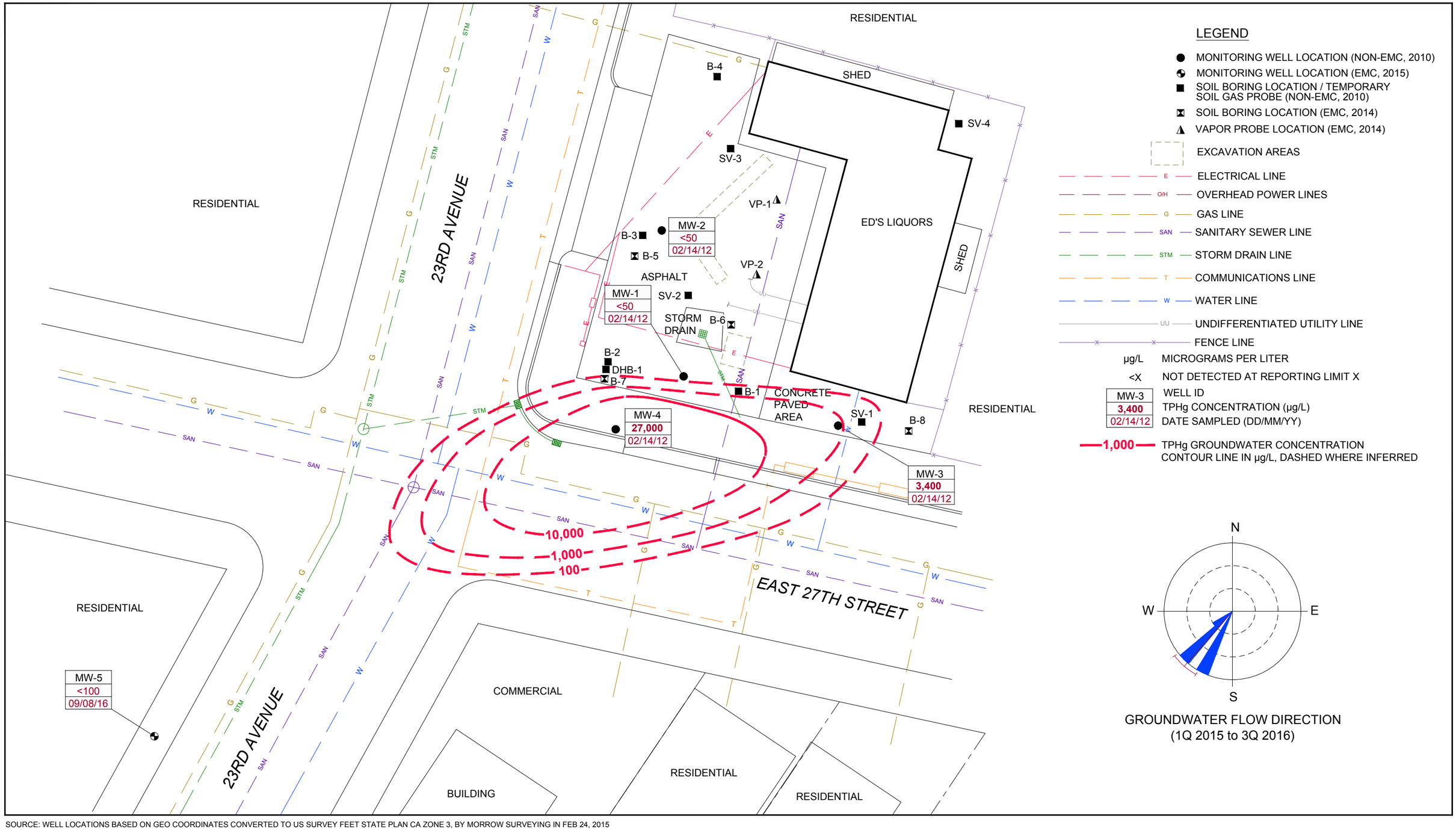
GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON CONCENTRATION MAP - SEPTEMBER 8, 2016

062086-2016.2

Nov 28, 2016

FIGURE 3

CAD File: 062086-2016.2(009)GN-SO007.dwg



SOURCE: WELL LOCATIONS BASED ON GEO COORDINATES CONVERTED TO US SURVEY FEET STATE PLAN CA ZONE 3, BY MORROW SURVEYING IN FEB 24, 2015

0 10 20ft

N

GHD

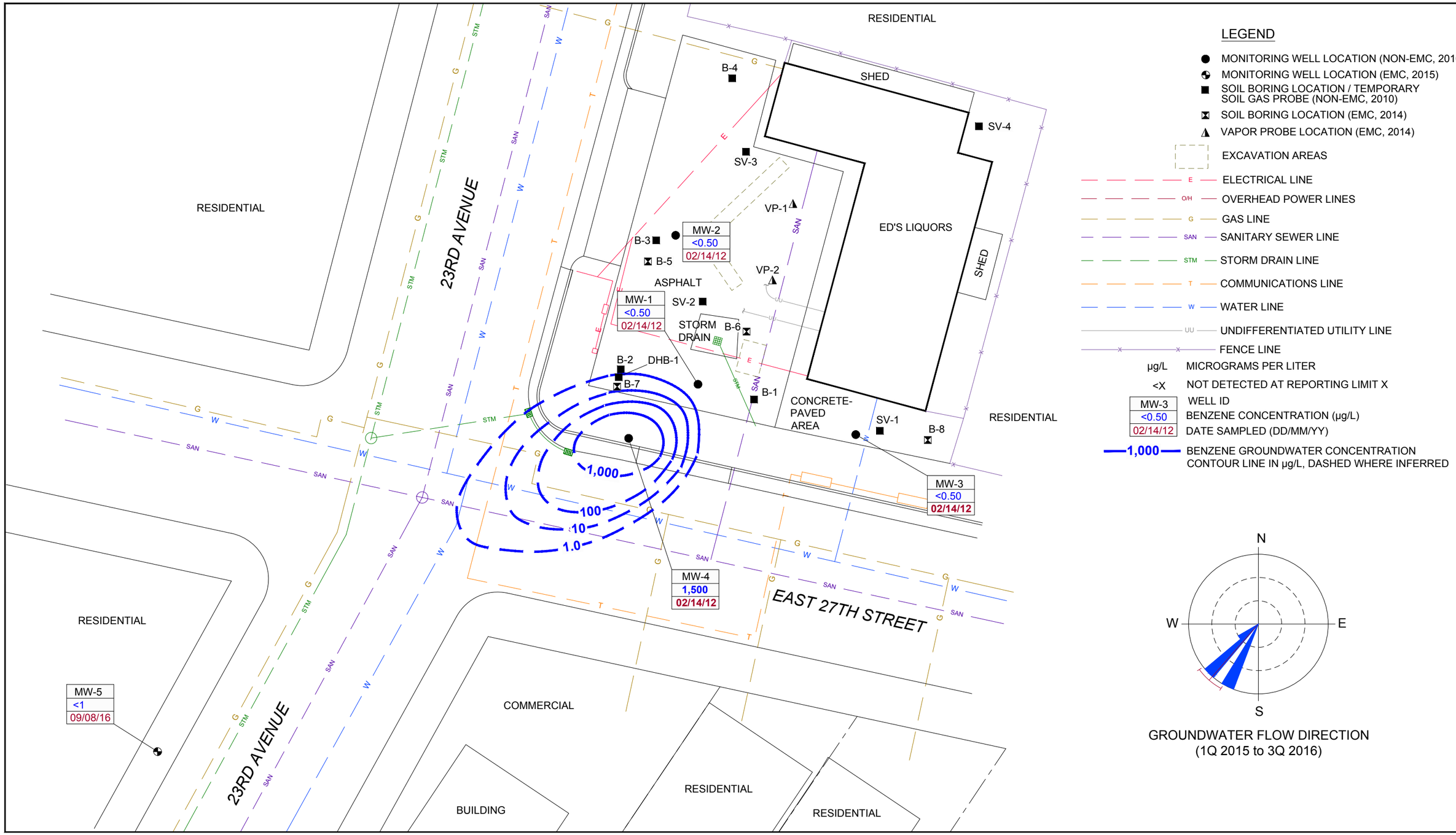
FORMER TEXACO STATION 359766
2700 23rd AVENUE
OAKLAND, CALIFORNIA

TPHg CONCENTRATIONS IN GROUNDWATER

062086-2016.2
Nov 1, 2016

FIGURE 4

CAD File: 062086-2016.2(009)GN-SO003.DWG



SOURCE: WELL LOCATIONS BASED ON GEO COORDINATES CONVERTED TO US SURVEY FEET STATE PLAN CA ZONE 3, BY MORROW SURVEYING IN FEB 24, 2015

0 10 20ft

FORMER TEXACO STATION 359766
2700 23rd AVENUE
OAKLAND, CALIFORNIA

062086-2016.2
Nov 1, 2016

BENZENE CONCENTRATIONS IN GROUNDWATER

FIGURE 5

CAD File: 062086-2016.2(009)GN-SO004.DWG

Tables

Table 1

Soil Analytical Data
Petroleum Hydrocarbons, Volatile Organics And Metals
Former Texaco Station 359766 (Ed's Liquors)
2700 23rd Avenue
Oakland, California

Location	Date	Depth	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	Other VOCs	Cadmium	Chromium	Lead	Nickel	Zinc
		feet	*Concentrations in milligrams per kilogram (mg/kg)*																				
Low-Threat Underground Storage Tank Case Closure Policy - Table 1[a] - Commerical (0 to 5 fbg)			NE	NE	NE	8.2	NE	89	NE	NE	45	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Low-Threat Underground Storage Tank Case Closure Policy - Table 1[a] - Commerical- Volatization to Outdoor Air (5 to 10 fbg)			NE	NE	NE	12	NE	134	NE	NE	45	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Low-Threat Underground Storage Tank Case Closure Policy - Table 1[a] - Utility Worker (0 to 10 fbg)			NE	NE	NE	14	NE	314	NE	NE	219	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Wells and Soil Borings																							
MW-5	2/12/2015	5	<10	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	<0.001	<0.001	--	0.773	52.4	7.14	71.9	57.7
MW-5	2/12/2015	8	<10	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	<0.001	<0.001	--	0.752	44.6	4.72	54.7	45.7
MW-5	2/12/2015	10	<10	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	<0.001	<0.001	--	0.643	35.8	3.85	44.8	35.4
MW-5	2/12/2015	15	<30	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	<0.001	<0.001	--	0.688	57.1	5.94	57.9	51.1
MW-5	2/12/2015	20	<10	<4.0	<0.5	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	<0.001	<0.001	--	0.675	61.6	4.46	62.3	48.5
VP-1	7/9/2014	5	<10[b]	<4.0[b]	<0.9	<0.0006	<0.001	<0.001	<0.001	--	0.00074	--	--	--	--	<0.001	<0.001	--	0.118	33.4	8.77	39.4	28.6
VP-2	7/9/2014	5	85[b]	42[b]	<1	<0.0005	<0.001	<0.001	<0.001	--	0.014	--	--	--	--	<0.001	<0.001	--	0.107	41.1	5.47	38.9	25.8
B-5	7/8/2014	5	<10[b]	<4.0[b]	<1	<0.0005	<0.001	<0.001	<0.001	--	<0.00067	--	--	--	--	<0.001	<0.001	--	0.432	64.5	4.28	47.7	41.7
B-5	7/8/2014	10	<9.9[b]	<3.9[b]	<1	<0.0005	<0.001	<0.001	<0.001	--	<0.00067	--	--	--	--	<0.001	<0.001	--	0.493	48.4	8.02	82.2	57.8
B-5	7/8/2014	15	<10[b]	<4.0[b]	<1.1	<0.0005	<0.001	<0.001	<0.001	--	<0.00066	--	--	--	--	<0.001	<0.001	--	0.570	45.0	7.48	79.8	53.2
B-5	7/8/2014	20	<10[b]	<4.0[b]	<1.0	<0.0005	<0.001	<0.001	<0.001	--	<0.00066	--	--	--	--	<0.001	<0.001	--	0.229	48.5	10.6	56.7	44.5
B-6	7/8/2014	5	<9.9[b]	<4.0[b]	22	<0.0005	<0.001	<0.001	<0.001	--	0.013	--	--	--	--	<0.001	<0.001	--	0.0913	31.9	9.78	36.7	22.0
B-6	7/8/2014	10	<10[b]	33[b]	130	<0.028[c]	<0.055[c]	<0.055[c]	<0.055[c]	--	0.029	--	--	--	--	<0.055[c]	<0.055[c]	--	0.0455	60.7	9.00	57.1	51.2
B-6	7/8/2014	15	<9.9[b]	<3.9[b]	<1.0	<0.0005	<0.001	<0.001	<0.001	--	0.0012	--	--	--	--	<0.001	<0.001	--	0.372	59.6	10.6	65.2	59.7
B-6	7/8/2014	20	<10[b]	<4.0[b]	<1.0	<0.0005	<0.001	<0.001	<0.001	--	<0.00066	--	--	--	--	<0.001	<0.001	--	0.319	44.7	10.4	50.6	47.2
B-7	7/8/2014	5	<10[b]	10[b]	130	0.086[c]	<0.055[c]	0.24[c]	0.84[c]	--	0.16	--	--	--	--	<0.055[c]	<0.055[c]	--	0.201	90.0	16.9	40.1	58.5
B-7	7/8/2014	10	<10[b]	<4.0[b]	<1.0	<0.0005	<0.001	<0.001	<0.001	--	0.0013	--	--	--	--	<0.001	<0.001	--	0.298	50.6	10.3	64.7	54.0
B-7	7/8/2014	15	<9.8[b]	<3.9[b]	<1	<0.0005	<0.001	<0.001	<0.001	--	0.0011	--	--	--	--	<0.001	<0.001	--	0.292	69.9	12.2	57.5	60.5
B-7	7/8/2014	20	<9.9[b]	<3.9[b]	<1	<0.0005	<0.001	<0.001	<0.001	--	<0.00067	--	--	--	--	<0.001	<0.001	--	0.323	52.0	12.3	69.2	61.5
B-8	7/8/2014	5	<10[b]	<4.0[b]	<1	<0.0005	<0.001	<0.001	<0.001	--	0.0014	--	--	--	--	<0.001	<0.001	--	0.146	30.0	12.7	28.5	24.3
B-8	7/8/2014	10	<10[b]	<4.0[b]	<1	<0.0005	<0.001	<0.001	<0.001	--	0.0015	--	--	--	--	<0.001	<0.001	--	0.103	29.3	8.38	33.3	23.3
B-8	7/8/2014	15	<10[b]	<4.0[b]	<1	<0.0005	<0.001	<0.001	<0.001	--	<0.00066	--	--	--	--	<0.001	<0.001	--	<0.0317	34.9	5.85	21.3	18.4
B-8	7/8/2014	20	<9.9[b]	<4.0[b]	<1.0	<0.0005	<0.001	<0.001	<0.001	--	<0.00066	--	--	--	--	<0.001	<0.001	--	0.0450	34.7	8.02	29.8	20.1
DHB-1	2/14/2012	3.25	--	140	490	0.16	0.18	1.7	4.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DHB-1	2/14/2012	6.25	--	360	360	1.05	0.21	1.9	5.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	10/27/2010	3.5	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	ND	<1.5	34	15	50	28
MW-1	10/27/2010	8.5	<5.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.5	63	7.2	110	66
MW-1	10/27/2010	13.5	<5.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.5	48	7.7	81	54
MW-1	10/27/2010	18.5	<5.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.5	57	5.7	65	56
MW-2	10/27/2010	3.5	5.5	5.1	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	ND	<1.5	80	6.1	60	62
MW-2	10/27/2010	8.5	<5.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.5	43	6.7	66	43

Table 1

Soil Analytical Data
Petroleum Hydrocarbons, Volatile Organics And Metals
Former Texaco Station 359766 (Ed's Liquors)
2700 23rd Avenue
Oakland, California

Location	Date	Depth	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	Other VOCs	Cadmium	Chromium	Lead	Nickel	Zinc
		feet	*Concentrations in milligrams per kilogram (mg/kg)*																				
Low-Threat Underground Storage Tank Case Closure Policy - Table 1[a] - Commerical (0 to 5 fbg)			NE	NE	NE	8.2	NE	89	NE	NE	45	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Low-Threat Underground Storage Tank Case Closure Policy - Table 1[a] - Commerical- Volatization to Outdoor Air (5 to 10 fbg)			NE	NE	NE	12	NE	134	NE	NE	45	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Low-Threat Underground Storage Tank Case Closure Policy - Table 1[a] - Utility Worker (0 to 10 fbg)			NE	NE	NE	14	NE	314	NE	NE	219	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-2	10/27/2010	13.5	<5.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.5	45	<5.0	64	47
MW-2	10/27/2010	18.5	<5.0	1.2	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.5	60	7.2	64	64
MW-3	10/27/2010	3.5	<5.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.5	34	<5.0	35	31
MW-3	10/27/2010	8.5	<5.0	27	200	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<1.0	<0.10	<0.10	<0.10	<0.080	<0.080	0.14[d] 0.17[e] 0.62[f]	<1.5	40	9.8	31	26
MW-3	10/27/2010	13.5	<5.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.5	36	<5.0	23	83
MW-3	10/27/2010	18.5	<5.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.5	55	11	93	67
MW-4	10/27/2010	3.5	16	220	1,400	<0.50	<0.50	1.1	0.96	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.40	<0.40	1.8[d] 0.81[g] 0.60[h] 1.2[e] 2.8[f]	2.0	55	18	46	1,200
MW-4	10/27/2010	8.5	<5.0	18	270	<0.20	<0.20	0.61	1.4	<0.2	0.27	<2.0	<0.20	<0.20	<0.20	<0.16	<0.16	1.3[j] 0.25[f] 0.23[j]	<1.5	69	6.6	110	68
MW-4	10/27/2010	13.5	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	ND	<1.5	47	6.6	55	53
MW-4	10/27/2010	18.5	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	0.0051	<0.004	ND	<1.5	71	6.4	61	59
B-1	7/29/2010	8	<5.0	33	43	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010	<0.010	<0.0080	<0.0080	0.028[d] 0.021[h] 0.021[f]	--	--	--	--	--
B-1	7/29/2010	14	5.1	710	420	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<0.80	<0.80	2.5[h] 2.8[e] 4.2[f]	--	--	--	--	--
B-1	7/29/2010	20	<5.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-2	7/29/2010	8	<5.0	<1.0	<1.0	<0.023	<0.023	0.043	<0.023	<0.023	--	--	--	--	--	--	--	--	--	--	--	--	--
B-3	7/29/2010	7	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--
B-4	7/29/2010	7	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--
SV-2	7/29/2010	5	1,500	370	420	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<2.0	<0.20	<0.20	<0.20	<0.16	<0.16	4.9[d] 0.27[g] 0.25[i] 0.86[h] 0.35[e] 1.8[f]	--	--	--	--	--
Test Pit Excavation																							
A	11/29/2010	5.5	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	ND	<1.5	34	8.3	28	26
A-W	12/1/2010	4	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	ND	<1.5	40	10	38	30
A-S	12/1/2010	4	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	ND	<1.5	49	11	39	32
A-E	12/1/2010	4	<5.0	1.2	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	ND	<1.5	50	36	58	50
Test Pit Excavation																							
B	11/29/2010	5	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	0.085[k]	<1.5	45	160	33	35
B-W	11/29/2010	3.5	<5.0	1.9	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	0.066[k]	<1.5	38	7.7	43	38
B-E	11/29/2010	3.5	53	3.6	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	0.080[k]	<1.5	49.93	28	53	83
B-N	11/29/2010	3.5	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	0.068[k]	<1.5	48	6.7	59	50

Table 1

Soil Analytical Data
Petroleum Hydrocarbons, Volatile Organics And Metals
Former Texaco Station 359766 (Ed's Liquors)
2700 23rd Avenue
Oakland, California

Location	Date	Depth	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	Other VOCs	Cadmium	Chromium	Lead	Nickel	Zinc
		feet	*Concentrations in milligrams per kilogram (mg/kg)*																				
Low-Threat Underground Storage Tank Case Closure Policy - Table 1[a] - Commerical (0 to 5 fbg)			NE	NE	NE	8.2	NE	89	NE	NE	45	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Low-Threat Underground Storage Tank Case Closure Policy - Table 1[a] - Commerical- Volatization to Outdoor Air (5 to 10 fbg)			NE	NE	NE	12	NE	134	NE	NE	45	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Low-Threat Underground Storage Tank Case Closure Policy - Table 1[a] - Utility Worker (0 to 10 fbg)			NE	NE	NE	14	NE	314	NE	NE	219	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
P-A	11/30/2010	2.5	<5.0	6.4	4.5	<0.005	<0.005	<0.005	<0.005	<0.005	0.068	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	0.0.091[k] 0.061[d] 0.016[h] 0.0056[e] 0.035[f]	<1.5	45	16	42	45
P-B	11/30/2010	1	<5.0	3.1	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	0.083[k]	<1.5	35	64	49	1,800
P-C	11/30/2010	2	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	ND	<1.5	37	<5.0	35	26
P-D	11/30/2010	2	<5.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	ND	<1.5	40	<5.0	42	27
P-E	11/30/2010	2.5	22	2.2	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.004	<0.004	ND	<1.5	36	8.0	41	530

Abbreviations and Notes:

Bold = Concentration exceeds screening levels
NE = Not established
-- = Not analyzed
<x.xx or ND = Not detected above stated laboratory method detection limit x
fbg = Feet below grade
Total petroleum hydrocarbons as motor oil (TPHmo) by EPA Method 8015B
Total petroleum hydrocarbons as diesel (TPHd) analyzed by EPA Method 8015B
Total petroleum hydrocarbons as gasoline (TPHg) analyzed by EPA Method 8015B
Benzene, toluene, ethylbenzene and xylenes (BTEX) analyzed by EPA Method 8260B
Methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), 1,2 dichloroethane (1,2-DCA), 1,2-dibromoethane (EDB), and tertiary butyl alcohol (TBA) by EPA Method 8260B; naphthalene by EPA Method 8260B or 8270C
Volatile Organic Compounds (VOCs) by EPA Method 8260B
Cadmium, chromium, lead, nickel, zinc by EPA Method 6010B
a = Table 1 - Concentration of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health, Low-Threat Underground Storage Tank Case Closure Policy, California State Water Resource Control Board, August 17, 2012
b = The reverse surrogate, capric acid, is present at <1%
c = Reporting limits were raised due to interference from the sample matrix
d = n-butyl benzene
e = isopropylbenzene
f = n-propyl benzene
g = 4-isopropyl toluene
h = sec-butyl benzene
i = 1,2,4-trimethylbenzene
j = 1,3,5-trimethylbenzene
k = acetone

Table 2

Soil Analytical Data
Polynuclear Aromatic Hydrocarbons
Former Texaco Station 359766 (Ed's Liquors)
2700 23rd Avenue
Oakland, California

Location	Date	Depth (feet)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
			Concentrations in milligrams per kilogram (mg/kg)																	
Low-Threat Underground Storage Tank Case Closure Policy - Table 1 [a] - Residential/Commerical (0 to 5 fbg)			NE	NE	NE	NE	0.063/0.68	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	9.7/45	NE	NE
Tank Case Closure Policy - Table 1 [a] - Residential/Commerical - Volatization to Outdoor Air (5 to 10 fbg)			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	9.7/45	NE	NE
Low-Threat Underground Storage Tank Case Closure Policy - Table 1 [a] - Utility Worker (0 to 10 fbg)			NE	NE	NE	NE	4.5	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	219	NE	NE
MW-5	2/12/2015	5	<0.00066	<0.00033	<0.00033	0.00082 J	0.00089 J	0.0023	0.0020	0.00075 J	0.0024	<0.00066	0.0019	<0.00066	0.00083 J	--	--	0.0016 J	0.0014 J	0.0016 J
MW-5	2/12/2015	8	<0.00067	<0.00033	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	--	--	<0.00067	<0.00067	<0.00067
MW-5	2/12/2015	10	<0.00067	<0.00033	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	--	--	<0.00067	<0.00067	<0.00067
MW-5	2/12/2015	15	<0.00067	<0.00033	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	--	--	<0.00067	<0.00067	<0.00067
MW-5	2/12/2015	20	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	--	--	0.00094 J	<0.00066	<0.00066
VP-1	7/9/2014	5	<0.00066	<0.00033	0.00046	0.0017	0.0018	0.0038	0.0011	0.0018	0.0032	<0.00066	0.0036	<0.00066	0.00077	--	--	0.00074	0.0016	0.0039
VP-2	7/9/2014	5	<0.00066	<0.00033	<0.00033	0.00087	0.00089	0.0022	0.00082	0.00072	0.0015	<0.00066	0.0016	<0.00066	0.00075	--	--	0.014	0.00083	0.0016
B-5	7/8/2014	5	<0.00067	<0.00033	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	--	--	<0.00067	<0.00067	<0.00067
B-5	7/8/2014	10	<0.00067	<0.00033	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	--	--	<0.00067	<0.00067	<0.00067
B-5	7/8/2014	15	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	--	--	<0.00066	<0.00066	<0.00066
B-5	7/8/2014	20	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	--	--	<0.00066	<0.00066	<0.00066
B-6	7/8/2014	5	0.0027	0.0014	0.0048	0.0065	0.0050	0.014	0.0018	0.0070	0.016	0.00078	0.029	0.011	0.0020	--	--	0.013	0.027	0.021
B-6	7/8/2014	10	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	0.00093	<0.00066	--	--	0.029	<0.00066	<0.00066
B-6	7/8/2014	15	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	--	--	0.0012	<0.00066	<0.00066
B-6	7/8/2014	20	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	--	--	<0.00066	<0.00066	<0.00066
B-7	7/8/2014	5	0.00083	0.0013	0.025	0.23	0.26	0.55	0.11	0.25	0.37	0.038	0.39	0.0040	0.12	--	--	0.16	0.057	0.34
B-7	7/8/2014	10	<0.00067	<0.00033	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	--	--	0.0013	<0.00067	<0.00067
B-7	7/8/2014	15	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	--	--	0.0011	<0.00066	<0.00066
B-7	7/8/2014	20	<0.00067	<0.00033	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00033	<0.00067	<0.00067	<0.00067	<0.00067	--	--	<0.00067	<0.00067	<0.00067
B-8	7/8/2014	5	<0.00066	<0.00033	<0.00033	0.0016	0.0017	0.0026	0.00070	0.00096	0.0019	<0.00066	0.0026	<0.00066	<0.00066	--	--	0.0014	0.0019	0.0036
B-8	7/8/2014	10	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	0.0013	<0.00066	<0.00066	0.0016	<0.00066	0.0027	0.00078	<0.00066	--	--	0.0015	0.0024	0.0014
B-8	7/8/2014	15	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	--	--	<0.00066	<0.00066	<0.00066
B-8	7/8/2014	20	<0.00066	<0.00033	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	<0.00066	<0.00033	<0.00066	<0.00066	<0.00066	<0.00066	--	--	<0.00066	<0.00066	<0.00066
MW-4	10/27/2010	3.5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0057	0.0056	<0.005	0.30	0.75	<0.005	0.0063	0.0059

Abbreviations and Notes:

Bold = Concentration exceeds ESL
NE = Not established
<x.xx or ND = Not detected above stated laboratory method detection limit x
fbg = Feet below grade
Polynuclear Aromatic Hydrocarbons (PAHs) by EPA Method SW8270C SIM
a = Table 1 - Concentration of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health,
Low-Threat Underground Storage Tank Case Closure Policy (LTCP), California State Water Resource Control Board, August 17, 2012
= The seven PAHs referenced in the LTCP criteria
J = estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

Table 3

Groundwater Monitoring and Sampling Data
Former Texaco Service Station 359766 (Ed's Liquor)
2700 23rd Avenue
Oakland, California

					HYDROCARBONS			VOCS												
Location	Date	TOC[a]	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	B	T	E	X	MTBE by SW8260	Naphthalene	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	ADDITIONAL
	Units	ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
B-1	7/29/2010	--	--	--	21,000	36,000	61,000	<5.0	<5.0	<5.0	<5.0	<5.0	200	<20	<5.0	<5.0	<5.0	<5.0	<5.0	12[b] 11[c] 30[d] 80[e] 110[f]
B-2	7/29/2010	--	--	--	60,000	4,000	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	ND
MW-1	11/18/2010[1]	168.84	7.93	160.91	<250	<50	--	--	--	--	--	1.3	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	02/14/2012[1]	168.84	7.31	161.53	--	<50	<50	<0.50	<0.50	<0.50	<0.50	1.2	--	--	--	--	--	--	--	--
	03/13/2015	168.90	12.11	156.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2015	168.90	11.31	157.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/29/2015	168.90	10.83	158.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/22/2015	168.90	6.44	162.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/28/2016	168.90	6.08	162.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2016	168.90	5.41	163.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/08/2016	**168.90**	**5.79**	**163.11**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-2	11/18/2010[1]	170.33	7.52	162.81	<250	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	02/14/2012[1]	170.33	6.37	163.96	--	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--	--
	03/13/2015	170.41	8.10	162.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2015	170.41	6.92	163.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/29/2015	170.41	7.95	162.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/22/2015	170.41	4.49	165.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/28/2016	170.41	3.83	166.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2016	170.41	3.71	166.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/08/2016	**170.41**	**4.77**	**165.64**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-3	11/18/2010[1]	168.67	5.14	161.15	<250	2,100	3,700	<0.5	<0.5	<0.5	0.84	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	3.0[g] 0.68[d] 2.0[e] 2.2[h] 6.6[f]
	02/14/2012[1]	168.67	4.98	163.69	--	<1,500	3,400	<0.50	<0.50	1.2	<0.50	<0.50	--	--	--	--	--	--	--	--
	03/13/2015	168.71	6.50	162.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2015	168.71	5.93	162.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/29/2015	168.71	6.98	161.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/22/2015	168.71	8.01	160.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/28/2016	168.71	7.04	161.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2016	168.71	7.14	161.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/08/2016	**168.71**	**9.81**	**158.90**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-4	11/18/2010[1]	168.40	--	--	<250	2,800	26,000	2,800	1,500	550	3,100	<0.5	210	<200	<50	<50	<50	<50	<50	790[i] 210[j]
	02/14/2012[1]	168.40	6.45	161.95	--	<3,000	27,000	1,500	660	520	1,500	<5.0	--	--	--	--	--	--	--	--
	03/13/2015	168.47	10.70	157.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2015	168.47	9.63	158.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3

Groundwater Monitoring and Sampling Data
Former Texaco Service Station 359766 (Ed's Liquor)
2700 23rd Avenue
Oakland, California

					HYDROCARBONS			VOCS												
Location	Date	TOC[a]	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	B	T	E	X	MTBE by SW8260	Naphthalene	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	ADDITIONAL
	Units	ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	09/29/2015	168.47	11.04	157.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/22/2015	168.47	10.31	158.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/28/2016	168.47	9.32	159.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2016	168.47	8.38	160.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/08/2016	**168.47**	**8.60**	**159.87**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-5	02/26/2015[2]	162.42	17.81	144.61	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
	03/13/2015	162.42	16.48	145.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2015	162.42	10.92	151.50	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
	09/29/2015	162.42	12.29	150.13	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
	12/22/2015	162.42	13.46	148.96	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
	03/28/2016	162.42	8.22	154.20	--	--	<100	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--
	06/19/2016	162.42	9.18	153.24	--	--	<100	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--
	09/08/2016	**162.42**	**10.78**	**151.64**	**--**	**--**	**<100**	**<1**	**<1**	**<1**	**<1**	**<1**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Abbreviations and Notes:

-- = Not analyzed

<x and ND = Not detected above the method detection limit x.

Total purgeable petroleum hydrocarbons (TPPH) by EPA Method 8260B

Total petroleum hydrocarbons as motor oil (TPHmo), TPH as diesel (TPHd), and TPH as gasoline (TPHg) by modified EPA Method 8015B

Benzene, Toluene, Ethylbenzene, Xylenes by EPA Method 8260B

Methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), 1,2 dichloroethane (1,2-DCA), 1,2-dibromoethane (EDB), tertiary butyl alcohol (TBA), naphthalene by EPA Method 8260B

Volatile organic copmounds (VOCs) by EPA Method 8260B

a = Top of casing elevation was surveyed by Morrow Surveying on February 24, 2015; coordinates are California State Plan Zone 3, from GPS observation using CSDS virtual survey network, coordinate datum is NAD 83, reference geoid is GEOID03, and vertical datus is NAVD 88 from GPS observations. Prior to 2015, a survey was completed by licensed surveyor Ty Hawkins on December 20, 2010; based on California Coordinate System NAD 83, Zone III (2002.00), and elevations based on NAVD 88.

b = n-butyl benzene

c = 4-isopropyl toluene

d = Sec-butyl benzene

e = Isopropylbenzene

f = n-propyl benzene

g = 2-butanone

h = 4-methyl-2-pentanone

i = 1,2,4-trimethylbenzene

j = 1,3,5-trimethylbenzene

1 = Sampled by previous consultant

2 = Well development

Table 4

Cumulative Soil Gas Analytical Data
Former Texaco Station 359766 (Ed's Liquors)
2700 23rd Avenue
Oakland, California

Sample ID	Date	Sample Depth (fbg)	TPHg	Benzene	Toluene	Ethyl-benzene	m,p-Xylene	o-Xylene	MTBE	Naphthalene	Oxygen	N_2	CO_2	Methane	He
			(µg/m^3)	*(µg/m^3)*	*(µg/m^3)*	*(µg/m^3)*	*(µg/m^3)*	*(µg/m^3)*	*(µg/m^3)*	*(µg/m^3)*	*(% Vol)*	*(% Vol)*	*Vol)*	*(% Vol)*	*(% Vol)*
ESL Table E-3 Ambient and Indoor Air Screening Levels, Lowest Commercial/Industrial [a]			***1,200***	***0.42***	***1,300***	***0.97***	***440***	***440***	***47***	***0.36***	***NE***	***NE***	***NE***	***NE***	***NE***
LTCP Soil Gas Criteria - Commercial [b]			***NE***	***280***	***NE***	***3,600***	***NE***	***NE***	***NE***	***310***	***NE***	***NE***	***NE***	***NE***	***NE***
VP-1	07/14/14	4.5	2,100	9.0	34	11	35	13	<5.0	<29	8.5	85	6.7	<0.00028	<0.14
VP-1 DUP	07/14/14	4.5	2,200	7.6	140	11	37	16	<4.8	<28	8.6	85	6.5	<0.00027	<0.13
VP-2	07/14/14	4.5	740,000	79	<58	<67	89	<67	<56	<320	10	79	10	0.12	<0.19

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method TO-15 or EPA Method TO-15 SIM

Benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method TO-15 or EPA Method TO-15 SIM

Naphthalene by EPA Method TO-15 or EPA Method TO-15 SIM or EPA Method TO-17 (VI Tubes)

Oxygen, nitrogen (N_2), carbon dioxide (CO_2), methane, and helium (He) by ASTM D-1946.

fbg = Feet below grade.

Micrograms per cubic meter (µg/m^3).

Percent Volume (%).

<x = Not detected above stated laboratory method detection limit x.

-- = not analyzed or not applicable.

a = Environmental Screening Levels (ESLs) for shallow soil gas 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, revised May 2013, Table E-3.

b = Low-Threat Underground Storage Tank Case Closure Policy - Soil Gas Criteria No Bioattenuation Zone - prepared by the California State Water Resources Control Board, August 17, 2012.

Bold = Concentration exceeds applicable screening levels.

Table 5

Aliphatic and Aromatic Hydrocarbon Soil Gas Analytical Data
Former Texaco Station 359766 (Ed's Liquors)
2700 23rd Avenue
Oakland, California

Location	Date	Depth	C5-C6 Aliphatic Hydrocarbons	>C6-C8 Aliphatic Hydrocarbons	>C8-C10 Aliphatic Hydrocarbons	>C10-C12 Aliphatic Hydrocarbons	>C8-C10 Aromatic Hydrocarbons	>C10-C12 Aromatic Hydrocarbons
Units		***(fbg)***	←		***Concentrations in µg/m^3***			→
					Shallow Soil Gas Criteria [a]			
LTCP Soil Gas Criteria - Commercial [a]			**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
			NE	**NE**	**NE**	**NE**	**NE**	**NE**
VP-1	7/14/2014	4.5	<90	420	<160	290	<140	<150
VP-1 DUP	7/14/2014	4.5	<86	550	<150	680	<130	<140
VP-2	7/14/2014	4.5	3,000	180,000	190,000	81,000	<1,500	<1,700

Notes:
Aliphatic and Aromatic Hydrocarbon analyses by EPA Method TO-15 GC/MS Full Scan.
fbg = Feet below grade.
µg/m^3 = Micrograms per cubic meter
[a] = Low-Threat Underground Storage Tank Case Closure Policy - Soil Gas Criteria No Bioattenuation Zone - prepared by the California State Water Resources Board, August 17, 2012
NE = Not Established
<x = Not detected at reporting limit x.
-- = Not analyzed/not applicable.

Table 6

Sensitive Receptors
Former Texaco Service Station 359766 (Ed's Liquors)
2700 23rd Avenue
Oakland, California

Receptor ID *	Type (number at location)	Name	Address	City	Approximate Distance From Site (feet)	Direction from Site
A	Irrigation Well	Salem Lutheran Home	2361 East 29th Street	Oakland	700	NE
A	Nursing Home	Salem Lutheran Home	2361 East 29th Street	Oakland	700	NE
B	School	Manazanita Community School	2409 E. 27th Street	Oakland	750	SE
C	Daycare	Eden Child Daycare	2935 21st Avenue	Oakland	1,200	NNW
D	Daycare	Tiny Tot Cooperative Nursery	2370 Grande Vista Place	Oakland	1,250	E
E	Cathodic Well	Pacific Gas & Electric	14th Ave and Vallecito St.	Oakland	2,000	NW
F	Hospital	Highland General Hospital	1411 E. 31st Street	Oakland	2,100	NW
G	Daycare	Redwood Day School	3245 Sheffield Avenue	Oakland	2,250	NE
H	Cathodic Well	East Bay Municiapl Utility District	Macarthur Blvd and Woodruff	Oakland	2,600	NNE

Notes/Abbreviations:
N = North
S = South
E = East
W = West
* = Locations shown on Figure 3

Appendix A
Summary of Environmental Investigations and Remediation

Appendix A Summary of Environmental Investigations and Remediation

April 2010 File Review

Basics Environmental (Basics) completed an environmental transaction screen on April 20, 2010 for Summit Bank. Basics also reviewed files at various local agencies to obtain historical use of the property. Based on the file review, the site was developed as a gas station by 1928 and demolished by 1967. The current building was constructed in 1968/1969. Additional information is available in Basics' *Local Regulatory Agency File Review* dated May 7, 2010.

July 2010 Subsurface Investigation

Schutze & Associates, Inc. (SA) advanced four soil borings (B-1 through B-4) and installed four temporary soil gas vapor probes (SV-1 through SV-4). Additional information is available in SA's *Phase II Subsurface Investigation Report* dated August 24, 2010.

October 2010 Subsurface Investigation

In October 2010, SA installed groundwater monitoring wells MW-1 through MW-4. A geophysical survey revealed a metallic utility line in the central area of the parking lot and miscellaneous debris at the southeast corner of the parking lot. In November 2010, these areas were excavated and the utility line and debris were removed. Additional information is available in SA's *Report: Summary of Previous Investigations, Installation and Sampling of Four Monitoring Wells, and Excavation of Test Pits, Soil Testing and Limited Soil Removal* dated March 16, 2011.

February 2012 Subsurface Investigation

In February 2012, Doulos Environmental, Inc. (Doulos) advanced boring DHB-1 on the southwest corner of the site and collected soil samples to compare soil analytical results from previous investigations. Doulos also collected groundwater samples from site monitoring wells MW-1 through MW-4. Additional information is available in Doulos' *Hydrolic Investigation*, dated March 8, 2012.

July 2014 Subsurface Investigation and Conceptual Site Model

In July 2014, Conestoga-Rovers and Associates (CRA) completed an investigation on behalf of Chevron Environmental Management Company (EMC). CRA advanced soil borings B-5 through B-8, and installed soil vapor probes VP-1 and VP-2 to assess soil and soil vapor beneath the site. Results of the investigation and a conceptual site model that included a sensitive receptor survey and preferential pathway study are presented in CRA's *Subsurface Investigation Report and Conceptual Model* dated August 29, 2014.

Appendix B
Low-Threat Closure Policy Checklist

Site Name: Former Texaco Service Station 359766
Site Address: 2700 23rd Street, Oakland, California

Site meets the criteria of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.[1]

General Criteria General criteria that must be satisfied by all candidate sites:	
Is the unauthorized release located within the service area of a public water system?	☒Yes ☐ No
Does the unauthorized release consist only of petroleum?	☒ Yes ☐ No
Has the unauthorized ("primary") release from the UST system been stopped?	☒ Yes ☐ No
Has free product been removed to the maximum extent practicable?	☒ Yes ☐ No ☐ NA
Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?	☒ Yes ☐ No
Has secondary source been removed to the extent practicable?	☒ Yes ☐ No
Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?	☒ Yes ☐ No
Does nuisance as defined by Water Code section 13050 exist at the site?	☐ Yes ☒ No
Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?	☐ Yes ☒ No
Media-Specific Criteria Candidate sites must satisfy all three of these media-specific criteria: **1. Groundwater:** To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites:	
Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?	☒ Yes ☐ No ☐ NA
Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites? If YES, check applicable class: ☐ **1** ☒ **2** ☐ **3** ☐ **4** ☐ **5**	☒ Yes ☐ No ☐ NA

[1] Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.

For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?	☐ Yes ☐ No ☒ NA
2. Petroleum Vapor Intrusion to Indoor Air: The site is considered low-threat for vapor intrusion to indoor air if site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies. **Is the site an active commercial petroleum fueling facility?** Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk. **a. Do site-specific conditions at the release site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4?** If YES, check applicable scenarios: ☐**1** ☐ **2** ☐ **3** ☒ **4** **b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?** **c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?**	☐ Yes ☒ No ☒Yes ☐ No ☐ NA ☐ Yes ☒ No ☐ NA ☐ Yes ☒ No ☐ NA

3. Direct Contact and Outdoor Air Exposure: The site is considered low-threat for direct contact and outdoor air exposure if site-specific conditions satisfy one of the three classes of sites (a through c).	
a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?	☒ Yes ☐ No ☐ NA
b. Are maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?	☐ Yes ☒ No ☐ NA
c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?	☐ Yes ☒ No ☐ NA