



February 10, 2017

Mr. Loyal and Ms. Mary Moore  
30689 Prestwick Avenue  
Hayward, CA 94544-7331  
(Sent via e-mail to: [loyalmary75@yahoo.com](mailto:loyalmary75@yahoo.com))

Mr. Pedro and Ms. Maria Pulido  
22762 Moura Court  
Hayward, CA 94541-3279  
(Sent via e-mail to: [edsliquor@yahoo.com](mailto:edsliquor@yahoo.com))

Mr. Mark Horne  
Chevron Environmental Management Co.  
6101 Bollinger Canyon Road  
San Ramon, CA 94583-5177 (Sent via e-mail to: [MarkHorne@chevron.com](mailto:MarkHorne@chevron.com))

Subject: Fuel Leak Case No. RO0003098 and GeoTracker Global IDT10000004218, Ed's Liquor Store, 2700 23<sup>rd</sup> Avenue, Oakland, CA 94606-3530

Ladies and Gentlemen:

Alameda County Department of Environmental Health (ACDEH) has reviewed the December 2, 2016 *Low Threat Case Closure Request* (RFC) prepared on Chevron's behalf by GHD for the referenced case. ACDEH has evaluated the data in conjunction with the case files and the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP) general and media specific criteria. Based on ACDEH staff review, we have determined that the site does not meet the following criteria, and consequently, ACDEH must deny closure:

- General Criteria f (Secondary Source Removal)
- Media-Specific Criteria for Groundwater
- Media-Specific Criteria for Vapor Intrusion to Indoor Air

At this juncture ACDEH requests that you address the Technical Comments below and submit a Data Gap Work Plan to advance the case to closure.

### **TECHNICAL COMMENTS**

A summary of the each of the general and media specific LTCP criteria that are not met is provided below, followed by an italicized description of justification provided by GHD in the RFC of how the criteria is met, and ACDEH's response.

1. **LTCP Media Specific Criteria for 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 listed in the policy.

***RFC Justification:*** *The site satisfies Class 2 criteria as follows:*

- *The dissolved hydrocarbon plume from the source area (the southwestern corner of the site, near MW-4) that exceeds Water Quality Objectives (WQOs) is less than 250 feet in length in all directions. Downgradient well MW-5, where no hydrocarbons are detected is approximately 120 feet from the plume center (MW-4).*

- *Onsite well MW-1 through MW-4 were previously sampled twice in 2010 and 2012. Methyl tert-butyl ether (MTBE) concentrations were below 1,000 micrograms per liter (ug/L); only 1.3 ug/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 ug/L, then in 2012 at 1,500 ug/L, which are both below 3,000 ug/L. Additionally, based on the concentration reduction in two years and the lack of residual hydrocarbon and natural attenuation processes, concentrations have likely continued to decrease over the past 4 years.*

**ADCEH's Response:** ACDEH's review of the case files indicates that insufficient data and analysis has been presented to assess compliance with Media Specific Criteria for Groundwater. The RFC concludes that groundwater flow direction is to the southwest and has been defined by downgradient monitoring well MW-5. Samples collected from monitoring well MW-5 have consistently been non-detect and thus GHD concludes the contaminant plume has been defined. However, the *Subsurface Investigation Report and Conceptual Site Model* dated August 29, 2014 prepared by Conestoga-Rovers & Associated (CRA) on behalf of Chevron stated that the sewer and storm drain lines in E. 27<sup>th</sup> Street and 23<sup>rd</sup> Avenue (bounding the subject site on the south and west side respectively), may come in contact with groundwater. CRA also concludes that it is uncertain whether these lines act as preferential pathways for hydrocarbon migration. ACDEH concurs with the CRA assessment that if the sewer and storm drain lines are in contact with groundwater, these lines may act as preferential pathways for hydrocarbon migration off site to the residential and commercial properties across E. 27<sup>th</sup> Street. Please refer to the groundwater gradient utility survey figures included in Attachment A to this letter.

Additionally, based on a review of data from nine quarters of monitoring events between 2010 and 2016 of five groundwater monitoring wells, the groundwater flow direction has components to the south and southeast in addition to the southwest. The groundwater flow components in the south and southeast direction are supported by data contained in a *Limited Phase II Environmental Site Assessment Sanitary Sewer Rehabilitation Project Sub-Basin 60-06 Oakland, CA* (Sewer Report) dated March 20, 2015 prepared by Ninyo & Moore on behalf of the City of Oakland. ACDEH provided a copy of the Sewer Report to Chevron on April 14, 2015. The Sewer Report was prepared for the City of Oakland in preparation for sanitary sewer rehabilitation work in the site vicinity. Soil and grab groundwater samples were collected adjacent to a sanitary sewer line segment located under E. 27<sup>th</sup> Street south of the case due to the City of Oakland's concern with potential environmental impact associated with the former USTs at the subject property. A grab groundwater sample collected from SB-2 located approximately 16 feet south of MW-3 and in E. 27<sup>th</sup> Street detected 12,000 ug/L TPHg, 4,000 ug/L TPHd, 330 ug/L TPHmo, 71 ug/L benzene, and 4.9 ug/L naphthalene, indicating TPH, benzene and naphthalene impact under E. 27<sup>th</sup> Street and south of the site. Please refer to the Figure and Tables from the Sewer Report provided in Attachment B to this letter.

Based on this data it appears the extent of the contaminant plume has not been adequately defined. Contaminant migration in groundwater may pose a vapor intrusion risk to downgradient residents and businesses on E. 27<sup>th</sup> Street.

Therefore, please present a strategy in the Data Gap Work Plan to evaluate the extent of the contaminant plume including, but not limited to, groundwater monitoring and sampling of all five groundwater monitoring wells for TPHg, TPHd, TPHmo, benzene, toluene, ethylbenzene, and xylenes (BTEX), naphthalene, fuel oxygenates and collection of soil and grab groundwater samples

from borings located upgradient of the residential and commercial businesses on the south side of E-27<sup>th</sup> Street.

- 2. LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air** – The LTCP describes conditions, including bioattenuation (unsaturated) zones, which if met will assure that exposure to petroleum vapors in indoor air will not pose unacceptable health risks to human occupants of existing or future site buildings, and adjacent parcels. Appendices 1 through 4 of the LTCP criteria illustrate four potential exposure scenarios and describe characteristics and criteria associated with each scenario.

**RFC Justification:** *LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air: 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.*

**ADCEH's Response:** ACDEH's review of the case files indicates that the Media Specific Criteria for Vapor Intrusion to Indoor Air is not met at the site. Data from a soil vapor survey performed in July 2010, but not included with the RFC, consisted of collection of four soil vapor samples SV-1 through SV-4 from a depth of five feet below ground surface (bgs) on the site. A soil vapor sample collected at SV-2 (located approximately 25 feet from the edge of the liquor store building) detected concentration of 8,100 micrograms per cubic meter ( $\text{ug}/\text{m}^3$ ) ethylbenzene, 850  $\text{ug}/\text{m}^3$  naphthalene, and benzene at less than the laboratory reporting limit of 500  $\text{ug}/\text{m}^3$ , a detection level exceeding the commercial benzene LTCP level of less than 280  $\text{ug}/\text{m}^3$ . A second soil vapor survey conducted in July 2014 consisted of collection of soil vapor samples from two locations, VP-1 and VP-2 at a depth of 4.5 feet bgs. A soil vapor sample collected at VP-2, located approximately 12 feet from the liquor store building and 10 feet east northeast of SV-2 detected concentrations of 79  $\text{ug}/\text{m}^3$  benzene, less than 67  $\text{ug}/\text{m}^3$  ethylbenzene, and naphthalene at less than the laboratory reporting limit of 320  $\text{ug}/\text{m}^3$ , a detection level exceeding the commercial naphthalene LTCP level of less than 310  $\text{ug}/\text{m}^3$ . Additionally, a review of Figure 2 included in Attachment A shows utility lines to the liquor store in the vicinity of these soil vapor probes that may act as preferential pathways to vapor migration into the store.

Therefore, please present a strategy in the Data Gap Work Plan to collect additional onsite data to verify that there is a low risk to occupants of the liquor store from vapor intrusion to indoor air. Please ensure if soil vapor collection is proposed, laboratory detection limits below the LTCP criteria are used. Please note, that if direct measurement of soil gas is proposed, ensure that your strategy is consistent with the field sampling protocols described in the Department of Toxic Substances Control's Final Vapor Intrusion Guidance (October 2011).

Additionally, please collect information on the foundation of the onsite liquor store and the residential and commercial buildings downgradient of the undefined contaminant plume on E. 27<sup>th</sup> street to assess the potential risk to occupants from vapor intrusion to indoor air. Subsequent to plume delineation (requested in Technical Comment 1) and a review of foundation information for the downgradient residences and commercial structures on E. 27<sup>th</sup> Street, a decision will be made whether further evaluation is required to assess vapor intrusion risk to indoor. Please refer to Attachment C of this letter for google maps showing the adjacent downgradient residential and commercial properties.

3. **General Criteria f – Secondary Source Has Been Removed to the Extent Practicable –** “Secondary source” is defined as petroleum-impacted soil or groundwater located at or immediately beneath the point of release from the primary source. Unless site attributes prevent secondary source removal (e.g. physical or infrastructural constraints exist whose removal or relocation would be technically or economically infeasible), petroleum-release sites are required to undergo secondary source removal to the extent practicable as described in the policy. “To the extent practicable” means implementing a cost-effective corrective action which removes or destroys-in-place the most readily recoverable fraction of source-area mass. It is expected that most secondary mass removal efforts will be completed in one year or less. Following removal or destruction of the secondary source, additional removal or active remedial actions shall not be required by regulatory agencies unless (1) necessary to abate a demonstrated threat to human health or (2) the groundwater plume does not meet the definition of low threat as described in this policy.

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

**ADCEH’s Response:** ACDEH’s review of the case files indicates that insufficient data and analysis has been presented to assess compliance with General Criteria f. The site was historically used as a commercial fueling facility from 1928 to 1964. The facility was demolished around 1964 and redeveloped with liquor store in 1968. There are no records in the case file documenting the location(s) and number of underground storage tanks (USTs) and associated piping and dispenser islands. In 2010 two areas were excavated at the site; however, as indicated by concentrations of Total Petroleum Hydrocarbon (TPH) as gasoline, diesel and motor oil, benzene and naphthalene detected in soil samples collected between 0 and 5 feet below ground surface (bgs) and between 5 to 10 feet bgs in areas outside the two excavations, significant secondary or residual sources remain at the site.

**On-site TPH/Benzene/Naphthalene detected in soil less than 5 feet in depth  
 in milligrams per kilogram (mg/kg)**

Field Point	Sample Date	Depth feet	TPHg	TPHd	TPHmo	Benzene	Naphthalene
DHB-1	2/2012	3.25	490	140	NA	0.16	NA
B-6	7/2014	5	22	<4.0	<9.9	<0.005	<0.013
B-7	7/2014	5	130	10	<10	0.086	0.16
MW-4	10/2010	3.5	1,400	220	16	<0.5	<0.5
SV-2	7/2010	5	420	370	1,500	<0.2	<2.0
VP-2	7/2014	5	<1	42	85	<0.005	0.014

NA Not analyzed

**On-site TPH/Benzene/Naphthalene detected in soil between 5 and 10 feet depth (mg/kg)**

Field Point	Sample Date	Depth feet	TPHg	TPHd	TPHmo	Benzene	Naphthalene
DHB-1	2/2012	6.25	360	360	NA	1.05	NA
B-6	7/2014	10	130	33	<10	<0.028	0.029
MW-4	10/2010	8.5	270	18	<5.0	<0.20	0.27
B-1	7/2014	8	43	33	<5.0	<0.010	<0.010

NA Not analyzed

Subsequent to collection of data to support the stability and lateral extent of the groundwater contaminant plume and the risk of vapor intrusion risk to indoor air of occupants in both on and offsite buildings, a decision will be made whether further remediation of secondary source (or residual source) material is required.

### **TECHNICAL REPORT REQUEST**

Please upload the following technical reports to the ACDEH ftp site (Attention: Karel Detterman) and to the State Water Resources Control Board's GeoTracker website:

- 1. Data Gap Investigation Work Plan and Updated Site Conceptual Model** – Please prepare a Data Gap Investigation Work Plan to address the technical comments listed above. Please support the scope of work in the Data Gap Investigation Work Plan with a focused Site Conceptual Model (SCM) and Data Quality Objectives (DQOs) that relate the data collection to each LTCP criteria. Please sequence activities in the proposed Data Gap Investigation scope of work to enable efficient data collection in the fewest mobilizations possible.

As a part of the updated SCM, please identify on the aerial photograph-based site vicinity figure buildings with basements, half-basements, or potential dewatering structures (such as sump pumps, which have the potential to bring contaminated groundwater to the surface for discharge to the street or storm drain). Please submit the Data Gap Work Plan in accordance with the following schedule and file naming convention:

**April 14, 2017** Data Gap Work Plan and Updated Site Conceptual Model  
RO0003098\_WP\_SCM\_R\_yyyy-mm-dd

- 2. Electronic Submittal of Information (ESI) Compliance:** A review of the case file indicates that the SWRCB Geotracker database and/or the ACDEH database is not complete, thus rendering the site to a non-compliant status pursuant to California Code of Regulations, Title 23, Division 3, Chapter 30, Articles 1 and 2, Sections 3890 to 3895. At present missing data and documents include, but may not be limited to:

- surveyed elevation measurements to the top of well casings (GEO\_Z files);
- the latitude and longitude (GEO\_XY files) of any permanent monitoring well for which data is reported in EDF format.

Please submit documentation of ESI compliance in accordance with the following schedule and file naming convention:

**April 14, 2017** ESI Compliance Documentation  
RO0003098\_ESI\_COMP\_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.

**SUBMITTAL ACKNOWLEDGEMENT STATEMENT (FORMER PERJURY STATEMENT)**

Please note that ACDEH has updated Attachment 1 and will now require a *Submittal Acknowledgement Statement*, instead of a *Perjury Statement* as a cover letter signed by the responsible Party (RP). Please make this change to your submittals to ACDEH with the next deliverable.

The language for the *Submittal Acknowledgement Statement* is as follows:

*"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."*

Should you have any questions, please contact me at (510) 567-6708 or send me an electronic mail message at [karel.detterman@acgov.org](mailto:karel.detterman@acgov.org)

Sincerely,

Karel Detterman, PG  
Hazardous Materials Specialist

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

Attachment A – Figure 2 (Utility Survey) and Figure 2 (Groundwater Gradient)

Attachment B – Figure 3, Table 2 and Table 4 from the *Limited Phase II Environmental Site Assessment Sanitary Sewer Rehabilitation Project Sub-Basin 60-06 Oakland, CA*, March 20, 2015 prepared by Ninyo & Moore for the City of Oakland

Attachment C – Google maps of downgradient adjacent properties

cc: Kiersten Hoey, GHD, 5900 Hollis Street, Emeryville, CA 94608, (Sent via E-mail to: [Kiersten.Hoey@ghd.com](mailto:Kiersten.Hoey@ghd.com))

Karel Detterman, ACDEH, (Sent via E-mail to: [karel.detterman@acgov.org](mailto:karel.detterman@acgov.org))

Dilan Roe, ACDEH, (Sent via E-mail to: [dilan.roe@acgov.org](mailto:dilan.roe@acgov.org))

Paresh Khatri, ACDEH, (Sent via E-mail to: [paresh.khatri@acgov.org](mailto:paresh.khatri@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/](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.bpelsg.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.

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)</b>	<b>REVISION DATE:</b> December 1, 2016
	<b>ISSUE DATE:</b> July 5, 2005
	<b>PREVIOUS REVISIONS:</b> October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010; May 15, 2014, November 29, 2016
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> 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](mailto:deh.loptoxic@acgov.org).
  - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
  - a) 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](mailto:deh.loptoxic@acgov.org) notify us that you have placed a report on our ftp site.
  - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
  - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
  - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.



# ATTACHMENT A

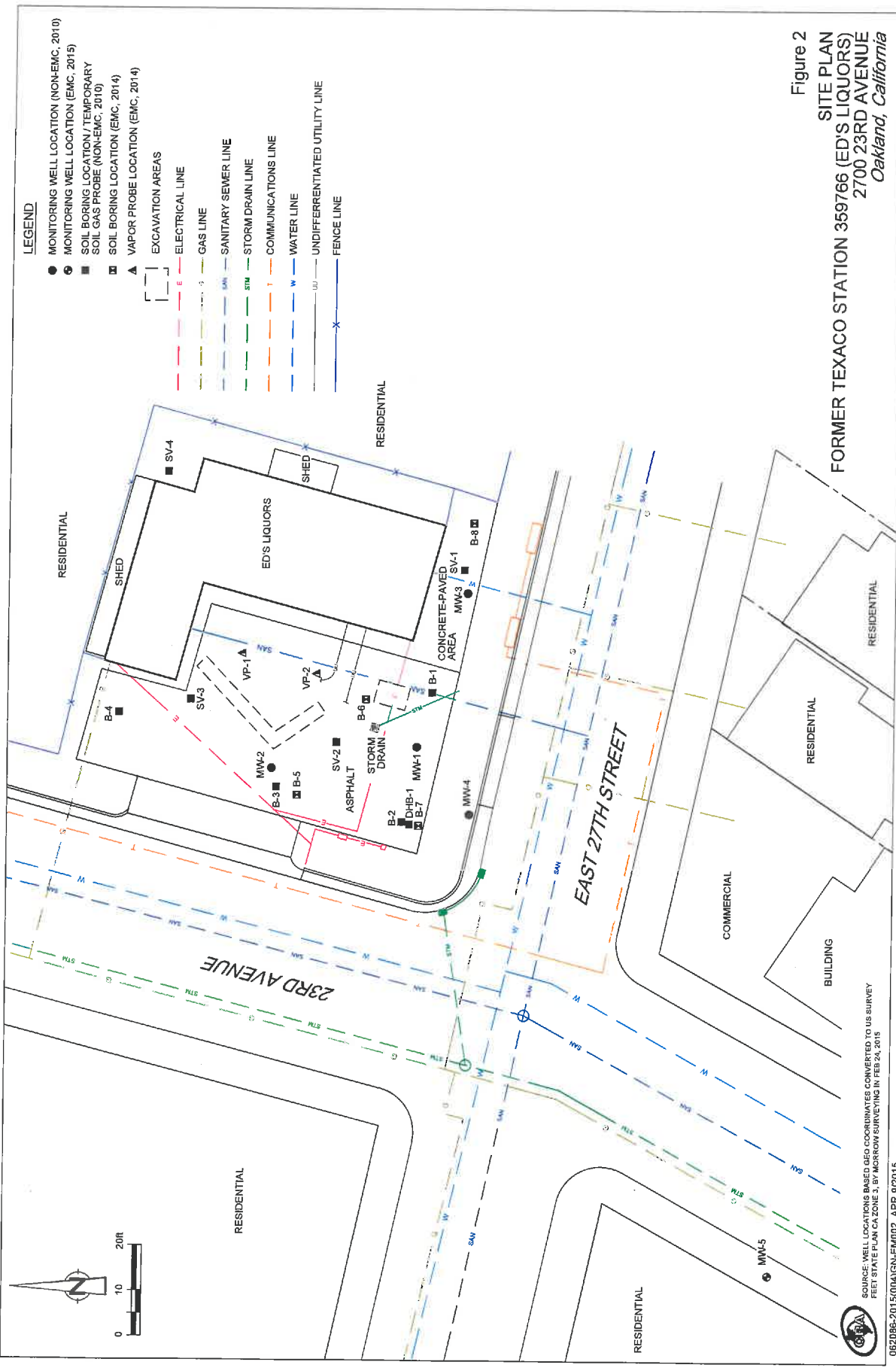


Figure 2  
 SITE PLAN  
 FORMER TEXACO STATION 359766 (ED'S LIQUORS)  
 2700 23RD AVENUE  
 Oakland, California

062006-2015(004)SN-EM002 APR 9/2015  
 SOURCE: WELL LOCATIONS BASED GEO COORDINATES CONVERTED TO US SURVEY FEET STATE PLAIN CA ZONE 3, BY MORROW SURVEYING IN FEB 24, 2015



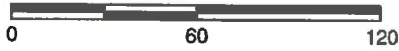
# ATTACHMENT B



REFERENCE: GOOGLE EARTH IMAGERY, 2015.



SCALE IN FEET



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND	
	BORING LOCATION

		<b>2700 23RD AVENUE BORING LOCATIONS</b>		FIGURE  <b>3</b>
402231012	3/15			

**TABLE 2  
SOIL SAMPLE LABORATORY ANALYTICAL RESULTS  
TOTAL PETROLEUM HYDROCARBONS AS GASOLINE, DIESEL, MOTOR OIL  
AND VOLATILE ORGANIC COMPOUNDS**

Sample I.D.	Sample Collection Date	Sample Depth (ft bgs)	TPH (mg/kg)			VOCs (mg/kg)				
			Gasoline C7-C12	Diesel C10-C24	Motor Oil C24-C36	Ethylbenzene	m, p-Xylenes	Isopropylbenzene (Cumene)	Propylbenzene	n-butylbenzene
SB-1-10	2/26/2015	10	2.2Y	2.7Y	ND<5.0	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042
SB-2-10	2/26/2015	10	220Y	82Y	8.0	0.610	0.250	0.280	0.590	0.510
SB-3-10	2/26/2015	10	ND<1.0	ND<1.0	ND<5.0	ND<0.0047	ND<0.0047	ND<0.0047	ND<0.0047	ND<0.0047
SB-4-7	2/26/2015	7	ND<1.1	ND<1.0	ND<5.0	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042
<b>Construction/Trench Worker ESL<sup>1</sup></b>			2,700	900	28,000	490	2,500	NL	NL	NL
<b>Commercial/Industrial Worker ESL<sup>2</sup></b>			4,000	1,100	100,000	24	2,600	NL	NL	NL

**Notes and Abbreviations:**

TPH (total petroleum hydrocarbons) as gasoline, diesel and motor oil analyzed by EPA Method 8015B

VOCs = Volatile Organic Compounds analyzed by EPA Method 8260B

mg/kg = milligrams per kilogram

ug/kg = micrograms per kilograms

ft bgs = feet below ground surface

< X = concentration not detected above laboratory reporting limits of X

NA = Not Applicable

ND = Not Detected

NL = Not listed

Y - Sample exhibits chromatographic pattern which does not resemble standard

<sup>1</sup>-Construction/Trench worker ESLs = San Francisco Bay RWQCB Environmental Screening Levels - Table K-3 Construction/Trench Worker Exposure, Revised December 2013

<sup>2</sup>- Commercial/Industrial worker ESLs = San Francisco Bay RWQCB Environmental Screening Levels - Table K-2 Direct Exposure Soil Screening Levels, Commercial/Industrial Worker Exposure Scenario, Revised December 2013

**Bold** indicates exceedence of Commercial/Industrial Worker ESL

**TABLE 4  
GROUNDWATER SAMPLE LABORATORY ANALYTICAL RESULTS  
TOTAL PETROLEUM HYDROCARBONS AND DETECTED VOLATILE ORGANIC COMPOUNDS**

Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Analytes												
			Gasoline C7-C12	Diesel C10-C24	Motor Oil C24-C3	Benzene	Toluene	Ethylbenzene	Total Xylenes (m,p + o)	Isopropylbenzene	Propylbenzene	1,3,5-Trimethylbenzene	sec-butylbenzene	para-Isopropyl Toluene	Naphthalene
Groundwater Sample Analytical Results (µg/L)															
SB-2-GW	2/26/2015	10	12,000	4,000	330	71	42	110	62	71	130	22	9.3	11	4.9
Trip Blank	2/26/2015	10	ND<50	ND<50	ND<300	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0
General Waste Discharge Requirement <sup>1</sup>			50	50	NE	1	5	5	5	NE	NE	NE	NE	NE	NE
Groundwater Screening Level ESLs <sup>2</sup>			100	100	100	1.0	40	30	20	NE	NE	NE	NE	NE	6.1

**Notes:**

Total Petroleum Hydrocarbons analyzed using EPA Method 80151  
Title 22 metals analyzed by 6010B  
Volatile Organic Compounds Analyzed using EPA Method 6010F

-- not applicable

µg/L - micrograms per Liter

ESL - Environmental Screening Level

NA - Not analyzed

ND<X - not detected at a concentration greater than the laboratory reporting limit of X

NE - Not Established

**Boldtype indicates concentration exceeds Groundwater Screening Level ESLs**

<sup>1</sup> - General Waste Discharge Requirements for Discharge or Reuse of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by Volatile Organic Compounds (VOC), Fuels and Other Related Wastes (VOC and Fuel General Permit) RWQCB 02-08-12

<sup>2</sup> - Groundwater Screening Levels (groundwater IS a current or potential drinking water resource) from Table F1-A; SFRWQCB ESLs

# ATTACHMENT C



2301 E 27th St - Google Maps

Google Maps 2301 E 27th St



Oakland, California  
Street View - Oct 2016



Image capture: Oct 2016 © 2017 Google

2700 23rd Ave - Google Maps

Google Maps 2700 23rd Ave



Image capture: Jun 2016 © 2017 Google

Oakland, California  
Street View - Jun 2016





2311 E 27th St - Google Maps

Google Maps 2311 E 27th St



Oakland, California  
Street View - Oct 2016



Image capture: Oct 2016 © 2017 Google



2315 E 27th St - Google Maps

Google Maps 2315 E 27th St



Oakland, California  
Street View - Oct 2016

Image capture: Oct 2016 © 2017 Google

