

Mark Horne Project Manager Marketing Business Unit Chevron Environmental Management Company 6001 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 842-0973 markhorne@chevron.com

Alameda County Health Care Services 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 **RECEIVED** By Alameda County Environmental Health 11:22 am, Feb 07, 2017

Re: Former Chevron Service Station No. 90955 1200 Park Street Alameda, California Case No. RO0003230

I have reviewed the attached report entitled Work Plan for Additional Site Assessment

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,

Mar S. Hon

Mark Horne Project Manager

Attachment: Work Plan for Additional Site Assessment

Reference No. 11119162



February 3, 2017

Karel Detterman Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502

Re: Work Plan for Additional Site Assessment Former Chevron Service Station 90955 1200 Park Street ("property" or "site") Alameda, California ACDEH Case No. RO0003230

Dear Ms. Detterman:

GHD is submitting this *Work Plan for Additional Site Assessment* at the site referenced above (Figure 1) on behalf of Chevron Environmental Management Company (CEMC), as requested by the Alameda County Department of Environmental Health Services (ACDEH) in its letter dated December 5, 2016, to CEMC and the property owner, M.J. Garfinkle and Susan G. Block (Attachment A). CEMC manages this project on behalf of its affiliate, Chevron U.S.A. Inc. (CUSA).

In April 2016, Moore Twining Associates, Inc. (MTA) completed a limited environmental assessment at the site reportedly as part of a property due diligence for TBC Corporation. No Phase I assessment has been provided. In its letter to the property owner and CEMC, ACDEH requested a work plan to collect additional data to further assess site conditions to assist in preparation of a site conceptual model (SCM) for comparison to the State Water Resources Control Board's Low-Threat Closure Policy (LTCP) general and media-specific closure criteria. The purpose of this work plan is to outline a proposed scope of work to further assess soil and groundwater conditions beneath the site and to collect sufficient data to evaluate site conditions against the LTCP criteria. A SCM will be prepared and submitted with the results of the proposed scope of work. Site background information and GHD's scope of work are presented below.

1. Site Background

1.1 Site Description

The site is located on the eastern corner of the intersection of Park Street and San Jose Avenue in Alameda, California (Figures 1 and 2) and is currently occupied by an automotive repair and tire facility that does business as "Discount Tire Pro's."



1.2 Site History

According CUSA archived records, its predecessor, Standard Oil Company of California (Standard), leased the property from 1933 to 1978. In 1952, Standard requested permission to remove three 550-gallon underground storage tanks (USTs) and install three 5,000-gallon USTs at the site. In 1967, Standard requested permission to relocate one 550-gallon used-oil UST. In 1978, CUSA terminated the lease agreement with the property owner and removed three 5,000-gallon USTs, canopy, and dispensers and sold the station building, one hoist, and compressor to the property owner. In 1988, CUSA removed one 490-gallon used-oil UST from the site.¹ Samples were collected at 9 feet below ground surface (fbgs) from the ends of the tank. No petroleum hydrocarbons as diesel, total oil and grease, or volatile organic compounds (VOCs) were detected. Former station facilities are illustrated on Figure 2.

The owner of the property submitted a "Summary of Findings for Property History and Chemical Use Information Research for 1200 and 1210 Park Street and 2407 San Jose Avenue" dated January 20, 2017 to ACDEH (Terraphase 2017). According to the Summary, the site has continued to be used as an "Auto Service Garage/Gas Station" since termination of the CUSA lease in 1978 to the present. The Summary states that the site has been occupied continuously by Big O Tires since 1983 for use as an "Auto Service Garage/Gas Station".

According to the Summary, the adjacent property at 2407 San Jose Avenue was utilized as an auto service garage in 1922. The Summary states that the 2407 San Jose Avenue property was occupied by Clamp-Swing Pricing for metal fabrication from the 1920s until late 1957. The Summary states that the 2407 San Jose Avenue property has been occupied continuously by Big O Tires since 1983 for use as an "Auto Service Garage."

In April 2016, MTA conducted a Phase II Investigation, reportedly for a potential buyer of the property to characterize soil and groundwater impacts related to current and former operations at the site.² A total of 12 soil borings (B-1 through B-12) were advanced in the suspected former locations of fuel USTs, used-oil USTs, hydraulic hoists, and dispensers. One soil sample was collected from each boring at depths ranging from 10 to 11.5 fbgs and grab-groundwater samples were collected from borings B-1, B-5, B-6, B-10, and B-12. Petroleum hydrocarbons were reported primarily in borings B-10 and B-12, in the suspected former dispenser locations, and in B-6, inside the site building. No total petroleum hydrocarbons as gasoline, diesel, or motor oil or polycyclic aromatic hydrocarbons (PAHs) were detected in B-1 through B-4 advanced in the locations of the hoists and former used-oil UST. The boring locations are illustrated on Figure 2 and analytical results of the investigation are included as Attachment B.

Soils encountered in the borings consisted of fine-to-medium grained silty sand to the maximum depth explored of 20 fbgs². Brick debris was noted between 1 and 5 fbgs in B-1 and concrete debris was noted

¹ Blaine Tech Services, Inc *Tank Removal Sampling* Report, October 4, 1988

² Moore Twining Associates, (Moore Twining) Inc. *Limited Phase II Environmental Site Assessment Report,* May 11, 2016



from 1 to 4 fbgs in boring B-2; both located inside the work bays adjacent to the hoists. MTA reported groundwater at approximately 8 to 8.5 fbgs in the borings. Based on data from nearby sites on the California State Water Resources Control Board's Geotracker website, MTA stated groundwater beneath the site likely flows west and northwest.

2. Work Plan

To further assess soil and groundwater conditions beneath the site and to collect sufficient data to evaluate site conditions against LTCP criteria, GHD proposes to install four groundwater monitoring wells onsite (Figure 2). Proposed work includes collection and analysis of soil and groundwater samples, verification of depth to groundwater, and evaluation of groundwater flow beneath the site.

2.1 Permits

GHD will obtain drilling permits from Alameda County Public Works Agency and CEMC will secure an access agreement with the property owner.

2.2 Site-Specific Health and Safety Plan

GHD will prepare a site-specific health and safety plan to protect site workers. The plan will be reviewed and signed by all site workers and visitors and remain onsite during all field activities.

2.3 Utility Location and Clearance

GHD will contact Underground Service Alert (USA) to coordinate location of subsurface utilities no less than 48 hours prior to the start of field activities. GHD will subcontract a licensed geophysicist to confirm the locations of underground utilities. In accordance with CEMC and GHD safety standards, a hand auger or air-knife equipment will be utilized to clear the locations to a depth of 8 fbgs.

2.4 Well Borings and Installation

The well borings will be advanced using 8-inch outside diameter hollow-stem auger to approximately 15 fbgs with an approximate screened interval of 5 to 15 fbgs. However, the screen interval may be modified based on field observation of water levels encountered during drilling activities. The monitoring wells will be constructed using 2-inch diameter Schedule 40 PVC with a 0.020-inch slotted screen. The well screen will be surrounded by a sand pack consisting of #2/12 sand to approximately 1 foot above the top of the screened interval. One foot of hydrated bentonite will be placed above the sand pack. Portland II/V cement will be placed above the bentonite to approximately 1 fbg. A traffic-rated well vault will be placed on the surface and secure to match the existing grade. A licensed land surveyor will survey the top of casing elevations and well locations. GHD's Standard Field Procedure for Soil Boring and Monitoring Well Installation is presented in Attachment C.

2.5 Soil Sampling

GHD will collect soil samples at 3 fbgs and at 5 fbgs and 5-foot intervals thereafter to total depth. Soil samples will also be collected at the soil/groundwater interface, at obvious changes in soil types, and



where hydrocarbon indications are observed to the total depth explored. Soils will be logged using the ASTM D2488-06 Unified Soil Classification System. The 3 fbgs and 5 fbgs samples will be collected using a slide hammer lined with clean stainless steel sleeves. Soil samples beyond 5 feet will be collected using a direct-push sampler, lined with polyethylene sampling tubes. Soil samples will be screened using a photoionization detector (PID) and all PID measurements will be recorded on the boring logs. All samples will be sealed, labeled, logged on a chain-of-custody, placed on ice, and transported to a CEMC approved state-certified laboratory for analysis.

2.6 Well Development and Sampling

The wells will be developed using standard surge agitation and pumping. The wells will be developed no sooner than 72 hours after installation and will be sampled at least 48 hours after well development is complete.

2.7 Chemical Analysis

Selected soil and groundwater samples will be analyzed for the following with a standard turnaround time of 10 working days:

- Total petroleum hydrocarbons as motor oil (TPHmo) and as diesel (TPHd) with silica gel cleanup by EPA Method 8015.
- Total petroleum hydrocarbons as gasoline by EPA Method 8015.
- Benzene, toluene, ethylbenzene, total xylenes (BTEX) and naphthalene by EPA Method 8260B.
- No PAHs or polychlorinated biphenyl (PCBs) were detected in soil collected beneath the former usedoil USTs or from borings adjacent to the hoists and former used-oil USTs; therefore, no additional PAHs analysis is warranted.

2.8 Waste Disposal

Soil cuttings and rinsate water generated during well installation will be placed in DOT-approved drums, labeled appropriately, and temporarily stored onsite. The waste will be transported by licensed waste haulers to a CEMC-approved, California licensed disposal facility following the receipt of an analytical profile.

2.9 Water Well Survey

GHD will contact the California Department of Water Resources (DWR) and Alameda County Public Works Agency (ACPWA) for water well records within 2,000 feet of the site. GHD will also review topographic maps for surface waters in the vicinity of the site.

2.10 Reporting

Upon completion of field activities and review of the analytical results, GHD will prepare a Site Assessment Report and Site Conceptual Model incorporating all available data that, at a minimum, will contain:



- Description of the drilling and sampling
- Well and boring logs
- Tabulated soil and groundwater analytical results
- Tabulated water wells and surface waters
- Analytical reports and chain-of-custody forms
- Waste disposal details
- Updated figures
- An evaluation of hydrocarbons in the subsurface
- An evaluation of site conditions against the LTCP Criteria
- Conclusions and recommendations, including data gaps, as necessary

3. Closing

Following approval, GHD will conduct the proposed work after obtaining the required permits and an access agreement with the current property owner. GHD will notify ACDEH when the assessment will take place and if there are any delays. Please contact Mark Horne of CEMC at (925) 842-0973 or Kiersten Hoey of GHD at (510) 510-3347 if you have any questions or require additional information.

Sincerely,

GHD

Kiersten Hoey

KH/cw/1 Encl.

Figure 1Vicinity MapFigure 2Site Plan

Attachment A Regulatory Letter

Attachment B Historical Soil and Groundwater Analytical Data

Attachment C Standard Field Procedures for Soil Boring and Monitoring Well Installation

cc: Mark Horne, CEMC (electronic copy)

Greg Barclay PG





GHD | 11119162-1-TP



GIS File: Q:\GIS\PROJECTS\11119000s\11119162\Layouts\001\11119162-2016(001)GIS-WA001.mxd



Attachment A Regulatory Letter

ALAMEDA COUNTY HEALTH CARE SERVICES



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

REBECCA GEBHART, Interim Director

AGENCY

December 5, 2016

M. J. Garfinkle and Susan G. Block etal (Sent via e-mail to: <u>garsurg@comcast.net</u>) 352 Capetown Drive Alameda, CA 94502-6426

Ms. Nicole Arceneaux (Sent via e-mail to: <u>Nicole.Arceneaux@chevron.com</u>) Mr. Mark Horne (Sent via E-mail to: <u>MarkHorne@chevron.com</u>) Chevron Environmental Management Company 6101 Bollinger Canyon Road San Ramon, CA 94583

Subject: Technical Report Request for Fuel Leak Case No. RO0003230 and GeoTracker Global ID T10000009401, 1200 Park Street, 1200 Park Street, Alameda, CA 94501

Ladies and Gentlemen:

Thank you for participating in the conference call with Alameda County Department of Environmental Health's (ACDEH) on October 31, 2016. The purpose of the call was to discuss the pending property transaction, the Phase II report's data, and identify the next steps to move the case to closure.

ACDEH has reviewed the *Limited Phase II Environmental Site Assessment Report* (Phase II) dated May 11, 2016 prepared by Moore Twining Associates, Inc. (Moore Twining) for TBC Corporation as part of a due diligence for a property transaction. According to the Phase II, in April 2016 a soil and groundwater investigation was conducted at the site. Twelve soil borings were drilled to determine the presence or extent of soil and groundwater impact in suspected source areas. Up to 17,000 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg), 1,800 mg/kg TPH diesel (TPHd), 150 mg/kg ethylbenzene and 65 mg/kg naphthalene were detected in soil samples. Up to 21,000 micrograms per liter (ug/l) TPHg, 84,000 ug/l TPHd, 89,000 ug/l TPH motor oil (TPH mo), 5.6 ug/l benzene, 240 ug/l ethylbenzene, and 730 ug/l naphthalene were detected in groundwater samples. These data indicate that unauthorized releases from the Underground Storage Tank (USTs) had occurred at the site. The release was referred to the ACDEH Local Oversight Program (LOP), the lead agency for oversight of investigation and cleanup of petroleum hydrocarbon releases in Alameda County. ACDEH-LOP subsequently listed the subject case on our database of fuel leak sites.

ACDEH has evaluated the data presented in the Phase II to the State Water Resources Control Board's Low Threat Closure Policy (LTCP) and we have determined the site does not meet the LTCP General Criteria d (Free Product Removal), e (Site Conceptual Model), f (Secondary Source Removal), and the Media-Specific Criteria for Groundwater, the Media-Specific Criteria for Vapor Intrusion to Indoor Air, and the Media-Specific Criteria for Direct Contact and Outdoor Air Exposure.

Therefore, ACDEH requests that you prepare a Data Gap Investigation Work Plan that is supported by a Site Conceptual Model (SCM) to address the Technical Comments provided below.

TECHNICAL COMMENTS

 LTCP General Criteria b (Unauthorized Release Consists Only of Petroleum) – For purposes of this policy, petroleum is defined as crude oil, or any fraction thereof, which is liquid at standard conditions and temperature and pressure, which means 60 degrees Fahrenheit and 14.7 pounds per square inch absolute including the following substances: motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents and used oils, including any additives and blending agents such as oxygenates contained in the formulation of the substances.

The property has been in commercial use for nearly 100 years. During the October 31, 2016 conference call, the property owner acknowledged that a metal fabricating facility, the Clamp Swing Pricing Company, was operated by the property owners on a portion of the site between the 1920's and the mid-1950's. Between 1933 and 1978, a portion of the property was used as a gasoline service station with USTs, dispenser island(s), waste oil USTs, and hoist(s) resulting in an overlap period between metal fabrication and the service station usage. The current property usage is as a tire and automotive repair facility where hoists are utilized. Historical site usage may indicate both petroleum and non-petroleum unauthorized releases in different portions of the site. Volatile organic compounds (VOCs) including Tetrachloroethene (PCE) were detected in grab groundwater samples.

Please present a strategy in the Data Gap Work Plan (described in Technical Comment 8 below) to address the data gaps identified above including, but not limited to submittal of a Phase I Report, the chemical inventory for the Clamp Swing Pricing Company, the service station, and the tire and auto repair businesses, accurate location of the layout and all potential source areas for the Clamp Swing Pricing Company, the service station, and the tire and auto repair businesses, including locations of all hoists, machine tools, gasoline, diesel, and waste oil USTs shown on a scaled figure. Alternatively, please provide justification of why the site satisfies this general criterion in the focused SCM described in Technical Comment 8 below.

2. LTCP General Criteria d (Free Product) – The LTCP requires free product to be removed to the extent practicable at release sites where investigations indicate the presence of free product by removing in a manner that minimizes the spread of the unauthorized release into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges, or disposes of recovery byproducts in compliance with applicable laws. Additionally, the LTCP requires that abatement of free product migration be used as a minimum objective for the design of any free product removal system.

ACDEH's review of the case files indicates that insufficient data and analysis has been presented to assess the potential for free product or light non-aqueous phase liquid (LNAPL) at the site and its aerial extent. Soil samples collected from B-6, B-10, and B-12 detected concentrations of up to 17,000 mg/kg TPHg and 1,800 mg/kg TPHd and grab groundwater samples collected from B-6, B-10, and B-12 detected up to 21,000 ug/l TPHg, 84,000 ug/l TPHd indicating the possible presence of LNAPL as discussed in the *Technical Justification for Vapor Intrusion (VI) Media Specific Criteria* for the LTCP. Please present a strategy in the Data Gap Work Plan (described in Technical Comment 8 below) to address this apparent data gap. Alternatively, please provide justification of why the site satisfies this general criterion in the focused SCM described in Technical Comment 8 below.

3. LTCP General Criteria e (Site Conceptual Model) – According to the LTCP, the SCM is a fundamental element of a comprehensive site investigation. The SCM establishes the source and attributes of the unauthorized release, describes all affected media (including soil, groundwater, and soil vapor as appropriate), describes local geology, hydrogeology and other physical site characteristics that affect contaminant environmental transport and fate, and identifies all confirmed and potential contaminant receptors (including water supply wells, surface water bodies, structures and their inhabitants). The SCM is relied upon by practitioners as a guide for investigative design and data collection. All relevant site characteristics identified by the SCM shall be assessed and

supported by data so that the nature, extent and mobility of the release have been established to determine conformance with applicable criteria in this policy.

Our review of the case files indicates that insufficient data collection and analysis has been presented to assess the nature, extent, and mobility of the release and to support compliance with General Criteria d, e, and f, Media Specific Criteria for Vapor Intrusion to Indoor Air, Groundwater, and Direct Contact and Outdoor Air Exposure as described in Technical Comments 1 through 7. Please present a strategy in the Data Gap Work Plan (described in Technical Comment 8 below) to address the data gaps identified above. Alternatively, please provide justification of why the site satisfies this general criterion in the focused SCM described in Technical Comment 8 below.

4. 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.

ACDEH's review of the case files indicates that insufficient data and analysis has been presented to assess compliance with General Criteria f. Historic data indicates the existence of at least two generations of USTs, associated piping and dispenser islands, and structures; soil samples collected from B-6, B-10, and B-12 at a depth of 10 feet in a possible dispenser island location detected concentrations of up to 17,000 mg/kg TPHg and 1,800 mg/kg TPHd; however lateral and vertical definition of UST backfill, dispensers, and pipeline runs remain uninvestigated. Consequently, the possibility exists that secondary source is still present at the site. Please present a strategy in the Data Gap Work Plan (described in Technical Comment 8 below) to address the Technical Comments discussed above. Alternatively, please provide justification of why the site satisfies this general criterion in the focused SCM described in Technical Comment 8 below.

5. 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.

Our review of the case files indicates that insufficient data and analysis has been presented to support the requisite characteristics of plume stability or plume length classification. Please present a strategy in the Data Gap Work Plan discussed in Technical Comment 8 below to determine if groundwater in the vicinity of the site has been impacted by a release.

Alternatively, please provide justification of why the site satisfies the media-specific criteria for groundwater in the SCM that assures that threats to existing and anticipated beneficial uses of groundwater have been mitigated or are de minimis.

6. LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air – The LTCP describes conditions, including bioattenuation 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.

Our review of the case files indicates that insufficient data and analysis has been presented to assess the risk of vapor intrusion to indoor air to onsite and offsite building occupants. Please present a strategy in the Data Gap Work Plan (described in Technical Comment 8 below) to address the data gaps identified above. Alternatively, please provide justification of why the site satisfies this general criterion in the focused SCM described in Technical Comment 8 below.

Alternatively, please provide justification of why the site satisfies the Media-Specific Criteria for Vapor Intrusion to Indoor Air in a SCM that assures that exposure to petroleum vapors in indoor air will not pose unacceptable health risks to occupants of current or future buildings.

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). Consistent with the guidance, ACDEH requires installation of permanent vapor wells to assess temporal and seasonal variations in soil gas concentrations.

7. LTCP Media Specific Criteria for Direct Contact and Outdoor Air Criteria – The LTCP describes conditions where direct contact with contaminated soil or inhalation of contaminants volatized to outdoor air poses a low threat to human health. According to the policy, release sites where human exposure may occur satisfy the media-specific criteria for direct contact and outdoor air exposure and shall be considered low-threat if the maximum concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1 for the specified depth bgs. Alternatively, the policy allows for a site specific risk assessment that demonstrates that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health, or controlling exposure through the use of mitigation measures, or institutional or engineering controls.

Insufficient data collection and analysis in the depth intervals of both 0 to 5 feet below ground surface (bgs) and the 5 to 10 feet bgs has been presented to satisfy the media-specific criteria for direct contact and outdoor air exposure. Therefore, please present a strategy in the Data Gap Work Plan described in Technical Comment 8 below to collect sufficient data to satisfy the LTCP direct contact and outdoor air exposure criteria. Sample and analyze soil at the zero to five and five to ten foot intervals, at the groundwater interface, lithologic changes, and at areas of obvious impact. Due to the historic presence of waste oil USTs, please include the requisite analysis for Poly-Aromatic Hydrocarbons (PAHs) with the Selected Ion Monitoring (SIM) mode to ensure that the detection levels of PAHs are below the concentrations specified in the LTCP for Direct Contact and Outdoor Air Exposure. Additionally, please include analysis for wear metals and polychlorinated biphenyl (PCBs) because of the presence of hoists and waste oil USTs.

Alternatively, please provide justification of why the site satisfies the Media-Specific Criteria for Direct Contact and Outdoor Air Exposure in the focused SCM described in Technical Comment 8 below that assures that exposure to petroleum constituents in soil will have no significant risk of adversely affecting human health.

8. Data Gap Investigation Work Plan and Site Conceptual Model – Please prepare Data Gap Investigation Work Plan to address the technical comments listed above and clarify which scenario within each Media-Specific Criteria a sampling strategy is intended to apply to. Please support the scope of work in the Data Gap Investigation Work Plan with a focused SCM and Data Quality Objectives (DQOs) that relate the data collection to each LTCP criteria. If the sampling strategy includes data collection to support a proposed site redevelopment, a description of that redevelopment should be included in the Data Gap Investigation Work Plan to support your sampling strategy so that ACDEH can verify the appropriateness of the proposed sample locations.

Please include a site map with a bar scale showing the location of all former USTs, the locations of all historic UST system appurtenances by the date specified below. Please include in all future reports an extended site map with a bar scale using an aerial photographic base map to depict both the site and immediate vicinity to facilitate understanding the site and surrounding vicinity. Please note that when preparing summary tables of current and historical soil and groundwater analytical results, please report the actual detection limits for all Non-Detected (ND) results. Do not use "ND" on the tables.

In order to expedite review, ACDEH requests the SCM be presented in a tabular format that highlights the major SCM elements and associated data gaps, which need to be addressed to progress the site to case closure under the LTCP. Please see Attachment A, *Site Conceptual Model Requisite Elements in Tabular Form including Preferential Pathway and Sensitive Receptor Survey* and Attachment B, *Sample Well Survey and Table*. Please sequence activities in the proposed Data Gap Investigation scope of work to enable efficient data collection in the fewest mobilizations possible.

- 9. Claim Site On Geotracker As described in the Attachment 1, Responsible Party(ies) Legal Requirements/Obligations, all technical reports must be submitted to both the ACDEH ftp website and the State Water Resource Control Board (SWRCB) GeoTracker website. To upload to the Geotracker website you will need to claim your site on GeoTracker and then upload the Work Plan and all future reports to the GeoTracker website. Pursuant to CCR Sections 2729 and 2729.1, all analytical data submitted in a report to a regulatory agency as part of the LUFT program, must be transmitted electronically to the SWRCB Geotracker website via the internet. Additionally, should groundwater wells be required, all permanent monitoring points utilized to collect groundwater samples (i.e. monitoring wells) and submitted in a report to a regulatory agency, must be surveyed (top of casing) to mean sea level and latitude and longitude accurate to within 1-meter accuracy, using NAD 83, and transmitted electronically to the SWRCB Geotracker website. Beginning July 1, 2005, electronic submittal of a complete copy of all reports (LUFT or SLIC) is required in GeoTracker (in PDF format). Please upload all reports prepared after July 1, 2005 to the SWRCB's Geotracker database website in accordance with the above-cited regulation. At the same time, please upload the reports to the ACDEH ftp website.
- 10. Request for information The ACDEH case file for the subject site contains only the electronic files listed on our web site at <u>http://www.acgov.org/aceh/lop/ust.htm</u>. Please submit electronic copies of all other reports including Phase I Reports, laboratory data, correspondence, etc. related to environmental investigations for this property not currently contained in our case file by the date specified in the Technical Report Request Section below. ACDEH requests e-mail notification of, and a list of the documents uploaded to Geotracker by the date listed below.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please be aware that site investigation/site cleanup costs may be reimbursable from the California Underground Storage Tank Cleanup Fund. The application and additional information is available at the State Water Resources Control Board's website at: <u>http://www.waterboards.ca.gov/water issues/programs/ustcf</u>. Please be aware that reimbursement monies are contingent upon maintaining compliance with directives from ACDEH. Additional information about the USTCF can be found below in the attachments to this letter.

TECHNICAL REPORT REQUEST

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

January 20, 2017 – Upload all Phase I Reports, laboratory data, correspondence, etc. related to site environmental investigations File(s) to be named: RO3230_MISC_R_yyyy-mm-dd

- January 20, 2017 Claim site in Geotracker
- February 6, 2017 Data Gap Investigation Work Plan and Site Conceptual Model File to be named: RO3230_WP_SCM_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/lop/ust.htm

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please send me an e-mail message at <u>karel.detterman@acgov.org</u> or call me at (510) 567-6708.

Sincerely,

Knel Dette

Karel Detterman, PG Hazardous Materials Specialist Digitally signed by Karel Detterman DN: cn=Karel Detterman, o, ou, email=karel.detterman@acgov.org, c=US Date: 2016.12.06 10:17:11 -08'00'

Enclosures:

 Attachment 1 - Responsible Party(ies) Legal Requirements/Obligations ACDEH Electronic Report Upload (ftp) Instructions
 Attachment A - Site Conceptual Model Requisite Elements in Tabular Format including Preferential Pathway and Sensitive Receptor Survey

Attachment B - Sample Well Survey and Table

cc: Nicole Gleason, Esq., Diepenbrock Elkin Gleason, 500 Capitol Mall, Suite 2200, Sacramento, CA 95814 (Sent via E-mail to: ngleason@diepenbrock.com)

Robert Goodman, Esq., Rogers Joseph O'Donnell, 331 California Street, 10th Floor, San Francisco, CA 94104 (Sent via E-mail to: rgoodman@rjo.com)

Ben Garfinkle, (Sent via E-mail to: bgarfinkle@clampswing.com)

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

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

Paresh Khatri, ACDEH (Sent via E-mail to: paresh.khatri@acgov.org)

GeoTracker, Electronic Case File

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 <u>other</u> 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 (<u>http://www.waterboards.ca.gov/water issues/programs/ust/electronic submittal/</u>) for more information on these requirements.

PERJURY 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 declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, 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.

	REVISION DATE: December 1, 2016				
Alameda County Environmental Cleanup	ISSUE DATE: July 5, 2005				
(LOP and SCP)	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 <u>do not</u> 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.
- <u>Do not</u> 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 <u>deh.loptoxic@acgov.org.</u>
 - 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 <u>deh.loptoxic@acgov.org</u> 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 B Historical Soil and GroundwaterAnalytical Data

TABLE 1 SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - METALS 1200 PARK STREET, ALAMEDA, CALIFORNIA

ACTIVITY OF A DESCRIPTION		Seren Contractor	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Sample ID	Sample Depth (feet bsg)	Area of Concern	ALC: N					and stig. I	ol in the	EPA Meth	od 6010B	HILLING	Inditi	Indiata	the second se	and the state			EPA Method 7471A
		100		Sample Date: April 17, 2016; results in milligrams per kilogram													Level and		
B1-10'	10	Hoist	<2.0	<2.0	46	<0.40	<0.40	45	2.7	6.5	2.3	<2.0	30	<5.0	<2.0	<5.0	27	20	<0.013
B2-11.5'	11.5	Hoist	<2.0	<2.0	51	<0.40	<0.40	40	4.6	6.5	2.3	<2.0	34	<5.0	<2.0	<5.0	28	21	<0.013
B3-11'	11	Hoist	<2.0	<2.0	37	<0.40	<0.40	45	3.7	5.6	<2.0	<2.0	29	<5.0	<2.0	<5.0	33	19	<0.013
B4-10'	10	Waste Oil Tank	<2.0	<2.0	48	<0.40	<0.40	48	4.2	7.3	2.3	<2.0	35	<5.0	<2.0	<5.0	32	23	<0.013
B5-10'	10	Hoist	<2.0	<2.0	49	<0.40	<0.40	29	3.7	5.9	2.1	<2.0	31	<5.0	<2.0	<5.0	23	17	<0.013
B6-10.5'	10.5	Concrete Cutout	<2.0	<2.0	39	<0.40	<0.40	48	3.7	5.7	2.6	<2.0	29	<5.0	<2.0	<5.0	31	21	<0.013
B7-10'	10	Gas Station	NA	NA	NA	NA	<0.40	40	NA	NA	<2.0	NA	27	NA	NA	NA	NA	19	NA
B8-10'	10	Gas Station	NA	NA	NA	NA	<0.40	41	NA	NA	3.9	NA	32	NA	NA	NA	NA	21	NA
89-10'	10	Gas Station	NA	NA	NA	NA	<0.40	45	NA	NA	3.4	NA	28	NA	NA	NA	NA	21	NA
B10-10'	10	Gas Station	<2.0	<2.0	51	<0.40	<0.40	58	1.7	7.1	5.1	<2.0	26	<5.0	<2.0	<5.0	23	23	<0.013
B11-10'	10	Gas Station	NA	NA	NA	NA	<0.40	37	NA	NA	2.5	NA	30	NA	NA	NA	NA	19	NA
B12-10'	10	Gas Station	<2.0	2.5	410	<0.40	<0.40	42	4.8	20	39	<2.0	44	<5.0	<2.0	<5.0	26	130	0.090
ESL (COMMER	470	0.31	220,000	2,200	580	1,800,000*	350	47,000	160	5,800	11,000	5,800	5,800	12	600,000	350,000	190		
and the second	31	0.067	15,000	150	39	120,000*	23	3,100	80	390	820	390	390	0.78	140,000	23,000	13		
ESL (ANY LAND USE/ANY DI	140	0.99	67,000	180	110	530,000*	49	14,000	160	1,800	1,700	1,800	1,800	3.5	220,000	110,000	57		

Notes:

bsg = below surface grade bold = detected concentration is above laboratory reporting limits Shading = detected concentration is above one ore more ESLs ESLs = Environmental Screening Levels, SF Bay Region of the California Water Quality Control Board, February 2016

TABLE 2 SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - TPH AND VOCS 1200 PARK STREET, ALAMEDA, CALIFORNIA

Sample ID Sample D	Sample Denth		TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ	Acetone	n-Propylbenzene	Isopropylbenzene	1,3,5- Trimethylbenzene	1,2,4- Trimethylbenzene	tert-Butylbenzene	Naphthalene	Other VOCs
Sample ID	(feet bsg)	Area of Concern		EPA Method 8015B			1.	The Hast				EPA Method 8260	В					NUMBER A
	THE MERSING ST				TRACE STREET	A CONCRETE OF		Per Constant (MCAN)	Sample Dat	te: April 17, 2016; r	Dentry Mar	COLUMN CONTRACTOR	OF THE LEVEL	I THE RELATED		ALL PROPERTY.		
B1-10'	10	Hoist	<1.0	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B2-11.5'	11.5	Hoist	<1.0	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B3-11'	11	Hoist	<1.0	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B4-10'	10	Waste Oil Tank	<1.0	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B5-10'	10	Hoist	<1.0	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA	NA	NA	NA
B6-10.5'	10.5	Concrete Cutout	<1.0	AJ 710	770	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	ND
B7-10'	10	Gas Station	<1.0	<10	<10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	ND
B8-10'	10	Gas Station	<1.0	<10	<10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.026	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	ND
B9-10'	10	Gas Station	76	AK 20	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.10	0.089	0.017	<0.0050	<0.0050	0.013	0.13	ND
B10-10'	10	Gas Station	AS 3,200	950	99	<0.50	<0.50	13	2.7	<0.50	<10	140	36	53	360	<0.50	40	ND
B11-10'	10	Gas Station	<1.0	<10	<10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.020	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	ND
B12-10'	10	Gas Station	AS 17,000	AK 1,800	<400	<2.0	<2.0	150	<2.0	<2.0	<40	160	65	<2.0	<2.0	<2.0	65	ND
	ESL (LEACHING TO	GROUNDWATER)	770	570	51,000**	0.044	2.9	1.4	2.3	0.023	0.50		and the second	1	a la compañía de la c		0.033	Various
ESL (COMMERCIAL/INDUSTRIAL, SHALLOW, ≤10 FI B			3,900	1,100	140,000	1.0	46,000	22	2,400	180	630,000		10.45	1.1	a state of	(d) (d)	14	Various
ESL (R	ESL (RESIDENTIAL, SHALLOW, ≤10 FEET			230	11,000	0.23	970	5.1	560	42	59,000					10 T	3.3	Various
ESL (ANY LAND USE/ANY DEPTH: CONST WORKER EX		H: CONSTRUCTION ORKER EXPOSURE)	7,400	3,800	32,000	24	28,000	480	65,000	3,700	320,000	1.1.1.1.1.1		13		123 X.L.	350	Various

Notes:

 Notes:

 bsg = below surface grade
 AI = heavier hydrocarbon than diesel

 Drbig = total petroleum hydrocarbons as gasoline
 AK = lighter hydrocarbon than diesel

 TPHid = total petroleum hydrocarbons as diesel
 AS = heavier hydrocarbon than diesel

 TPH d = total petroleum hydrocarbons as diesel
 AS = heavier hydrocarbon than diesel

 TPH d = total petroleum hydrocarbons as diesel
 AS = heavier hydrocarbon than gasoline

 VOCs = volatile organic compounds
 NA = not analyzed

 NA = not analyzed
 ND = these analyzes include a variety of individual compounds. The "ND" designation indicates that individual compounds included in the analyses were not detected above laboratory reporting limits

 Shading = detected concentration is above laboratory reporting limits
 Shading = detected concentration is above one or more ESLs

 ESLs = Environmental Screening Levels, SF Bay Region of the California Water Quality Control Board, February 2016
 *** = gross contamination levels (Beaching to groundwater ESL not established)

 *** = gross contamination levels (Beaching to groundwater ESL not established)
 **** = gross contamination levels (Beaching to groundwater ESL not established)

TABLE 3 SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - SVOCs and PCBs 1200 PARK STREET, ALAMEDA, CALIFORNIA

Sample		Martin Contraction	Acenaphthene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene	Other SVOCs	PCBs
Sample ID	Depth	Area of Concern		A DESCRIPTION OF THE PARTY OF T	EPA Meth	od 8270C	States and a state of a state of		EPA Method 8082
	(feet bsg)		Same Contra	S	ample Date: April 1	17, 2016; results in	milligrams per kilo	gram	and a supervised and a supervised of the supervi
B1-10'	10	Hoist	<0.020	<0.020	<0.020	<0.020	<0.020	ND	ND
B2-11.5'	11.5	Hoist	<0.020	<0.020	<0.020	<0.020	<0.020	ND	ND
B3-11'	11	Hoist	<0.020	<0.020	<0.020	<0.020	<0.020	ND	ND
B4-10'	10	Waste Oil Tank	<0.020	<0.020	<0.020	<0.020	<0.020	ND	NA
B5-10'	10	Hoist	<0.020	<0.020	<0.020	<0.020	<0.020	ND	ND
B6-10.5'	10.5	Concrete Cutout	<0.020	<0.020	<0.020	0.030	<0.020	ND	NA
B7-10'	10	Gas Station	NA	NA	NA	NA	NA	NA	NA
B8-10'	10	Gas Station	NA	NA	NA	NA	NA	NA	NA
B9-10'	10	Gas Station	NA	NA	NA	NA	NA	NA	NA
B10-10'	10	Gas Station	0.060	1.9	0.15	0.084	<0.030	ND	NA
B11-10'	10	Gas Station	NA	NA	NA	NA	NA	NA	NA
B12-10'	10	Gas Station	< 0.030	4.5	<0.030	<0.030	<0.030	ND	NA
	ESL (LEACHIN	G TO GROUNDWATER)	16	0.033	11	85	130	Various	Various
ESL (CO	MMERCIAL/I	NDUSTRIAL, SHALLOW, ≤10 FEET BSG)	45,000	14		23,000	0.29	Various	Various
ESL (RES	IDENTIAL, SH	ALLOW, ≤10 FEET BSG)	3,600	3.3	ann an sugar	1,800	0.016	Various	Various
C	ESL (ANY ONSTRUCTIO	LAND USE/ANY DEPTH: N WORKER EXPOSURE)	10,000	350	(1999) <u></u> 1999)	5,000	1.6	Various	Various

Notes:

bsg = below surface grade

SVOCs = semi-volatile organic compounds

PCBs = polychlorinated biphenyls

NA = not analyzed

ND = these analyses include a variety of individual compounds. The "ND" designation indicates that

individual compounds included in the analyses were not detected above laboratory reporting limits

bold = detected concentration is above laboratory reporting limits

Shading = detected concentration is above one or more ESLs

ESLs = Environmental Screening Levels, SF Bay Region of the California Water Quality Control Board, February 2016

TABLE 4 SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS - METALS 1200 PARK STREET, ALAMEDA, CALIFORNIA

	Area of Concern	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Sample ID			EPA Method 200.8															
Sample Date: April 17, 2016; results in micrograms per liter											ms per liter				1 1 1 1 1	1.1.1.1.1.		
B-1 GW	Hoist	<1.0	<1.0	23	<1.0	<0.20	4.3	<1.0	<2.0	<1.0	<0.20	2.0	11	<1.0	<1.0	<1.0	1.9	<5.0
B-5 GW	Hoist	<1.0	<1.0	22	<1.0	<0.20	3.7	<1.0	2.6	<1.0	<0.20	2.1	4.0	<1.0	<1.0	<1.0	1.9	<5.0
B-6 GW	Concrete Cutout	<1.0	<1.0	20	<1.0	<0.20	1.2	1.1	<2.0	<1.0	<0.20	<1.0	6.8	<1.0	<1.0	<1.0	1.7	<5.0
B-10 GW	Gas Station	<1.0	<1.0	27	<1.0	<0.20	1.1	1.4	<2.0	<1.0	<0.20	6.6	5.2	<1.0	<1.0	<1.0	<1.0	<5.0
B-12 GW	Gas Station	1.3	2.3	1,300	<1.0	<0.20	1.5	<1.0	<2.0	<1.0	<0.20	17	4.0	<1.0	<1.0	<1.0	2.5	<5.0
WAR ARE STOLEN.	Tier 1 ESL	6.0	10	1,000	2.7	0.25	50	3.0	3.1	2.5	0.051	100	8.2	5.0	0.19	2.0	19	81
MCL 6.0 10 1,000 4.0 5.0 50 1300 15									2		100	50	100 *	2.0		5,000 *		
Notes:	Notes:																	

bold = detected concentration is above laboratory reporting limits ESL = Environmental Screening Level; San Francisco Region, Regional Water Quality Control Board, February 2016 MCL = Maximum Contaminant Level, California Department of Public Health, September 2013 * = Secondary MCL (taste & order or welfare based) - - - = screening level not established

TABLE 5 SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS - TPH AND VOCs 1200 PARK STREET, ALAMEDA, CALIFORNIA

	The state of the s	трнg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	o-Xylene	MTBE	Tetrachloroethene	Naphthalene	Isopropylbenzene	n-Propylbenzene	1,3,5- Trimethylbenzene	tert-Butylbenzene	1,2,4- Trimethylbenzene	p-Isopropyitoluene	Other VOCs
Sample ID	Area of Concern		EPA Method 8015E		Contractory	EPA Method 82608												的特别的
			COLUMN TO SAVE						Sample Date	: April 17, 2016; result	s in micrograms pe	r liter			LAN LIST OF	10.82407.987	mannan	A DESCRIPTION OF
B-1 GW	Hoist	<50	<50	<100	<0.50	<0.50	<0.50	<0.50	<1.0	3.9	<0.50	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	ND
B-5 GW	Hoist	<50	<54	<110	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	ND
B-6 GW	Concrete Cutout	<50	AJ 84,000	89,000	<0.5	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	ND
B-10 GW	Gas Station	21,000	24,000	A3 1,900	<2.5	<2.5	240	<2.5	<5.0	<2.5	730	510	1,400	570	66	3,100	310	ND
B-12 GW	Gas Station	3,600	11,000	16,000	5.6	2.0	83	1.3	<1.0	0.81	81	39	76	4.2	4.5	16	6.6	ND
	MCL				1.0	40	30	20*	5.0	5.0	0.17	014500	till tridlly	Entruis	nn thu		illinguation.	Various
Charles St	Tier 1 ESL	100	100	54,000	1.0	40	13	20*	5.0	3.0	0.17	1204960		100 Heren		·		Various

Notes:

AJ = heavier hydrocarbon than diesel

A3 = lighter hydrocarbon than motor oil

TPHg = total petroleum hydrocarbons as gasoline TPHd = total petroleum hydrocarbons as diesel TPHmo = total petroleum hydrocarbons as motor oil

TABLE 6 SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS - SVOCs 1200 PARK STREET, ALAMEDA, CALIFORNIA

	TO DESCRIPTION OF	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Indeno(1,2,3-cd)pyrene	Benzo(g,h,i)perylene	Other SVOCs
Sample ID	Area of Concern		THE REPORT OF THE				EPA Method 8270C SIM		LOW SHE HERE	A PERSONAL PROPERTY OF		
						Sample Date: A	pril 17, 2016; results in micr	ograms per liter	A STREET BOOM	CONTRACTOR OF THE	STREET, STREET	
B-1 GW	Hoist	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	ND
B-5 GW	Hoist	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	ND
B-6 GW	Concrete Cutout	0.086	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	ND
B-10 GW	Gas Station	480	3.0	<0.050	0.40	0.41	2.6	4.6	1.6	<0.050	0.096	ND
B-12 GW	Gas Station	67	<0.50	0.46	0.29	0.33	<0.050	1.5	1.5	0.10	0.29	ND
	MCL	0.17	530		18,000	800	290	A Ballerer Alland	120	0.034	S	Various
	Tier 1 ESL	0.17	20	30	0.73	8.0	3.9	4.6	2.0	0.034	0.10	Various

.

Notes: SVOCs = semi-volatile organic compounds ND = these analyses include a variety of individual compounds. The "ND" designation indicates that individual compounds included in the analyses were not detected above laboratory

reporting limits

reporting limits bold = detected concentration is above laboratory reporting limits Shading = detected concentration is at or above Tier 1 ESL and/or MCL ESL = Environmental Screening Level; San Francisco Region, Regional Water Quality Control Board, February 2016 MCL = Maximum Contaminant Level; California Department of Public Health, September 2013 --- = screening level not established

I.D.	SANPLE		TYPB &					ANALYTICAL RESULTS				
GIVEN THIS SAMPLE (<u>ABBA</u>	DEPTH IN PT. BELOW GRADE	SAKPLING LOCATION DICTATED BY	NETEOD FOR THE SAMPLE OBTAINED	SAMPLE MATEIX	DATB <u>Sanpled</u>	BTS CHAIN OP CUSTODY I.D.	BTS SANPLB <u>L.D.</u>	NAKE OF Dors hetl Laboratory	LABORATORY SAMPLE I.D.	PPN TPE-HBF DIESEL	PPK TOTAL OIL & GREASE	(PARTS PER BILLI PPB BPA 8240 <u>Compounds</u>
WoF	91	FIY/BFEC	INTEPACE	SOIL	9/27/88	88271-M-1	#1	ANAMETRIX	8809211-01	ND	KD	KD
	11'	BLECTIVE	INTEFACE	SOIL	9/27/88	88271-M-1	#1A	ANAKETEIX	8809211-02	PLACED	ON HOLD	
Woop	9'	LIA/BLEC	INTEFACE	SOIL	9/27/88	88271-N-1	12	ANAKETEII	8809211-03	ND	ND	ND
	11'	BLECTIVE	INTEFACE	SOLL	9/27/88	88271-M-1	#2K	ANAMETRIX	8809211-04	PLACED	ON HOLD	

TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS

• .

.

5

Sampling Report 88271-M-1 CHEVRON 0955

.

page 6

Attachment C Standard Field Procedures for Soil Boring and Monitoring Well Installation

Attachment C STANDARD FIELD PROCEDURES FOR SOIL BORING AND MONITORING WELL INSTALLATION

This document presents standard field methods for drilling and sampling soil borings and installing, developing, and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

SOIL BORINGS

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the ASTM D2488-06 Unified Soil Classification System by a trained geologist working under the supervision of a California Professional Geologist (PG).

Soil Boring and Sampling

Prior to drilling, the first 8 feet of the boring are cleared using an air or water knife and vacuum extraction or hand auger. This minimizes the potential for impacting utilities. Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Analysis

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4° C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and groundwater depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected from the open borehole using bailers. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in

protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

Groundwater monitoring wells are installed to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two feet above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I, II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized.

Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite and covered by plastic sheeting. At least three individual soil samples are collected from the stockpiles and composited at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples in addition to any analytes required by the receiving disposal facility. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Groundwater removed during development and sampling is typically stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Upon receipt of analytic results, the water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.