Carryl MacLeod
Project Manager, Marketing Business Unit

Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Chevron Service Station 95607
5269 Crow Canyon Road
Castro Valley, CA
ACEH Case #RO0350

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached *Soil Vapor Assessment Work Plan* submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

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,

Carryl MacLeod
Project Manager

Attachment: *Soil Vapor Assessment Work Plan*

Chevron Environmental Management Company
6001 Bollinger Canyon Road, San Ramon, CA 94583
Tel 925 842 3201
CarrylMacLeod@chevron.com

October 30, 2017 Reference No. 311950

Mr. Mark Detterman
Alameda County Environmental Health Services (ACEHS)
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6540

Re: Soil Vapor Assessment Work Plan
Former Chevron Service Station 95607
5269 Crow Canyon Road
Castro Valley, California
ACEH LOP #RO0350

Dear Mr. Detterman:

GHD is submitting this *Soil Vapor Assessment Work Plan* (Work Plan) for additional soil vapor sampling at the site referenced above on behalf of Chevron Environmental Management Company (CEMC). To assess soil vapor conditions following operation of the dual phase extraction (DPE) system, a soil vapor sampling event was conducted in November 2016. In soil vapor samples collected from well VP-1, VP-2, VP-4, VP-5, VP-7, VP-8, and VP-9, benzene, ethylbenzene, and naphthalene concentrations were below laboratory detection limits and/or low threat closure policy (LTCP) criteria.[1] No samples were collected from onsite vapor probes VP-3 and VP-6 due to water in the probe tubings.[1]

As described in the In a June 9, 2017 letter, the Alameda County Department of Environmental Health Services (ACDEH) requested a Focused FS/CAP and Site Analysis, and in an August 11, 2017 email approved GHD and Chevron's request to attempt to collect soil vapor samples from existing vapor probes VP-3 and VP-6 during the dry months, prior to submitting the requested report (Attachment A). On August 11, 2017, GHD attempted to collect soil vapor samples from VP-3 and VP-6 during the dry summer months. No soil vapor samples were collected due to water in the probe tubings (described in further detail in Section 2 below). Therefore, GHD recommends installing two new replacement soil vapor probes as described in this Work Plan. The site description and background, details of attempted soil vapor sampling event, and work plan details are presented below.

1. Site Description and Background

The site is a former Chevron service station, currently occupied by an automotive repair shop, located on the southeast corner of Waterford Place and Crow Canyon Road in Castro Valley, California (Figure 1). A used oil underground storage tank (UST), owned by the current property owner, is located on the west side of the repair shop. The former station facilities consisted of a station building, three gasoline USTs and two dispenser islands under one canopy (Figure 2). The USTs and dispensers were removed in

[1] GHD's January 16, 2017 *Soil Vapor Sampling Report*

1990. Surrounding properties consist of residential properties to the south, west and east, and undeveloped hillside to the north.

The site has been an open environmental case since 1985 under ACEHS jurisdiction (Fuel Leak Case Number RO0000350 and GeoTracker Global ID T0600100344). To date, six remediation wells and 17 monitoring wells have been installed (one remediation and four monitoring wells have been destroyed), 16 temporary vapor probes have been advanced, and ten nested soil vapor probes have been installed onsite (VP-1 through VP-6) and offsite (VP-7 through VP-10). Remedial activities consisted of tank and piping replacement in 1985 and station removal in 1990, which included excavation of 300 cubic yards of soil, a groundwater extraction and treatment system connected to RW-1 and C-9, a two-phase extraction pilot test, and the operation of a dual phase extraction (DPE) remediation system from September 2014 to March 2016.

2. Attempted Soil Vapor Sampling

On August 11, 2017, GHD field staff attempted to collect soil vapor samples from onsite dual nested vapor probes VP-3 and VP-6 using 100 percent laboratory certified 1 liter Summa™ canisters to collect vapor samples for analyses by TO-15 method and 100 percent laboratory certified Sorbent Tubes and a syringe assembly to collect samples for analyses by TO-17 method.

For the TO-15 method, prior to collecting samples, a closed circuit sampling train was created by attaching the sample Summa™ canister in series with the purge Summa™ canister via a steam cleaned, stainless steel manifold. A “shut in” test was performed prior to connecting the sampling equipment to the vapor probe tubing. This test was performed by sealing all openings to ambient air, opening the purge Summa™ canister to establish a vacuum inside the sampling train and waiting for at least 10 minutes to ensure the vacuum remained stable over time. The shut in test reduces the potential for ambient air to dilute the soil vapor samples. Once the sampling train passed the “shut in” test, it was connected to the probe tubing. Using the same flow rate as is used during sampling, GHD attempted to purge air from the sampling tubing using the purge Summa™ canister before sample collection began.

Prior to sampling, the vapor probe tubing was inspected for integrity and the presence of water. If water was observed in the tubing, every effort was made to clear the water from the tubing in order to collect a viable sample. Water entered the vapor probe tubing at both sample locations (VP-3 and VP-6) either during the initial purge or during the TO-15 sample collection. Sampling was terminated at the first sign of water entering the tubing. No water entered the sampling train manifolds or the summa canisters. Due to the presence of water in the vapor probe tubing, GHD field staff was unable to collect the necessary samples for TO-15 and TO-17 analysis at either of the dual-nested probe locations.

3. Work Plan for Additional Vapor Assessment

Existing vapor probes VP-3 and VP-6, located in the planter onsite, continue to have water in the tubing; therefore, GHD recommends installing two nested vapor probes to replace vapor probes VP-3 and VP-6. To assess current soil vapor conditions at these locations after operation of the DPE system and risk to the existing building, one vapor probe is proposed in the asphalt pavement in the vicinity of VP-3, and one is proposed in the asphalt pavement between VP-6 and the office of the existing building (Figure 2). In alignment with the LTCP Scenario 3 criteria, the nested vapor probes will be set at approximately 5.5 and 10 fbg. The scope of work is described below.

3.1 Permits

GHD will obtain drilling permits from Alameda County Public Works Agency.

3.2 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.

3.3 Utility Location and Clearance

GHD will contact Underground Service Alert (USA) to coordinate locations of subsurface utilities no less than 48 hours prior to the start of field activities. GHD will hire a private utility locator to confirm the locations of underground utilities in the vicinity of the proposed vapor probe locations.

3.4 Soil Vapor Probe Installation and Construction

Two soil borings will be advanced to approximately 10 fbg using a hand auger. GHD will collect soil samples at approximately 2.5, 4.5, and 9.5 feet below grade (fbg) by driving steel tubes into undisturbed sediments using a slide hammer bucket. Soils will be logged using the ASTM D2488-06 Unified Soil Classification System. Soil samples will be screened with a photo ionization detector (PID) and all PID measurements will be recorded on a boring log. All samples will be sealed, labeled, logged on a chain-of-custody, placed on ice, and transported to Eurofins CalScience Laboratory for analysis.

The soil vapor probes will consist of a permeable stainless steel filter with a ¼-inch push-to-connect fitting to ¼-inch Teflon tubing. Probes will be placed at approximately 5.5 and 10 fbg and surrounded by a 12-inch sand pack. Above the sand pack, 12 inches of dry granulated bentonite will be topped with at least 12 inches of hydrated granular bentonite. Exact vapor probe depth may be altered based on field observations and depth to groundwater. The soil vapor probes will be finished at the surface using a well vault. GHD's *Standard Field Procedures for Soil Vapor Probe Installation and Sampling* are presented as Attachment B.

3.5 Soil Vapor Sampling Protocol

Vapor samples will be collected from the four vapor probes at least 48 hours after the placement of the

probes using 1-liter Summa™ canisters in a manifold system, connected to the sampling tubing at each vapor point. Vapor samples collected for TO-15 analysis will be collected using 100 percent laboratory certified 1-liter Summa™ canisters. Prior to collecting a sample, a closed circuit sampling train is created by attaching the sample Summa™ canister in series with the purge Summa™ canister via a steam-cleaned, stainless-steel manifold. A "shut-in" test will be performed prior to connecting the sampling equipment to the vapor probe tubing. This test is performed by sealing all openings to ambient air, opening the purge Summa™ canister to establish a vacuum inside the sampling train and waiting to ensure the vacuum remained stable over time. The shut-in test reduces the potential for ambient air to dilute the soil vapor samples. Once the sampling train passes the "shut in" test, it is connected to the probe tubing. Using the same flow rate as is used during sampling, approximately three purge volumes will be purged from the sampling tubing using the purge Summa™ canister before sampling begins. While sampling, the vacuum of the sample Summa™ canister will be used to draw the soil vapor through the flow controller until a negative pressure of approximately 5 inches of mercury is observed on the vacuum gauge. In accordance with the Department of Toxic Substances Control (DTSC) *Advisory – Active Soil Gas Investigation* guidance document, dated July 2015, leak testing will be performed during sampling using laboratory grade helium. The vapor probe vault, probe tubing, and entire sampling train will be enclosed in a rigid shroud. The helium concentration inside the shroud will be maintained above 10 percent helium and quantified using a helium meter. After sampling, the Summa™ canisters will be packaged and sent to the Air Toxics laboratory under chain-of-custody for analysis. A diagram of the TO-15 soil vapor sampling apparatus is attached as Figure 3.

Vapor samples collected for TO-17 analysis will be collected using 100 percent laboratory certified TO-17 Sorbent Tubes. A leak test will be performed prior to connecting the sampling equipment to the vapor tubing. The test is performed by inserting the sorbent tube into the tube holder on the syringe assembly, turning the valve into the 'off' position, pulling the plunger of the syringe. If the plunger does not move or immediately returns to the starting position, the system is leak tight and is ready for sampling. To sample, the plunger of the syringe will be pulled to the desired volume. When the desired volume has been collected, the sorbent tube will be removed from the tube holder and the ends re-capped. The sample volume will be recorded and the tubes will be packaged and sent to the Air Toxics laboratory under chain-of-custody for analysis. A diagram of the TO-17 soil vapor sampling apparatus is attached as Figure 4.

GHD's *Standard Field Procedures for Soil Vapor Probe Installation and Sampling* is included as Attachment B.

3.6 Chemical Analysis

Soil vapor samples will be analyzed for:

- Total Petroleum Hydrocarbons as gasoline (TPHg), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Methyl-tert- butyl ether (MTBE) and naphthalene by EPA Method TO-15
- Naphthalene by EPA Method TO-17

- Oxygen (O2), carbon dioxide (CO2), nitrogen (N2), methane (CH4), and helium by ASTM D-1946 (GC/TCD)
- Air phase hydrocarbon (APH) fractions (Sp) aromatics C8 C12 modified TO 15 GC/MS Full Scan
- APH fractions (Sp) aliphatics C5 C12 modified TO 15 GC/MS Full Scan

Selected soil samples will be analyzed for:

- TPHg and total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015
- BTEX, MTBE, and naphthalene by EPA Method 8260
- Poly-aromatic hydrocarbons (PAHs) by EPA Method 8270

3.7 Waste Disposal

All waste generated will be placed in Department of Transportation (DOT) approved drums, labeled appropriately, and temporarily stored onsite. Waste will be transported by a licensed waste hauler to a Chevron and State of California-approved disposal facility following receipt of the analytical profile.

3.8 Reporting

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

- Description of the drilling
- Soil boring and probe logs
- Tabulated soil and soil vapor analytical results
- Analytical reports and chain-of-custody forms
- Waste disposal details
- Updated figures
- Conclusions and recommendations

4. Closing

GHD will proceed with the proposed scope of work upon receipt of written approval from ACDEH. GHD will obtain all required drilling permits and schedule the subcontractors at their earliest availability.

Well MW-17 has been inaccessible since January 2017 due to an overgrowth of poison oak. Chevron is working with the property owner to clear the poison oak so that the well can be sampled. Dilution attenuation will be assessed after the well can be sampled again.

Please contact Chevron project manager Carryl MacLeod at (925) 842-3201 or GHD project manager Kiersten Hoey at (510) 420-3347 if you have any questions or require additional information.

Sincerely,
GHD

Jessica Hudnall

Kiersten Hoey

Greg Barclay PG 6260

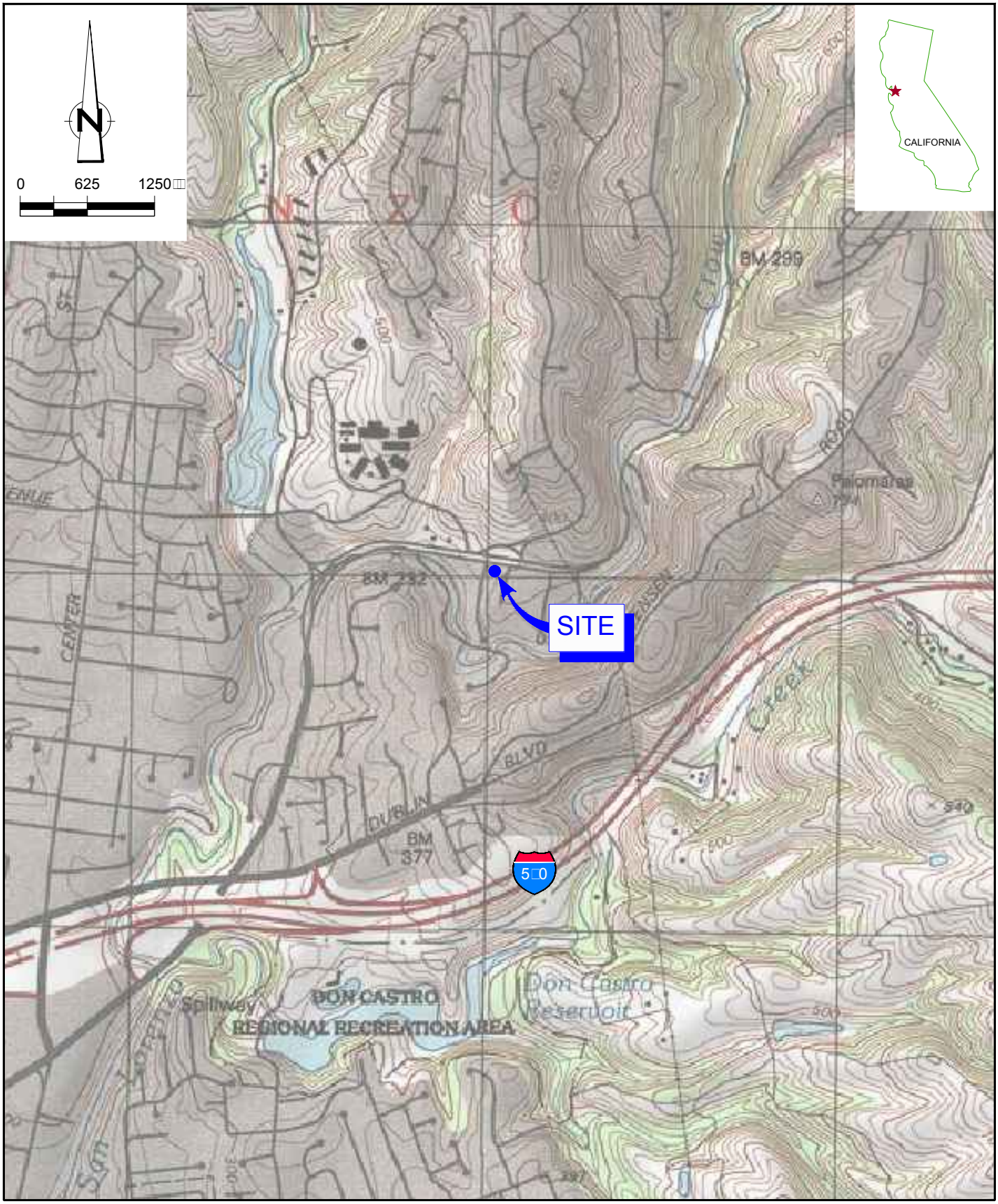
JH/cw/69
Encl.

Figure 1	Vicinity Map
Figure 2	Site Plan
Figure 3	TO-15 Soil Vapor Sampling Apparatus
Figure 4	TO-17 Soil Vapor Sampling Apparatus

Attachment A	Regulatory Correspondence
Attachment B	Soil Vapor Probe Installation and Sampling

cc: Ms. Carryl MacLeod, Chevron *(electronic copy)*
Mr. Kevin Hinkley, Property Owner
Ms. Diane Riggs, Forest Creek Townhomes Association

Figures



SOURCE□TOPO□MAPS

FORMER CHEVRON-BRANDED STATION 95607
5269 CROW CANYON ROAD
CASTRO VALLEY, CALIFORNIA

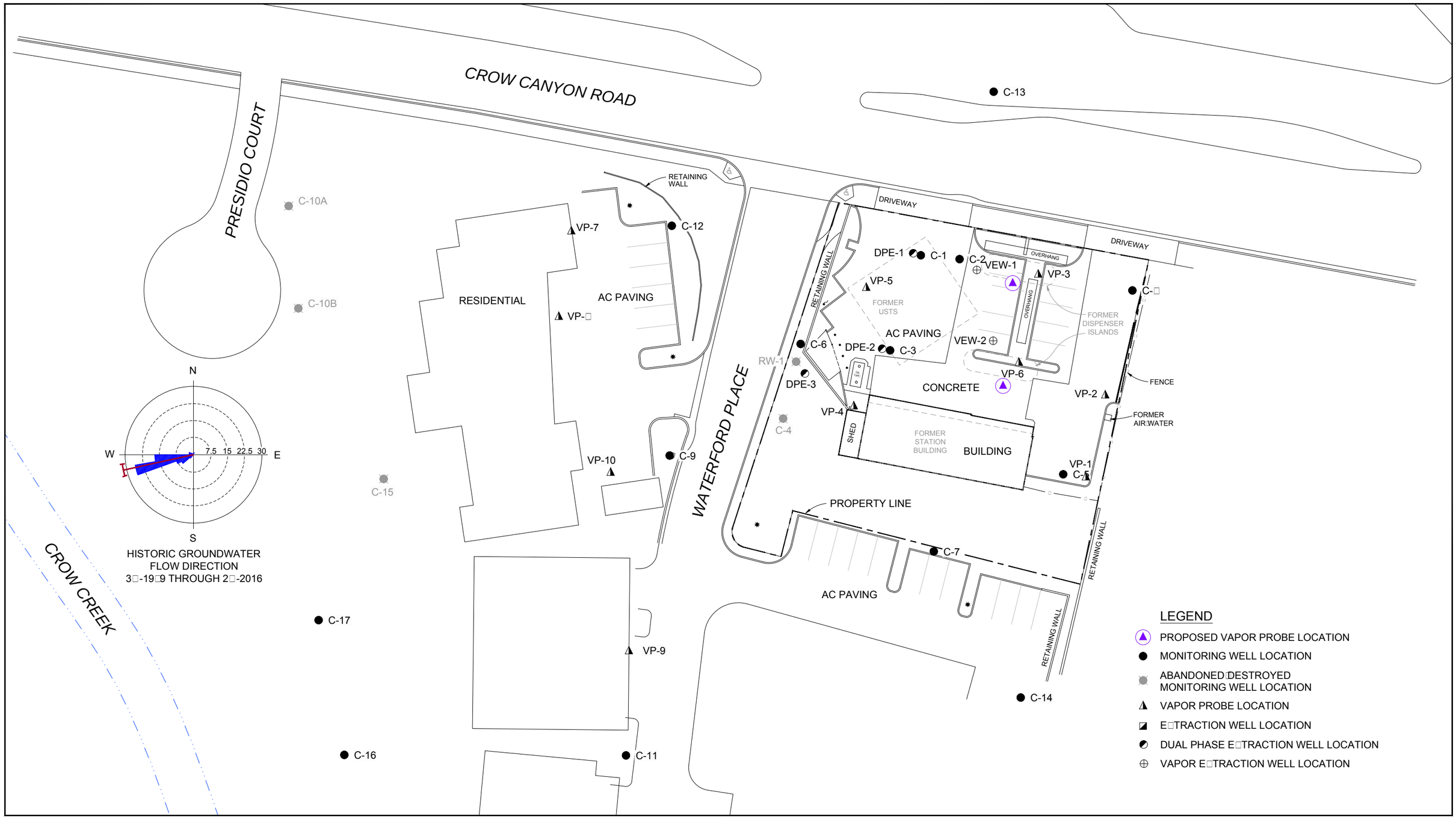
311950-2017.1

Se□ 14, 2017

VICINITY MAP

FIGURE 1

CAD Fi□e□□S□□□□ □Pu□□□CAD□dr□□i□g□311000□311950□311950-REPORTS□311950-2017.1(069)GN□311950-2017.1(069)GN-SO001.DWG



BASEMAP MODIFIED FROM DRAWING PROVIDED BY MORROW SURVEYING, JANUARY 15, 2014

0 20 40□□

CHEVRON SERVICE STATION 95607
5269 CROW CANYON ROAD
CASTRO VALLEY, CALIFORNIA

311950-2017.1

O□□16, 2017

SITE PLAN

FIGURE 2

CAD File□I□S□□□□ □Pu□I□□CAD/dr□□i□g□311000□311950/311950-REPORTS/311950-2017.1(069)GN/311950-2017.1(069)GN-SO002.DWG

DRAWING NOT TO SCALE

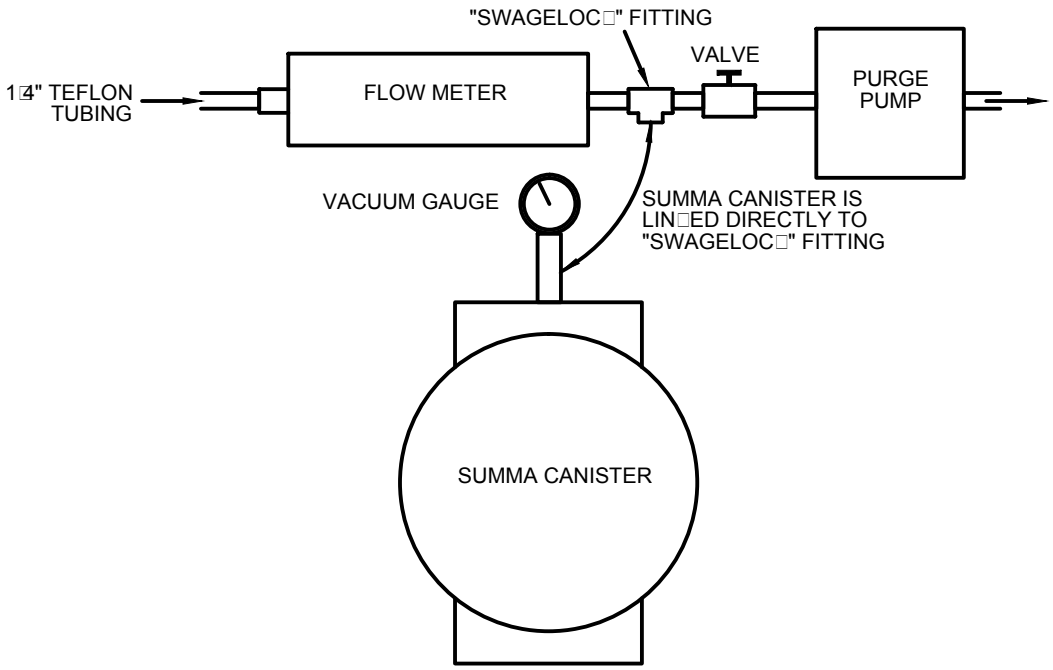


Figure 3

TO-15 SOIL VAPOR SAMPLING APPARATUS DIAGRAM
CHEVRON SERVICE STATION 95607
5269 CROW CANYON ROAD
Castro Valley, California

DRAWING NOT TO SCALE

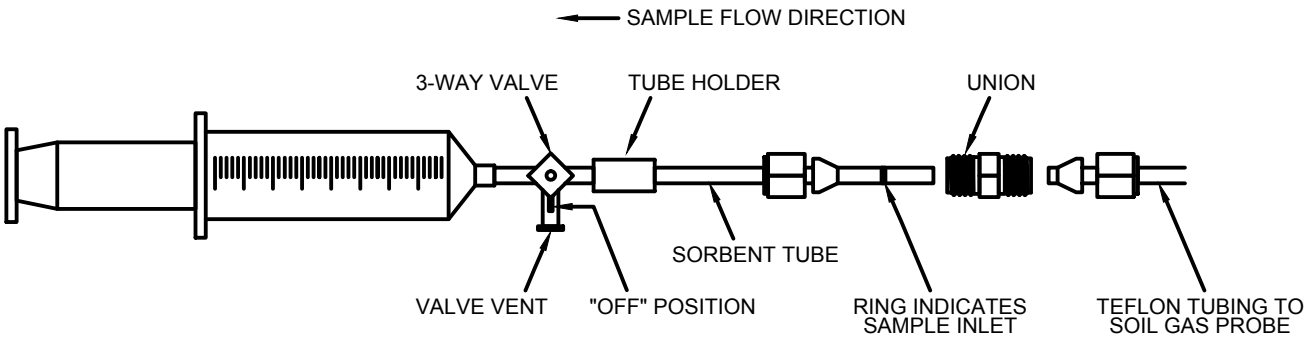


Figure 4

TO-17 SOIL VAPOR SAMPLING APPARATUS DIAGRAM
CHEVRON SERVICE STATION 95607
5269 CROW CANYON ROAD
Castro Valley, California

Attachment A
Regulatory Correspondence

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
REBBECA GEBHART, Interim Director

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

June 9, 2017

Ms. Carryl MacLeod
Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
(Sent via electronic mail to:
cmacleod@chevron.com)

Kevin & Julia Hinkley
Kevin Hinkley Service
5269 Crow Canyon Road
Castro Valley, CA 94552

Subject: Request for Focused FS/CAP; Fuel Leak Case No. RO0000350 and GeoTracker Global ID T0600100344, Chevron #9-5607, 5269 Crow Canyon Road, Castro Valley, CA 94552

Dear Ms. MacLeod, and Mr. and Ms. Hinkley:

Alameda County Department of Environmental Health (ACDEH) staff has reviewed the case file including the *Fourth Quarter 2016 Groundwater Monitoring and Sampling Report,* dated January 6, 2017, the *Soil Vapor Sampling Report*, dated January 16, 2017, and the *First Quarter 2017 Groundwater Monitoring and Sampling Report,* dated March 29, 2017. The reports were prepared and submitted on your behalf by GHD Services, Inc (GHD). Thank you for submitting the reports.

ACDEH has evaluated the data and recommendations presented in the above-mentioned reports, in conjunction with the case files, and the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP). Based on ACDEH staff review, we have determined that the site fails to meet the LTCP Media-Specific Criteria for Groundwater and Vapor Intrusion to Indoor Air (see Geotracker).

Based on ACDEH staff review of the case file, we request that you address the following technical comments and send us the reports requested below.

TECHNICAL COMMENTS

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.

   Our review of the case files indicates that insufficient data collection and analysis has been presented to support the requisite characteristics of plume stability or plume classification as follows:

   a. **Extent of Groundwater Plume** – At present the downgradient extent of the groundwater plume has not been defined and impinges on Crow Creek, which continues to represent an ecotoxicity risk for aquatic receptors downgradient of the site.

   Please present a strategy to address the items discussed above, in the report requested below. A dilution – attenuation analysis has been previously requested by ACDEH; however, reasons to defer the analysis had been put forth. Alternatively, please provide justification of why the site satisfies the Media-Specific Criteria for Groundwater in the focused SCM and is protective of aquatic receptors in Crow Creek.

2. **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 the site data collection and analysis fail to support the requisite characteristics of one of the four scenarios. Specifically, the referenced soil vapor report documented a post-

corrective action resampling of the soil vapor well network at, and downgradient of, the site. Substantial improvements in soil vapor concentrations were observed onsite since the initial sampling event prior to corrective actions; however, several vapor wells in the vicinity of the former fuel islands remain with elevated Total Petroleum Hydrocarbons as gasoline (TPHg) vapor concentrations, and elevated concentrations of petroleum hydrocarbon-related volatile compounds (benzene, toluene, ethylbenzene, and total xylenes or BTEX) for an area of the commercial site that does not appear to always contain a bioattenuation zone (based on the context, presumably one or more near surface dispenser releases, see for example VP-6 soil analytical data). At present the lateral extent of elevated soil vapor concentrations has not been defined towards the building, or within the former dispenser area.

At this juncture, it appears appropriate to request a Focused Feasibility Study / Corrective Action Plan (FS/CAP), including any necessary pilot tests, to address the comment provided above.

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 an unencumbered use of the entire site by the current property owners, including commercial occupants of the site buildings.

Please note, that if direct measurement of soil gas is proposed as a part of your strategy, ensure that your techniques are 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.

3. **Quarterly Groundwater Monitoring** – To help facilitate the requested site analysis, and to track changes in contaminant trends at and downgradient of the site, please continue quarterly groundwater monitoring at the site. Please submit groundwater monitoring and sampling reports by the dates identified below.

SUBMITTAL ACKNOWLEDGEMENT STATEMENT

Please note that ACDEH has updated Attachment 1 with regard to report submittals to ACDEH. ACDEH will now be requiring a Submittal Acknowledgement Statement, replacing the Perjury Statement, as a cover letter signed by the Responsible Party (RP). 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.

Please make this change to your submittals to ACDEH.

TECHNICAL REPORT REQUEST

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

- **June 30, 2017** – Second Quarter 2017 Groundwater Monitoring Report
  File to be named: RO350_GWM_R_yyyy-mm-dd

- **August 25, 2017** – Focused FS/CAP and Site Analysis
  File to be named: RO350_FEASTUD_CAP_R_yyyy-mm-dd

- **September 29, 2017** – Third Quarter 2017 Groundwater Monitoring Report
  File to be named: RO350_GWM_R_yyyy-mm-dd

- **January 27, 2018** – Fourth Quarter 2017 Groundwater Monitoring Report
  File to be named: RO350_GWM_R_yyyy-mm-dd

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

Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm. If your email address is not listed on the first page of this letter, or in the list of cc's listed below, ACDEH is requesting your email address to help expedite communications and to help lower overall costs.

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

Sincerely,

Mark Detterman, PG, CEG
Senior Hazardous Materials Specialist

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

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

Brandon Wilken, GHD Services, Inc, 5900 Hollis Street, Suite A, Emeryville, CA 94608
(Sent via electronic mail to: bwilken@craworld.com)

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

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

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

ELECTRONIC SUBMITTAL OF REPORTS

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

ACKNOWLEDGEMENT STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

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

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

REQUIREMENTS

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

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

Submission Instructions

1) Obtain User Name and Password
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to deh.loptoxic@acgov.org.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Open File Explorer using the Windows  key + E keyboard shortcut.
      i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) On the address bar, type in ftp://alcoftp1.acgov.org.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive)
   d) Click Log On.
   e) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   f) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

Kiersten Hoey

From: Detterman, Mark, Env. Health <Mark.Detterman@acgov.org>
Sent: Friday, August 11, 2017 1:37 PM
To: Kiersten Hoey
Cc: MacLeod, Carryl G
Subject: RE: RO0000350, Chevron 95607 - 5269 Crow Canyon Rd, Castro Valley

Carryl and Kiersten,
I have extended the submittal date until October 30th, per your request. The collection of additional vapor samples may provide additional insight at the site. Should you need to, please document the extension with this email.

Mark Detterman
Senior Hazardous Materials Specialist, PG, CEG
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
Direct: 510.567.6876
Fax: 510.337.9335
Email: mark.detterman@acgov.org

PDF Copies of case files can be downloaded at:
http://www.acgov.org/aceh/lop/ust.htm

From: Kiersten.Hoey@ghd.com [mailto:Kiersten.Hoey@ghd.com]
Sent: Thursday, August 03, 2017 3:18 PM
To: Detterman, Mark, Env. Health <Mark.Detterman@acgov.org>
Cc: MacLeod, Carryl G <CMacleod@chevron.com>
Subject: RO0000350, Chevron 95607 - 5269 Crow Canyon Rd, Castro Valley

Hi Mark,

GHD on behalf of Chevron Environmental Management Company (CEMC), would like to request an extension for the *Focused FS/CAP and Site Analysis* requested by Alameda County Department of Environmental Health (ACDEH) letter dated June 9, 2017. The reason for the extension is to allow time for GHD to attempt to collect soil vapor samples from onsite probes VP-3 and VP-6 during the dry months. This data will then be used to develop the requested report. GHD is scheduled to sample the two probes in August; therefore an extension of October 25, 2017 for the submittal of the report is requested.

Thank you,
Kiersten

Kiersten Hoey

GHD
T: +1 510 420 3347 | E: kiersten.hoey@ghd.com
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Attachment B
Soil Vapor Probe Installation and Sampling

Attachment B STANDARD FIELD PROCEDURES FOR SOIL VAPOR PROBE INSTALLATION AND SAMPLING

This document presents GHD Services, Inc.'s (GHD's) standard field procedures for soil vapor probe installation and sampling. These procedures are designed to comply with Federal, State, and local regulatory guidelines. Specific field procedures are summarized below.

Objectives

Soil vapor samples are collected and analyzed to assess whether vapor-phase subsurface contaminants pose a threat to human health or the environment.

Shallow Soil Vapor Probe Installation

The shallow soil vapor probe method for soil vapor sampling utilizes a hand auger or drill rig to advance a boring for the installation of a soil vapor sampling probe. Soil vapor probes facilitate the collection of in-situ vapor samples. Once the boring is advanced to the final depth, #2/12 filter pack is poured through a tremie pipe to fill the bottom 6 inches of the boring. A permeable, stainless-steel probe tip is connected to ¼-inch outside diameter Teflon tubing via a push-to-connect fitting. The probe tip is then placed approximately 6 inches from the bottom of the boring and covered by 6 inches of #2/16 filter sand. A 12 inch layer of dry granular bentonite is placed on top of the filter pack. Pre-hydrated granular bentonite is then poured to fill the borehole. The tube is labeled, capped, and placed within a traditional well box finished flush to grade. Soil vapor samples will be collected no sooner than 48 hours after installation of the soil vapor probe to allow adequate time for representative soil vapors to accumulate. Soil vapor sample collection will not be scheduled until after a minimum of three consecutive precipitation-free days and irrigation onsite has ceased.

Purging

At least three purge volumes of vapor are removed from the soil vapor probe prior to sampling. The purge volume is defined as the amount of air within the probe and tubing. Purging is performed using the vacuum of a dedicated Summa canister, a flow regulator set to the same flow rate used for sampling, and vacuum gauges. Immediately after purging, soil vapor samples will be collected using the appropriate size Summa canister with attached flow regulator and sediment filter.

Sampling Soil Vapor Probes

Samples collected using a SUMMA™ canister will have the SUMMA™ canister connected to the sampling tube of each vapor probe. Prior to collecting soil vapor samples, the initial vacuum of the canisters is measured and recorded on the chain-of-custody. The vacuum of the SUMMA™ canister is used to draw the soil vapor through the flow controller until a negative pressure of approximately 5 inches of mercury is observed on the vacuum gauge and recorded on the chain-of-custody. The flow controllers should be set to 100-200 milliliters per minute. Field duplicates should be collected for every day of sampling and/or for every 10 samples collected.

In accordance with the Department of Toxic Substances Control (DTSC) *Advisory – Active Soil Gas Investigation* guidaznce document, dated April 2012, leak testing is necessary during sampling. Helium is recommended, although shaving cream is acceptable. Helium is pumped into a shroud that contains the entire sampling apparatus and the soil vapor probe well vault. A helium meter is used to quantify the percentage helium in the shroud during sampling.

Samples collected for TO-17 analysis will be collected using a TO-17 Sorbent Tubes connected to the sampling tube of each vapor probe. A 60 cc syringe will be used to draw the sample into the sorbent tubes. Field duplicates should be collected for each day of sampling and/or for every 10 samples collected.

A leak test will be performed prior to connecting the sampling equipment to the vapor tubing. The test is performed by inserting the sorbent tube into the tube holder on the syringe assembly, turning the valve into the 'off' position, pulling the plunger of the syringe. If the plunger does not move or immediately returns to the starting position, the system is leak tight and is ready for sampling.

Vapor Sample Storage, Handling, and Transport

Samples are stored and transported under chain-of-custody to a state-certified analytic laboratory. Samples should never be cooled due to the possibility of condensation within the canister.

Soil Vapor Probe Destruction

The soil vapor probes will be preserved until they are no longer needed for risk evaluation purposes. At that time, they will be destroyed by extracting the tubing, hand augering to remove the sand and bentonite, and backfilling the boring with neat cement. The boring will be patched with asphalt or concrete, as appropriate.