



November 10, 2016

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

Subject: Plume Delineation and Feasibility Study / Corrective Action Plan Request; Fuel Leak  
Case No. RO0000383 (Global ID # T0600100315), Chevron #9-0260, 21995 Foothill  
Boulevard, Hayward, CA 94541

Dear Mr. Horne:

Alameda County Department of Environmental Health (ACDEH) staff has reviewed the case file for the above referenced site including the *Second Quarter 2016, Groundwater Monitoring and Sampling Report*, dated August 23, 2016, and the *Private Well Sampling Report*, dated September 26, 2016. The reports were prepared and submitted on your behalf by GHD. Thank you for submitting the reports.

The *Private Well Sampling Report* documented the sampling of two downgradient residential wells in order to determine if the wells had been impacted by the release at the site. The wells are depicted to be approximately 465 to 555 feet downgradient of the site, respectively. One well is currently unused, while the other is used to irrigate landscaping at the residence. Both wells did not contain detectable concentrations of Total Petroleum Hydrocarbons as gasoline (TPHG) and the associated compounds benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tert butyl ether (MTBE), at good limits of detection. A third unused residential well not mentioned in the report is located approximately 20 feet downgradient of the site and has been abandoned by loosely filling it with paver bricks and other debris, but it has not been properly destroyed under permit.

The referenced groundwater monitoring and sampling report documents the most recent monitoring and sampling event at the site. In onsite well MW-5, groundwater concentrations of TPHg are as high as 57,000 micrograms per liter ( $\mu\text{g/l}$ ), and have ranged between 22,000 and 62,000  $\mu\text{g/l}$  for the past two years. This concentration of TPHg is considered to be indicative of the presence of Light Non Aqueous Phased Liquids (LNAPL) by the Low Threat Closure Policy (LTCP) *Technical Justification for Vapor Intrusion Media-Specific Criteria* (State Water Resources Control Board [SWB], March 2012). LNAPL has not been reported in groundwater in the wells other than sheen, thus residual LNAPL may principally remain in soil beneath the site. Benzene is currently 90  $\mu\text{g/l}$  in well MW-5, but has ranged between 32 and 120  $\mu\text{g/l}$  over the past two years, and ethylbenzene is currently 2,200  $\mu\text{g/l}$ , but has ranged between 1,500 and 3,000  $\mu\text{g/l}$  over the past two years.

Since the shutdown of the Dual Phase Extraction (DPE) system in December 2009, and the subsequent removal of the system due to copper scavenging vandalism, the site has been in groundwater verification monitoring onsite and plume delineation offsite to the southwest. During this time period groundwater concentrations in onsite wells increased to as high as 110,000  $\mu\text{g/l}$  TPHg. Additionally, the closest downgradient offsite groundwater monitoring well (MW-13) increased slowly from <50  $\mu\text{g/l}$  TPHg, with more recent spikes up to 7,800  $\mu\text{g/l}$  TPHg. More recent substantial increases in well MW-13, up to 13,000  $\mu\text{g/l}$  TPHg, have consistently been documented beginning in June 2015. These concentrations are beginning to approach concentrations suggestive of the migration of LNAPL. It thus appears that a substantial soil and / or groundwater contaminant plume is present beneath the site, and is migrating in groundwater downgradient and offsite. Using the predominant groundwater flow direction depicted in the rose diagram presented in the groundwater monitoring report, the two private residential wells recently sampled are directly downgradient. In this view, it appears that well MW-14, with somewhat lower

groundwater concentrations, is located between to lobes of the groundwater plume that are suggestive of natural preferential pathways. Thus it appears appropriate to re-evaluate feasible corrective actions.

Consistent with the LTCP process, ACDEH has additionally re-evaluated site data and recommendations presented in the above-mentioned reports, in conjunction with the case files, to determine if the site is eligible for closure as a low risk site under the SWBs LTCP. Based on this review, we have determined that the site continues to fail to potentially meet the LTCP General Criteria d (Free Product), and the Media-Specific Criteria for Groundwater (see Geotracker for an updated LTCP checklist).

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

### **TECHNICAL COMMENTS**

1. **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.

As discussed above, groundwater concentrations have been present consistently in well MW-5 at concentrations that are indicative of LNAPL beneath the site which continues to degrade local groundwater resources and use. Increased concentrations in groundwater are migrating downgradient of the site towards local residential water supply wells since system shutdown as demonstrated by data from well MW-13, as also discussed above.

2. **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.

As noted above, our review of the case files indicates the migration of a contaminated groundwater plume downgradient of the site that is not defined upgradient of the private water supply wells. This has the potential to impact the use of these wells. It appears appropriate to install sentinel wells upgradient of the private water supply wells concurrent with undertaking the following:

3. **Feasibility Study / Corrective Action Plan** – Based on the discussions above, ACDEH requests the generation of an Feasibility Study / Corrective Action Plan (FS / CAP) that meets the provisions of section 2725 of the UST regulations (CCR, Title 23, Chapter 16, section 2600, et seq.) and includes the following minimum information:
  - Proposed cleanup goals and the basis for cleanup goals.
  - Summary of site characterization data.
  - Receptor information including likely future land use scenarios, adjacent land use and sensitive receptors, and potential groundwater receptors.
  - Evaluation of a minimum of three active remedial alternatives including discussion of feasibility, cost effectiveness, estimated time to reach cleanup goals, and limitations for each remedial alternative.
  - Inclusion of any required pilot tests to allow the evaluation of the alternatives
  - Detailed description of proposed remediation including confirmation sampling and monitoring during implementation.

- Post-remediation monitoring.
- Schedule for implementation of cleanup.

Public participation is a requirement for the Corrective Action Plan process. Therefore, we request that you submit a Draft CAP for ACDEH review. Upon ACDEH approval of a Draft CAP, ACDEH will notify potentially affected members of the public who live or own property in the surrounding area of the proposed remediation described in the Draft CAP. Public comments on the proposed remediation will be accepted for a 30-day period.

4. **Private Water Well Sampling** – Until sentinel wells are installed or potentially other options evaluated, upgradient of the private water supply wells, it appears appropriate to incorporate the wells into the groundwater monitoring program on a minimum of a semi-annual basis. This interval should be revisited at appropriate intervals in the near future.

#### **TECHNICAL REPORT REQUEST**

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

- **December 12, 2016** – Third Quarter 2016 Quarterly Groundwater Monitoring Report  
File to be named: RO383\_GWM\_R\_yyyy-mm-dd
- **January 20, 2017** – Feasibility Study / Corrective Action Plan  
File to be named: RO383\_FEASTUD\_R\_yyyy-mm-dd
- **March 3, 2017** – Fourth Quarter 2016 Quarterly Groundwater Monitoring Report  
File to be named: RO383\_GWM\_R\_yyyy-mm-dd

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

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

Sincerely,

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

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

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

Brandon Wilken, GHD, 5900 Hollis Street, Suite A, Emeryville, CA 94608; (Sent via electronic mail to: [Brandon.Wilken@ghd.com](mailto:Brandon.Wilken@ghd.com))

Dilan Roe, ACDEH, (Sent via electronic mail to: [dilan.roe@acgov.org](mailto:dilan.roe@acgov.org))  
Paresh Khatri, ACDEH; (Sent via electronic mail to: [paresh.khatri@acgov.org](mailto:paresh.khatri@acgov.org))  
Mark Detterman, ACDEH, (Sent via electronic mail to: [mark.detterman@acgov.org](mailto: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**

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) 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 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 Spills, Leaks, Investigations, and Cleanup (SLIC) 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 for more information on these requirements ([http://www.waterboards.ca.gov/water\\_issues/programs/ust/electronic\\_submittal/](http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)).

#### **PERJURY STATEMENT**

All work plans, technical reports, or technical documents submitted to ACEH 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, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

#### **AGENCY OVERSIGHT**

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

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

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

## REQUIREMENTS

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

RO#\_Report Name\_Year-Month-Date (e.g., RO#5555\_WorkPlan\_2005-06-14)

## Submission Instructions

- 1) Obtain User Name and Password
  - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
    - i) Send an e-mail to [deh.loptoxic@acgov.org](mailto:deh.loptoxic@acgov.org)
  - b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
  - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
    - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
  - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
  - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
  - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  - a) Send email to [deh.loptoxic@acgov.org](mailto:deh.loptoxic@acgov.org) notify us that you have placed a report on our ftp site.
  - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
  - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
  - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.