



May 25, 2017

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

Subject: Conditional Work Plan Approval and Plume Delineation and FS/CAP Comments; Fuel Leak Case No. RO0000383 (Global ID # T0600100315), Chevron #9-0260, 21995 Foothill Boulevard, Hayward, CA 94541

Dear Mr. Patten:

Alameda County Department of Environmental Health (ACDEH) staff has reviewed the case file for the above referenced site including the *Feasibility Study / Corrective Action Plan and Work Plan*, dated March 31, 2017, and the *Fourth Quarter 2016, Groundwater Monitoring and Sampling Report*, dated March 1, 2017. The reports were prepared and submitted on your behalf by GHD. Thank you for submitting the reports.

The Feasibility Study / Corrective Action Plan (FS/CAP) portion of the referenced *Feasibility Study / Corrective Action Plan and Work Plan* evaluated four alternative corrective actions (Monitored Natural Attenuation, excavation, groundwater extraction, and Enhanced In-Situ Biodegradation [EISB]), and found based on analytical testing that petroleum hydrocarbon degradation is currently proceeding under extremely anaerobic conditions. The FS/CAP proposed the installation, and quarterly replacement, of five-foot long containers packed with sulfate and sand in five wells (MW--5, DVE-20, SVE-9, DVE-12, and MW-8) to enhance anaerobic biodegradation of hydrocarbons in the five wells, such that biodegradation in the wells would be increased into the highly (sulfate) anaerobic zone from the current extremely (methanogenic) anaerobic biodegradation zone.

The Work Plan portion of the referenced *Feasibility Study / Corrective Action Plan and Work Plan* proposed the installation of a groundwater well on Rio Vista Street to act as a sentinel well upgradient of an actively used private residential irrigation water supply well on that street, and potentially of San Lorenzo Creek. It appears the sentinel well would be located approximately 70 feet upgradient of the private well, which was recently analyzed for site contaminants of concern and yielded non-detectable concentrations at standard limits of reporting. A second, inactive residential water supply well, would not be monitored by a sentinel well, based on the inactive use profile.

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. **Work Plan Modifications** – The work plan portion of the referenced FS/CAP proposes a series of actions with which ACDEH is in general agreement of undertaking; however, ACDEH requests one modification to the approach. Please submit a report by the date identified below.

- a. **Well Screen Interval** – The work plan in the FS/CAP stated that the screen interval for the sentinel well proposed to be installed upgradient of the actively used private residential irrigation water supply well would utilize an approximately 15 foot long screen interval between 15 and 40 feet below grade surface (bgs). In general ACDEH prefers shorter screen intervals, on the order of approximately 10 feet, in an effort to limit vertical intra-well fluid flow between granular zones of differing transmissivity; however, recognizes some latitude is necessary for in-field well installation

decisions if two granular zones will not be connected by the screen interval. Please incorporate this thinking into the well screen interval selection.

- 2. Feasibility Study / Corrective Action Plan Recommendations** – The FS/CAP portion of the report proposed the installation of passive sulfate-amended canisters at five wells to increase extremely anaerobic degradation to highly anaerobic biodegradation of hydrocarbons in groundwater beneath the site. In ACDEH's view this approach will likely very slowly treat near-well hydrocarbon concentrations in groundwater, but is likely not to address the apparently substantial residual soil contamination source, does not address substantially impacted groundwater further from the proposed wells themselves, or further from the site, such as at offsite downgradient wells MW-13 and MW-18. Groundwater concentrations in these wells are of sufficient concern to ACDEH to note in the previous directive letter that since system shut-down in December 2009 contaminant concentrations have increased substantially in these wells, and that the groundwater concentrations are suggestive of residual, non-migrating Light Non Aqueous Phased Liquids (LNAPL) in soil which will continue to contaminate groundwater in the vicinity for an extended period. The adequacy of biodegradation of apparently substantial petroleum hydrocarbon concentrations in soil, and in groundwater, including at downgradient locations from the site, with a passive, highly anaerobic bio-enhancement is, in part, sufficiently uncertain that a downgradient sentinel well has been proposed. Additionally, the extent of anaerobic biodegradation outside of each well has not been proposed to be accessed.

While ACDEH is in agreement with the sentinel well installation in order to ensure that the migrating slug of groundwater contamination does not, in the interim, impact the actively used irrigation well, San Lorenzo Creek, or the second inactive irrigation well, it appears appropriate to request an evaluation of remedial alternatives that are capable of remediating the groundwater contaminant plume on and offsite in order to reach Water Quality Objectives in a more reasonable time due to the current groundwater use in the vicinity. This may include an active system, or perhaps a combination active / passive system, at both on and offsite locations, to prevent impacts to the identified sensitive receptors.

Therefore, utilizing the time period the proposed sentinel well will be installed in, ACDEH requests the re-evaluation of FS/CAP options, including such potential options as Air Sparging / Soil Vapor Extraction (AS/SVE), horizontal well installation, or other methods to actively increase the oxygen concentration in soil and groundwater in the residual LNAPL source zone, and in downgradient locations. Other options are also likely to be identified. Please submit a FS/CAP Addendum by the date identified below.

#### **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:

- **July 31, 2017** – Feasibility Study / Corrective Action Plan Addendum  
File to be named: RO383\_FEASTUD\_ADEND\_R\_yyyy-mm-dd
- **August 4, 2017** – Offsite Investigation (can be combined with above)  
File to be named: RO383\_SWI\_R\_yyyy-mm-dd
- **June 5, 2017** – First Quarter 2017 Quarterly Groundwater Monitoring Report  
File to be named: RO383\_GWM\_R\_yyyy-mm-dd
- **September 1, 2017** – Second Quarter 2017 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,

A handwritten signature in blue ink, appearing to read 'Mark E. Detterman', with a stylized flourish at the end.

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**

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

#### **ACKNOWLEDGEMENT STATEMENT**

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

#### **PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS**

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

#### **UNDERGROUND STORAGE TANK CLEANUP FUND**

Please note that delays in investigation, late reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

#### **AGENCY OVERSIGHT**

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

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


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

## REQUIREMENTS

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

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

## Submission Instructions

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