



ENVIRONMENTAL HEALTH DEPARTMENT
ENVIRONMENTAL PROTECTION
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December 16, 2010

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San Ramon, CA 94583-2324
(sent via electronic mail to:
staciehf@chevron.com)

Mr. Onsori Ardavan
37 Victoria Drive
Atherton, CA 94027-4122

Frances & Louis Carnazzo
Carnozzo Land Co, Inc, et al
P.O. Box 6031
Atascadero, CA 93423-6031

Ahmad & Shahla Mostofi
37 Victoria Drive
Atherton, CA 94027-4122

Subject: Request for Alternative Work Plan; Fuel Leak Case No. RO0000185 (Global ID #T0600102298), Chevron #9-7127, I 580 and Grant Line Road, Tracy, CA

Dear Responsible Parties:

Alameda County Environmental Health (ACEH) staff has reviewed the case file including the *Corrective Action Plan Addendum and Proposed Feasibility Study*, dated December 31, 2008, the *Work Plan for Groundwater Pumping Test*, dated August 6, 2009, the *Vacuum Extraction Event Report and Work Plan for Surfactant-Enhanced Recovery*, dated October 4, 2010, and the *First Semi-Annual 2010 Groundwater Monitoring Report*, dated July 28, 2010, each prepared on your behalf by Conestoga-Rovers & Associates (CRA). The CAP Addendum recommended a groundwater pumping test to determine if groundwater flow is primarily fracture flow within the bedrock sandstone beneath the site, and the groundwater pumping test work plan detailed work methodologies. Because the site is now slated for redevelopment as a service station and remediation needs to be expedited, the groundwater pumping test was abandoned and a groundwater vacuum extraction event was conducted and reported on in the soil and groundwater investigation report referenced. The report provided rough radius-of-influence data for groundwater vacuum extraction, as well as a work plan for the injection of a surfactant into two wells with free phase (FP) in an attempt to decrease the surface tension between the FP and water and allow desorption of residual FP from saturated soil.

The proposed injection of surfactant at the site is at least the second proposal for surfactant injection at the site. Two previous ACEH letters have requested additional site characterization in part to address potential implementation of these proposals, and also requested further site specific studies relative to the technique, and set submittal timelines for related deliverables; these remain outstanding. At this time the use of surfactant is not approved until outstanding deliverables, inclusive of related deliverables identified in this letter, are submitted.

Based on ACEH staff review of these documents and the work plan we request additional information prior approval of the scope of work. We request that you address the following technical comments regarding the site, and send us the technical documents requested below.

TECHNICAL COMMENTS

1. **Surfactant Injection and Extraction** - The work plan proposes to conduct surfactant-enhanced recovery (SER) of FP from wells MW-1 and MW-3 using the surfactant Ivey-Sol[®]. The surfactant is reported to be biodegradable, achieving 90% degradation within 28 days in the laboratory. In addition to the outstanding deliverables noted above, ACEH has a number of concerns with this specific

proposal that require a better understanding prior to ACEH consideration of the work. Please address the following comments and submit the requested items:

- a. **Site Characterization / Lateral Extent of Free Phase Product** – ACEH is in general agreement that bedrock fractures may create a preferential pathway based on the current linear distribution of FP at the site; however, this distribution assumption (or hypothesis) has not been tested through the installation of additional soil bores or wells that would additionally provide a better estimation of the lateral extent of surfactant flow, the effectiveness of surfactant recovery after injection, or the effectiveness of other potential remedial options. Similarly the extent of FP (including downgradient extent) in the vicinity of well MW-3 has not been defined. The existing well network is a minimum of 75 feet from either of the proposed injection wells, and ranges up to 125 feet in distance. Contaminant delineation is an outstanding ACEH request.

An analysis of distribution of hydrocarbons in soil contained in the December 31, 2008 *Corrective Action Plan Addendum and Proposed Feasibility Study*, suggests that the limited shallow soil contamination in well MW-1 and the elevated concentrations detected at depth in soil are likely related to groundwater. This also suggests that the location of the residual soil source and FP is not known. This analysis is substantiated by the May 15, 2007 *Corrective Action Plan* where the source was presumed to be within the vadose zone, but is not otherwise known. The apparent poor location control of UST removal confirmation soil samples again affirms this situation. This would limit any ability to target the residual soil source with a remedial technology, including the proposed method.

As currently proposed the work appears to target FP in two wells and does not seek to target residual soil sources, or to determine the lateral or downgradient extent of FP, or to determine the effectiveness of FP removal, except at the injection wells where the removal rate is likely to be higher. ACEH is not convinced that the proposed work could not be described as a spot treatment of two wells, and not of the site. Moreover, unintended flow of liberated product can occur prior to recognition or could be missed completely with the existing well network. As a consequence, a denser monitoring well network will be required prior to implementation of this or any remedial effort.

A site assessment was requested in an August 22, 2007 directive letter and remains a valid concern. As documented in the CV RWQCB letter appended to that letter are statements by Ivey International that also indicate that complete site characterization is essential to proper use of surfactant as a remedial tool. ACEH notes that site characterization is not antithetical to careful site development.

As a consequence of these identified data gaps, inclusive of outstanding deliverables previously noted, the submitted work plan is not approved; rather by the date identified below, please submit an alternative work plan to fill these site characterization data gaps (and potentially others that may be identified in your reviews). A capture zone analysis, as requested in the August 22, 2007 letter, and as proposed in the August 6, 2009 *Work Plan for Groundwater Pumping Test*, would be appropriate using a more closely spaced well network. This network would also help verify the lateral extent of FP or dissolved groundwater concentrations.

- b. **Interim Use of Skimmers** - Please evaluate the interim use of skimmers or other appropriate technology, in wells MW-1 and MW-3 as temporary measures to increase the capture of free product at the site between site visits; this FP recovery method has ceased being used at the site.
- c. **Justification of Pilot Test Appropriateness** – As stated in both the August 22, 2007 and the August 20, 2008 directive letters, interim remediation must be completed within the corrective action process. As a consequence please justify the choice of the interim remedial alternative in a Feasibility Study / Corrective Action Plan (FS/CAP) which targets all impacted

media at the site by the date identified below. The FS/CAP should utilize data to be generated as a part of the requested alternative work plan.

As required in the August 2008 letter, the FS/CAP should include contamination cleanup levels and cleanup goals, in accordance with the Central Valley Regional Water Quality Control Board (CV RWQCB) Basin Plan for all COCs and for the appropriate groundwater designation. Soil cleanup levels should ultimately (within a reasonable timeframe) achieve water quality control objectives (cleanup goals) for groundwater in accordance with the CV RWQCB Basin Plan. Please propose appropriate cleanup levels and cleanup goals and the timeframe to reach these levels and goals in accordance with 23 CCF Section 2725, 2726, and 2727 in the FS/CAP for active remediation and final cleanup goals. These can be calculated site-specific risk-based cleanup goals and water quality objectives.

The FS/CAP must evaluate at least three viable alternatives for remedying or mitigating the actual or potential adverse affects of the unauthorized release(s) besides the 'no action' and 'monitored natural attenuation' remedial alternatives. Each alternative shall be evaluated by the Responsible Party for remedial effectiveness, cost-effectiveness, and timeframe to reach water quality objectives (cleanup goals), and thereafter propose an appropriate cleanup technology.

2. **Geotracker Well Survey** – Site wells have not been surveyed to Geotracker well survey standards at this site. Please incorporate this work in the requested work plan identified below.

TECHNICAL REPORT REQUEST

Please submit the following deliverable to ACEH (Attention: Mark Detterman), according to the following schedule:

- **February 14, 2011** – Work Plan
- **60 Days After Work Plan Approval** – Soil and Groundwater Investigation Report
- **60 Days After Soil & Groundwater Investigation Response Letter** – FS/CAP or additional appropriate work plan

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.

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 E. Detterman, PG, CEG
Hazardous Materials Specialist

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

cc: James Kiernan, 10969 Trade Center Drive, Suite 106, Rancho Cordova, CA 95670
(sent via electronic mail to jkiernan@craworld.com)
Donna Drogos, ACEH, (sent via electronic mail to donna.drogos@acgov.org)
Mark Detterman, ACEH, (sent via electronic mail to mark.detterman@acgov.org)
Geotracker, e-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

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.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml).

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.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	REVISION DATE: July 20, 2010
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: 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 dehloptoxic@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 dehloptoxic@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.