



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
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February 20, 2014

Charles Carmel
Atlantic Richfield Company
P.O. Box 1257
San Ramon CA 94583
(Sent via E-mail to: charles.carmel@bp.com)

Subject: Case File Review for Fuel Leak Case No. RO0000200 and GeoTracker Global ID T0600100113, ARCO #00771, 899 Rincon Avenue, Livermore, CA 94550

Dear Mr. Carmel:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the report entitled, "*Updated Site Conceptual Model and Soil and Groundwater Investigation Report*," dated January 17, 2014 (Report). The Report, which was prepared on behalf of Atlantic Richfield Company by Broadbent & Associates, Inc., presents results from three cone penetration (CPT) borings and an updated site conceptual model (SCM). Based upon the CPT results, the Report recommends additional groundwater sampling during the First Quarter of 2014 and submittal of a case closure request.

Several items in the proposed scope of work for the CPT investigation could not be completed. Although multiple depth-discrete groundwater sampling was proposed for each of four CPT borings, only two groundwater samples were collected from a total of three CPT borings. Pore pressure dissipation tests (PPDT) were proposed for the CPT borings but only one PPDT test was conducted. The completed CPT investigation provides significantly less data than was proposed in the Work Plan. As discussed in technical comment 1, site conditions do not meet the numeric criteria in scenarios 1 through 4 of the Groundwater-Specific Criteria in the LTCP. Therefore, the site will be evaluated for closure under scenario 5 of the Groundwater-Specific Criteria in the LTCP. Additional data is required to determine whether the contaminant plume meets the scenario 5 criteria which require that the plume poses a low threat to human health and water quality objectives will be achieved within a reasonable time frame. To complete the assessment, we request that you submit a Work Plan that addresses the technical comments below.

TECHNICAL COMMENTS

- 1. Low-threat Closure Policy.** The Report indicates that the site appears to meet the criteria for closure in the State Water Resources Control Board Low-threat Closure Policy (LTCP). We believe that the site does not meet any of the four scenarios with specific numeric criteria for case closure under the Groundwater-Specific Criteria in the LTCP because the plume is more than 100 feet in length and the nearest water supply well is less than 1,000 feet from the defined plume boundary. Active municipal supply well CWS-10 is approximately 850 feet northeast (downgradient) of the site. Therefore, case closure, when appropriate, would take place under scenario 5 of the Groundwater-Specific Criteria, which indicates that the regulatory agency determines that under current and reasonably anticipated near-term future scenarios, the plume poses a low threat. In order to meet

this criterion, we request that you submit a Work Plan that addresses technical comments 2 and 3 below.

- 2. Vertical Hydraulic Gradient.** The data gaps identified by ACEH in correspondence dated March 18, 2013 included the lack of information on vertical extent of contamination and vertical gradients. One grab groundwater sample was collected from boring B-2 at a depth 58 feet which is below the sandy clay layer. Petroleum hydrocarbons were not detected in the grab groundwater samples. Although the sampling result from boring B-2 is useful, it is not sufficient to make conclusions about vertical heads and the potential for future vertical migration. A specific data gap for the site is the question of whether there is a vertical gradient that could cause downward migration through the sandy clay layer that typically occurs at depths of 36 to 42 feet bgs. The May 29, 2013 Work Plan, proposed that CPT borings would be advanced to depths of approximately 60 feet bgs and pore pressure dissipation tests (PPDT) would be performed. Only one PPDT was performed at a depth of 42 feet bgs in borings B-1. Therefore, no information was collected regarding vertical gradients and the potential for downward migration of contamination due to increased pumping. In order to address this concern, we request that you submit a Work Plan that includes the installation of groundwater monitoring wells below the sandy clay layer. Additional evaluations could include analysis of water levels at the site and possible correlations with pumping in CWS-10 and analysis of possible impacts under various increased pumping scenarios.
- 3. Hydraulic Gradient.** Based on review of data from other fuel leak cases in the area and regional groundwater elevation contour maps by the Zone 7 Water Agency, the regional hydraulic gradient in the area is to the west northwest. Groundwater elevation contour maps for the site typically show a hydraulic gradient to the north or north northwest. During several groundwater monitoring events, the apparent hydraulic gradient was to the north northeast, which is in the direction of the municipal water supply well discussed in technical comment 2. As shown on Table 3 of the 2009 SCM and Work Plan, the hydraulic gradient for the site is typically 0.02 to 0.05 but ranges from 0.01 to 0.07. The regional hydraulic gradient in the area of the site is on the order of 0.01. The cause for the apparent differences between the flow direction and hydraulic gradient for the site and the regional flow direction and hydraulic gradient is not obvious. An additional question is whether increased pumping in well CWS-8 during drought conditions could cause the plume to become unstable and migrate off-site must be evaluated. As discussed in technical comment 2, we request that you submit a Work Plan that includes the installation of groundwater monitoring wells below the sandy clay layer.
- 4. Livermore Sewage Ponds.** The historic Livermore Sewage Ponds were located approximately 400 feet west of the site and were considered a possible source of tetrachloroethene that was detected in well CWS-10. Since the site is closer to well CWS-10 than the Livermore Sewage Ponds, the site must also be evaluated as a possible source of contamination for well CWS-10.
- 5. Map of Water Supply Wells.** The SCM does not appear to include a map of water supply wells or distances to each of the wells discussed. The SCM refers to Drawing 4 for well locations but Drawing 4 is a Site Map showing the GRO plume. Please include a map showing the well locations in future reports.

- 6. Nearby Water Supply Well of Unknown Use.** The SCM discusses a well of unknown use that is reportedly located 450 feet north of the site. As described in the SCM, it is unknown whether the well was properly abandoned but it is reported that the well is no longer in use and currently located beneath the existing fire station building. The URS "*Water Well Survey*," dated September 17, 2003 described the well as "North side of fire Station, Pine and Rincon," of unknown use with no accurate address. The north end of the fire station building is approximately 215 feet north of the site. The "*Case Evaluation and Justification for No Further Action*," dated January 5, 2012 indicates that well on the property of the Livermore-Pleasanton Fire Department Station No. 7 was abandoned by Dejesus Pump and Well Drilling on February 15, 2002. Given the various descriptions of the location and status of this well, we request that you provide definitive documentation as to the current location and status of this well.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Jerry Wickham), and to the State Water Resources Control Board's GeoTracker website according to the following schedule and file-naming convention:

- **April 25, 2014** – Work Plan
File to be named: WP_R_yyyy-mm-dd RO200
- **May 29, 2014** – Groundwater Monitoring Report – First Quarter 2014
File to be named: GWM_R_yyyy-mm-dd RO200

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.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org. Case files can be reviewed online at the following website: <http://www.acgov.org/aceh/index.htm>.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Attachments: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

Responsible Parties
RO0000200
February 20, 2014
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cc: Danielle Stefani, Livermore Pleasanton Fire Department, 3560 Nevada St, Pleasanton, CA 94566
(Sent via E-mail to: dstefani@lpfire.org)

Colleen Winey (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore, CA 94551
(Sent via E-mail to: cwiney@zone7water.com)

Kristene Tidwell, Broadbent, 875 Cotting Lane, Suite G, Vacaville, CA 95688 (Sent via E-mail to:
ktidwell@broadbentinc.com)

Jason Duda, Broadbent & Associates, Inc., 1324 Mangrove Avenue, Suite 212, Chico, CA 95926
(Sent via E-mail to: jduda@broadbentinc.com)

Donna Drogos, ACEH (Sent via E-mail to: donna.drogos@acgov.org)
Jerry Wickham, ACEH (Sent via E-mail to: jerry.wickham@acgov.org)

GeoTracker, eFile

Attachment 1

Responsible Party(ies) Legal Requirements/Obligations

REPORT/DATA REQUESTS

These reports/data are being requested pursuant to Division 7 of the California Water Code (Water Quality), Chapter 6.7 of Division 20 of the California Health and Safety Code (Underground Storage of Hazardous Substances), and Chapter 16 of Division 3 of Title 23 of the California Code of Regulations (Underground Storage Tank Regulations).

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (Local Oversight Program [LOP] for unauthorized releases from petroleum Underground Storage Tanks [USTs], and Site Cleanup Program [SCP] for unauthorized releases of non-petroleum hazardous substances) require submission of reports in electronic format pursuant to Chapter 3 of Division 7, Sections 13195 and 13197.5 of the California Water Code, and Chapter 30, Articles 1 and 2, Sections 3890 to 3895 of Division 3 of Title 23 of the California Code of Regulations (23 CCR). Instructions for submission of electronic documents to the ACEH FTP site are provided on the attached "Electronic Report Upload Instructions."

Submission of reports to the ACEH FTP site is in addition to requirements for electronic submittal of information (ESI) to the State Water Resources Control Board's (SWRCB) Geotracker website. In April 2001, the SWRCB adopted 23 CCR, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1 (Electronic Submission of Laboratory Data for UST Reports). Article 12 required electronic submittal of analytical laboratory data submitted in a report to a regulatory agency (effective September 1, 2001), and surveyed locations (latitude, longitude and elevation) of groundwater monitoring wells (effective January 1, 2002) in Electronic Deliverable Format (EDF) to Geotracker. Article 12 was subsequently repealed in 2004 and replaced with Article 30 (Electronic Submittal of Information) which expanded the ESI requirements to include electronic submittal of any report or data required by a regulatory agency from a cleanup site. The expanded ESI submittal requirements for petroleum UST sites subject to the requirements of 23 CCR, Division, 3, Chapter 16, Article 11, became effective December 16, 2004. All other electronic submittals required pursuant to Chapter 30 became effective January 1, 2005. Please visit the SWRCB website for more information on these requirements. (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, 7835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

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

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	REVISION DATE: July 25, 2012
	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 (petroleum UST 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 .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 <://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 .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.