

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director



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ENVIRONMENTAL PROTECTION
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November 14, 2008

Paul Supple
Atlantic Richfield Company
(A BP Affiliated Company)
P.O. Box 1257
San Ramon, CA 94583

Subject: Fuel Leak Case No. RO0000309 and GeoTracker Global ID T0600100108, ARCO #0601, 712 Lewelling Boulevard, San Leandro, CA 94579

Dear Mr. Supple:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Soil and Water Investigation Report," dated March 28, 2007, which was prepared by Broadbent & Associates, Inc. (BAI) for the subject site. The report summarizes the installation of a continuously-cored boring (B-1) to 58 feet below the ground surface (bgs) to delineate the vertical extent of soil and groundwater contamination. "Grab" groundwater sample analytical results detected TPH-d at a concentration of 260 µg/L (with silica gel cleanup) at a depth of 58 feet bgs. No hydrocarbon contamination was detected in six soil samples collected from the boring. As a result, BAI recommends no additional vertical assessment at the site. Please note that our May 29, 2006 work plan approval letter requested that a Site Conceptual Model (SCM) also be prepared and included in the Soil and Groundwater Investigation Report. However, based on a review of the above-mentioned report, the SCM does not appear to have been included with the report.

Brief Site History

In January 1990, GeoStrategies, Inc. removed five underground storage tanks (USTs) from the site. Soil sample analytical results detected maximum concentrations of TPH-g and benzene at 7,100 mg/kg and 175 mg/kg, respectively. In June of 1990, Applied Geosystems installed groundwater monitoring wells MW-1 through MW-3. Soil sample analytical results detected TPH-g and benzene at concentrations of 620 mg/kg and 11 mg/kg, respectively, with sheen observed in groundwater monitoring wells MW-1 and MW-3. To further define the extent of contamination, RESNA installed groundwater monitoring wells MW-4 through MW-8 in May 1991 and in June 1991 conducted an SVE pilot test. Based on the results of the pilot test, RESNA recommended installing a SVE system with vapor trenches in lieu of installing vertical vapor wells.

In October 1992, RESNA installed four additional groundwater monitoring wells (MW-11 through MW-14). Soil sample analytical results detected TPH-g, TPH-d, and benzene at concentrations up to 2,000 mg/kg, 760 mg/kg and 57 mg/kg, respectively. In March 1993, RESNA conducted a 12-hour pumping test to determine whether the aquifer could sustain an average yield of 200-gallons per day. RESNA concluded that 200-gallons per day yield would probably be sustained. RESNA also concluded that the apparent physical characteristics of the water bearing unit beneath the site could limit the beneficial effects of a capture zone. Because the water bearing unit appears to consist of numerous thin discrete sand layers, a capture zone created by pumping

from one sand layer may not hydraulically influence and thus not capture hydrocarbon impacted groundwater in adjacent sand layers.

In June 1997, ENCON performed a site-specific RBCA and collected soil vapor samples from a depth of 1 to 1.5 feet bgs and determined that "groundwater and subsurface soil-to-indoor air scenarios for the commercial building on-site and the residences off-site were not exceeded by representative indoor air concentrations of benzene.

In June 2003, URS oversaw the dispenser upgrades and associated piping excavation and sampling. Soil sample analytical results detected benzene at concentrations up to 7 mg/kg in soil sample D-6. According to URS, approximately 21,000 gallons of water was pumped from the existing UST pit during upgrade work.

ACEH requests that you address the following technical comments and send us the technical work plan and reports requested below.

TECHNICAL COMMENTS

1. **Site Conceptual Model** – Our May 29, 2006 directive letter requested that an SCM be prepared and included in the Soil and Groundwater Investigation Report. Based on a review of the case file, it appears that the SCM has not been submitted. At this time, it may be advantageous to develop a site conceptual model (SCM), which synthesizes all the analytical data and evaluates all potential exposure pathways and potential receptors that may exist at the site, including identifying or developing site cleanup objectives and goals. At a minimum, the SCM should include:
 - (1) Local and regional plan view maps that illustrate the location of sources (former facilities, piping, tanks, etc.) extent of contamination, direction and rate of groundwater flow, potential preferential pathways, and locations of receptors;
 - (2) Geologic cross section maps that illustrate subsurface features, man-made conduits, and lateral and vertical extent of contamination;
 - (3) Plots of chemical concentrations versus time;
 - (4) Plots of chemical concentrations versus distance from the source;
 - (5) Summary tables of chemical concentrations in different media (i.e. soil, groundwater, and soil vapor); and
 - (6) Well logs, boring logs, and well survey maps;
 - (7) Discussion of likely contaminant fate and transport.

If data gaps (i.e. potential contaminant volatilization to indoor air or source area(s) are undefined, etc.) are identified in the SCM, please include a proposed scope of work to address those data gaps in the work plan due by the date specified below. Please note that

the work plan must address all technical comments presented in this correspondence and all data gaps identified by your consultant in their SCM.

2. **Contaminant Source Area Characterization** – As mentioned above significantly elevated concentrations of hydrocarbons were detected during UST removals. Specifically, TPH-g and benzene were detected at 7,100 mg/kg and 175 mg/kg respectively in soil sample ASW-2. In February 1993, borings B-23 through B-31 were installed along property boundary and Lewelling Boulevard. Soil sample analytical results detected TPH-g and benzene as high as 900 mg/kg and 17 mg/kg, respectively in soil sample S-6.5-B24. Although boring B-10/MW-5 appears to adequately delineate vertical soil impact in the cross-gradient direction, the vertical and lateral extent of soil impact in the down-gradient direction and laterally northwest across Lewelling Boulevard appears undefined. Please propose a scope of work to address the above-mentioned concerns and submit a work plan by the date specified below.
3. **Monitoring Well Construction and Hydrogeologic Setting** – Monitoring wells MW-4, MW-5, MW-6, and MW-7 have been periodically "dry" during sampling. In order to obtain representative data that will ultimately justify groundwater contaminant plume stability, consistent cumulative data is required. Over the past several years, groundwater samples analytical results collected from MW-6 have been significantly elevated. During the most recent groundwater sampling event, the monitoring well was "dry." Please evaluate groundwater monitoring well constructions at the site and determine whether analytical results are representative of site conditions considering that water has been noted to transmit through several layers permeable lenses.
4. **Soil Vapor Sampling and RCBA** – As mentioned in the brief site history above, EMCON submitted a site-specific RBCA and soil vapor sampling results for the site in June 1997. ENCON collected soil vapor samples from a depth of 1 to 1.5 feet bgs and determined that "groundwater and subsurface soil-to-indoor air scenarios for the commercial building on-site and the residences off-site were not exceeded by representative indoor air concentrations of benzene. However, according to soil vapor sampling procedure included in the report, it appears a stainless steel rod with a one-inch perforated section was driven to depth. It is reported that "[a] vacuum was applied to the top of the stainless steel rod using a portable vacuum pump for five minutes until several volumes of air had been evacuated from the probe and rod. The soil gas samples were then collected by connecting empty Tedlar® bags to the probe..." The results of the soil vapor samples were utilized to evaluate potential contaminant volatilization from soil and groundwater to indoor air exposure scenario on and off site. Since significantly elevated concentrations of hydrocarbons have been detected in soil and groundwater, and no active remediation besides pilot testing appear to have been performed, it appears prudent to collect soil vapor samples utilizing more current methodologies to evaluate risk to on-site and off-site receptors. Please propose a scope of work to address the above-mentioned concerns and submit a work plan due by the date specified below.

NOTIFICATION OF FIELDWORK ACTIVITIES

Please schedule and complete the fieldwork activities by the date specified below and provide ACEH with at least three (3) business days notification prior to conducting the fieldwork, including routine groundwater sampling.

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Pares Khatri), according to the following schedule:

- **January 13, 2009** – SCM with Soil and Water Investigation Work Plan
- **January 30, 2009** – Quarterly Monitoring Report (4th Quarter 2008)
- **April 30, 2009** – Quarterly Monitoring Report (1st Quarter 2009)
- **July 30, 2009** – Quarterly Monitoring Report (2nd Quarter 2009)
- **October 30, 2009** – Quarterly Monitoring Report (3rd Quarter 2009)

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_rgmts.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

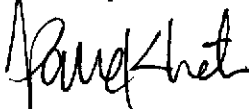
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

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.

If you have any questions, please call me at (510) 777-2478 or send me an electronic mail message at paresh.khatri@acgov.org.

Sincerely,



Paresh C. Khatri
Hazardous Materials Specialist



Donna L. Drogos, PE
Supervising Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Tom Venus, Broadbent & Associates, Inc., 1324 Mangrove Ave., Ste 212, Chico, CA 95926
Donna Drogos, ACEH
Paresh Khatri, ACEH
File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	ISSUE DATE: July 5, 2005
	REVISION DATE: December 16, 2005
	PREVIOUS REVISIONS: October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

Effective **January 31, 2006**, 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

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- 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)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

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
or
 - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
 - 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 and Firefox browsers will not open the FTP site.
 - b) Click on File, then on Login As.
 - 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 at 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)