

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



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February 13, 2009

Mr. Charles Miller  
USA Petroleum  
905 Rancho Conejo Blvd.  
Newbury Park, CA 91320-1716

Mr. John Jay  
Drake Builders  
c/o Jay-Phares Corporation  
10700 MacArthur Boulevard  
Oakland, CA 94605

Subject: Fuel Leak Case No. RO0000232 and Geotracker Global ID T0600101808, USA Petroleum, 10700 MacArthur Boulevard, Oakland, CA 94605

Dear Mr. Miller and Mr. Jay:

I am the case worker now assigned to your case. Please send future correspondence for this case to my attention. Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the subject site including the recently submitted documents entitled, "*Dual Phase Extraction and Air Sparge Event Report, Former USA Service Station No. 57, 10700 MacArthur Boulevard, Oakland, California,*" dated March 3, 2008 (DPE Report) and "*Quarterly Groundwater Monitoring Report, Fourth Quarter 2008, Former USA Service Station No. 57, 10700 MacArthur Boulevard, Oakland, California,*" dated January 20, 2009 (QMR). The DPE Report presents the results of a dual phase extraction (DPE) and air sparging event conducted at the site from September 4 to November 14, 2007. This DPE and air sparging event was the seventh in a series of DPE remediation events conducted between 2004 and 2007.

The DPE Report and Quarterly Monitoring Report indicate that Stratus intends to initiate continuous DPE and air sparging at the site. We do not concur with the proposal to initiate continuous DPE and air sparging at this time. As discussed in the technical comments below, the data collected to date during DPE and air sparging events provide relative rates of recovery but are not sufficient to indicate whether DPE and air sparging will be effective for site cleanup. In addition, it is not clear whether other remedial alternatives have been evaluated. Therefore, we request that you prepare a work plan for pilot testing of soil vapor extraction, DPE, and air sparging that includes sufficient monitoring and collection of operational data to demonstrate the effectiveness of these technologies. Alternately, you may prepare a Draft Corrective Action Plan (please see technical comment 11) to evaluate additional remedial technologies.

We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

## **TECHNICAL COMMENTS**

- 1. First Three Historic DPE Events Using Wells S-1, S-2, and MW-3.** Three DPE events, utilizing wells S-1, S-2, and MW-3, were conducted between July 2004 and September 2004. Wells S-1 and S-2 are 40-feet deep with 20-foot screen intervals. The 20-foot well screens for wells S-1 and S-2 were generally installed within fractured bedrock but the top of the screen and filter pack extends approximately 2 to 5 feet above the top of the bedrock. Well MW-3 is 40 feet deep with a 16-foot well screen that is entirely within bedrock. The first three events conducted on wells within the bedrock, were largely ineffective in removing mass. The total mass of gasoline range organics (GRO) extracted during the first three DPE events was 13.35, 6.52 and 0.02 pounds, respectively. Daily extraction rates for GRO during the three DPE events, which lasted up to 25 days, were generally less than 0.38 pounds per day. The volume of groundwater removed during each DPE event was 21,170, 34,340, and 54,730 gallons, respectively.
- 2. Fourth through Sixth Historic DPE Events Using Extraction Wells.** Three DPE events, utilizing extraction wells EX-1 through EX-4, were conducted between February 2006 and August 2006. The total mass of GRO removed during the fourth through sixth extraction events was less than 50 pounds per event. Daily extraction rates for GRO during the three DPE events were limited to less than 1.8 pounds per day.
- 3. Seventh DPE and Air Sparging Event.** The most recent DPE event, which was conducted from September 4, 2007 through November 14, 2007, utilized extraction wells EX-1 through EX-4 and included air sparging. The total mass of GRO extracted during the seventh DPE event was estimated to be approximately 700 pounds. Daily extraction rates ranged from 5 to 21 pounds per day. The groundwater extraction rate was 0.08 gallons per minute. No vacuum influence was reported in observation wells and it is unclear whether drawdown occurred due to groundwater extraction.
- 4. Effectiveness of DPE.** The effectiveness of DPE to remediate the site is not clear from the data collected to date. The vacuum radius of influence and drawdown with distance from the extraction wells do not appear to have been estimated. Field observation tables from DPE events present limited vacuum influence data that show no vacuum influence or highly variable vacuum influence for the DPE events. Future plans for conducting DPE must include sufficient monitoring and collection of operational data to demonstrate the effectiveness of DPE.
- 5. Effectiveness of Air Sparging.** During the seventh DPE event which included air sparging, daily extraction rates were significantly higher than during previous DPE events. However, it is not clear whether the increased extraction rate was due to lower water levels during the seventh event or due to the effects of air sparging. Future plans for conducting air sparging must include sufficient monitoring and collection of operational data to demonstrate the effectiveness of air sparging.
- 6. Depth of Air Sparging.** During the seventh DPE and air sparging event, air sparging was performed using injection wells screened from 17.5 to 20 feet bgs. We could not locate data showing the depth to water in the air sparging wells. Nearby monitoring wells had depths to water at the start of air sparging ranging from 17.6 to 20.7 feet bgs. Based on these data, it appears that air sparging may have been limited to the upper two feet of the water column. Future plans for air sparging must

present the rationale for the proposed depth of air sparging that considers the current and historic depth to water data, vertical interval of the soil and water column requiring cleanup, site stratigraphy, and expected radius of influence of air sparging.

7. **Site Plans.** On future site plans, please include the area of excavation from previous reports and show the paved and unpaved areas of the site.
8. **Groundwater Elevation Contour Maps.** The inferred directions of groundwater flow shown on Groundwater Elevation Contour Maps are generally based on water level data from monitoring wells, which are long screen wells typically screened at various depths into bedrock. We note that groundwater elevations from extractions wells, which are screened from 20 to 25 feet bgs, are typically not used to prepare Groundwater Elevation Contour Maps. The water level data from the extraction wells may be more representative of the hydraulic head for shallow groundwater in the area of the former USTs. Please review the validity of using data from the long screen monitoring wells versus the extraction wells to interpret the hydraulic gradient in the area of the former USTs. Please also review the potential for recharge and groundwater mounding in the former excavation area to affect water levels. This analysis is to be presented in the work plan for pilot testing or Draft Corrective Action Plan requested below.
9. **Vertical Gradients and Long-Screen Monitoring Wells.** The groundwater monitoring wells were constructed with screen intervals of 20 to 25 feet. The monitoring wells extend to depths up to 44 feet bgs and many extend various distances into the underlying bedrock. In contrast, the four extraction wells are uniformly screened from 5 to 25 feet bgs. A comparison of water levels in the extraction wells to nearby monitoring wells indicates that there may be a downward vertical gradient at the site. The groundwater elevation in extraction well EX-1 is typically several feet higher than the groundwater elevations in nearby monitoring wells S-1 and S-2. Similarly, the groundwater elevation in well EX-2 is typically several feet higher than the groundwater elevation in bedrock monitoring well MW-3. In the work plan for pilot testing or Draft Corrective Action Plan requested below, please include an evaluation as to whether the long-screen monitoring wells may be or may have been conduits for downward migration of groundwater contamination.
10. **Development Plans.** Previous reports have described possible excavation of shallow soils at the site as part of future site development. Please present any updates on site development or plans for soil excavation at the site.
11. **Work Plan for Pilot Testing or Draft Corrective Action Plan.** Although seven DPE events have been conducted at the site, the data collected to date are not sufficient to demonstrate the effectiveness of DPE and air sparging to clean up the site. Therefore, we request that you prepare a work plan for pilot testing to collect sufficient data to provide a more complete evaluation of DPE and air sparging or prepare a Draft CAP that meets the provisions of section 2725 of the UST regulations (CCR, Title 23, Chapter 16, section 2600, et seq.). A Draft CAP is to include at a minimum, the following information:
  - Proposed cleanup goals and the basis for cleanup goals.
  - Summary of site characterization data.

Mr. Charles Miller  
Mr. John Jay  
RO0000232  
February 13, 2009  
Page 4

- Receptor information including likely future land use scenarios, adjacent land use and sensitive receptors, and potential groundwater receptors (see technical comment 2 regarding well survey).
- Evaluation of remedial alternatives including discussion of feasibility and limitations for each remedial alternative.
- 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 ACEH review. Upon ACEH approval of a Draft CAP, ACEH 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

#### **TECHNICAL REPORT REQUEST**

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **April 17, 2009** – Work Plan for Pilot Testing or Draft Corrective Action Plan
- **April 17, 2009** – First Quarter 2009 Groundwater Monitoring Report
- **July 17, 2009** – Second Quarter 2009 Groundwater Monitoring Report

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

Mr. Charles Miller  
Mr. John Jay  
RO0000232  
February 13, 2009  
Page 5

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/cleanup/electronic\\_reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

#### **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.

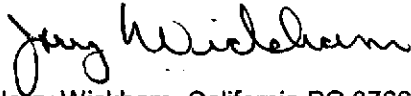
#### **AGENCY OVERSIGHT**

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.

Mr. Charles Miller  
Mr. John Jay  
RO0000232  
February 13, 2009  
Page 6

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org).

Sincerely,



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

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Hazardous Materials Unit, 250 Frank Ogawa Plaza, Suite 3341,  
Oakland, CA 94612

Scott Bittinger, Stratus Environmental, 3330 Cameron Park Drive, Ste. 550, Cameron Park, CA  
95682

Donna Drogos, ACEH  
Jerry Wickham, 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](mailto: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](mailto: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](mailto: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)