

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



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

September 30, 2008

Ms. Staci Frerichs  
Chevron Environmental Management  
6001 Bollinger Canyon Rd K2256  
PO Box 6012  
San Ramon, CA 94583-2324

Mr. Denis Brown  
Shell Oil Products US  
20945 S Wilmington Ave  
Carson, CA 90810-1039

Ms Jennifer Sedlachek  
Exxon Mobil  
4096 Piedmont Ave #194  
Oakland, CA 94611

Mr. Brandford Howard  
Brandford Howard ET AL  
516 Grand Avenue  
Oakland, CA 94610-3515

Subject: Fuel Leak Case No. RO0000391 (Global ID # T0600101355), Chevron #21-1173, 500 Grand Avenue, Oakland

Dear Ms Frerichs and Ms Seldachek; Mr. Brown and Mr. Howard:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above referenced site and the document entitled "Work Plan for Additional for Additional Soil Vapor Study" and "Subsurface Investigation Report" received September 19, 2007 and August 14, 2008 and prepared by Conestoga Rovers Associates (CRA). We note that Chevron implemented the soil vapor work plan without Agency approval. Furthermore, the work performed in the subsurface investigation is not what was proposed in the work plan; soil vapor sampling was not completed, limited shallow soil samples were collected and soil borings were not installed. Therefore, we request that you complete the scope of work from your work plan (approved by ACEH) including soil vapor sampling and soil boring installation.

Based on ACEH staff review of the case file, we request that you address the following technical comments and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to [mail to: steven.plunkett@acgov.org](mailto:mail.to:steven.plunkett@acgov.org)) prior to the start of field activities.

**TECHNICAL COMMENTS**

1. **Work Plan for Additional Soil Vapor Study.** Previous soil vapor data collected in November 2006 detected high concentrations of up to 2,204,000  $\mu\text{g}/\text{m}^3$  TPHg and 35,130  $\mu\text{g}/\text{m}^3$  benzene. However, CRA neglected to analyze vapor samples for leak detection compounds, calling into question the validity of the analytical results. Consequently, ACEH requested a supplemental soil vapor work plan in a directive letter dated July 30, 2007, which CRA submitted in September 2007. The work plan proposed the installation of additional soil borings, soil and groundwater sampling and soil vapor sampling. The work plan was implemented in August 2008 without Agency concurrence. However, the proposed scope of work which included soil vapor assessment was not completed. As a result, the potential for indoor vapor intrusion has not been adequately evaluated for the site.

2. **Subsurface Investigation Results.** The work plan recommended the installation of 3 soil borings and 5 soil vapor probes with soil, groundwater and soil vapor sampling. However, the vapor probes were not installed as proposed and soil samples were only collected from SV-5 (within the excavation backfill), SV-7 and SV-8 at selected depths of 2 feet and 5 feet bgs. In addition, the proposed soil borings along Grand Avenue were not installed. CRA states that the vapor probes were not installed due to high groundwater elevations, but no further recommendations for vapor sampling is discussed. ACEH agrees that high groundwater elevations would preclude the installation of soil vapor probes; however, the vapor probes must be installed to assess soil vapor contamination in the vadoze zone and evaluate the vapor intrusion pathway. ACEH recommends that you measure groundwater elevations in existing monitoring wells to determine the appropriate time to install soil vapor probes. We also request that soil probes be installed in native material as close to the limits of the excavation as possible. Please relocate proposed soil vapor probes SV-5 and SV-6 from the backfill material so that the probes will be installed in native, undisturbed soil.

CRA concludes that results from the recent site characterization indicate that residual contamination in soil does not pose a significant health risk. ACEH does not agree with this conclusion, given that residual TPHg and benzene contamination in the vadoze zone have not been adequately evaluated. A strong hydrocarbon odor was noted on the boring logs for SV-7 and SV-8, indicating the presence of residual contamination in soil. Furthermore, analytical data collected from boring SV-7 detected 1,400 mg/kg TPHg and 0.11 mg/kg benzene, which are above residential ESLs and demonstrate that contamination in the vadoze must be further evaluated. Please present the results from the soil vapor assessment in the soil and groundwater investigation report requested below.

3. **Recommended Soil Borings in Grand Avenue.** CRA proposed the installation of three soil borings along Grand Avenue; however, the soil borings were not installed as proposed. CRA states that the soil borings were not installed due to utility conflicts. However, no discussion is presented regarding the results of utility clearance by a utility locating service or utility clearance by hand auger. It appears that only a nominal effort was made to actually install the soil borings and determine the location of utilities. Please present any additional information you may have regarding the actual location of underground utilities and results from activities for utility clearance.
4. **Well Redevelopment and Quarterly Groundwater Sampling.** Groundwater monitoring and sampling has not been conducted at the site since 2001. CRA recommends that onsite and offsite wells should be redeveloped and sampled to evaluate the dissolved phase hydrocarbon plume beneath and downgradient of your site. ACEH concurs with the recommendations to redevelop and sample onsite and offsite monitoring wells. Please present results of your well redevelopment activities in the quarterly monitoring report requested below, and implement a program of quarterly groundwater monitoring.
5. **Preferential Pathway Study.** The purpose of the preferential pathway study is to locate potential migration pathways and conduits and determine the probability of the NAPL and/or plume encountering preferential pathways and conduits that could spread contamination. We request that you perform a preferential pathway study that details the potential migration pathways and potential conduits (wells, utilities, pipelines, etc.) for vertical and lateral migration that may be present in the vicinity of the site.

Discuss your analysis and interpretation of the results of the preferential pathway study (including the well survey and utility survey requested below) and report your results in the next quarterly groundwater monitoring report (Second Quarter 2008) requested below. The results of your study shall contain all information required by California Code of Regulations, Title 23, Division 3, Chapter 16, §2654(b).

- a. Utility Survey

An evaluation of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s) is required as part of your study. Please include maps and cross-sections illustrating the location and depth of all utility lines and trenches within and near the site and plume areas(s) as part of your study.

b. Well Survey

The preferential pathway study shall include a detailed well survey of all wells (monitoring and production wells: active, inactive, standby, decommissioned (sealed with concrete), abandoned (improperly decommissioned or lost); and dewatering, drainage, and cathodic protection wells) within a ¼ mile radius of the subject site.

6. **Site Conceptual Model (SCM).** We anticipate that at this juncture, 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 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 contaminant migration along preferential pathways, etc.) are identified in the SCM, please submit a work plan to address those data gaps

**TECHNICAL REPORT REQUEST**

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Steven Plunkett), according to the following schedule:

- **December 1, 2008** – 4<sup>th</sup> Quarter 2008 Groundwater Monitoring and Sampling Report
- **January 15, 2009** – Site Conceptual Model with Preferential Pathway Study
- **March 15, 2009** – Soil and Groundwater Investigation Report
- **March 1, 2009** – 1<sup>st</sup> Quarter 2009 Groundwater Monitoring and Sampling Report
- **June 1, 2009** – 2<sup>nd</sup> Quarter 2009 Groundwater Monitoring and Sampling Report
- **September 1, 2009** – 3<sup>rd</sup> Quarter 2009 Groundwater Monitoring and Sampling Report
- **December 1, 2009** – 4<sup>th</sup> Quarter 2009 Groundwater Monitoring and Sampling 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 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](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.

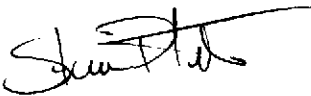
#### AGENCY OVERSIGHT

Staci Freichs, Denis Brown, Jennifer Sedlachek and Brandford Howard  
September 30, 2008  
RO0000391  
Page 5

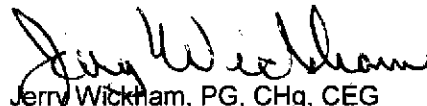
If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 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) 383-1761 or send me an electronic mail message at [steven.plunkett@acgov.org](mailto:steven.plunkett@acgov.org).

Sincerely,



Steven Plunkett  
Hazardous Materials Specialist



Jerry Wickham, PG, CHg, CEG  
Senior Hazardous Materials Specialist

cc: Laura Genin  
CRA  
5900 Hollis Street, Suite A  
Emeryville, CA 94608

Donna Drogos, ACEH, Steven Plunkett ACEH, File