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

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
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January 28, 2009

Stacie Harting-Frerichs
Chevron Corporation
6111 Bollinger Canyon Rd, RM 3596
San Ramon, CA 94583

Hai Pham
3530 Macarthur Blvd Gas Station, Inc.
3530 Macarthur Boulevard
Oakland, CA 94619

Subject: Fuel Leak Case No. RO0000405 and GeoTracker Global ID T0600101790, Chevron #9-8341, 3530 Macarthur Boulevard, Oakland, CA 94619

Dear Ms. Harting-Frerichs and Mr. Pham:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Subsurface Investigation Report," dated March 28, 2008, which was prepared by Conestoga-Rovers & Associates for the subject site. The approved scope of work consisted of installing six borings to delineate the vertical and lateral extent of soil and groundwater contamination. However, CRA stated that only one boring was installed. According to CRA, the remaining five borings could not be installed since multiple subsurface utilities are on Magee Avenue and Macarthur Boulevard, private property owners denied access to their properties, and the City of Oakland does not allow soil borings in the sidewalk. Please note that ACEH oversees several leaking underground storage tank cases in Oakland, and Responsible Parties have been able to obtain necessary permits/access agreements and complete the required site assessment work.

At this time, ACEH requests that you address the following technical comments and send us the technical work plans and reports requested below.

TECHNICAL COMMENTS

1. **Monitoring Well Construction and Hydrogeologic Setting** – Currently, there are three groundwater monitoring wells (MW-1, MW-2 and MW-3) at the site. Groundwater monitoring well MW-1 is screened from 7 to 27 feet below the ground surface (bgs), and MW-2 and MW-3 are screened from 7 to 32 feet bgs. Depth to water (DTW) typically ranges from approximately 2 to 4 feet bgs. According to the boring log for MW-1, saturated medium dense sand is encountered from approximately 1 to approximately 7.5 feet bgs, underlain by sandy clay to a depth of approximately 12.5 feet bgs. Silty sand is encountered from approximately 12.5 to 17 feet bgs, underlain by silt to an approximately depth of 27 feet bgs. The boring log for MW-3 indicates a sandy clay from approximately 1 to 4 feet bgs, underlain by a clayey sand to approximately 13.25 feet bgs. Sandy silt is encountered from approximately 13.25 feet bgs to 17.25 feet bgs, underlain by gravel with clay and sand to approximately 26.75 feet bgs. From 26.75 feet bgs to 32 feet bgs, silty sand is encountered, underlain by clay to approximately 40 feet bgs, the maximum depth explored.

ACEH has two concerns regarding monitoring well construction at the site. The first concern is that the DTW at the site is above the screened interval of the monitoring wells. Since groundwater elevation is above the screened interval for site monitoring wells and petroleum hydrocarbons have a specific gravity that is lower than water (therefore, float on water); concentrations of contaminants detected may not be representative of actual site conditions. Therefore, the monitoring wells appear to be incorrectly constructed, which may affect the contaminant concentrations detected in groundwater. The second concern is that the existing groundwater monitoring wells appear to have excessively lengthy screened intervals over what appear to be multiple coarse-grained units or water-bearing zones that are separated by fine-grained units. Please evaluate and discuss the effect that groundwater elevations rising above monitoring well screens have on hydrocarbon concentrations for each monitoring well at the site, as well as the fact that the screened intervals appear to intersect multiple water-bearing zones. Please address the above-mentioned concerns and include your analysis in the Site Conceptual Model (SCM) and Data Gap Work Plan requested below. Also please construct the proposed monitoring wells so that accurate groundwater concentrations, indicative of actual site conditions can be collected. It may be advantageous to propose depth-discrete groundwater samples or installing multi-level monitoring wells, monitoring well clusters, or systems capable of monitoring multiple depths.

2. **Preferential Pathway Study** – Depth to groundwater at the site has ranged between approximately 2 to 4 feet bgs. Since groundwater is relatively shallow at the site, a preferential pathway evaluation appears prudent. The purpose of the preferential pathway study is to locate potential migration pathways and conduits and determine the probability of the NAPL and/or dissolved-phase 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 SCM and Data Gap Work Plan 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 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. Use the results of your background study to determine the existence of unrecorded/unknown (abandoned) wells,

which can act as contaminant migration pathways at or from your site. Please review and submit copies of historical maps, such as Sanborn maps, aerial photographs, etc., when conducting the background study.

3. **Soil and Groundwater Characterization** – Currently, the extent of soil and groundwater contamination appears undefined and the most recent subsurface investigation failed to address the data gap. As mentioned above, ACEH oversees several leaking underground storage tank cases in Oakland, and Responsible Parties have been able to obtain necessary permits/access agreement and complete the required site assessment work. For all future correspondences sent to the City of Oakland for permits or private property owners for access agreements, please copy ACEH so that we may assist in should permitting or access issues arise. Please propose a scope of work to address the above-mentioned concerns and submit a work plan due by the date specified below.

4. **Contaminant Source Area Characterization** – In May 1994, one 1,000-gallon waste oil UST was removed from the site as well as the product piping lines. Soil sample P-3 near the north side of the western most dispenser island detected TPH-g and benzene at concentrations of 1,200 mg/kg and 2.2 mg/kg respectively. Due to the evident soil contamination present, over-excavation was conducted. Over-excavation confirmation soil sample PX-7 (located in the vicinity of P-3) detected TPH-g and benzene at concentrations of 1,300 mg/kg and 6 mg/kg, respectively, indicating that the vertical and lateral extent of the source area appears undefined and the site poses a potential risk to human health and the environment. Please propose a scope of work to address the above-mentioned concerns and submit a work plan due by the date specified below.

5. **Site Conceptual Model** – 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 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 contaminant migration along preferential pathways, 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 as well as all data gaps identified in the SCM.

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: Steven Plunkett), according to the following schedule:

- **March 30, 2009** – SCM & Data Gap Work Plan
- **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)
- **January 30, 2010** – Quarterly Monitoring Report (4th 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_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.

If you have any questions, please call me at (510) 383-1767 or send me an electronic mail message at Steven.Plunkett@acgov.org.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

Paresh C. Khatri
Hazardous Materials Specialist

Donna L. Drogos, PE
Supervising Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Brian P. Carey, Conestoga Rovers & Associates, 2000 Opportunity Drive, Suite 110, Roseville, CA 95678
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032
Donna Drogos, ACEH
Steven Plunkett, 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)