ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
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March 3, 2011

Mr. Aaron Costa
Chevron Corporation
6111 Bollinger Canyon Road, Rm 3660
San Ramon, CA
(sent via electronic mail to acosta@chevron.com)

Mr. Mark Hom and Anna Cheng
3135 Gibbons Drive
Alameda, CA, 94501-1749

JL and Jane Bolton
3135 Gibbons Drive
Alameda, CA 94501-1749

Subject: Inadequate FS / CAP and Request for a Work Plan(s); Fuel Leak Case No. RO0000341; (Global ID # T0600100330); Chevron #9-1153, (3126 Fernside Blvd), 3135 Gibbons Drive, Alameda, CA 94501

Ladies and Gentlemen:

Alameda County Environmental Health Department (ACEH) staff has reviewed the case file, including the most recently submitted reports prepared by Conestoga-Rovers & Associates (CRA) for this site, the *Feasibility Study and Corrective Action Plan*, (FS/CAP) dated December 30, 2010, and the *Fourth Quarter 2010 Groundwater Monitoring Report,* dated December 29, 2010. Thank you for submitting the reports; they help to move the site forward; however, based upon review of the FS / CAP, ACEH noted a number of concerns or deficiencies and consequently finds the report inadequate. Regardless, it is notable that free phase (FP) product in well C-1 has again decreased in thickness and returned to more typical, recent (and long-term) product thicknesses at the site (0.03 feet, down from 0.25 feet). Use of hydrocarbon adsorbent socks in well C-1 as a temporary measure while the residential site is evaluated for remedial actions is appropriate.

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.

TECHNICAL COMMENTS

1. **Crawl Space Vapor Intrusion Study -** The FS / CAP usefully describes our understanding of the site and illustrates the currently understood extent of contamination. This includes the clarification that the existing residential home is constructed with a perimeter footing rather than slab-on-grade construction. While unspecified, ACEH presumes that the attached garage uses a slab-on-grade construction. To help evaluate and generate appropriate remedial alternatives and costs, ACEH requests that a crawl-space vapor intrusion study be conducted at the site. This is based on a number of reasons:

    a. **Crawl Space Environments –** Technical literature, as well as ACEH experience, indicates that the presence of a crawl space does not eliminate vapor intrusion exposure, but rather potentially increases that exposure due to unimpeded vapor diffusion (such as a concrete slab provides) and subsequent direct infiltration through floor boards or utility penetrations of the floor. While presumed to be present, standard perimeter crawl space ventilation openings typically provide limited mixing to the crawl space environment. The site is potentially further limited due to the presence of property perimeter landscaping walls, expected to further limit crawl space air flow and mixing.

b. **Limited Soil Sampling Beneath Residence –** Review of available site documents indicate that there is limited soil analytical data collected from beneath the majority of the existing residence. The majority of soil samples near the residence were collected at a depth of 1.5 feet below surface grade (bgs) during site investigations, and at depths ranging from approximately 8 to 12 feet bgs during UST removal confirmation sampling (It is understood that shallow groundwater may have limited the vertical depth of sampling during site investigations). All of the UST removal confirmation soil samples were non-detectable; not unusual at depths approximately 4 to 8 feet below groundwater at the time of the UST removals (as well as currently). This observation is not intended to limit the usefulness of the data; it remains useful as it helps constrain the vertical extent of contamination. Finally, the limited data (four locations) collected at intermediate depths beneath, and in the vicinity of, the home yield both low as well as elevated concentrations of gasoline related compounds. This is consistent with data collected in other areas of the site at intermediate depths, and suggests that additional soil samples in this depth range beneath the home may yield additional concentrations of concern.

c. **Limited Understanding of UST Backfill Soils –** Review of available UST removal documents appear to indicate that the extent of excavation associated with the removal of the former USTs was limited to the area vertically overlying the USTs, suggesting that the excavations were not expanded laterally to remove impacted soils. Samples were not collected at sidewall, product line, and dispenser locations. Both of these actions were typical for the era. Additionally, after approximately one month of onsite aeration between June and July 1986, all excavated soils were used to backfill the UST excavations. The aerated soil was characterized with only two composite soil samples, both nondetectable for TPHg only; BTEX compounds were not analyzed. Each of these data suggests that a potential for concentrations of concern in soil remains beneath the residence as backfill or in excavation sidewalls.

   As a consequence of these reasons ACEH requests a Work Plan for a crawl space vapor intrusion survey by the date identified below. This can take the form of an addendum to the previous work plan for a sub-slab vapor intrusion survey.

2. **Subsurface Investigation Work Plan –** For the reasons discussed above ACEH also requests a work plan for the installation of soil bores, including potential angled soil bores, to more completely investigate UST backfill soils or potential perimeter UST excavation impacts beneath the residence, the garage, or in close proximity to these locations, by the date identified below. The location of residual soil contamination acting as a source for free phase in well C-1 remains unknown. The requested work is additionally intended to help target this source, rather than simply targeting the symptom. This work plan can be combined with the vapor intrusion work plan.

3. **Inadequate FS / CAP –** The FS / CAP was found to be inadequate based on several reasons including the following:

   a. **Soil Cleanup Levels and Groundwater Levels and Goals –** The FS / CAP proposes no remedial levels for soil at the site stating that because the residential house is situated over the majority of the site, cleanup goals (ESLs) may not be technically or economically feasible. Instead the identified cleanup goal was removal of free phase and offsite (MW-7) dissolved phase concentration reductions. Because our understanding of the scope or magnitude of soil contamination beneath the house is limited, it is reasonable that the residual soil contamination continues to harbor free phase quantities of hydrocarbons as demonstrated at well C-1. Until free phase concentrations cease leaching from soil to groundwater where ever they are encountered beneath the site, achieving the remedial levels or cleanup goals in groundwater remain unlikely.

   b. **Inadequate Scope and Monitoring –** It appears that the proposed interim remediation pilot test is simply a spot treatment of one well, rather than a treatment of a larger soil mass yielding free phase quantities of hydrocarbons 25 years after removal of a UST source. When further coupled with wells

currently spaced a minimum of 50 feet apart, significant unintended flow of liberated product can occur prior to recognition or could be missed completely with the existing well network. A denser monitoring well network, with associated costs currently not captured in the FS / CAP, would be required to monitor the extent of surfactant migration should this remedial contingency ultimately be found appropriate. Considering the site location is in close proximity to an estuary and is a residential property with a limited understanding of residual concentrations in soils and backfill beneath the house, the use of surfactant appears to be inappropriate remedial technology.

c. **Incomplete Remediation Costs –** As discussed, and at a minimum, costs associated with a denser well network were not captured in the FS / CAP. However, the inclusion of additional data such as a vapor intrusion survey or better understanding of residual contamination beneath the house also would be expected to affect the scope of the remedial effort, the approach ultimately selected, and the associated costs.

d. **Incorporation of Vapor Intrusion or Other Work** – A revised FS / CAP will allow the incorporation of data generated during the requested investigations, and will allow management any resulting implications for the site. Please note that a submittal deadline for a revised FS / CAP has not been defined pending the results of the vapor intrusion survey or other proposed work.

TECHNICAL REPORT REQUEST

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

- **April 29, 2011** – Work Plan or Addendum for Vapor Intrusion Survey and Subsurface Investigation
- **60 Days After Approval of Work Plan** – Subsurface Investigation and Vapor Survey 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.

Should you have any questions, do not hesitate to call me at (510) 567-6876.

Sincerely,

Digitally signed by Mark E. Detterman
DN: cn=Mark E. Detterman, o, ou, email, c=US
Date: 2011.03.03 16:54:53 -08'00'

Mark E. Detterman, PG, CEG
Senior Hazardous Materials Specialist

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations
Electronic Report Upload (ftp) Instructions

cc: Nathan Lee, Conestoga-Rovers & Assoc., 5900 Hollis Street, Suite A, Emeryville, CA 94608
(sent via electronic mail to NLee@craworld.com)
Kiersten Hoey, Conestoga-Rovers & Assoc., 5900 Hollis Street, Suite A, Emeryville, CA 94608
(sent via electronic mail to KHoey@craworld.com)

Donna Drogos (sent via electronic mail to donna.drogos@acgov.org)
Mark Detterman (sent via electronic mail to mark.detterman@acgov.org)
eFile, GeoTracker

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

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.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** July 20, 2010
	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 (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

- **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 deh.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 ftp://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 deh.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.