



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
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August 4, 2010  
*Revised August 25, 2010*

Mr. Bill Borgh (*Sent via E-mail to: [Bill.Borgh@conocophillips.com](mailto:Bill.Borgh@conocophillips.com)*)  
ConocoPhillips Company  
76 Broadway  
Sacramento, CA 95818

Mr. Henry O. Armour  
P.O. Box 2527  
Olympia, WA 98507

CD & PWS Enterprises, Inc.  
8998 Alcosta Boulevard  
San Ramon, CA 94583

De L Liu and Na Li  
922 Saddlehorn Court  
Danville, CA 94506

Subject: Review of Draft Corrective Action Plan for Fuel Leak Case No. RO0000361 and Geotracker Global ID T0600100101, Unocal #7376, 4191 First Street, Pleasanton, CA 94566

Dear Mr. Grayson:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the most recent report entitled, "*Corrective Action Plan, 76 Service Station #7376, 4191 First Street, Pleasanton, CA,*" dated July 7, 2010 (CAP). The CAP, which was prepared on behalf of ConocoPhillips by Delta Environmental, evaluates remedial alternatives and recommends the use of soil vapor extraction (SVE) and groundwater extraction (GWE). Based upon our review of the CAP, we request that you address the technical comments below and prepare a Revised Draft CAP no later than September 23, 2010.

Comments on the July 7, 2010 CAP were forwarded to ACEH by Ms. Christine Noma and Mr. Les Hausrath of Wendel, Rosen, Black & Dean LLP. These comments, which are dated August 23, 2010, were prepared by AMEC Geomatrix at the request of Ms. Noma and Mr. Hausrath. Many of the comments are similar to technical comments below or reiterate requests made in our previous correspondence. We have attached the August 23, 2010 comments and request that you address the comments and incorporate them as appropriate into the Revised Draft CAP requested below.

#### **TECHNICAL COMMENTS**

- 1. Targeted Cleanup Goals.** Please propose targeted cleanup goals for the site in the Revised Draft CAP. The targeted cleanup goals are to be used to select the best available technology and to estimate the time required to restore the groundwater beneficial uses for the site. Once the best available technology has been implemented to the maximum extent feasible, it is possible that alternative cleanup standards may be applied provided that the majority of contaminant mass has been removed, groundwater beneficial uses will be restored within an acceptable time frame, and the site does not pose a risk to human health or the environment.

- 2. Evaluation of Alternatives.** We request that you include more detail in the evaluation of alternatives. The general goal of this request is to assure that the best available technology is implemented for the site. Specifically, we request that you include more information in the Revised Draft CAP on the anticipated duration of remediation, cost, and potential to reach cleanup goals.
- 3. On-site Exclusion Zone.** In the Revised Draft CAP requested below, please describe the reason for an "Exclusion Zone Area," shown on-site in the area north and east of the USTs on Figure 5 of the CAP. It appears that excluding this area from cleanup may result in an area of residual contamination and on ongoing source of groundwater contamination. Please consider expanding the cleanup into the subsurface beneath this area. Please also see technical comment 5 regarding the use of existing well CWA-1.
- 4. Number and Spacing of SVE Wells.** We request that you decrease the spacing and thereby increase the number of SVE wells proposed. We base this request upon the variable radius of influence observed during the pilot test and the dual purpose of the wells which also includes the recovery of free product. In addition, the radius of influence assumed in the CAP was based on a measured vacuum response of greater than 0.5% rather than the industry standard of 1%. Please also consider the benefit of placing SVE wells along the southeastern edge of the Transportation Corridor adjacent to the building to extend cleanup beneath the building.
- 5. Proposed Use of Existing Well CWA-1.** Well CWA-1 is screened at a depth of 44 to 55 feet bgs mostly in stiff lean clay with a small interval of gravelly clay and sand at the bottom. During the SVE pilot test, the corresponding onsite observation well, OWA-1, did not show significant vacuum influence and the hydrocarbon recovery rate was minimal. Petroleum hydrocarbon recovery rates during the pilot test were significantly higher in shallower wells CWA-2 and CWA-3. Furthermore, existing well CWA-1 does not have a pump casing interval for collecting free product. Based on these considerations, we do not concur with the proposed use of only SVE well CWA-1 for remediation in the area of the CWA cluster. Please review the nearby boring logs, pilot test results, and contaminant distribution to propose additional SVE wells in the CWA cluster area.
- 6. Proposed Screen Intervals for SVE Wells.** Most of the proposed SVE wells are located in proximity to existing soil borings. Therefore, boring logs and/or sampling results are available to help define the target intervals for the wells. In some cases, it appears that the vertical intervals of the contamination may be shallower or significantly exceed the targeted screen interval. As an example, review of boring B-11, indicates that abundant hydrocarbons are present at 57 feet bgs and a sand with clay layer that is present from 59 to 62.25 feet bgs may be saturated with hydrocarbons. Proposed SVE well CWA-5, which is adjacent to B-11, has a proposed screen interval of 22 to 37 feet bgs. Therefore, the deeper interval of contamination is not targeted for cleanup. Please expand the discussion of the rationale for selection of the targeted intervals for the SVE wells and how the screen intervals may be adjusted in the field based on encountered conditions.
- 7. Groundwater Extraction.** One groundwater extraction well is currently proposed between wells MW-7 and MW-8 to control plume migration. Please discuss whether groundwater extraction in other

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areas onsite or offsite could be used to lower the water level and allow SVE to be used to cleanup up deeper intervals of soil contamination.

8. **Access Negotiations.** We recommend that you not wait for CAP approval to begin access negotiations for installation of the remediation system on the adjacent property. Negotiation of an access agreement with a public agency may take
9. **Public Participation.** Public participation is a requirement for the Corrective Action Plan process. Therefore, we request that you submit a Revised Draft CAP for ACEH review. Upon ACEH approval of a Revised 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.
10. **Groundwater Monitoring.** Please continue semi-annual groundwater monitoring and present the results in the groundwater monitoring reports requested below. Recently installed well MW-13 is to be included in the groundwater monitoring program.

#### **TECHNICAL REPORT REQUEST**

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

- **October 6, 2010** – Revised Draft CAP
- **January 18, 2011** – Semi-annual Groundwater Monitoring Report, Fourth Quarter 2010
- **July 18, 2010** – Semi-annual Groundwater Monitoring Report, Second Quarter 2010

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

Attachments: Correspondence dated August 23, 2010 from AMEC Geomatrix to Mr. Christine Noma and Mr. Les Hausrath of Wendel, Rosen, Black & Dean LLP

Responsible Party(ies) Legal Requirements/Obligations

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Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Danielle Stefani, Livermore Pleasanton Fire Department, 3560 Nevada St, Pleasanton, CA 94566  
(Sent via E-mail to: [dstefani@lpfire.org](mailto:dstefani@lpfire.org))

Cheryl Dizon (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore, CA 94551  
(Sent via E-mail to: [cdizon@zone7water.com](mailto:cdizon@zone7water.com))

R. Lee Dooley, Delta Consultants, 312 Piercy Road, San Jose, CA 95138 (Sent via E-mail to:  
[ldooley@deltaenv.com](mailto:ldooley@deltaenv.com))

Les Hausrath, Wendel, Rosen, Black & Dean, 1111 Broadway, 24<sup>th</sup> Floor, Oakland, CA 94607 (Sent  
via E-mail to: [LHausrath@wendel.com](mailto:LHausrath@wendel.com))

Christine Noma, Wendel, Rosen, Black & Dean, 1111 Broadway, 24<sup>th</sup> Floor, Oakland, CA 94607  
(Sent via E-mail to: [CNoma@wendel.com](mailto:CNoma@wendel.com))

Rory MacNeil, Alameda County Public Works, 399 Elmhurst Street, Hayward, CA 94544-1307 (Sent  
via E-mail to: [rory@acpwa.org](mailto:rory@acpwa.org))

Donna Drogos, ACEH (Sent via E-mail to: [donna.drogos@acgov.org](mailto:donna.drogos@acgov.org))  
Jerry Wickham, ACEH

Geotracker, File

Attachment 1  
**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](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.

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>ISSUE DATE:</b> July 5, 2005
	<b>REVISION DATE:</b> July 8, 2010
	<b>PREVIOUS REVISIONS:</b> December 16, 2005, October 31, 2005
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> 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

- 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 Teena Le Khan.
  - 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 Page on upper right side of browser, 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 [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 @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.

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Project 14167

Ms. Christine Noma  
Mr. Les Hausrath  
Wendel, Rosen, Black & Dean LLP  
1111 Broadway, 24<sup>th</sup> Floor  
Oakland, California 94607

**Subject: Comments on Corrective Action Plan**  
4191 First Street  
Pleasanton, California

Dear Ms. Noma and Mr. Hausrath:

At your request we have reviewed the Corrective Action Plan (CAP) dated July 7, 2010, prepared by Delta Consultants on behalf of ConocoPhillips Company (Conoco) for the property located at 4191 First Street, in Pleasanton, California (the site). This property is located adjacent to the railroad right-of-way, which is currently owned by your client, Alameda County (County). In summary, the approach presented in the CAP (soil vapor extraction and groundwater containment via extraction) may be acceptable remedies for the site, however we have comments related to the content and completeness of the CAP and several specific technical comments which would need to be addressed before the remedy is implemented.

### **COMMENTS ON CONTENT AND COMPLETENESS**

Below we list items that should be included in the CAP but appear to be missing. All of these items were requested by Alameda County Health Care Services Agency (ACHCSA) in its letter dated June 9, 2010, commenting on the May 7, 2010, *Feasibility Study and Additional Soil and Groundwater Investigation Report* (Feasibility Study), which preceded the CAP.

#### ***Proposed Cleanup Goals***

No general remediation goals or specific cleanup goals are presented in the CAP. In its June 9, 2010, letter ACHCSA requested that the CAP include "Proposed cleanup goals and the basis for cleanup goals." Without cleanup goals it is not possible to determine the extent of soil and groundwater to be remediated. A set of appropriate general remediation goals, from which specific cleanup goals could be derived, might include the following:

- i. Protect human health.
- ii. Prevent the further deterioration of groundwater from COCs in the vadose zone.
- iii. Contain the zone of impacted groundwater at its current extent.
- iv. Restore groundwater to its designated beneficial use.

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Specific cleanup goals for soils in the vadose will emerge from a consideration of items i and ii, and specific cleanup goals for groundwater will emerge from consideration of items iii. Section 7.2 of the CAP qualitatively evaluates potential exposure pathways to human receptors and surface water, and determines that human receptors are not currently being impacted by the chemicals of concern (COCs). However, it should be noted that soil vapor sampling has not been conducted at the site to quantitatively evaluate the vapor intrusion pathways.

### **Evaluation of Alternatives**

The CAP evaluates three alternatives but the evaluation does not include a discussion of time to reach cleanup goals. This evaluation was requested by ACHCSA in its June 9 letter.

### **Post-Remediation Monitoring**

The CAP should contain a description of post-remediation monitoring, which is required to confirm the satisfactory progress compared to an agreed schedule and the ultimate success of the selected remedy. A description of post-remediation monitoring was requested by ACHCSA in its June 9, 2010, letter.

### **Schedule for Implementation of Cleanup**

A schedule for preparing engineering drawings and for preparing a Remedial Action Plan (RAP) is discussed in the CAP. It does not seem appropriate to prepare a RAP at this point as a RAP typically contains the same information as a CAP. If anything, it would be more appropriate to submit a remedial design and implementation plan after approval of the CAP. To expedite the schedule, you may want to discuss with ACHCSA the necessity for a formal design document. It may be possible for the ACHCSA to approve implementation after reviewing engineering drawings or a simplified document describing design details. Additionally, the CAP should include an estimated schedule for implementation of the remedy and a schedule for monitoring. This schedule was requested in ACHCSA's June 9, 2010 letter.

### **SPECIFIC TECHNICAL COMMENTS**

Below we present our specific technical comments on the CAP which should be addressed before the remedy is implemented.

#### **Groundwater Impacts and the Proposed Remediation**

The extent of groundwater requiring remediation cannot be defined until specific cleanup goals have been identified for the COCs. Once cleanup goals are defined, plans and sections should be prepared showing the extent of groundwater to be remediated.

Based on a review of past monitoring reports, the direction of groundwater flow appears to be highly variable. The most recent monitoring report dated April 1, 2010, states that the "wells at



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the site... are screened at varying elevations.... [and] gradients and flow directions [presented in the report] are not considered representative of actual conditions.” The uncertainty with respect to groundwater flow direction is a factor that should be accounted for in evaluating the remedy effectiveness.

Section 8.0 of the May 7, 2010, Feasibility Study concludes that (as indicated by pump tests) groundwater extraction is not feasible at the site, yet it is selected as a remedy in Section 7.5 of the CAP dated June 6, 2010. More justification is required for the selected remedy and hydrogeologic analysis is required to demonstrate the capture of dissolved constituents in each water bearing zone. It is possible that more than one well may be required to provide adequate capture of COCs.

Since pumping groundwater will increase the groundwater gradient, separate-phase hydrocarbons might be mobilized and pumped by the extraction well. The pumping equipment and treatment system should be designed to deal with this possible eventuality.

#### **Separate Phase Hydrocarbon Impacts and Remediation**

Separate phase hydrocarbons (SPH) have not been identified in any well since December 11, 2006, when MW-5 had a reported liquid petroleum hydrocarbon thickness of 0.02 feet (approximately ¼-inch).<sup>1</sup> These data suggest that SPH is bound up in the soil matrix and is not flowing downwards under gravity towards the water table. The vacuum induced by the proposed soil vapor extraction (SVE) system may however mobilize some of this “residual” SPH towards the SVE wells, and the CAP proposes to extract this SPH from a sump at the bottom of the SVE wells. We concur with this approach.

#### **Vadose Zone Impacts and Remediation**

The CAP proposes nine SVE wells on approximately 20 to 30 feet centers. This appears reasonable given the results of the pilot test. However, as indicated above, cleanup goals are necessary to establish the level of vadose zone remediation required to protect groundwater, and monitoring during operation is required.

Section 5.3 of the CAP states that “SVE is not effective in the lean clay to silty-clay interbedded layers at this site.” Note that cross-sections presented in the CAP and FS indicate elevated concentrations of the petroleum and petroleum-related constituents in these soil types. The development of remediation goals with respect to soil vapor and groundwater will provide important, long-term metrics to evaluate whether adequate remediation of these lithologic units has occurred.

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<sup>1</sup> Delta Consultants, 2010, Quarterly Summary Report – First Quarter 2010, 76 Service Station No. 7376, 4191 First Street, Pleasanton, California, RO# 0361, April 1.

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Furthermore, in prior correspondence dated March 21, 2008, July 30, 2008, and March 27, 2009, ACHCSA requested that Conoco address the Bunker C fuel oil issue. SVE will not likely remove residual Bunker C fuel oil by volatilization, however increased air flow should enhance the natural biodegradation processes. Additionally, as indicated above, the induced vacuum may mobilize the flow of residual SPH towards the SVE wells for collection. As with the other COCs, cleanup goals should be developed or a rationale for why the proposed approach sufficiently addresses the Bunker C should be discussed.

Finally, with regard to the residual Bunker C, based upon information provided to the County by a title company, it is our understanding that the Bunker C fuel storage tank, while adjacent to, is and was not located within the County property. Therefore, Figure 2 is confusing because it infers that the parcel on which the Bunker C tank exists or existed, is within the County property. The Site Plan in the CAP should be revised to clearly distinguish that property that is owned by the County, Conoco, and others.

We appreciate the opportunity to assist you with this project; please contact the undersigned with any questions.

Sincerely yours,  
AMEC Geomatrix, Inc.

A handwritten signature in black ink, appearing to read "ACox".

Andrew Cox, PE  
Senior Engineer

A handwritten signature in black ink, appearing to read "Susan M. Gallardo".

Susan M. Gallardo, PE  
Principal Engineer