



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

September 30, 2013

Mr. Seung Lee  
German Autocraft  
350 Cherrywood Avenue  
San Leandro, CA 94577

William Andrade II  
Address Unknown

Sephen & Elizabeth Wilhelm  
Address Unknown

Subject: Request for FS / CAP Implementation Plan, Focused SCM, and Draft Fact Sheet; Fuel Leak Case No. RO0000302 and Geotracker Global ID T0600100639, German Autocraft, 301 East 14<sup>th</sup> Street, San Leandro, CA 94577-1713

Dear Mr. Lee:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above referenced site including the *Draft Feasibility Study / Corrective Action Plan*, (Draft FS / CAP) dated December 6, 2012, and the *Semi-Annual Groundwater Monitoring Report - First Quarter 2013*, dated April 12, 2013. The reports were prepared and submitted on your behalf by Stratus Environmental, Inc (Stratus). Thank you for submitting the reports.

ACEH has evaluated site data in available site documents in order to determine if the site can be closed under the State Water Resources Control Board's (SWRCBs) Low-Threat Closure Policy (LTCP). Based on ACEH staff review, we have determined that the site fails to meet the LTCP General Criteria d (Free Product), e (Site Conceptual Model), f (Secondary Source Removal) and the Media-Specific Criteria for Groundwater, the Media-Specific Criteria for Vapor Intrusion to Indoor Air, and the Media-Specific Criteria for Direct Contact (please see Geotracker for a copy of the LTCP checklist, and the Technical Comments below). Additional data may be available that ACEH is not aware of, or may not have been submitted, and therefore has not been incorporated in to ACEH's review. If additional data is made available, the data can be incorporated in future LTCP reviews. The evaluation of the site under the LTCP that is presented below is intended to initiate further discussions, submittal of other available documents, or the collection of additional data in order to determine if or when the site can be closed under the LTCP and to document current LTCP data gaps.

The Draft FS / CAP evaluated four alternative corrective actions for the site (ozone injection; ORC Advanced / RegenOX; Groundwater Extraction Technology; and Monitored Natural Attenuation), and selected ozone injection based on cost and the ability to implement across a plume that is approximately 510 feet in length. As requested, the Draft FS / CAP proposed Environmental Screening Level (ESL) remedial goals. Since generation of the report, the State Water Resources Control Board's (SWRCBs) Low-Threat Closure Policy (LTCP) has been fully implemented and alternative corrective action goals, as defined by the LTCP, are appropriate.

In general ACEH concurs with the remedial alternatives that were evaluated in the FS / CAP. However, prior to proceeding further, ACEH requests you generate a focused Site Conceptual Model (SCM) to address and incorporate the technical comments below, prepare an FS / CAP Implementation Plan to modify the proposed scope of corrective actions as appropriate, and to identify additional data that needs to be collected to support the modified approach.

ACEH would like to invite you to meeting in order to discuss the site and to resolve any questions that may arise due to these changes. ACEH requests notification of suitable dates and times for the meeting.

## **TECHNICAL COMMENTS**

- 1. LTCP General Criteria d (Free Product)** – The LTCP requires free product to be removed to the extent practicable at release sites where investigations indicate the presence of free product by removing in a manner that minimizes the spread of the unauthorized release into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges, or disposes of recovery byproducts in compliance with applicable laws. Additionally, the LTCP requires that abatement of free product migration be used as a minimum objective for the design of any free product removal system.

ACEH's review of the case files indicates that while Light Non-Aqueous Liquids (LNAPL) may not be visible on groundwater at the site, the last groundwater sampling events in wells MW-1 and MW-4 before they were destroyed for interim remedial actions in 2011 produced groundwater concentrations that are considered to be in excess of groundwater concentrations that the *Technical Justification for Vapor Intrusion Media-Specific Criteria*, state is indirect evidence of LNAPL.

A review of the data for each of the wells indicates persistent fluctuating concentrations of TPHg and benzene at concentrations indicative of free product. Specifically, in MW-1 during the time frame from April 13, 1996 to September 13, 2010, TPHg ranged from 58,000 to 75,000 µg/l and benzene ranged from 820 to 670 µg/l, while maximum concentrations during that period were 250,000 micrograms per liter (µg/l) TPHg and 11,000 µg/l benzene. In MW-4 during the time frame from March 30, 2001 and September 13, 2010, TPHg ranged from 10,000 to 9,900 µg/l TPHg, and 700 to 660 µg/l benzene, while maximum concentrations during that period were 44,000 µg/l TPHg and 3,700 µg/l benzene.

ACEH concurs that the proposed ozone injection in the vicinity of these former wells would likely remediate the source that continues to feed the groundwater contamination. It also appears appropriate to install onsite replacement wells for MW-1 and MW-4 in order to determine current groundwater concentrations and to monitor post-remedial groundwater changes.

- 2. LTCP General Criteria e (Site Conceptual Model)** – According to the LTCP, the Site Conceptual Model (SCM) is a fundamental element of a comprehensive site investigation. The SCM establishes the source and attributes of the unauthorized release, describes all affected media (including soil, groundwater, and soil vapor as appropriate), describes local geology, hydrogeology and other physical site characteristics that affect contaminant environmental transport and fate, and identifies all confirmed and potential contaminant receptors (including water supply wells, surface water bodies, structures and their inhabitants). The SCM is relied upon by practitioners as a guide for investigative design and data collection. All relevant site characteristics identified by the SCM shall be assessed and supported by data so that the nature, extent and mobility of the release have been established to determine conformance with applicable criteria in this policy.

Our review of the case files indicates that additional data and analysis is required to determine compliance with General Criteria d as discussed in Comment 1, to account for unusual contaminant distributions at the site as discussed in Comment 3 (General Criteria f), and to document compliance with Media Specific Criteria for Groundwater, Vapor Intrusion to Indoor Air, and Direct Contact and Outdoor Air Exposure as described in Comments 4, 5, and 6 below, respectively.

- 3. General Criteria f – Secondary Source Has Been Removed to the Extent Practicable** – Soil contamination documented in well MW-2 (soil analytical concentrations up to 6,300 mg/kg TPHg, 110 mg/kg benzene, and 190 mg/kg ethylbenzene), which is considered to be cross-gradient to upgradient of the release, and soil vapor concentrations in vapor well SV-8, which is upgradient of the release location, appear to document an unusual distribution of contaminants at the site relative to the presumed source area. These data have not been incorporated into a SCM that can account for contamination at these locations. Hydrocarbon releases sufficiently large to account for these data do not appear to have occurred in the vicinity of upgradient soil bores B-4, B-5, or EMT-7; however, the area between MW-2 and SV-8 and these later bore locations may be sufficient to hold undocumented sources such as an earlier generation of USTs which has not been investigated. If present, the tank hold is uncharacterized and may contain residual contamination at concentrations of concern.

Please present a strategy in the Data Gap Investigation Work Plan requested below in Comment 7 to collect additional data to investigate potential sources that may account for this unusual contaminant distribution at the site.

Alternatively, please provide justification of why the site satisfies this general criterion in a focused SCM that assures that unaccounted sources do not remain at the site.

4. **LTCP Media Specific Criteria for Groundwater** – To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites listed in the policy.

Our review of the case files indicates that insufficient data has been presented to support the requisite characteristics of plume stability or plume classification as follows:

- a. **Closest Water Supply Well** – The closest water supply well is located at a distance of 510 feet downgradient of the site.
- b. **Plume Length** – The length of the plume is defined by a downgradient residential irrigation water supply well located approximately 510 feet downgradient of the release. Historically, groundwater flow direction has been towards this water supply well (west). This is also documented by distribution of the dissolved-phase groundwater plume. While the well has previously been requested not to be used, the relatively recent change in groundwater flow direction to the southwest appears to indicate changes in pumping use in the vicinity.
- c. **Benzene Concentrations** – Wells with the highest benzene concentrations (MW-1 and MW-4) were decommissioned in March 2011 in order to conduct an interim remedial excavation. As described in Technical Comment 1, benzene concentrations may fluctuate up to 11,000 µg/l in these wells.
- d. **Plume Stability** – Concentrations of benzene in groundwater wells MW-2, MW-10, and perhaps destroyed well MW-1 do not appear to be stable. The stability of the plume can also be affected by the source of contamination at well MW-1A, which has historically been identified as unrelated to the site.
- e. **Presence of Free Phase (LNAPL)** – As noted above, the most recent groundwater sampling event at decommissioned wells MW-1 and MW-4 produced groundwater concentrations that can or can fluctuate up to concentrations that are considered to be in excess of groundwater concentrations that the *Technical Justification for Vapor Intrusion Media-Specific Criteria*, state is indirect evidence of LNAPL.

The principal exposures identified by ACEH under the Groundwater Media-Specific Criterion is the potential for LNAPL to remain beneath the site and for exposures to groundwater contamination at the residential backyard water supply well (141 Farrelly) that continues to define the downgradient extent of the offsite groundwater plume. It appears appropriate to evaluate the potential for LNAPL indicative concentrations in groundwater onsite and the potential for exposure to groundwater contamination at the downgradient 141 Farrelly well. ACEH recommends at a minimum an evaluation of the screen interval of the Farrelly well, an analysis of the rate of pumping of the well, and the radius of influence of the well on vicinity groundwater flow, and the source of groundwater contamination at well MW-1A. Consequently, please present a strategy in the Data Gap Investigation Work Plan requested below in Comment 7 to investigate these identified data gaps.

Alternatively, please provide justification of why the site satisfies this criterion in a focused SCM that assures that unaccounted sources do not remain at the site.

5. **LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air** – The LTCP describes conditions, including bioattenuation zones, which if met will assure that exposure to petroleum vapors in indoor air will not pose unacceptable health risks to human occupants of existing or future site buildings, and adjacent parcels. Appendices 1 through 4 of the LTCP criteria illustrate four potential exposure scenarios and describe characteristics and criteria associated with each scenario.

Our review of the case files indicates that the site data fails to support the requisite characteristics of one of the four vapor intrusion scenarios as follows:

- a. **Benzene Concentrations** – As discussed in Technical Comment 1, wells with the highest benzene concentrations were decommissioned in March 2011 in order to conduct an interim remedial excavation. Based on historic data, ACEH judges benzene concentrations in the vicinity of the release may fluctuate up to 11,000 µg/l.
- b. **Soil Oxygen Measurements** – No soil gas oxygen data is available. However, ACEH notes that significant bioattenuation may occur between deeper and shallower soil vapor samples.
- c. **Soil Gas Benzene Concentrations** – A one-time sampling event of permanent vapor wells at the site yielded a benzene concentration of 270 µg/m<sup>3</sup>, slightly below the commercial LTCP threshold of 280 µg/m<sup>3</sup> at a depth of 5 feet below surface grade (bgs). ACEH notes that these vapor samples were not collected at a depth of five feet below the building foundation as required by the LTCP (presumed to be slab on grade). Additionally, standard DTSC vapor intrusion guidelines indicate that multiple vapor sampling events are appropriate to evaluate soil vapor.
- d. **Bioattenuation Zone** – Although the site may potentially meet the LTCP bioattenuation characteristics, unidentified source areas as discussed above in Technical Comment 3 that may account for the atypical contaminant distribution in areas of the site prevent classification under this LTCP criteria.
- e. **TPH Concentrations in 0 to 5 foot Interval** – TPH is present above 100 mg/kg in limited areas at the site, principally in the vicinity of the former waste oil UST. Should an additional UST pit be present at the site as discussed above in Technical Comment 3, additional shallow contamination may be present at the site.
- f. **Lack of Naphthalene Soil Gas Concentrations** – No naphthalene soil gas concentrations are reported for a site that contained a waste oil UST, and that contains TPH concentrations above 100 mg/kg in the 0 to 5 foot depth interval in association with the former waste oil UST.

The principal identified exposure under the Vapor Intrusion Media-Specific Criterion is the potential for vapor intrusion onsite and at the apartment building across the western property line due to unidentified sources that may account for the atypical contaminant distribution previously discussed, and due to the presence of residual LNAPL as indicated by groundwater concentrations.

It appears appropriate to reevaluate the potential for vapor intrusion onsite with the collection of additional vapor samples at existing vapor wells. Consequently, please present a strategy in the Data Gap Investigation Work Plan requested below in Comment 7 to investigate these identified data gaps.

Alternatively, please provide justification of why the site satisfies this criterion in a focused SCM that assures that unaccounted sources do not remain at the site.

6. **LTCP Media Specific Criteria for Direct Contact and Outdoor Air Criteria** – The LTCP describes conditions where direct contact with contaminated soil or inhalation of contaminants volatilized to outdoor air poses a low threat to human health. According to the policy, release sites where human exposure may occur satisfy the media-specific criteria for direct contact and outdoor air exposure and shall be considered low-threat if the maximum concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1 for the specified depth bgs. Alternatively, the policy allows for a site specific risk assessment that demonstrates that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health, or controlling exposure through the use of mitigation measures, or institutional or engineering controls.

Our review of the case files indicates that insufficient data has been gathered to satisfy the media-specific criteria for direct contact and outdoor air exposure. Specifically, the potential for the presence of another UST pit location that may account for the unusual contaminant distribution at well MW-2 and VP-8 has the potential to document shallow contamination that would pose a direct contact or outdoor air concern. Additionally, soil beneath the waste oil UST does not appear to have been analyzed for naphthalene or PAHs as required by the LTCP.

Please present a strategy in the Data Gap Work Plan requested in Comment 7 below to collect sufficient data to satisfy the direct contact and outdoor air exposure criteria in the areas associated with the potential additional UST location and the waste oil UST. The collection of samples for

analysis of soil at the five and ten foot intervals, at the groundwater interface, lithologic changes, and at areas of obvious impact is appropriate. Also, the collection of a groundwater sample from each boring for requisite analysis including naphthalene and polycyclic aromatic hydrocarbons (PAH) analysis is appropriate.

Alternatively, please provide justification of why the site satisfies the Media-Specific Criteria for Direct Contact and Outdoor Air Exposure in the focused SCM described in Comment 7 below that assures that exposure to petroleum constituents in soil will have no significant risk of adversely affecting human health.

- 7. FS / CAP Implementation Plan and Focused Site Conceptual Model** – In our review, the principal points of exposure appear to be the potential for vapor intrusion at the site and the residential apartment building across the western property line due to groundwater concentrations indicative of residual LNAPL, unidentified onsite sources due to the atypical contaminant distribution, and the potential for exposure to groundwater at the downgradient residential water supply well (141 Farrelly).

As noted above, ACEH is in general agreement that the proposed ozone injection wells may be effective in remediating onsite groundwater contamination that is indicative of LNAPL, in mitigating the potential for vapor intrusion at the subject site and the adjacent residential site, and may in time mitigate exposure to groundwater at the downgradient water supply well (141 Farrelly). However, the installation of multiple offsite wells as proposed does not appear warranted under the LTCP which indicates there does not appear to be a groundwater, vapor intrusion, or direct contact threat to offsite properties, with the exception of the downgradient water supply well as discussed above. The implementation of the LTCP requires that corrective action goals be adjusted. However, prior to implementing the CAP, ACEH requests submittal of a CAP Implementation Plan that expands upon the ozone (or other) conceptual plans presented in the Draft FS / CAP, and includes a focused SCM and Data Gap Work Plan. Please present implementation details at a level commensurate with the *Revised Draft Corrective Action Plan* dated April 29, 2013, prepared by Stratus for Fuel Leak Case RO0000373, Former Olympic Service Station including:

- Design drawings and specifications for the ozone injection system including installation details for the wells proposed in the Draft FS / CAP
- Operation and maintenance plans
- System optimization, performance metrics and proposed reporting including submittal of monthly progress reports
- Post-remediation monitoring and verification plans with proposed strategy for collecting groundwater, soil and soil vapor monitoring and confirmation samples. This may require the installation of two replacement onsite groundwater monitoring wells.
- An updated detailed cost estimate for the proposed work
- Updated cleanup goals utilizing the LTCP screening levels for petroleum hydrocarbons
- Implementation schedule with milestone dates
- A strategy for collecting soil data within the upper 10 feet of soil at the site during ozone well installation, if appropriate, to help fulfill the requirements for the LTCP Media Specific Criteria for Direct Contact and Outdoor Air.

Please note, implementation of the CAP is contingent on submittal and ACEH acceptance of CAP Implementation Plan.

- 8. Fact Sheet** - Public participation is a requirement for the CAP process. Therefore, we request that you submit a draft Fact Sheet for ACEH review as identified below. Upon ACEH approval of both the CAP Implementation Plan and the Fact Sheet, affected members of the public who live or own property in the surrounding area are to be notified. Public comments on the proposed remediation will be accepted for a 30-day period.
- 9. Request for Geotracker Electronic Report, Well Survey, and Data Upload Compliance** – A review of the State Geotracker database indicates that the site is not in compliance with previous directive letters. Compliance is a State requirement. Pursuant to California Code of Regulations,

Title 23, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1, beginning September 1, 2001, all analytical data, including monitoring well samples, submitted in a report to a regulatory agency as part of the UST or LUST program, must be transmitted electronically to the SWRCB GeoTracker system via the internet. Also, beginning January 1, 2002, all permanent monitoring points utilized to collect groundwater samples (i.e. monitoring wells) and submitted in a report to a regulatory agency, must be surveyed (top of casing) to mean sea level and latitude and longitude to sub-meter accuracy using NAD 83. A California licensed surveyor may be required to perform this work. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs, including SLIC programs. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites was required in GeoTracker. **At present missing data and documents include, but may not be limited to, older reports, a majority of EDF submittals, a majority of GEO\_WELL data, a majority of bore logs (regardless of age), and a well survey to Geotracker standards. Compliance is required by the State and is tied to reimbursement funding by the UST Cleanup Fund.** Please see Attachment 1 for limited additional details, and the state GeoTracker website for full details. Please upload all submittals to GeoTracker as well as to ACEH's ftp website by the date specified below.

### **TECHNICAL REPORT REQUEST**

Please upload technical reports to the ACEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the specified file naming convention below, according to the following schedule:

- **October 14, 2013** – Geotracker Compliance (Notification and Documentation of)  
File to be named: RO302\_CORRES\_R\_YYYY-MM-DD
- **October 25, 2013** – Third Quarter 2012 Semi-Annual Groundwater Monitoring Report  
File to be named: RO302\_GWM\_R\_YYYY-MM-DD
- **November 22, 2013** – Corrective Action Implementation Plan and Focused SCM  
File to be named: RO302\_CAP\_R\_YYYY-MM-DD
- **December 6, 2013** – Draft Public Fact Sheet (an electronic example will be forwarded under separate cover); File to be named: RO302\_CORRES\_R\_YYYY-MM-DD

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.

Online case files are available for review at the following website: <http://www.acgov.org/aceh/index.htm>. If your email address does not appear on the cover page of this notification, ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

Should you have any questions, please contact me at (510) 567--6876 or send me an electronic mail message at [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org).

Sincerely,

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

Mr. Seung Lee  
RO0000302  
September 30, 2013, Page 7

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

Attachment A – Site Conceptual Model Requisite Elements

cc: Kasey Jones, Stratus Environmental, Inc, 3330 Cameron Park Drive, Suite 550, Cameron Park,  
CA 95682; (sent via electronic mail to: [kaseyjones@stratusinc.net](mailto:kaseyjones@stratusinc.net))

Dilan Roe (sent via electronic mail to [dilan.roe@acgov.org](mailto:dilan.roe@acgov.org))

Mark Detterman, ACEH, (sent via electronic mail to [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org))

Geotracker, Electronic File

**ATTACHMENT 1**

**Responsible Party(ies) Legal Requirements/Obligations  
& ACEH Electronic Report Upload (ftp) Instructions**



# Attachment 1

## Responsible Party(ies) Legal Requirements/Obligations

### REPORT/DATA REQUESTS

These reports/data are being requested pursuant to Division 7 of the California Water Code (Water Quality), Chapter 6.7 of Division 20 of the California Health and Safety Code (Underground Storage of Hazardous Substances), and Chapter 16 of Division 3 of Title 23 of the California Code of Regulations (Underground Storage Tank Regulations).

### ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (Local Oversight Program [LOP] for unauthorized releases from petroleum Underground Storage Tanks [USTs], and Site Cleanup Program [SCP] for unauthorized releases of non-petroleum hazardous substances) require submission of reports in electronic format pursuant to Chapter 3 of Division 7, Sections 13195 and 13197.5 of the California Water Code, and Chapter 30, Articles 1 and 2, Sections 3890 to 3895 of Division 3 of Title 23 of the California Code of Regulations (23 CCR). Instructions for submission of electronic documents to the ACEH FTP site are provided on the attached "Electronic Report Upload Instructions."

Submission of reports to the ACEH FTP site is in addition to requirements for electronic submittal of information (ESI) to the State Water Resources Control Board's (SWRCB) Geotracker website. In April 2001, the SWRCB adopted 23 CCR, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1 (Electronic Submission of Laboratory Data for UST Reports). Article 12 required electronic submittal of analytical laboratory data submitted in a report to a regulatory agency (effective September 1, 2001), and surveyed locations (latitude, longitude and elevation) of groundwater monitoring wells (effective January 1, 2002) in Electronic Deliverable Format (EDF) to Geotracker. Article 12 was subsequently repealed in 2004 and replaced with Article 30 (Electronic Submittal of Information) which expanded the ESI requirements to include electronic submittal of any report or data required by a regulatory agency from a cleanup site. The expanded ESI submittal requirements for petroleum UST sites subject to the requirements of 23 CCR, Division, 3, Chapter 16, Article 11, became effective December 16, 2004. All other electronic submittals required pursuant to Chapter 30 became effective January 1, 2005. Please visit the SWRCB website for more information on these requirements: ([http://www.waterboards.ca.gov/water\\_issues/programs/ust/electronic\\_submittal/](http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)).

### 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, 7835, 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, late 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 SCP)</b>	<b>REVISION DATE:</b> July 25, 2012
	<b>ISSUE DATE:</b> July 5, 2005
	<b>PREVIOUS REVISIONS:</b> October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (petroleum UST and SCP) 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](mailto: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](mailto: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.

**ATTACHMENT A**

**Site Conceptual Model Requisite Elements**

# ATTACHMENT A

## Site Conceptual Model

The site conceptual model (SCM) is an essential decision-making and communication tool for all interested parties during the site characterization, remediation planning and implementation, and closure process. A SCM is a set of working hypotheses pertaining to all aspects of the contaminant release, including site geology, hydrogeology, release history, residual and dissolved contamination, attenuation mechanisms, pathways to nearby receptors, and likely magnitude of potential impacts to receptors.

The SCM is initially used to characterize the site and identify data gaps. As the investigation proceeds and the data gaps are filled, the working hypotheses are modified, and the overall SCM is refined and strengthened until it is said to be "validated". At this point, the focus of the SCM shifts from site characterization towards remedial technology evaluation and selection, and later remedy optimization, and forms the foundation for developing the most cost-effective corrective action plan to protect existing and potential receptors.

For ease of review, Alameda County Environmental Health (ACEH) requests utilization of tabular formats to (1) highlight the major SCM elements and their associated data gaps which need to be addressed to progress the site to case closure (see Table 1 of attached example), and (2) highlight the identified data gaps and proposed investigation activities (see Table 2 of the attached example). ACEH requests that the tables presenting the SCM elements, data gaps, and proposed investigation activities be updated as appropriate at each stage of the project and submitted with work plans, feasibility studies, corrective action plans, and requests for closures to support proposed work, conclusions, and/or recommendations.

The SCM should incorporate, but is not limited to, the topics listed below. Please support the SCM with the use of large-scaled maps and graphics, tables, and conceptual diagrams to illustrate key points. Please include an extended site map(s) utilizing an aerial photographic base map with sufficient resolution to show the facility, delineation of streets and property boundaries within the adjacent neighborhood, downgradient irrigation wells, and proposed locations of transects, monitoring wells, and soil vapor probes.

- a. Regional and local (on-site and off-site) geology and hydrogeology. Include a discussion of the surface geology (e.g., soil types, soil parameters, outcrops, faulting), subsurface geology (e.g., stratigraphy, continuity, and connectivity), and hydrogeology (e.g., water-bearing zones, hydrologic parameters, impermeable strata). Please include a structural contour map (top of unit) and isopach map for the aquitard that is presumed to separate your release from the deeper aquifer(s), cross sections, soil boring and monitoring well logs and locations, and copies of regional geologic maps.
- b. Analysis of the hydraulic flow system in the vicinity of the site. Include rose diagrams for depicting groundwater gradients. The rose diagram shall be plotted on groundwater elevation contour maps and updated in all future reports submitted for your site. Please address changes due to seasonal precipitation and groundwater pumping, and evaluate the potential interconnection between shallow and deep aquifers. Please include an analysis of vertical hydraulic gradients, and effects of pumping rates on hydraulic head from nearby water supply wells, if appropriate. Include hydraulic head in the different water bearing zones and hydrographs of all monitoring wells.
- c. Release history, including potential source(s) of releases, potential contaminants of concern (COC) associated with each potential release, confirmed source locations, confirmed release locations, and existing delineation of release areas. Address primary leak source(s) (e.g., a tank, sump, pipeline, etc.) and secondary sources (e.g., high-

## ATTACHMENT A

### Site Conceptual Model (continued)

concentration contaminants in low-permeability lithologic soil units that sustain groundwater or vapor plumes). Include local and regional plan view maps that illustrate the location of sources (former facilities, piping, tanks, etc.).

- d. Plume (soil gas and groundwater) development and dynamics including aging of source(s), phase distribution (NAPL, dissolved, vapor, residual), diving plumes, attenuation mechanisms, migration routes, preferential pathways (geologic and anthropogenic), magnitude of chemicals of concern and spatial and temporal changes in concentrations, and contaminant fate and transport. Please include three-dimensional plume maps for groundwater and two-dimensional soil vapor plume plan view maps to provide an accurate depiction of the contaminant distribution of each COC.
- e. Summary tables of chemical concentrations in different media (i.e., soil, groundwater, and soil vapor). Please include applicable environmental screening levels on all tables. Include graphs of contaminant concentrations versus time.
- f. Current and historic facility structures (e.g., buildings, drain systems, sewer systems, underground utilities, etc.) and physical features including topographical features (e.g., hills, gradients, surface vegetation, or pavement) and surface water features (e.g. routes of drainage ditches, links to water bodies). Please include current and historic site maps.
- g. Current and historic site operations/processes (e.g., parts cleaning, chemical storage areas, manufacturing, etc.).
- h. Other contaminant release sites in the vicinity of the site. Hydrogeologic and contaminant data from those sites may prove helpful in testing certain hypotheses for the SCM. Include a summary of work and technical findings from nearby release sites, including the two adjacent closed LUFT sites, (i.e., Montgomery Ward site and the Quest Laboratory site).
- i. Land uses and exposure scenarios on the facility and adjacent properties. Include beneficial resources (e.g., groundwater classification, wetlands, natural resources, etc.), resource use locations (e.g., water supply wells, surface water intakes), subpopulation types and locations (e.g., schools, hospitals, day care centers, etc.), exposure scenarios (e.g. residential, industrial, recreational, farming), and exposure pathways, and potential threat to sensitive receptors. Include an analysis of the contaminant volatilization from the subsurface to indoor/outdoor air exposure route (i.e., vapor pathway). Please include copies of Sanborn maps and aerial photographs, as appropriate.
- j. Identification and listing of specific data gaps that require further investigation during subsequent phases of work. Proposed activities to investigate and fill data gaps identified.

**TABLE 1  
INITIAL SITE CONCEPTUAL MODEL**

<b>CSM Element</b>	<b>CSM Sub-Element</b>	<b>Description</b>	<b>Data Gap</b>	<b>How to Address</b>
Geology and Hydrogeology	Regional	<p>The site is in the northwest portion of the Livermore Valley, which consists of a structural trough within the Diablo Range and contains the Livermore Valley Groundwater Basin (referred to as "the Basin") (DWR, 2006). Several faults traverse the Basin, which act as barriers to groundwater flow, as evidenced by large differences in water levels between the upgradient and downgradient sides of these faults (DWR, 2006). The Basin is divided into 12 groundwater basins, which are defined by faults and non-water-bearing geologic units (DWR, 1974).</p> <p>The hydrogeology of the Basin consists of a thick sequence of fresh-water-bearing continental deposits from alluvial fans, outwash plains, and lacustrine environments to up to approximately 5,000 feet bgs (DWR, 2006). Three defined fresh-water bearing geologic units exist within the Basin: Holocene Valley Fill (up to approximately 400 feet bgs in the central portion of the Basin), the Plio-Pleistocene Livermore Formation (generally between approximately 400 and 4,000 feet bgs in the central portion of the Basin), and the Pliocene Tassajara Formation (generally between approximately 250 and 5,000 or more feet bgs) (DWR, 1974). The Valley Fill units in the western portion of the Basin are capped by up to 40 feet of clay (DWR, 2006).</p>	None	NA
	Site	<p><b>Geology:</b> Borings advanced at the site indicate that subsurface materials consist primarily of finer-grained deposits (clay, sandy clay, silt and sandy silt) with interbedded sand lenses to 20 feet below ground surface (bgs), the approximate depth to which these borings were advanced. The documented lithology for one on-site boring that was logged to approximately 45 feet bgs indicates that beyond approximately 20 feet bgs, fine-grained soils are present to approximately 45 feet bgs. A cone penetrometer technology test indicated the presence of sandier lenses from approximately 45 to 58 feet bgs and even coarser materials (interbedded with finer-grained materials) from approximately 58 feet to 75 feet bgs, the total depth drilled. The lithology documented at the site is similar to that reported at other nearby sites, specifically the Montgomery Ward site (7575 Dublin Boulevard), the Quest laboratory site (6511 Golden Gate Drive), the Shell-branded Service Station site (11989 Dublin Boulevard), and the Chevron site (7007 San Ramon Road).</p> <p><b>Hydrogeology:</b> Shallow groundwater has been encountered at depths of approximately 9 to 15 feet bgs. The hydraulic gradient and groundwater flow direction have not been specifically evaluated at the site.</p>	<p>As noted, most borings at the site have been advanced to approximately 20 feet bgs, and one boring has been advanced and logged to 45 feet bgs; CPT data was collected to 75 feet bgs at one location. Lithologic data will be obtained from additional borings that will be advanced on site to further the understanding of the subsurface, especially with respect to deeper lithology.</p> <p>The on-site shallow groundwater horizontal gradient has not been confirmed. Additionally, it is not known if there may be a vertical component to the hydraulic gradient.</p>	<p>Two direct push borings and four multi-port wells will be advanced to depth (up to approximately 75 feet bgs) and soil lithology will be logged. See items 4 and 5 on Table 2.</p> <p>Shallow and deeper groundwater monitoring wells will be installed to provide information on lateral and vertical gradients. See Items 2 and 5 on Table 2.</p>
Surface Water Bodies		The closest surface water bodies are culverted creeks. Martin Canyon Creek flows from a gully west of the site, enters a culvert north of the site, and then bends to the south, passing approximately 1,000 feet east of the site before flowing into the Alamo Canal. Dublin Creek flows from a gully west of the site, enters a culvert approximately 750 feet south of the site, and then joins Martin Canyon Creek approximately 750 feet southeast of the site.	None	NA
Nearby Wells		The State Water Resources Control Board's GeoTracker GAMA website includes information regarding the approximate locations of water supply wells in California. In the vicinity of the site, the closest water supply wells presented on this website are depicted approximately 2 miles southeast of the site; the locations shown are approximate (within 1 mile of actual location for California Department of Public Health supply wells and 0.5 mile for other supply wells). No water-producing wells were identified within 1/4 mile of the site in the well survey conducted for the Quest Laboratory site (6511 Golden Gate Drive; documented in 2009); information documented in a 2005 report for the Chevron site at 7007 San Ramon Road indicates that a water-producing well may exist within 1/2 mile of the site.	A formal well survey is needed to identify water-producing, monitoring, cathodic protection, and dewatering wells.	Obtain data regarding nearby, permitted wells from the California Department of Water Resources and Zone 7 Water Agency (Item 11 on Table 2).

**TABLE 2  
DATA GAPS AND PROPOSED INVESTIGATION**

<b>Item</b>	<b>Data Gap</b>	<b>Proposed Investigation</b>	<b>Rationale</b>	<b>Analysis</b>
5	Evaluate the possible presence of impacts to deeper groundwater.  Evaluate deeper groundwater concentration trends over time.  Obtain data regarding the vertical groundwater gradient.  Obtain more lithological data below 20 feet bgs.	Install four continuous multichannel tubing (CMT) groundwater monitoring wells (aka multi-port wells) to approximately 65 feet bgs in the northern parking lot with ports at three depths (monitoring well locations may be adjusted pending results of shallow grab groundwater samples; we will discuss any potential changes with ACEH before proceeding). Groundwater monitoring frequency to be determined. Soil samples will be collected only if there are field indications of impacts. Soil lithology will be logged. However, information regarding the moisture content of soil may not be reliable using sonic drilling technology (two borings will be logged using direct push technology; see Item 4, above).	One well is proposed at the western (upgradient) property boundary to confirm that there are no deeper groundwater impacts from upgradient. Two wells are proposed near the center of the northern parking lot to evaluate potential impacts in an area where deeper impacts, if any, would most likely to be found. One well is proposed at the eastern (downgradient) property boundary to confirm that there are no impacts extending off-site. Port depths will be chosen based on the locations of saturated soils (as logged in direct push borings; see Item 4, above), but are expected at approximately 15, 45, and 60 feet bgs.	<i>Groundwater:</i> VOCs by EPA Method 8260, dissolved oxygen, oxidation/reduction potential, temperature, pH, and specific conductance.
6	Evaluate possible off-site migration of impacted soil vapor in the downgradient direction (east).  Evaluate concentration trends over time.	Install 4 temporary nested soil vapor probes at approximately 4 and 8 feet bgs along the eastern property boundary. Based on the results of the sampling, two sets of nested probes will be converted to vapor monitoring wells to allow for evaluation of VOC concentration trends over time.	Available data indicate that PCE and TCE are present in soil vapor in the eastern portion of the northern parking lot. Samples are proposed on approximately 50-foot intervals along the eastern property boundary to provide a transect of concentrations through the vapor plume. The depths of 4 and 8 feet bgs are chosen to provide data closest to the source (i.e., groundwater) while avoiding saturated soil, and also provide shallower data to help evaluate potential attenuation within the soil column. Two sets of nested vapor probes will be converted into vapor monitoring wells (by installing well boxes at ground surface); the locations of the permanent wells will be chosen based on the results of samples from the temporary probes.	<i>Soil vapor:</i> VOCs by EPA Method TO-15.
7	Evaluate potential for off-site migration of impacted groundwater in the downgradient direction (east).	Advance two borings to approximately 20 feet bgs in the parking lot of the property east of the Crown site for collection of grab groundwater samples.	Two borings are proposed off-site, on the property east of the Crown site, just east of the building in the expected area of highest potential VOC concentrations.	<i>Groundwater:</i> VOCs by EPA Method 8260, dissolved oxygen, oxidation/reduction potential, temperature, pH, and specific conductance.
8	Evaluate VOC concentrations just north of the highest concentration area.	Advance two borings to approximately 20 feet bgs north of Building A for collection of soil and grab groundwater samples. Soil samples will be collected at two depths in the vadose zone. Soil samples will be collected based on field indications of impacts (PID readings, odor, staining) or, in the absence of field indications of impacts, at 5 and 10 feet bgs.	The highest concentrations of PCE in groundwater were detected at boring NM-B-32, just north of Building A. The nearest available data to the north are approximately 75 feet away. One of the borings will be advanced approximately 20 feet north of NM-B-32 to provide data close to the highest concentration area. A second boring will be advanced approximately halfway between the first boring and former boring NM-B-33 to provide additional spatial data for contouring purposes. These borings will be part of a transect in the highest concentration area.	<i>Groundwater:</i> VOCs by EPA Method 8260, dissolved oxygen, oxidation/reduction potential, temperature, pH, and specific conductance.  <i>Soil:</i> VOCs by EPA Method 8260 (soil samples to be collected using field preservation in accordance with EPA Method 5035).
9	Evaluate VOC concentrations in soil vapor in the south parcel of the site.	Install four temporary soil vapor probes at approximately 5 feet bgs around boring SV-25, where PCE was detected in soil vapor at a low concentration.	PCE was detected in soil vapor sample SV-25 in the southern parcel, although was not detected in groundwater in that area. Three probes will be installed approximately 30 feet from of boring SV-25 to attempt to delineate the extent of impacts. A fourth probe is proposed west of the original sample, close to the property boundary and the location of mapped utility lines, which may be a potential conduit, to evaluate potential impacts from the west.	<i>Soil vapor:</i> VOCs by EPA Method TO-15.
10	Obtain additional information regarding subsurface structures and utilities to further evaluate migration pathways and sources.	Ground penetrating radar (GPR) and other utility locating methodologies will be used, as appropriate, to further evaluate the presence of unknown utilities and structures at the site.	Utilities have been identified at the site that include an on-site sewer lateral and drain line, and shallow water, electric, and gas lines. Given the current understanding of the distribution of PCE in groundwater at the site, it is possible that other subsurface utilities, and specifically sewer laterals, exist that may act as a source or migration pathway for distribution of VOCs in the subsurface.	NA