



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

March 30, 2015

Mark A. Jacobson & Ilona J. Frieden
811 Paramount Road
Oakland, CA 94610
(Sent via E-mail to: mjacobson@php.ucsf.edu)

James E. Allison & Margaret Lindenstein
214 Highland Ave.
Piedmont, CA 94611
(Sent via E-mail to: jallison@medsfgh.ucsf.edu)
(Sent via E-mail to: mlindenstain@gmail.com)

Subject: Request for a Soil, Groundwater, and Soil Vapor Investigation Report; Fuel Leak Case No. RO0003143 and GeoTracker Global ID T10000006106, Paramount UST, 811 Paramount Road, Oakland, CA 94610

Dear Responsible Parties:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site, including the *Proposed Data Gap Investigation Workplan to Address Potential Impact from a Former Leaking Underground Heating Oil Tank*, dated February 23, 2015, and prepared by Stellar Environmental Solutions, Inc. (Stellar). The work plan proposes the installation of two soil bores up to a depth of 25 feet below grade surface (bgs), installation of two soil vapor wells up to a depth of 5 feet bgs, and indoor/outdoor air sampling. Thank you for the work plan.

Based on ACEH staff review of the Work Plan and of the case file we generally concur with the recently proposed scope of work, provided that the modifications requested in the technical comments below are addressed and incorporated during the field implementation. While the comments below request a number of modifications, primarily related to soil vapor sampling, and secondarily to maximum soil bore depths, submittal of a Work Plan Addendum is not required, unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed. We request that you review and integrate the following technical comments into Stellar's existing Work Plan, perform the proposed and requested work, and send us the technical report requested below. Please provide 72-hour advance written notification to this office (e-mail preferred to: matthew.soby@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

The referenced Work Plan proposes a series of actions with which ACEH is in general agreement of undertaking; however, ACEH requests several modifications to the approach. Please submit a site investigation report by the date specified below.

- 1. Field Investigation Preparation** - Drilling permit - Soil gas point depth - ACEH requests a minimum of 5 feet bgs, not the stated no deeper than 5 feet bgs. The five foot depth for soil-gas sampling points is consistent with Department of Toxic Substances Control (DTSC) guidance regarding proper sealing of the sample point and elimination of atmospheric short-circuiting.
- 2. Drilling and Soil and Groundwater Sampling** - The referenced work plan proposes a series of actions with which ACEH is in general agreement of undertaking; however, ACEH requests several modifications to the approach:

- a. Please ensure the quality objectives (DQOs) of the Low Threat Closure Policy (LTCP), and Environmental Screening Levels (ESLs) are met. The tank excavation report demonstrated laboratory reporting limits that were elevated above DQOs (e.g. LTCP, and ESLs) which makes comparison to the LTCP and ESLs, and assignment of risk, especially with regard to residential use, challenging to inconclusive.
 - b. The work plan proposes to advance three boreholes. Only two soil bores are noted Figure 2 adjacent to the east and west ends of the former underground storage tank (UST) excavation. From ACEH's March 23, 2015 phone conversation with Stellar, ACEH understands only two soil bores are proposed. However, in order to fully delineate the lateral extents of soil impact, ACEH requests the potential to advance a third step-boring during initial mobilization should site conditions permit or be warranted (e.g. qualitative observations of soil impacts).
 - c. Soil bore depth as written "*to a maximum depth of approximately 25 feet below grade or to the first occurrence of shallow groundwater*" ACEH requests to not focus on a specific target depth of 25 feet bgs as the maximum depth. From adjacent well studies, groundwater is anticipated from 5 to 20 feet bgs. However, the possibility of encountering groundwater deeper than 25 feet bgs needs to be entertained. Ideally, a minimum of two, and preferably three, clean (below laboratory reporting limits) soil samples (at five foot intervals) are required prior to terminating the soil bore if groundwater, or bedrock refusal, has not been encountered below 25 feet bgs. In addition to laboratory data, field observations of no staining, no odor, and photo-ionization device (PID) readings of zero may be used as qualitative evidence of clean soil below known impacts. The additional vertical soil column ensures adequate bio-attenuation zone between down-gradient receptors and groundwater (if it is impacted), and reduces the potential for soil leaching to groundwater.
- 3. Soil-Gas Sampling** - The referenced work plan proposes a series of actions with which ACEH is in general agreement of undertaking; however, ACEH requests several modifications to the approach:
- a. Hand-driven post-run tubing (PRT) for one-time soil gas sampling, or direct-push installation of gas diffuser probes within permanent soil vapor wells are both proposed methods of soil gas sampling. ACEH notes whilst PRT is not contraindicated in DTSC guidance, there are many reasons for installation of a permanent soil vapor well. Chief amongst the reservations is the difficulty of preventing atmospheric short-circuiting utilizing PRT, even with a bentonite seal, due to O-ring sealing problems and deflection of the sampling rod in certain lithologies. The PRT method should be used only with an understanding of its limitations and ability to meet the project-specific DQOs. Additionally, should multiple rounds of soil vapor collection be necessary (as is generally required in DTSC soil vapor sampling guidance), permanent soil vapor wells allow for repeat sampling without mobilization of a direct-push rig. Therefore, ACEH requests permanent soil vapor well construction utilizing non-PRT methods.
 - b. ACEH requests the minimum depth of the upper soil vapor diffuser probe set between 5 to 5.5 feet rather than the proposed 4.5 to 5 feet bgs. The increased depth is more in alignment with DTSC guidance minimizing atmospheric short-circuiting. ACEH realizes that soil moisture and saturated zone depth must be taken into account for depth selection.
 - c. Collection of volatile organic compounds (VOCs) via Method TO-15 is noted in the Work Plan. As the current primary constituent of concern is naphthalene, please additionally collect and analyze for naphthalene via Method TO-17 (utilizing sorbent tubes) as this method presents fewer data inconsistencies per DTSC guidance. Please note that DTSC recommends using two absorbent tubes in series to avoid breakthrough losses in areas of suspected higher concentrations. Therefore, ACEH requests soil gas analysis via both Method TO-15 and Method TO-17 collection and analysis procedures.
 - d. The Work Plan details the analysis of oxygen in soil gas samples. ACEH requests additional atmospheric and biogenic gases of carbon dioxide and methane also be analyzed. This request is

consistent with DTSC guidance enabling vertical profiling of biodegradation and analysis of intrusion of atmospheric air into the subsurface.

- e. Tygon tubing is proposed for soil vapor sampling – ACEH concurs with this tubing choice. If alternate tubing is utilized, be sure to consider chemical interference and sorption contraindications, especially with regard to naphthalene and Nylaflow. Naphthalene sorbs to Nylaflow, thereby reducing recovery.
 - f. With all soil vapor collection methods, ensure adequate equilibration time, as noted in the work plan, is achieved and noted in the report.
 - g. As the source is adjacent (within 5 lateral feet) to the structure, sampling between the source and structure (near-slab sampling) is warranted for this investigation. ACEH requests a reduction from two soil vapor sample locations (currently proposed at the east and west ends of the former UST excavation) to one clustered soil vapor sample at two depths (situated between the structure and the former UST excavation impacted soils) in order to determine vertical profile and assess the potential for vapor intrusion from deeper impacted soils. Note ACEH requests clustered wells and not nested soil vapor wells to reduce the potential of atmospheric and multi-level sampling leakage. LTCP policy notes collecting samples at a depth of 5 feet below the building foundation. As noted, the impacted soil sample points are 7 feet and 12 feet bgs. The Work Plan notes the existence of a basement room which may extend approximately 8 feet below grade. Per LTCP policy, the sample depth would need to be approximately 13 feet bgs. ACEH recommends the deeper, clustered soil vapor implant be emplaced at 13 feet bgs. Considerations of soil moisture, saturated zone depth, and bedrock refusal will determine the maximum potential depth.
 - h. 1,1-difluorethane (DFA) does not appear able to be monitored with field-based monitoring equipment (e.g. PID, FID, or other VOC field monitor). To ensure adequate and continuous tracer gas levels, ACEH requests the use of a shroud for the duration of the soil vapor sampling. In the event of atmospheric leakage in the vapor well, ACEH requests the determination of shroud tracer concentrations per DTSC guidance.
 - i. Ensure adequate quality assurance/quality control samples are collected such as equipment and material blanks (encompassing the entire sampling system), trip blanks (for the Method TO-17 method), and field duplicates/replicates samples.
 - j. From the Work Plan, it appears as if a sub-grade basement exists. The site conceptual model for vapor intrusion pathway assessment would benefit from a cross-section of the relative residential structure elevations, topography, geology, source area, and soil/groundwater/soil vapor sampling points. Please include this cross-section with the technical report.
4. **Indoor Air Sampling** - Indoor air sampling can be delayed until after evaluation of soil gas data. ACEH agrees with and follows the DTSC protocol for vapor intrusion assessment. Initially, soil vapor data should be assessed with an evaluation of risk (e.g. numerical screening) and site-specific evaluation of the vapor intrusion pathway. Thereafter, ACEH would require a building survey to identify potential indoor air interferences from non-subsurface, background sources and collection of indoor air/outdoor air samples. ACEH appreciates the robust nature of the Work Plan to evaluate indoor air concurrent with soil gas. The work plan's *Task 5* can be utilized as the basis of a future indoor air sampling work plan.
5. **Well and Sensitive Receptor Survey** - Please submit sensitive receptor survey data both in a tabular format (denoting receptor type, distance and direction), and on a Figure.
6. **Electronic Data Reporting** - Please have the analytical laboratory submit soil, groundwater, and soil vapor results in Electronic Data Format (EDFs) to GeoTracker.

TECHNICAL REPORT REQUEST

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

- **June 1, 2015** – Soil, Groundwater, and Soil Vapor Investigation Report
(file name: RO0003143_SWI_R_yyyy-mm-dd)

This report is 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>.

Should you have any questions, please contact me at (510) 567-6725 or send me an electronic mail message at matthew.soby@acgov.org.

Sincerely,

Matthew Soby
Hazardous Materials Technician

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

cc:

Amitai Schwartz, Law Offices of Amitai Schwartz, 2000 Powell St., Suite 1286, Emeryville, CA 94608-1860 (Sent via E-mail to: amitai@schwartzlaw.com)

Henry Pietropaoli, PG, Stellar Environmental Solutions, Inc., 2198 Sixth Street, Suite 201, Berkeley, CA 94710 (Sent via e-mail to: hpietropaoli@stellar-environmental.com)

Richard Makdisi, PG, Stellar Environmental Solutions, Inc., 2198 Sixth Street, Suite 201, Berkeley, CA 94710 (Sent via e-mail to: rmakdisi@stellar-environmental.com)

Dilan Roe, ACEH, (Sent via E-mail to dilan.roe@acgov.org)

Matthew Soby, ACEH, (Sent via E-mail to matthew.soby@acgov.org)

Electronic File, GeoTracker

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.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, 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: May 15, 2014
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 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.