ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
REBECCA GEBHART, Interim Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
LOCAL OVERSIGHT PROGRAM (LOP)
For Hazardous Materials Releases
1131 HARBOR BAY PARKWAY, SUITE 250
ALAMEDA, CA 94502
(510) 567-6700
FAX (510) 337-9335

November 1, 2016 *(revised)*

Mr. Farrokh Hosseinvoun
(Sent via electronic mail to: farok@fhone.net)

Mr. Mohammad Pazdel
1770 Pistacia Court
Fairfield, CA 94533

Mr. Hamid Khatirine
Address Unknown

Subject: Corrective Action Evaluation and Data Gap Work Plan; Fuel Leak Case No. RO0000473 and GeoTracker Global ID T0600191157, ARCO, 15101 Freedom Avenue, San Leandro, CA 94578

Dear Messrs. Hosseinvoun, Pazdel, and Khatirine:

Alameda County Environmental Health (ACDEH) staff has reviewed the case file including the *Shallow Soil Sample Investigation Report*, dated September 9, 2016, and the *Third Quarter 2016 Groundwater Monitoring and Remediation Progress Report,* dated October 10, 2016. The reports were prepared and submitted on your behalf by SOMA Environmental Engineering, Inc. Thank you for submitting the reports.

The referenced investigation report documented the installation of two onsite shallow soil bores for the purpose of collecting shallow soil samples at selected locations at the site in order to help evaluate the site with respect to the Direct Contact Medial-Specific Criteria of the Low Threat Closure Policy (LTCP). The bores yielded non-detectable concentrations of analytes of concern at the site at good limits of detection. The referenced groundwater monitoring and remediation progress report documented the most recent Multi-Phase Extraction (MPE) event at offsite well MW-10R, and the third quarter 2016 groundwater monitoring event in September 2016. The report recommended the site be evaluated against the State Water Resources Control Board's (SWRCBs) LTCP.

Based on ACDEH staff review, we have utilized the recently generated data to re-evaluate the case against the LTCP, and find that the site now additionally meets the LTCP Media-Specific Criteria for Petroleum Vapor Intrusion to Indoor Air and for the Direct Contact and Outdoor Air Exposure Criteria. ACDEH has also determined that the site continues to fail to meet the LTCP General Criteria d (Free Product), and the LTCP Media-Specific Criteria for Groundwater as discussed below, and as documented on Geotracker. Therefore ACDEH requests that you address the following technical comments and send us the documents requested below.

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.

   ACDEH's review of the case files indicates that sheen continues to be is present at well MW-3 (see groundwater sampling log rather than Table 1 of the referenced groundwater monitoring report). Additional consideration is given to rebounding groundwater concentrations at a number of wells since the extraction system was shut down onsite on March 7, 2016. Groundwater concentrations appear to be rebounding at onsite well MW-3, potentially in onsite well MPE-2, and potentially at offsite well MW-10R. Since system shut-down, groundwater concentrations in well MW-3 have increased from 7,600 micrograms per liter (µg/l) to 12,000 µg/l Total Petroleum Hydrocarbons as

gasoline (TPHg), from 180 µg/l to 380 µg/l benzene, and from 130 µg/l to 250 µg/l ethylbenzene. While not considered Light Non Aqueous Phased Liquids (LNAPL) by LTCP justification papers, contaminant rebound may not be complete and may approach concentrations considered by the LTCP to be LNAPL.

2. **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 collection and analysis has been presented to support the requisite characteristics of plume stability or plume classification as follows:

   a. **Groundwater Concentration Stability –** As noted above, since the extraction system was shut down on March 7, 2016, groundwater concentrations appear to be rebounding in well MW-3, potentially in onsite well MPE-2, and also in offsite well MW-10R. Since late March 2016, groundwater concentrations in well MW-3 have increased from 7,600 micrograms per liter (µg/l) to 12,000 µg/l TPHg, from 180 µg/l to 380 µg/l benzene, and from 130 µg/l to 250 µg/l ethylbenzene. The most recent MPE event occurred at offsite well MW-10R in early August 2016, and while contaminant concentrations were reduced substantially after the MPE event, groundwater concentrations increased notably within a month, and thus it is uncertain if plume concentration stability has been established at the most downgradient well at the site.

   b. **Plume Length –** At present the length of the groundwater contaminant plume has not been defined and appears to split offsite south of well MW-6 into a southerly direction (towards MW-10R), and into a southeastern direction (towards MW-7). The presence of buried stream channels has been discussed in previous summaries of the local and site stratigraphy. As an example are the substantial differences in the lithology encountered in well MW-3 and MW-3D, installed within feet of one another. Due to the potential for buried natural conduits (stream channels) and the presence of known two offsite downgradient residential water supply wells, it appears appropriate at a minimum to define the length of the two plume directions with respect to the maximum plume length for methyl tert butyl either (MTBE) identified in the LTCP *Technical Justification for Groundwater Media-Specific Criteria* (April 2012) paper, and to conduct a door-to-door well survey canvas and sensitive receptor survey within 1,000 feet downgradient of the area defined by the maximum plume length. An initial attempt was conducted in late 2003, located one of the two wells, and further followup appears to have only included a mailer. If additional residential water supply wells are located, the collection of groundwater samples should be attempted at all known wells to determine exposure potential and thus plume length. (Please note, single family residential houses with a water supply well, may typically have two water utility hookup boxes at the curb).

   Please present a strategy in the Data Gap Work Plan (described in Technical Comment 4 below) to address the items discussed above. At a minimum therefore it appears warranted to continue quarterly groundwater monitoring in an effort to determine contaminant concentration changes at the site and vicinity since the shutdown of the system, while cognizant that a review of historic depth to groundwater measurements indicates contaminant concentrations are typically highest during low groundwater intervals such as June or September of a given year, and that the next planned groundwater sampling event late in the year may yield lower groundwater concentrations that will subsequently rise with declines in the groundwater elevation. Alternatively, please provide justification of why the site satisfies the Media-Specific Criteria for Groundwater in the focused SCM described in Technical Comment 4 below.

3. **Corrective Action Evaluation –** Concurrent with the items requested above, it also appears to be warranted to evaluate corrective actions at the site. This can include a review of the MPE system in order to increase system effectiveness, potentially incorporate cyclical MPE events during lower groundwater intervals, identify residual onsite soil source, or identify other possible options. Please

present a strategy in the Corrective Action Evaluation and Data Gap Work Plan (described in Technical Comment 4 below) to address the items discussed above.

4. **Corrective Action Evaluation and Data Gap Work Plan –** Please prepare a Corrective Action Evaluation and Data Gap Work Plan to address the technical comments discussed above, by the date identified below. Please support the scope of work in the Data Gap Work Plan with a focused SCM and Data Quality Objectives (DQOs) that relate the data collection to each LTCP criteria. For example please clarify which scenario within each Media-Specific Criteria a sampling strategy is intended to apply to.

   In order to expedite review, ACDEH requests the focused SCM be presented in a tabular format that highlights the major SCM elements and associated data gaps, which need to be addressed to progress the site to case closure under the LTCP. Please sequence activities in the proposed revised data gap investigation scope of work to enable efficient data collection in the fewest mobilizations possible.

5. **Groundwater Monitoring –** Please continue with quarterly groundwater monitoring at the subject site due to fluctuating contaminant concentrations and the presence of LNAPL sheen in a site well (MW-3), and recently at least 200 feet downgradient of the site (well MW-10R). Depending on remedial progress at the site, as documented in part by groundwater concentrations, continued groundwater monitoring will continue to document the presence of contaminant rebound in the post-MPE period at the site. Please submit reports by the dates identified below.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACDEH 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:

- **January 27, 2017** – Corrective Action Evaluation and Data Gap Work Plan
  File to be named RO473_WP_R_yyyy-mm-dd

- **February 10, 2017** – Fourth Quarter 2016 Monitoring and Remedial Progress Report
  File to be named RO473_GWM_REM_R_yyyy-mm-dd

- **May 12, 2017** – First Quarter 2017 Monitoring and Remedial Progress Report
  File to be named RO473_GWM_REM_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.

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

Sincerely,

Digitally signed by Mark Detterman
DN: cn=Mark Detterman, o=ACEH, ou=ACEH, email=mark.detterman@acgov.org, c=US
Date: 2016.11.02 11:49:29 -07'00'

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

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

cc: Mansour Sepehr, SOMA Environmental Engineering, 6620 Owens Dr., Ste A, Pleasanton, CA 94588 (Sent via electronic mail to: msepehr@somaenv.com)

Dilan Roe, ACDEH, (Sent via electronic mail to: dilan.roe@acgov.org)
Paresh Khatri, ACDEH; (Sent via electronic mail to: paresh.khatri@acgov.org)
Mark Detterman, ACDEH, (Sent via electronic mail to: mark.detterman@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.