ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

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October 2, 2015

Port of Oakland
530 Water Street
Oakland, CA 94607
Attn.: John Prall
(*Sent via E-mail to: jprall@portoakland.com*)

Subject: Conditional Work Plan Approval; Fuel Leak Case No. RO0000101 and GeoTracker Global ID T0600101099, Port of Oakland/ Kaiser & Powerine Oil/ Berth 30, 2800-2801 7th Street, Oakland, CA 94607

Dear Mr. Prall:

Thank you for the recently submitted document entitled *Soil and Groundwater Investigation Work Plan* (Work Plan), dated July 1, 2015, which was prepared by Terraphase Engineering Inc. (Terraphase) for the subject site. Alameda County Environmental Health (ACEH) has evaluated the data and recommendations presented in the above-mentioned report, in conjunction with the case files, to determine if the site is eligible for closure as a low risk site under the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case 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), g (Soil and Groundwater Have Been Tested for MTBE) and the Media-Specific Criteria for Groundwater, and the Media-Specific Criteria for Direct Contact (see Geotracker).

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 Work Plan proposes to investigate an area previously occupied by one 3,000-gallon gasoline underground storage tank (UST), one 5,000-gallon gasoline UST, and one 5,000-gallon diesel UST by advancing six soil bores for the recovery of soil and grab groundwater samples. Field screening using a photoionization detector (PID) is proposed to be performed at a minimum of every three feet. Soil with headspace readings greater than 25 parts per million (ppm) will be collected and submitted to the analytical laboratory for analysis, and grab groundwater samples will be collected from each soil bore for analysis. Soil samples will not be collected below the water table. Soil and groundwater samples collected from the borings will be analyzed for total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015 and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8260.

Based on ACEH staff review of the referenced document 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. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed. The ACEH requests that you incorporate the following technical comments into your work scope, perform the proposed work, and send us the technical reports described below.

TECHNICAL COMMENTS

1. **LTCP General Criteria d (Free Product) –** The LTCP requires free product (FP) to be removed to the extent practicable at release sites where investigations indicate the presence of FP 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 FP migration be used as a minimum objective for the design of any FP removal system.

   ACEH's review of the case files indicates that insufficient data and analysis has been presented to assess FP at the site. Specifically, measurable FP was observed in pit infiltration water at the time of the tank removal and not-measurable FP continued to be observed after two rounds of pit water evacuations. Approximately 800 gallons of water were removed. Sampling and analysis of recharged groundwater revealed the presence of TPHg at a concentration of 4,100 micrograms per liter (µg/L), indicating the possible presence of residual FP.

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 insufficient data collection and analysis has been presented to assess the nature, extent, and mobility of the release and to support compliance with General Criteria d as discussed in Technical Comment 1 above and additional criteria as described in Technical Comments 3, 4, and 5 below, respectively.

3. **General Criteria f – Secondary Source Has Been Removed to the Extent Practicable –** "Secondary source" is defined as petroleum-impacted soil or groundwater located at or immediately beneath the point of release from the primary source. Unless site attributes prevent secondary source removal (e.g. physical or infrastructural constraints exist whose removal or relocation would be technically or economically infeasible), petroleum-release sites are required to undergo secondary source removal to the extent practicable as described in the policy. "To the extent practicable" means implementing a cost-effective corrective action which removes or destroys-in-place the most readily recoverable fraction of source-area mass. It is expected that most secondary mass removal efforts will be completed in one year or less. Following removal or destruction of the secondary source, additional removal or active remedial actions shall not be required by regulatory agencies unless (1) necessary to abate a demonstrated threat to human health or (2) the groundwater plume does not meet the definition of low threat as described in this policy.

   At the time of the USTs removal, petroleum odors and staining were observed in the soil beneath the two 5,000-gallon USTs. There is no documentation indicating the tank pit backfill or soil beneath the USTs was removed.

Therefore, based on the indeterminate status of soil removal, ACEH requests a boring be advanced in the location of the UST pit for the recovery and analysis of groundwater and a native soil sample as discussed further in Technical Comment 7 below.

4. **General Criteria g – Soil and Groundwater Have Been Tested for MTBE -** Health and Safety Code section 25296.15 prohibits closing a UST case unless the soil, groundwater, or both, as applicable have been tested for MTBE and the results of that testing are known to the Regional Water Board. The exception to this requirement is where a regulatory agency determines that the UST that leaked has only contained diesel or jet fuel. Before closing a UST case pursuant to this policy, the requirements of section 25296.15, if applicable, shall be satisfied.

   ACEH's review of the case files indicates that site soil or groundwater have not been analyzed for MTBE. Sampling and analysis for MTBE was requested by ACEH on July 6, 2000. Please include MTBE in the analysis scope for soil and grab groundwater samples.

5. **LTCP Media Specific Criteria for Groundwater –** To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be defined, 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. ACEH requested groundwater monitoring wells be installed at the site on June 30, 1993, June 10, 1996, and July 6, 2000. ACEH is not aware of the wells having been installed; thus, the plume is not defined, known to be stable, or decreasing in areal extent.

   At this time, ACEH is of the opinion that installation of monitoring wells at the site is premature pending the results of this soil and groundwater investigation. However, well installation and/or advancement of step-out borings may be appropriate at a future date.

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 volatized 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 collection and analysis has been collected to satisfy the media-specific criteria for direct contact and outdoor air exposure. Specifically, naphthalene has not been analyte at this site. In order to satisfy the LTCP, please include naphthalene as an analyte in the analysis suite. Please recover the samples at the depths described in Technical Comment 7 below.

7. **Soil Sampling –** The proposed soil sampling is based solely on PID readings, so conceivably no soil samples will be recovered for analysis should the PID readings be less than 25 ppm.

   In order to satisfy the LTCP, ACEH requests at least one soil sample be recovered and analyzed from each boring from the 0- to 5-foot and 5- to 10-foot intervals, as measured from the ground surface. Additionally, ACEH requests that soil samples be collected and analyzed at intervals of not more than

five feet, signs of obvious contamination, such as odor, discoloration, free product, etc., the soil/groundwater interface, and at significant changes in lithology. Please ensure that the analytical results define the vertical and horizontal extent of TPH impacts in soil and groundwater at the site.

8. **Extractable Range Petroleum Hydrocarbon (Diesel) Analysis –** As previously stated above, the site was the location of gasoline and diesel USTs. Therefore, ACEH requests the addition of TPH as diesel (TPHd), using EPA Test Method 8015, to the scope of analysis. In regards to silica gel cleanup, it is the policy of the San Francisco Bay Region, Regional Water Quality Control Board (SFBR-RWQCB) that extractable range petroleum hydrocarbon samples be analyzed both with and without silica gel cleanup. In order to be consistent with the SFBR-RWQCB policy, ACEH requests that these samples be analyzed both with and without silica gel cleanup and have a determination performed for organic matter content using ASTM test method D2974.

TECHNICAL REPORT REQUEST

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

- **December 29, 2015** – **Soil and Groundwater Investigation** (File to be named: SWI_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.

Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please call me at (510) 567-6764 or send an electronic mail message at keith.nowell@acgov.org

Sincerely,

Keith Nowell

Digitally signed by Keith Nowell
DN: cn=Keith Nowell, o=Alameda County, ou=Department of Environmental Health, email=keith.nowell@acgov.org, c=US
Date: 2015.10.02 13:42:25 -07'00'

Keith Nowell, P.G., C.HG
Hazardous Materials Specialist

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

cc: Jan Schutze, Schutze & Associates, Inc., 44358 South Grimmer Boulevard, Fremont, CA 94538 (*Sent via E-mail to: js@schutze-inc.com*)

Dilan Roe, ACEH (*Sent via E-mail to: dilan.roe@acgov.org*)
Keith Nowell, ACEH, (*Sent via electronic mail to keith.nowell@acgov.org*)
GeoTracker, file

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.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.