

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



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ENVIRONMENTAL PROTECTION
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March 28, 2008

Ravi Sekhon
21696 Knuppe Place
Castro Valley, CA 94552

Abdul Ghaffar
Zaroon, Inc.
40092 Davis Street
Fremont, CA 94538

Subject: Fuel Leak Case No. RO0000175, GeoTracker Global ID: T0600102286,
Foothill Mini Mart, 6600 Foothill Boulevard, Oakland, CA 94605

Dear Mr. Sekhon and Mr. Ghaffar:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Site Characterization and Groundwater Monitoring and Sampling Report," dated December 5, 2005, which was prepared by Advanced Assessment and Remediation Services (AARS).

ACEH generally concurs with the preparation of a Feasibility Study/Corrective Action Plan (FA/CAP) proposed by AARS. However, preparation of a Site Conceptual Model (SCM) and addressing data gaps appears more prudent at this time. ACEH requests that you address the following technical comments and send us the technical reports and work plan described below.

TECHNICAL COMMENTS

1. **Contaminant Source Area Characterization** – Based on a review of the case file, it appears that an underground storage tank (UST) removal report was not submitted. Only laboratory analytical data from the UST removal sent via facsimile from Whitman Petroleum, Inc. on December 28, 1998 is currently in our file. Based on review of the laboratory analytical data, elevated concentrations of MiBE (up to 12 mg/kg) were detected in confirmation soil samples collected following the UST and dispenser removals. However, the depths of the samples collected are unknown. Prior to conducting active remediation, the contaminant source area(s) must be adequately characterized. Please submit a tank removal report by the date specified below. Please propose a scope of work to address the above-mentioned concerns (i.e. define the lateral and vertical extent of contamination) and submit a work plan. You may include the work plan in the SCM requested below.
2. **Dissolved Contaminant Plume Characterization** – According to AARS, the extent of groundwater contaminant plume has been defined and no further site characterization is necessary at this time. However, contamination originating from the site appears to have

impacted adjacent and neighboring properties. This is evidenced by concentrations of contaminants detected in groundwater samples collected from MW-4 located at 6620 Foothill Boulevard indicating that the groundwater contaminant plume is not defined in that direction. To that end, figures provided to date are insufficient to adequately depict the extent of your contaminant plume in relation to adjacent and neighboring properties. Please prepare extended site maps, which utilize aerial photos as base maps for your site, and accurately depict neighboring structures and site features in relation to the groundwater contaminant plume for all future reports. Please propose additional groundwater characterization to define the extent of contamination to east and south and submit a work plan.

3. **Vertical Plume Characterization** - In addition to defining the lateral extent of the hydrocarbon contaminant plume, including the MtBE contaminant plume, vertical plume characterization has not been conducted. Prior to commencing with corrective action, it is imperative that the site is adequately characterized so that the appropriate corrective action, having a likelihood of attaining site cleanup goals, is implemented. Based on a review of the above-mentioned report and case file, it appears that the vertical extent of the contaminant plume is unknown at this time. Please propose a scope of work to vertically define the groundwater contaminant plume and submit a work plan. It may be advantageous to collect depth discrete groundwater samples or install multi-level monitoring wells, monitoring well clusters, or systems capable of monitoring multiple depths to adequately characterize the groundwater contaminant plume.

4. **Preferential Pathway Study** - The purpose of the preferential pathway study is to locate potential migration pathways and conduits and determine the probability of the NAPL and/or plume encountering preferential pathways and conduits that could spread contamination. Although a preferential pathway evaluation including a well survey was conducted and reported in the document entitled "Additional [sic] Site Investigation," dated September 6, 2002, the discussion in the report was inadequate and did not discuss depths of utilities and make a determination of whether contaminant migration may be occurring along preferential pathways (including wells) nor did it include figures depicting potential preferential pathways (i.e. utility corridors, wells, etc.).

The preferential pathway study should detail the potential migration pathways and potential conduits (wells, utilities, pipelines, etc.) for vertical and lateral migration that may be present in the vicinity of the site. We request that you re-submit the preferential pathway study and include the results in the SCM. Please include maps and data tables to support your analysis. The results of your study shall contain all information required by California Code of Regulations, Title 23, Division 3, Chapter 16, §2654(b).

a. Utility Survey

An evaluation of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s) is required as part of your study. Please include maps and cross-sections illustrating the location and depth of all utility lines and trenches within and near the site and plume areas(s) as part of your study.

b. Well Survey

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The preferential pathway study shall include a detailed well survey of all wells (monitoring and production wells: active, inactive, standby, decommissioned (sealed with concrete), abandoned (improperly decommissioned or lost); and dewatering, drainage, and cathodic protection wells) within a ¼ mile radius of the subject site. As part of your detailed well survey, please perform a background study of the historical land uses of the site and properties in the vicinity of the site. Use the results of your background study to determine the existence of unrecorded/unknown (abandoned) wells, which can act as contaminant migration pathways at or from your site. Please review and submit copies of historical maps, such as Sanborn maps, aerial photographs, etc., when conducting the background study.

5. **Site Conceptual Model (SCM)** – We anticipate that characterization and remediation work, in addition to what is requested in this letter, will be necessary at and down-gradient from your site. Considerable cost savings can be realized if your consultant focuses on developing and refining a viable Site Conceptual Model (SCM) for the project. 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 used to identify data gaps that are subsequently filled as the investigation proceeds. As the data gaps are filled, the working hypotheses are modified, and the overall SCM is refined and strengthened. Subsurface investigations continue until the SCM no longer changes as new data are collected. At this point, the SCM is said to be 'validated.' The validated SCM then forms the foundation for developing the most cost-effective corrective action plan to protect existing and potential receptors.

When performed properly, the process of developing, refining and ultimately validating the SCM effectively guides the scope of the entire site investigation. We have identified, based on our review of existing data, some initial key data gaps in this letter and have described several tasks that we believe will provide important new data to refine the SCM. We request that your consultant incorporate the results of the new work requested in this letter into their SCM, identify new and/or remaining data gaps, and propose supplemental tasks for future investigations. There may need to be additional phases of investigations, each building on the results of prior work, to validate the SCM. Characterizing the site in this manner will focus the scope of work to address the identified data gaps, which improves the efficiency of the work, and limit its overall costs.

Both industry and the regulatory community endorse the SCM approach. Technical guidance for developing SCMs is presented in Strategies for Characterizing Subsurface Releases of Gasoline Containing MTBE, American Petroleum Institute Publication No. 4699 dated February 2000; 'Expedited Site Assessment Tools for Underground Storage Tank Sites: A Guide for Regulators' (EPA 510-B-97-001), prepared by the U.S. Environmental Protection Agency (EPA), dated March 1997; and 'Guidelines for Investigation and Cleanup of MTBE and Other Ether-Based Oxygenates, Appendix C,' prepared the State Water Resources Control Board, dated March 27, 2000.

The SCM for this project is to incorporate, but not limited to, the following:

- a. A concise narrative discussion of the regional geologic and hydrogeologic setting. Include a list of technical references you reviewed, and copies (photocopies are sufficient) of regional geologic maps, groundwater contours, cross-sections, etc.
- b. A concise discussion of the on-site and off-site geology, hydrogeology, release history, source zone, plume development and migration, attenuation mechanisms, preferential pathways, and potential threat to down-gradient and above-ground receptors (e.g. contaminant fate and transport). Please include the contaminant volatilization from the subsurface to indoor/outdoor air exposure route (i.e. vapor pathway) in the analysis. Maximize the use of large-scaled graphics (e.g. maps, cross-sections, contour maps, etc.) and conceptual diagrams to illustrate key points. 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).
- c. Identification and listing of specific data gaps that require further investigation during subsequent phases of work and propose a scope of work to acquire data to address the identified data gaps.
- d. The SCM shall include an analysis of the hydraulic flow system at down-gradient from the site. Include rose diagrams for depicting groundwater gradients. The rose diagram shall be plotted on the groundwater contour maps and updated in all future reports submitted for your site. Include an analysis of vertical hydraulic gradients. Please note that these likely change due to seasonal precipitation and groundwater pumping.
- e. Temporal changes in the plume location and concentrations are also a key element of the SCM. In addition to providing a measure of the magnitude of the problem, these data are often useful to confirm details of the flow system inferred from the hydraulic head measurements. Please include plots of the contaminant plumes on your maps, cross-sections, and diagrams.
- f. Summary tables of chemical concentrations in different media (i.e. soil, groundwater, and soil vapor), including well logs, well completion details, boring logs, etc.
- g. Other contaminant release sites may exist in the vicinity of your site. Hydrogeologic and contaminant data from those sites may prove helpful in testing certain hypotheses for your SCM. Include a summary of work and technical findings from nearby release sites, if applicable.

At this juncture, prepare a site conceptual model (SCM) as described above, including developing and/or identifying site cleanup goals, and include the results of the SCM in the decision-making process. If data gaps (i.e. vertical and lateral extent of contamination, potential contaminant volatilization to indoor air, or contaminant migration along preferential pathways, etc.) are identified in the SCM, please include a work plan to address those data gaps.

Once site characterization is completed and all identified data gaps have been addressed, a Feasibility Study, should be prepared in accordance with California Code of Regulations, Title 23, Division 3, Chapter 16, §2725(f), which evaluates at least three cost-effective remedial

approaches, not including the no action and monitored natural attenuation remedial alternatives, having likelihood of attaining site cleanup objectives.

6. **Groundwater Contaminant Plume Monitoring** – In order to evaluate groundwater contaminant plume stability, consecutive quarterly groundwater monitoring must be conducted at the site. Since the installation of the additional groundwater monitoring wells in August 2005, only one groundwater monitoring event has been conducted. Additionally, significantly elevated concentrations of MtBE are presently detected at the site. However, fuel oxygenates and methyl tertiary butyl ether (MtBE) breakdown products (i.e. ethyl tert-butyl ether (ETBE), tertamyl methyl ether (TAME), diisopropyl ether (DIPE)), lead scavengers (i.e. ethylene dichloride (EDC) and ethylene dibromide (EDB)), and alcohol compounds, (i.e. tert-butyl alcohol (TBA) and ethanol (EtOH)) have not been part of the analytical suite. Please include the fuel oxygenates to the groundwater analytical suite. At this time, please initiate consistent quarterly groundwater monitoring at the site, include TPH-g, BTEX, and the above-listed fuel oxygenates, and submit quarterly groundwater monitoring reports by the dates specified below.

7. **Geotracker Compliance** – A review of the case file and the State Water Resources Control Board's (SWRCB) GeoTracker website indicate that only electronic copies of analytical data have been submitted. Monitoring well survey data, groundwater elevation data, and PDF version of the reports have not been uploaded to GeoTracker, rendering the site to non-compliance status. 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. Additionally, 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. Additionally, pursuant to California Code of Regulations, Title 23, Division 3, Chapter 30, Articles 1 and 2, Sections 3893, 3894, and 3895, beginning July 1, 2005, the successful submittal of electronic information (i.e. report in PDF format) shall replace the requirement for the submittal of a paper copy. Please complete the surveying and upload all applicable electronic submittal types such as the analytical data (EDF), survey data (GEO_XY and GEO_Z), and PDF reports from July 1, 2005 to current to GeoTracker by the date specified below. Electronic reporting is described below.

REQUEST FOR INFORMATION

ACEH's case file for the subject site contains the following reports as listed on our website (<http://www.acgov.org/aceh/top/ust.htm>). You are requested to submit copies of all other reports related to environmental investigations for this property (including the UST Removal Report Phase I, and Phase II Investigation reports) by **May 27, 2008**.

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TECHNICAL REPORT REQUEST

Please submit the SCM, work plan, and technical reports to Alameda County Environmental Health (Attention: Paresh Khatri), according to the following schedule:

- **May 27, 2008** – Site Conceptual Model Report (with Preferential Pathway Study) & Data Gap Work Plan and electronically transmit all outstanding reports (including the UST Removal Report), and associated electronic data files to GeoTracker and Alameda County's FTP site (PDF reports only)
- **July 30, 2008** – Quarterly Monitoring Report (Second Quarter 2008)
- **October 30, 2008** – Quarterly Monitoring Report (Third Quarter 2008)
- **January 30, 2009** – Quarterly Monitoring Report (Fourth Quarter 2008)
- **April 30, 2009** – Quarterly Monitoring Report (First Quarter 2009)

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

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. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

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. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for 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 monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

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:

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"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

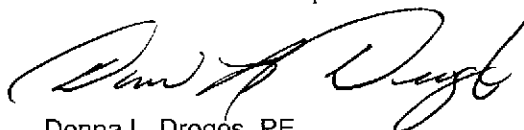
If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 777-2478 or send me an electronic mail message at Paresh.Khatri@acgov.org.

Sincerely,



Paresh C. Khatri
Hazardous Materials Specialist



Donna L. Drogos, PE
Supervising Hazardous Material Specialist

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Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Tridib K. Guha, Advanced Assessment and Remediation Services, 2380 Salvio Street,
Suite 202, Concord, CA 94520-2137
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA
94612-2032
Mark Arniola, Public Works Agency , 250 Frank H. Ogawa Plaza, Suite 5301, Oakland, CA
94612
Larry A. Gallegos, City of Oakland, Community and Economic Development Agency, 250
Frank H. Ogawa Plaza, 5th Floor, Oakland, CA 94612
Dylan T. Radke, Gordon, Watrous, Ryan, Langley, Bruno & Paltenghi, 611 Las Juntas
Street, P.O. Box 630, Martinez, CA 94553
Dorina Drogos, ACEH
Paresh Khatri, ACEH
File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	ISSUE DATE: July 5, 2005
	REVISION DATE: December 16, 2005
	PREVIOUS REVISIONS: October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

Submission Instructions

- 1) Obtain User Name and Password:
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to dehloptoxic@acgov.org
or
 - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
 - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
 - (i) Note: Netscape and Firefox browsers will not open the FTP site.
 - b) Click on File, then on Login As.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to dehloptoxic@acgov.org 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 at 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)



ALAMEDA COUNTY
HEALTH CARE SERVICES AGENCY
 Department Of Environmental Health
 Environmental Protection Division
 1131 Harbor Bay Parkway
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HAZ MAT

Tridib K. Guha
Advanced Assessment and
Remediation Services
2380 Salvio Street, Suite 202
Concord, CA 94520-2137

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RETURN TO SENDER
 NOT DELIVERABLE AS ADDRESSED
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