ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

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

August 31, 2012

Mr. Bob Webster
David D Bohannon Organization
60 31st Avenue
San Mateo, CA 94403
(sent via electronic mail to: Robert.Webster@ddbo.com)

Subject: Request for Site Conceptual Model and Data Gap Work Plan; Fuel Leak Case No. RO0000167 and GeoTracker Global ID T0600102098; Bohannon Development Property, 575 Paseo Grande, San Lorenzo, CA 94580

Dear Mr. Webster:

Alameda County Environmental Health Department (ACEH) staff has reviewed the case file, including the *Report of Dual-Phase Extraction System Operations, Soil Vapor Sampling, and Risk Analysis,* dated November 22, 2011 (received June 13, 2012) and the *Second Quarter 2012 (Semi-Annual) Groundwater Monitoring Report*, dated July 27, 2012 (received August 3, 2012). Both reports, and the letter, were prepared and submitted by Stantec on your behalf. Thank you for submitting these documents.

The subsurface report documented the operation of the DPE system (installation was covered in a report previously submitted in April 2007), the results of the vapor sampling of four vapor wells, and the results of a risk analysis based on the residual soil vapor concentrations (but did not incorporate residual soil or groundwater concentrations into the risk calculations). The results of the Dual-Phased Extraction effort appear to be encouraging with decreases in the mass total removal rate in the pulse mode period, and notable decreases in groundwater concentrations from a number of wells at the site and vicinity (MW-2, MW-3, POBS-A1, and perhaps MW-4). As of May 2012 groundwater concentrations in offsite well MW-4 appeared to be undergoing rebound to higher concentrations than were present in the well immediately after cessation of DPE operations; however, in a subsequent resampling in June 2012 concentrations were somewhat reduced, but still remained higher than immediately after DPE operations. The results from the vapor sampling event are also encouraging and reported concentrations significantly below generic ESLs approximately 1.5 years after termination of the remedial effort. These actions are appreciated and are encouraging.

The November report also contained a cover letter entitled *Request for Site Closure,* dated June 7, 2011. Based on factors and items discussed in the technical comments below, this fuel leak case cannot be closed at this time. This decision is subject to appeal to the State Water Resources Control Board (SWRCB), pursuant to Section 25299.39(b) of the Health and Safety Code (Thompson-Richter Underground Storage Tank Reform Act - Senate Bill 562). Please contact Mr. George Lockwood in the SWRCB Underground Storage Tank Program at (916) 341-5752 or GLockwood@waterboards.ca.gov for information regarding the appeal process.

Based on the review of the case file ACEH requests that you address the following technical comments and send us the documents requested below.

TECHNICAL COMMENTS

1. **Request for Geotracker Compliance** – Thank you for claiming the site in the state's Geotracker database and uploading a series of reports; it is appreciated. To bring the site into full compliance

with state regulations and ACEH directives, ACEH requests that all required submittals be uploaded to the database. This is standing request from the previous directive letter, is overdue, and is late. Again, please note that the request that the Geotracker upload requirement be waived due to voluntary cleanup actions cannot be granted by ACEH; it is a state requirement ACEH is tasked with managing. Compliance is required by the State.

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. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs, including SLIC programs. 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. 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,** all but one report**, all EDF submittals, all GEO_MAPS, all GEO_WELL data, and all bore and well logs**. Site wells have also not been surveyed to Geotracker standards; another state requirement. 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.

2. **Request for Residential Well Decommissioning Update –** The report entitled *Semi-Annual (Second Half 2003) Groundwater Monitoring Report,* dated June 21, 2004, prepared and submitted on your behalf by SECOR International Inc, (SECOR) reported that two residential "backyard" irrigation wells were located immediately downgradient of the site and that assistance for well decommissioning had been requested from the Bohannon Organization by both property owners. This request for an update is a standing request from the previous directive letter, is overdue, and is late. This is important due to the documented presence of an offsite contaminant plume (at MW-4) directly upgradient of one of the residential wells, at a distance of only approximately 25 to 50 feet. ACEH requests an update as to the status of this activity in the SCM requested above, by the date identified below.

3. **Request for SCM and Data Gap Work Plan –** While site data is generally encouraging, data gaps are apparent that require addressing. Consequently ACEH requests the generation of a Site Conceptual Model (SCM) to identify data gaps at the subject site, accompanied with a data gap work plan. Data gaps noted by ACEH include the following:

    a. **Evaluation of Success of Remedial Actions on Residual Soil Contamination –** Seven DPE wells were installed at the site based on site specific data not fully summarized in submitted reports. Unfortunately DPE well locations have not been depicted in association with known source areas (sump, tank, and product lines and subsequent excavations), and therefore ACEH has not been able determine this association, other than by inference. Significant residual soil contamination was documented at the southern end of the "Product Line and Pump Island Excavation" (soil samples U-EW-1, U-EW-1A, U-SW-2, and Pump Island). The Radius of Influence (ROI) determined by the pilot test appears to be in excess of 20 feet in the northern area of the site; however, older available cross sections (*Limited Subsurface Investigation Report and Work Plan for Additional Soil and Groundwater Assessment,* dated February 19, 2003) and more recent bores indicate the southern area of the site is predominately clay and a lower ROI would be reasonable to anticipate. Further, groundwater concentrations that appear to be rebounding in offsite well MW-4 (located within 25 to 50 feet of a residential well, as noted above) indicate that additional residual soil contamination is present upgradient of the well, and may not have been remediated sufficiently. At present a steady state for residual contamination has not been shown or documented.

b. Location of Vapor Wells – Similar to the location of DPE wells discussed above, the location of vapor wells is not well constrained with respect to former site features and sources. Several of the vapor wells appear to be located in a zone of limited impacts along the former product lines. It appears appropriate to collect additional soil vapor data at points of previously documented elevated soil contamination (e.g. former source areas with elevated residual soil contamination).

c. Documentation of Extent of Groundwater Dewatering – At present the extent of groundwater dewatering during DPE operations is not clear and the information can provide an understanding of rebounding groundwater concentrations in offsite well MW-4. ACEH requests inclusion of depth-to-water measurements collected during the period of DPE operations in the SCM, and other future reporting when warranted.

d. Downgradient, Lateral, and Vertical Extent of Groundwater Plume - The downgradient, lateral, and vertical extent of the groundwater plume downgradient of well MW-4 does not appear to have been defined. Downgradient and lateral gradient groundwater monitoring wells MW-5, MW-6, and MW-7 are spaced approximately 200 to 270 feet apart and, based on groundwater contour maps, flow paths downgradient of well MW-4 appear to consistently pass between these wells. Also consistent with a well network bypassed by the contaminant plume is data from a report entitled *Third Quarter 1999 Groundwater Monitoring Results and Plume Definition Investigation Report,* (dated October 22, 1999), which contains data from a Gore Sorber vapor screening survey. The data indicated that two samples (313406 and 313415) at the intersection of Paseo Largavista and Paseo Grande contained among the highest detections for the survey. Wells MW-5 and MW-6 have not captured the downgradient extent of contamination at these points.

Additionally, the 1999 report also contains additional Gore Sorber data that indicates some of the higher (benzene and total xylenes) concentrations were to the north of the site along Paseo Largavista (samples 313398 and 313397). Earlier groundwater flow gradients indicated groundwater flow to the northwest, consistent with these vapor locations. Higher benzene concentrations at sample 313409 on Via Del Sol also appear consistent with these data. It is surmised that well MW-7 may have been installed to generally investigate the analytical data; however, the spacial relationship between the various wells (including MW-7; installed approximately 400 feet downgradient of former sources) and Gore Sorber sampling points is not clear.

For these and other unenumerated reasons, ACEH requests the submittal of an SCM and a data gap work plan by the date identified below.

An SCM synthesizes all the analytical data and evaluates all potential exposure pathways and potential receptors that may exist at the site, including identifying or developing site cleanup objectives and goals. At a minimum, the SCM should include:

- Local and regional plan view maps that illustrate the location of sources (former facilities, piping, tanks, etc.) extent of contamination, direction and rate of groundwater flow, potential preferential pathways, and locations of receptors;
- Geologic cross section maps that illustrate subsurface features, man-made conduits, and lateral and vertical extent of contamination;
- Plots of chemical concentrations versus time;
- Plots of chemical concentrations versus distance from the source;
- Summary tables of chemical concentrations in different media (i.e. soil, groundwater, and soil vapor); and
- Well logs, boring logs, and well survey maps;
- Discussion of likely contaminant fate and transport.

If these data have already been generated, the data may only require updating, or inclusion into a single supporting document. For data gaps (i.e. potential contaminant volatilization to indoor air or contaminant migration along preferential pathways, etc.) identified in the SCM, please include a data gap work plan, by the date specified below. An example SCM and Data Gap Table has been attached to this letter and may be an appropriate format for this site.

4. **Request for Quarterly Groundwater Monitoring Reports –** Thank you for the second round of post-remediation groundwater monitoring conducted in May and June 2012. The last previous groundwater data appears to have been collected in January 2010, within approximately two weeks of system decommissioning. The previous directive letter requested semi-annual groundwater monitoring; however, with the receipt of the November 2011 report (in June 2012), it is apparent that post remediation monitoring should be implemented at the site in order to test the success of the remediation effort. In order to monitor post-remediation trends at the site, and in particular offsite well MW-4, ACEH requests that quarterly groundwater monitoring and sampling be conducted for a minimum period of one year. Sampling interval reductions can be discussed thereafter. ACEH requests future groundwater monitoring reports on the schedule identified below.

5. **Request for Decreased Well Sampling –** Groundwater monitoring wells MW-1, MW-5, MW-6, and MW-7 have essentially been non-detectable for approximately 12 years, but may be bypassed by the contaminant plume. Depth-to-water monitoring of the remainder of the wells should be conducted on quarterly basis; however, the sampling interval of these four wells can be maintained at a semi-annual basis, unless changes in the well are observed, especially if signs of contamination become apparent.

6. **Low-Threat Closure Policy** – As on August 17, 2012 the Low-Threat Closure Policy has been adopted and implemented. Presuming the policy will be considered for the site, ACEH has attached the guidance entitled *Required Information to Review Case for Low-Threat Closure Per Resolution 2012-0016.*

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:

- **September 28, 2012 –** Geotracker Compliance Documentation
  File to be named: CORRES_L_yyyy-mm-dd
- **November 2, 2012 –** SCM and Data Gap Work Plan
  File to be named: SCM_WP_R_yyyy-mm-dd
- **November 30, 2012 –** Third Quarter 2012 Groundwater Monitoring Report
  File to be named: GWM_R_yyyy-mm-dd
- **March 1, 2013 –** Fourth Quarter 2012 Groundwater Monitoring Report
  File to be named: GWM_R_yyyy-mm-dd
- **60 Days After SCM & Data Gap Work Plan Approval –** Soil & 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.

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

Sincerely,

Digitally signed by Mark E. Detterman
DN: cn=Mark E. Detterman, o, ou, email, c=US
Date: 2012.08.31 11:18:08 -07'00'

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

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations
Electronic Report Upload (ftp) Instructions
Site Conceptual Model Example
Required Information to Review Case for Low-Threat Closure Per Resolution 2012-0016

cc: Chris Maxwell, Stantec Consulting Corporation, 57 Lafayette Circle, 2nd Floor, Lafayette, CA 94549; (sent via electronic mail to Chris.Maxwell@stantec.com)

Donna Drogos, (sent via electronic mail to donna.drogos@acgov.org)
Mark Detterman (sent via electronic mail to mark.detterman@acgov.org)
Electronic File, GeoTracker

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/)

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.

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	**REVISION DATE:** July 25, 2012
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** 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
   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.