



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION

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April 17, 2015

Ms. Susan Kirkpatrick  
Greyhound Lines, Inc.  
c/o FirstGroup America, Inc.  
600 Vine Street, Suite 1400  
Cincinnati, OH 45202

Subject: Request for Feasibility Study / Corrective Action Plan; Fuel Leak Case No. RO0000074 and GeoTracker Global ID T0600100666, Oakland Bus Terminal, 2103 San Pablo Avenue, Oakland, CA 94608

Dear Ms. Kirkpatrick:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the subject site including the *Groundwater Monitoring Report*, and the (Response to) *Request for Focused Site Conceptual Model and Data Gap Work Plan* ("Response and SCM"), both dated February 12, 2015, as well as the *Groundwater Monitoring Report* dated April 6, 2015, each prepared and submitted by Green Star Environmental on your behalf. The more recent groundwater monitoring report documented groundwater concentrations up to 7,100 micrograms per liter ( $\mu\text{g/l}$ ) Total Petroleum Hydrocarbons (TPH as gasoline (TPHg), 830  $\mu\text{g/l}$  TPH as diesel (TPHd), 740  $\mu\text{g/l}$  benzene, 130  $\mu\text{g/l}$  ethylbenzene, and 53  $\mu\text{g/l}$  naphthalene. The "Response and SCM" provided additional data or alternative interpretations for the site under the Low Threat Closure Policy (LTCP), and both agreed and disagreed with LTCP statements contained in the ACEH April 7, 2014 directive letter, but proposed the injection of 10,000 gallons of surfactant enhanced In-Situ Chemical Oxidation (ISCO) products to remediate secondary source that is present beneath the former underground storage tank (UST) complex at the site.

As previously discussed in the April 7, 2014 directive letter, ACEH evaluated the data and recommendations presented site documents, in conjunction with the case files, and the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP). In the discussion contained in the April 2014 letter, ACEH's review of the case files indicated that insufficient data and analysis has been presented to support compliance with General Criteria f (Secondary Source Removal) and the Media Specific Criteria for Groundwater, Vapor Intrusion to Indoor Air, and Direct Contact and Outdoor Air Exposure. Additional insights were provided in the referenced documents above; however, ACEH's review continues to indicate the site does not meet these LTCP criteria as detailed further below.

However, ACEH is also in general agreement that corrective actions are appropriate at the site. Therefore ACEH requests that you address the following technical comments and send us the documents requested below.

### **TECHNICAL COMMENTS**

- 1. Response: General Criteria f – Secondary Source Has Been Removed to the Extent Practicable**  
– As before, ACEH's review of the case files indicates that the secondary source has not been removed from beneath the USTs. Specifically, site documents indicate that 791 tons of stockpiled soil was removed and treated at an offsite location. Utilizing the depicted excavation size (an irregular area, but approximately 40 by 50 feet), and standard calculations that incorporate a standard fluff factor supports an interpretation that approximately eight vertical feet of soil / backfill was removed to account for this volume. The void space volume of the USTs would provide for an additional several vertical feet. This suggests that secondary source remains between approximately 10 feet and groundwater beneath the former UST locations, as well as laterally. This is documented by available soil analytical from bores B-1 to B-10 collected in October 2010, wherein soil

concentrations up to 3.4 milligrams per kilogram (mg/kg) benzene, 7.30 mg/kg ethylbenzene, 2,600 mg/kg TPHg and 3,100 mg/kg TPHd were detected. The previously discussed concentration trend graphs, and laterally spreading contaminant concentrations as documented by older increasing trends at well ES-3 support this interpretation.

- 2. Response: LTCP Media-Specific Criteria for Vapor Intrusion to Indoor Air** – As before, at the present time it does not appear the subject site meets this criterion, although with the collection of additional data it might. An argument has been presented that because benzene concentrations in groundwater are currently below 1,000 µg/l benzene the site fits Scenario 3b of this criterion. This is based on recent maximum concentrations of benzene at the site (850 and 740 µg/l, respectively in the two referenced monitoring reports); however, the concentration of benzene in the previous two sampling events from the same well was above 1,000 µg/l benzene. These are several years older, and additional groundwater data sets may provide confirmation of consistent lower benzene concentrations below 1,000 µg/l benzene. At this time ACEH judges it premature to make this determination using this scenario. In the event of corrective actions at the site, this concern is likely to be eliminated.

Additionally, an argument has been advanced that the site fits the active commercial petroleum fueling facility exclusion of this criterion. Please be aware that while fueling may occur at the Greyhound facility, the facility is not in the business of selling fuel for commercial purposes. This exception is specifically limited to service stations where there is an expectation of exposure to fuel vapors.

- 3. Proposed Surfactant Enhanced Recovery Corrective Actions** - The referenced “Response and SCM” letter briefly outlined and recommended surfactant enhanced ISCO with injection at 15 locations proximal to the former UST excavation. The surfactant enhanced ISCO is partly designed to mobilize petroleum hydrocarbon compounds from soil to make them available for oxidation; however, a probable by-product is the high likelihood of the mobilization of product from soil to groundwater. ACEH is sufficiently concerned with this approach as the current configuration of the site and wells does not allow the recovery of petroleum products that are likely to be mobilized to groundwater and that may not undergo complete oxidation. The injection of 10,000 gallons of surfactant / ISCO is likely to overwhelm the ability of the single downgradient existing well (ES-8) to either recover or monitor groundwater concentration changes. As such, surfactant enhanced ISCO appears to be an inappropriate remedial technology without the installation of a method to substantially capture, manage, and collect liberated products, and monitor groundwater concentration trends at multiple locations downgradient of the injection area, and ACEH does not currently concur with this approach. Alternative corrective action options appear to be more appropriate at this time.
- 4. Request for Corrective Action Plan** - At this time, a Feasibility Study/Corrective Action Plan (FS/CAP) prepared in accordance with Title 23, California Code of Regulations, Section 2725 appears warranted. The FS/CAP must include a concise background of soil and groundwater investigations performed in connection with this case and an assessment of the residual impacts of the chemicals of concern (COCs) for the site and the surrounding area where the unauthorized release has migrated or may migrate. The FS/CAP should also include, but is not limited to, a detailed description of site lithology, including soil permeability, and most importantly, contamination cleanup levels and cleanup goals, in accordance with the San Francisco Regional Water Quality Control Board (SFRWQCB) Basin Plan, the LTCP, or appropriate Environmental Screening Level (ESL) guidance for all COCs and for the appropriate groundwater designation. Please note that soil cleanup levels should ultimately (within a reasonable timeframe) achieve water quality objectives (cleanup goals) for groundwater in accordance with the SFRWQCB Basin Plan. Please specify appropriate cleanup levels and cleanup goals in accordance with 23 CCR Section 2725, 2726, and 2727 in the FS/CAP, that includes the following minimum information:
  - Detailed description of proposed remediation including confirmation sampling and monitoring during implementation (a performance monitoring network).
  - Post-remediation monitoring.
  - Schedule for implementation of cleanup.

The FS/CAP must evaluate at least three viable alternatives for remedying or mitigating the actual or potential adverse effects of the unauthorized release(s) besides the 'no action' and 'monitored natural attenuation' remedial alternatives. Each alternative shall be evaluated not only for cost-effectiveness but also its timeframe to reach cleanup levels and cleanup goals, and ultimately the Responsible Party must propose the most cost-effective corrective action.

Please be aware that public participation is a requirement for the Corrective Action Plan process. Therefore, we request that you submit the FS/CAP for ACEH review and a Draft Public Notification Fact Sheet. Two examples will be forwarded under separate cover. Upon ACEH approval of the documents, ACEH will notify potentially affected members of the public who live or own property in the surrounding area of the proposed remediation described in the CAP. Public comments on the proposed remediation will be accepted for a 30-day period.

5. **Water Well Survey Plot** – It is reported that a water well survey has been conducted using Department of Water Resources (DWR) and Alameda County Environmental Health Agency (ACPWA) database resources; however, a plot map of the results has not been made available to ACEH in order to determine the appropriateness of conclusions contained in the SCM addendum. ACEH is aware that well construction details are confidential; however, the address and location of these wells is not. Therefore as a part of the FS/CAP report, ACEH requests that all water production wells (irrigation, domestic, or unknown) and all cathodic protection wells within 1,500 feet of the site, be plotted on a map and be listed in a table, without construction details. Groundwater monitoring wells, unless installed into deeper water-bearing zones, are generally not of significant concern.
6. **Groundwater Monitoring** - Please continue to conduct semi-annual groundwater monitoring at the site. Please conduct the semi-annual sampling in the months of February and August of a year, in order to capture periods of high and low groundwater levels that may elucidate the range of groundwater contaminant concentrations. Please submit the semi-annual reports by the dates identified below.
7. **Electronic Report and Data Upload Compliance** – Thank you for restarting the groundwater monitoring at the site; however, a review of the case file and the State's Geotracker database indicates that the site is not in compliance with previous directive letters. Compliance is also a State requirement. 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. 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, older reports, older EDF submittals, GEO MAPS, GEO WELL data, and all bore logs. Compliance is required by the State and is tied to reimbursement funding by the UST Cleanup Fund. Please see Attachment 1 for limited additional details, and the state GeoTracker website for full details. ACEH requests notification of, and a list of, the documents uploaded to Geotracker. Please upload all submittals to GeoTracker as well as to ACEH's ftp website by the date specified below.

#### **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:

- **May 29, 2015** – Geotracker Compliance  
(Notification email requested)

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- **July 17, 2015** – FS/CAP  
(File to be named: RO74\_CAP\_R\_YYYY-mm-dd)
- **October 16, 2015** – Semi-Annual Groundwater Monitoring  
File to be named: RO74\_GWM\_R\_YYYY-mm-dd
- **April 22, 2016** – Semi-Annual Groundwater Monitoring  
File to be named: RO74\_GWM\_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 your email address is not listed on the first page of this letter, ACEH is requesting your email address to help expedite communications and to help lower overall costs. Please provide that information in your next submittal.

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please call me at (510) 567-6876 or send me an electronic mail message at [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org).

Sincerely,

Mark Detterman  
Senior Hazardous Materials Specialist

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

cc: Leonard Albright, Green Star Environmental, 354 McDonnell Street, Suite 9, Lewisville, TX 75057  
(sent via E-mail to: [LCAlbright@greenstarenvironmental.com](mailto:LCAlbright@greenstarenvironmental.com))

Terrance Harriman, Green Star Environmental, 354 McDonnell Street, Suite 9, Lewisville, TX 75057 (sent via E-mail to: [TAHarriman@greenstarenvironmental.com](mailto:TAHarriman@greenstarenvironmental.com))

William Little, Advanced GeoEnvironmental, Inc, 837 Shaw Road, Stockton, CA 95215  
(sent via electronic mail to [WLittle@advgeoenv.com](mailto:WLittle@advgeoenv.com))

Dilan Roe, ACEH (sent via electronic mail to [dilan.roe@acgov.org](mailto:dilan.roe@acgov.org))

Mark Detterman (sent via electronic mail to [mark.detterman@acgov.org](mailto: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/](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.

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>REVISION DATE:</b> May 15, 2014
	<b>ISSUE DATE:</b> July 5, 2005
	<b>PREVIOUS REVISIONS:</b> October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> 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](mailto: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](mailto: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.