ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

January 30, 2009

Mr. Donald Miller
Barbara Miller Trust, Et Al.
989 41st Street
Oakland, CA, 94608

Subject: Fuel Leak Case No. RO0000337 (Global ID # T0600100249), California Linen Rental, 989 41st Street, Oakland, CA 94609

Dear Mr. Miller:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above referenced site and the documents entitled, "Request for Site Closure" dated August 6, 2008 and received August 25, 2008 and "Supplemental Soil Vapor Extraction Remediation Report" Dated May 22, 2008 and received June 25, 2008 prepared by Zemo & Associates LLC (Zemo) and RGA Environmental (RGA), respectively. RGA completed a remedial action which included the removal of vapor phase contamination using high vacuum dual phase vapor extraction from October 2006 through May 2007. The remedial action removed residual vapor phase hydrocarbon contamination, and approximately 13,000 pounds of total hydrocarbon mass was removed from the vadose zone.

Residential redevelopment, apparently at grade construction, is proposed for this site; however, significant levels of residual heavy metals and petroleum hydrocarbon contamination remains in soil above residential ESLs at concentrations of up to 2,200 parts per million lead (Pit 1d-3 feet bgs), 1,900 mg/kg TPHg, 460 mg/kg TPHd, 4.3 mg/kg benzene, 25 mg/kg toluene, 33 mg/kg ethylbenzene, 180 mg/kg xylenes (I2-10 feet bgs). In June 2007, soil vapor samples were collected from the SVE system influent air stream, and residual vapor phase TPH contamination above residential ESLs was detected at concentrations of up to 796,000 $\mu g/m^3$ TPHg, 2,800 $\mu g/m^3$ benzene, 7,900 $\mu g/m^3$ toluene, 4,500 $\mu g/m^3$ ethylbenzene and 11,000 $\mu g/m^3$ total xylenes. Post remediation confirmation soil vapor sampling has not been conducted to evaluate if residual vapor phase contamination remains in the vadose zone. In addition, it appears that an unknown source of petroleum hydrocarbon contamination may exist in the vicinity of soil borings E8/B5 and E9/B6 (1,300 mg/kg TPHg, 150 mg/kg TPHd, 0.43 mg/kg benzene and 43 mg/kg xylenes). Therefore, ACEH cannot consider case closure for the subject site at this time. Once the data gaps have been addressed, the case can move forward to closure. This decision to deny closure is subject to appeal to the State Water Resources Control Board (SWRCB), pursuant to Section 25299.39.2(b) of the Health and Safety Code (Thompson-Richter Underground Storage Tank Reform Act - Senate Bill 562). Please contact the SWRCB Underground Storage Tank Program at (916) 341-5851 for information regarding the appeal process.

Based on ACEH staff review of the case file, we request that you address the following technical comments and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to mailto:steven.plunkett@acgov.org) prior to the start of field activities.

TECHNICAL COMMENT

1. **Dissolved Contaminant Plume Migration**. In October 2005, an offsite investigation was conducted to evaluate the lateral extent of soil and groundwater contamination down gradient of the site. Nine soil borings

were installed and a strong hydrocarbon odor was noted in soil borings B5, B6 and B7. Separate phase hydrocarbons were observed in groundwater collected from boring B5; however a groundwater sample was not submitted for analysis. Groundwater analytical data collected from boring B6 at 24 feet bgs detected elevated levels of dissolved phase contamination at up to 1,900 µg/L TPHg, 23 µg/L benzene and 240 µg/L xylenes, while groundwater analytical data from boring B5 collected at 28 feet bgs detected 120 µg/ TPHg and 1 µg/L benzene.

Review of lithologic data for multiple nearby LUFT sites including (RO0002733, Oak Walk Redevelopment, 4090 San Pablo Ave, Emeryville) has established that course grain alluvial sediments deposited in paleo-stream channels are encountered in the subsurface, and the paleo-channels can act as a conduit for the offsite migration of dissolved phase hydrocarbon contamination. Site lithology, in particular lithologic data from borings B5, B6, E8, E9, B15 and B16 identified a silty sandy zone with moderate to high estimated permeability is present from approximately 6.5 feet bgs to 11 feet bgs indicating a paleo stream channel. Groundwater is encountered in this facies at approximately 8 feet to 10 feet bgs. Groundwater samples were collected from borings B5 and B6 at 28 feet bgs and 24 feet bgs, respectively. However, depth discrete groundwater samples were not collected from the shallow water bearing zone above 11 feet bgs. Consequently, it is doubtful that groundwater samples collected from borings B5 (28 feet bgs) and B6 (24 feet bgs) represent groundwater conditions in the upper water bearing zone.

The upper water bearing zones is underlain by sandy, silty clay unit with low estimated permeability. Groundwater analytical data from boring B31 (B31-35 feet bgs) did not detect dissolved phase contamination above laboratory reporting limits, while groundwater samples from boring B32 detected 220 µg/L TPHd, 1,700 µg/L TPHmo (B32-30 feet bgs) and 160 µg/L TPHd and 310 µg/L TPHmo (B32-56 feet bgs). No shallow groundwater samples were collected from borings B31 or B32 because the paleo stream channel deposits detected in borings B5, B6, E8, E9 were not encountered in borings B31 or B32. Consequently, it is unlikely that groundwater samples collected from borings B31 (35 feet bgs) and B32 (30 feet bgs 56 feet bgs) represent groundwater conditions in the upper water bearing zone.

Considering the residual contamination detected in soil from borings B5/E8 and B6/E9 (1,300 mg/kg TPHg, 150 mg/kg TPHd, 0.43 mg/kg benzene and 43 mg/kg xylenes) and the screen interval for wells E8 (19 feet bgs to 34 feet bgs) and E9 (25 feet bgs to 35 feet bgs) it is unlikely these wells would encounter dissolved phase contamination in the upper water bearing zone above 11 feet bgs. Combined, the lithologic and groundwater analytical data suggest that there are two distinct water bearing zones; an upper water bearing zone above 12 feet bgs (paleo stream channel) and a lower water bearing zone below 20 feet bgs. Please evaluate if the upper water bearing zone encountered at 8 feet bgs to 11 feet bgs in borings B5, B6 and extraction wells E8 and E9 may be acting as a conduit for offsite plume migration. Please propose a scope of work to evaluate the upper water bearing zone in the work plan requested below.

2. **Post Remediation Soil Vapor Sampling.** In October 2006, RGA began a program of soil vapor extraction to remove residual vapor phase contamination from the vadose zone in the vicinity of former USTs. The SVE system was in operation from October 2006 through August 2007, when operation of the SVE system was discontinued. Approximately 13,000 pounds of total petroleum hydrocarbon was recovered during SVE system operation. In June 2007, prior to the SVE system shut down, combined influent soil vapor samples were collected from the influent air stream and residual contamination was detected at concentrations of up to 796,000 µg/m^3 TPHg, 2,800 µg/m^3 benzene, 7,900 µg/m^3 toluene, 4,500 µg/m^3 ethylbenzene and 11,000 µg/m^3 total xylenes. These data indicate that significantly elevated contamination exceeding residential ESLs remains in the vadose zone beneath your site. Therefore, in order to evaluate the soil vapor to the indoor air exposure pathway it is necessary collect post remediation confirmation soil vapor samples. Please propose a scope of work to collect soil vapor samples in the work plan requested below.

3. **Down Gradient Soil Contamination.** In October 2005, nine soil borings were installed and a strong hydrocarbon odor was noted in soil borings B5, B6 and B7. Soil analytical data collected from borings B5 and B6 detected 590 mg/kg TPHg (B5-7.5 feet bgs) and 240 mg/kg TPHg (B6-7 feet bgs). In March 2007, RGA installed three additional extraction wells E4, E8 and E9 for remediation proposes. Soil samples collected during the well installation detected significantly elevated levels of up to 1,300 mg/kg TPHg, 150 mg/kg TPHd, 0.43 mg/kg benzene and 43 mg/kg xylenes in soil. The elevated levels of hydrocarbon contamination in B5/E8 and B6/ E9 may indicate the existence of an unknown source; therefore we request that you evaluate if an unknown source of residual contamination exists in the vicinity of borings B5, B6, E8, and E9. Please propose a scope of work to evaluate the high levels of residual TPH contamination in the work plan requested below.

4. **Soil Excavation and Removal**. RGA identified seven areas where residual contamination above residential ESL remains in soil. The seven areas of concern were not considered as part of the former UST remedial action. A total of approximately 400 yd^3 of soil was excavated and disposed of offsite. Post excavation confirmation soil sample were collected at all seven locations and residual contamination above residential ESL remains in place in soil at maximum concentrations up to 2,200 mg/kg lead (Pit 1d-3.0 feet bgs), 11 mg/kg arsenic (Pit 7a-0.5 feet bgs), 190 mg/kg TPHg (Pit 4d-4.0 feet bgs) and 200 mg/kg TPHd (Pit 4e-4.0 feet bgs). Zemo states that arsenic concentrations in soil exceed the residential ESLs, but represent background levels for bay area soils. However, no documentation is presented to support this statement. Please present documentation to substantiate your assertion that residual arsenic above residential ESLs represents background levels in Bay Area Soils in the response to comments requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Steven Plunkett), according to the following schedule:

- **March 15, 2009 –** Response to Comments
- **April 30, 2009 –** Work Plan

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.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

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.

If you have any questions, please call me at (510) 383-1767 or send me an electronic mail message at steven.plunkett@acgov.org.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

Donna L. Drogos, PE
Supervising Hazardous Materials Specialist

cc: (sent via email only)
Elizabeth Costello, aec@pocketdevelopment.com
Paul King, pdking0000@aol.com
Dawn Zemo, dazemo@zemoassociates.com
Leroy Griffin, lgriffin@oaklandnet.com)
Donna Drogos, Steven Plunkett, File

ALAMEDA COUNTY
HEALTH CARE SERVICES AGENCY
Department Of Environmental Health
Environmental Protection Division
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

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Mr. Donald Miller
Barbara Miller Trust, Et Al.
989 41st Street
Oakland, CA 94608

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