ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
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February 18, 2009

Mr. Natale and Darlene Piazza
7613 Peppertree Road
Dublin, Ca 94568-3343

Mr. Franklin and Priscilla Mays
7567 Amarillo Road
Dublin, CA 94568-2223

Subject: Fuel Leak Case No. RO00002739 (Global ID #T06019758706) Piazza Property, 20987 Baker Road, Castro Valley, CA

Dear Mr. Piazza and Mr. Mays:

Alameda County Environmental Health Department (ACEH) staff has reviewed the case file for the above referenced site including the recently submitted report entitled, "Additional Information Report" dated November 15, 2008 and prepared by AEI Consultants Inc (AEI). During the tank removal in April 2004, TPHg and TPHd were detected at maximum concentration of up to 1,400 mg/kg and 10,000 mg/kg, respectively. AEI has presented additional information in their response to ACEH comments to support their position that natural attenuation is occurring at the site.

ACEH concurs that natural attenuation is a recognized, valid scientific process that is well documented at fuel release sites. However, we do not concur that soil data collected during the 2004 UST removal should be ignored and replaced with soil data collected during the installation of monitoring well IN-1 in 2007. All soil and groundwater data must be considered without selectively choosing one data set over another. Furthermore, geology beneath the site indicate that a highly weathered possibly fractured saprolitic bedrock unit encountered at approximately 15 feet bgs may act as a conduit for the downward migration of dissolved phase contamination. Prior to the evaluation of your case for regulatory closure, ACEH requests that you address the comments discussed below.

Based on ACEH staff review of the documents referenced above, we request that you address the following technical comments. Please send us the reports requested below. (e-mail preferred to steven.plunkett@acgov.org).

TECHNICAL COMMENTS

1. **Fate of Dissolved Phase Contamination.** AEI states that the contamination detected during the tank removal in April 2004 (1,400 mg/kg TPHg and 10,000 mg/kg TPHd) is no longer present, and that residual pollution left in place after the tank removal has degraded over the last four years by natural attenuation. AEI hypothesizes that natural attenuation, specifically biodegradation processes, are responsible for the decrease in concentrations of contamination originally identified in April 2004. However, since the USTs were not in operation for approximately 10 years prior to the UST removal, natural attenuation processes would have been occurring prior to the discovery of the release, and it is unlikely that natural attenuation is solely responsible for the degradation of contamination beneath your site.

During the preliminary site assessment completed in May 2005, dissolved phase TPHg and TPHd contamination was detected at maximum concentrations of up to 7,300 µg/L and 23,000 µg/L, respectively, while benzene and MtBE were not detected in groundwater above laboratory reporting limits. AEI identified a highly weathered Saprolite facies overlying a fractured claystone at approximately 14 feet below ground surface (bgs), and groundwater flow within the low permeability sediments is through an interconnected fracture system. If the underlying claystone contains fractures, the fracture could act as a conduit for the downward migration of dissolved phase contamination. Please evaluate if the bedrock fractures indentified in the claystone may be acting as a conduit for the downward migration of dissolved phase contamination and present the results of your evaluation in the report requested below

2. **Soil Vapor Sampling.** AEI has collected qualitative "soil gas" data by inserting a vapor monitoring instrument into the open well head; the instrument samples atmospheric air and possibly air from inside the well casing. AEI hypothesizes that the relative concentrations of total volatile hydrocarbons, oxygen, methane and carbon dioxide detected by the instrument indicate that natural attenuation via biodegradation is responsible for the degradation of hydrocarbon contamination beneath the site.

   AEI has presented technical references to support their use of non-discrete qualitative soil vapor samples collected from the well head to evaluate biodegradation. The sampling procedure used in technical reference presented by AEI; "In-situ Bioventing: Pilot Testing Results In Deep Soils in the Southwestern United States", describe the installation of soil vapor monitoring points installed at discrete depths in the source area, with background vapor monitoring points installed in uncontaminated soil to characterize soil gas conditions. It is unclear what protocols AEI used to collect "soil vapor" samples, since the technical reference cited by AEI describe studies that use air injection wells combined with the installation and sampling of discrete soil vapor probes.

   AEI's use of "soil vapor" data collected from groundwater monitoring wells, and the comparison of the "soil vapor" data against the RWQCB ESLs is not conducted in accordance with industry standards and is unacceptable. Evaluation of the vapor intrusion migration pathway requires the collection of actual soil gas samples. Furthermore, since residential redevelopment is proposed at the site, and high concentrations of hydrocarbons have been detected in soil and groundwater, soil vapor sampling is necessary to accurately evaluate the potential contaminant volatilization from soil and groundwater to indoor air exposure pathway. Please collect soil vapor samples utilizing 2003 DTSC guidelines to evaluate risk to on-site potential residential receptors. Please propose a scope of work to address the above-mentioned concerns and submit a work plan due by the date specified below.

Once the above mentioned data gaps have been addressed, the site can be evaluated for case closure.

TECHNICAL REPORT REQUEST

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

- **May 1, 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) 383-1761 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: Robery Flory
AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597

Cherie McCaulou
Regional Water Quality Control Board
1515 Clay Street
Oakland, CA 94612

Donna Drogos, ACEH, Steven Plunkett ACEH, File