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

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September 10, 2009

Mr. David Blain
BPS Reprographic Services
945 Bryant Street
San Francisco, CA 94103

Subject: Fuel Leak Case No. RO0000151 and Geotracker Global ID T0600100196, City Blue Print, 1700 Jefferson Street, Oakland, CA 94612

Dear Mr. Blain:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the site including the most recently submitted documents entitled *Request for Regulatory Closure* dated June 3, 2009 and the March 2009 Groundwater Monitoring Report dated March 19, 2009 both prepared by Environmental Risk Specialties Corporation (ERS). The request for case closure appears to be based on ERS' hypothesis that the hydrocarbon contamination is localized around the original source area and that the high concentration of total petroleum hydrocarbons as gasoline (TPHg) and benzene in MW-5 is due to an unknown off-site source.

A review of the site history indicates that the hypothesis that MW-5 is impacted by an off-site source is not substantiated. In June 1987, the USTs were removed and wells MW-1 through MW-3 were installed. Well MW-1, immediately adjacent to the underground storage tank (UST) had 30 inches of separate phase hydrocarbons (SPH) at the time of installation and groundwater extraction was implemented in September 1987 to remove SPH. Wells MW-1A and MW-4 were installed as remediation wells in January 1988, MW-1A was installed to replace MW-1 which had been degraded by the SPH in the well and MW-4 was installed to aid with SPH removal. MW-5 was installed to the north 160 feet downgradient of well MW-1 in August 1988 and contained 0.36 inches of SPH. Groundwater monitoring reports through 1996 also indicate that the groundwater flow direction was to the north to northwest. Groundwater extraction was performed in on-site wells MW-1A and MW-4 from 1992 to 1999 until all SPH was removed from on-site wells (an estimated 5,062 pounds). However, no SPH removal was performed in off-site monitoring wells. Oxygen releasing compound (ORC) socks were then installed in wells MW-1A, MW-3, MW-4 and MW-5 and were removed in 2002. Petroleum hydrocarbon concentrations showed a decrease in concentrations during ORC installation in well MW-5. These results appear biased low since the wells with the ORC deployed were the wells sampled. This is further substantiated since contaminant concentrations in MW-5 have rebounded to pre-1999 levels after the ORC socks were removed and up to 11,700 µg/L benzene is currently being detected in groundwater.

Also, additional data gaps appear to exist at the site including: consideration of the vapor pathway, evaluation of potential risk to adjacent apartments and buildings identified as having basements and a sunken courtyard, the lines of evidence that support the hypothesis that MW-5

is impacted from an off-site source and other data gaps identified in the technical comments below. Therefore, ACEH cannot consider case closure for the subject site at this time. 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 appeals process.

**TECHNICAL COMMENTS**

1. **Delineation of Contamination in Source Area** – A maximum concentration of 8,800 milligrams per kilogram (mg/kg) total volatile hydrocarbons (TVH) was detected in soil from the UST excavation at a depth of 6.5 feet below ground surface (bgs). Up to 3,300 mg/kg TVH was detected in soil from boring B5 at a depth of 24 feet bgs. No deeper soil samples were collected during the subsequent investigations and minimal samples were collected from the well borings, leaving the lateral and vertical extent of contamination undefined in the source area. In addition, soil removed from the site was aerated and reused on-site with no confirmation sampling results reported. Free product was encountered at up to 30 inches in MW-1 in 1987 but later appeared at a thickness of 4 inches in 1991 in cross-gradient well MW-3, 60 feet away, leaving the extent of free product undefined. Please submit a proposal to define the vertical and lateral extent of contamination in the source area in the work plan requested below.

2. **Dissolved Plume Definition** - ACEH requested that the lateral extent of the dissolved plume be defined in a previous letter dated February 13, 2004. MACTEK's May 12, 2004 Work Plan response states that TPHg concentrations have generally been reduced an order of magnitude and therefore concluded that the "plume is relatively stable and laterally defined". A proposal to evaluate the extent of the dissolved plume was not presented in the work plan. However, since 2002 when ORC socks were removed from the wells that were being monitored, concentrations in well MW-5 have increased to pre-1999 levels indicating that ORC socks were not effective in reducing contamination and that significant mass may still be present at the site. In addition, HLA's Phase I review of the site performed in 1989 did not identify an off-site contamination source and concluded that the site is the source of the product at MW-5. Therefore, we request that you submit a work plan to define the lateral extent of the dissolved hydrocarbon plume by the date requested below.

3. **Well Survey** – We request that you perform a well survey to complete the survey of the potential migration pathways and potential conduits for vertical and lateral migration that may be present in the vicinity of the site. The well survey should include a 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.

4. **Site Conceptual Model** – As no conceptual model for the release has been presented to date, at this juncture, it appears appropriate to develop a site conceptual model (SCM). The 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:
(1) 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;
(2) Update geologic cross-sections to illustrate subsurface features, man-made conduits, and lateral and vertical extent of contamination;
(3) Plots of chemical concentrations versus time, plotted with distance;
(4) Update tables to include all historical groundwater data and wells prior to plotting;
(5) Summary tables of chemical concentrations in different media (i.e. soil, groundwater, and soil vapor);
(6) Well logs, boring logs, and well survey maps;
(7) Discuss likely contaminant fate and transport;
(8) Assess the potential for vapor migration to adjacent buildings, basements, etc.; and
(9) Documentation to support ERS' hypothesis of an off-site source for SPH in MW-5.

If data gaps (i.e. plume/source definition, potential contaminant volatilization to indoor air or contaminant migration along preferential pathways, etc.) are identified in the SCM, please include a proposed scope of work to address those data gaps in the work plan due by the date specified below. Please note that the work plan must address all technical comments presented in our December 11, 2006 correspondence and all data gaps identified in the SCM.

5. **Data Tables** – ACEH's February 13, 2004 letter requested that all data be tabulated and that a rose diagram be added to monitoring reports. To date, this data has not been presented. Further, the data table in your June 3, 2009 report omits data from MW-1 and MW-4. Omitting this data makes it appear that off-site concentrations were always higher than on-site concentrations, which was not the case. Please tabulate all data on your data tables and include groundwater elevations on the same table.

## TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Barbara Jakub), according to the schedule presented below:

- **December 7, 2009** – SCM with Work Plan to investigate data gaps

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) 639-1287 or send me an electronic mail message at barbara.jakub@acgov.org.

Sincerely,

Barbara J. Jakub, P.G.
Hazardous Materials Specialist

Enclosures: ACEH Electronic Report Upload (ftp) Instructions

cc: David DeMent, ERS, 1600 Riviera Avenue, Suite 310, Walnut Creek, CA 94596
Donna Drogos, ACEH
Barbara Jakub, ACEH
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