Khatri, Paresh, Env. Health

From: Tom Venus [tvenus@broadbentinc.com]
Sent: Wednesday, March 26, 2008 9:56 AM
To: Khatri, Paresh, Env. Health
Cc: 'Kiran Nagaraju'
Subject: DPE Remediation System Install at Former BP 11117

Hello Paresh,

I have been providing ACEH with periodic progress updates of the installation of the Dual-Phase Extraction Treatment System being installed at Former BP Station #11117 (ACEH Case #RO00000356), located at 7210 Bancroft Ave, Oakland. These reports had been sent to the personal attention of Steven Plunkett when he was the assigned ACEH regulator for BP sites in my portfolio. I have usually submitted these progress updates on a monthly basis when combined with regularly-scheduled written quarterly monitoring reports (January, April, July, and October) or dedicated emails for the remaining months.

For the DPE Remediation System Install progress report for March 2008:

- Stratus Environmental, Inc. (Executing Consultant for BP) met with PG&E regarding electrical power drop to the Site. Apparently, the power drop will have to come from a transformer across the street and not from the nearby corner. PG&E is working on providing power to Stratus as requested in previously-submitted service application;
- The Authority to Construct Permit sent by Stratus was received by the Bay Area Air Quality Management District. Due to proximity to a nearby K-12 school, the ATC must go thru a Public Notice comment period before BAAQMD approval;
- Stratus has held preliminary discussions with East Bay Municipal Utility District regarding treated wastewater discharge. An EBMUD industrial discharge application is due to be submitted by Stratus soon;
- As reported previously, the skid-mounted DPE system has been purchased. It is presently still at Solinco's Southern California facility pending scheduling for delivery to coincide with field construction.

Should you have any questions, please do not hesitate to contact me at your earliest convenience.

With regards,

Tom Venus, PE
Senior Engineer
BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
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ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
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October 11, 2007

Mr. Paul Supple
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Mr. Bill Borgh
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Mr. Paul Bernard
One Eastmont Town Center
7200 Bancroft Avenue
Oakland, CA 94605

Ms. Diane Clark
Eastmont Town Center CX LLC
7200 Bancroft Avenue
Oakland, CA 94605-2403

Subject: Fuel Leak Case No. RO0000356 (Global ID #T0600100201), BP #11117, 7210 Bancroft Avenue, Oakland, California.

Dear Messrs. Supple, Bernard and Borgh and Ms. Clark

Alameda County Environmental Health (ACEH) has reviewed the case file and the recently submitted reports entitled "Corrective Action Plan (CAP)" dated December 29, 2006, "Soil and Groundwater Investigation Report" dated June 22, 2007 and "Dual Phase Vapor Extraction (DPE) Remediation System Design Specifications" dated June 29, 2007 submitted on your behalf by Broadbent & Associates (Broadbent). Results from the soil and groundwater investigation conducted in June 2007 indicate that dissolved phase petroleum hydrocarbons are present in groundwater at concentrations of up to 170,000 µg/L TPHg, 7,700 µg/L benzene and 6,500 µg/L MtBE.

In November 2001, a DPE pilot test was conducted on site to determine if subsurface conditions are favorable for the implementation of a full scale DPE system. Broadbent has concluded that DPE is a viable remedial alternative at the site. Consequently, ARCO has proposed the installation of a dual phase vapor extraction system to mitigate soil and groundwater contamination. ACEH generally concurs with the recommendations in the remediation system design specification provided the following technical comments are addressed.

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 steven.plunkett@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Soil and Groundwater Investigation.** Results from the June 2007 soil and groundwater investigation detected high concentrations of TPH and TPH constituents in soil and groundwater beneath your site. Of particular concern are high levels of dissolved phase TPHg, benzene and MtBE

at concentrations up to 170,000 µg/L, 7,700 µg/L and 6,500 µg/L, respectively. In addition, quarterly groundwater monitoring conducted in February 2007 detected high concentrations of dissolved phase petroleum hydrocarbon TPHg, benzene and MtBE at concentrations up to 78,000 µg/L, 9,700 µg/L and 15,000 µg/L, respectively.

2. **DPE Pilot Test and System Installation.** A DPE pilot test was completed in November 2001 to determine the feasibility of DPE as a remedial option for your site. In response to a letter request from ACEH dated June 2006, Broadbent prepared a CAP to evaluate the feasibility of several alternatives for the remediation of residual soil contamination and the dissolved phase hydrocarbon plume. Broadbent proposed the installation of a DPE system to mitigate residual soil and groundwater contamination beneath your site. The remediation system design will utilize a total of six DPE wells. Considering the proximity of monitoring wells MW-2 and MW-4, located in the source area, Broadbent has recommended these two monitoring wells be converted into 4-inch DPE wells. ACEH generally agrees with the proposal to implement a DPE system for the mitigation of soil and groundwater contamination beneath your site, and the recommendation to convert monitoring wells MW-2 and MW-4 into 4-inch DPE extraction wells is acceptable. Please present the results of the DPE system installation in the report requested below.

3. **Monitoring Well Installation.** ACEH requests that two additional groundwater monitoring wells be installed at your site in order to evaluate the efficacy of the DPE system and to monitor groundwater conditions near the source area. The recommendation to convert MW-2 and MW-4 into remediation wells will leave a gap in the monitoring well network; therefore, a new monitoring well must be installed approximately midway between MW-2 and MW-4. In addition, considering that high concentrations of dissolved phased TPHg, benzene and MtBE are present in the southwest portion of the site and considering the absence monitoring data in this area, one monitoring well is to be installed approximately midway between DPE-2 and DPE-3. Prior to the monitoring well installation, please provide ACEH with an undated figure showing the location of the two new monitoring wells. Please present the results from the monitoring well installation in the report requested below.

TECHNICAL REPORT REQUEST

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

- **November 30, 2007** – Monitoring Well Installation Report
- **March 30, 2007** – DPE Remediation System Installation Report

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

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. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

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. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for 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 monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

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.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

cc: Tom Venus
Broadbent and Associates, Inc.
1324 Mangrove Ave., Suite 212
Chico, Ca 95926

Donna Drogos, Steven Plunkett, File

ALAMEDA COUNTY
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March 19, 2007

Mr. Paul Supple
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Ms. Liz Sewell
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76 Broadway
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Mr. Jim Givens
One Eastmont Town Center
Oakland, CA 94605-1907

Ms. Diane Clark
Eastmont Town Center CX LLC
7200 Bancroft Avenue
Oakland, CA 94605-2403

Subject: Fuel Leak Case No. RO0000356, BP #11117, 7210 Bancroft Avenue, Oakland, California.

Dear Messrs. Supple and Givens, Mses. Sewell and Clark

Alameda County Environmental Health (ACEH) has reviewed the case file and the recently submitted reports entitled "Work Plan for Onsite Soil and Groundwater Investigation (SWI)", dated November 30, 2005 and "Corrective Action Plan" and submitted on your behalf by Broadbent & Associates (Broadbent). The scope of work as presented in the work plan recommends the installation of two additional soil borings that will delineate the vertical extent of soil and groundwater contamination on the southeastern portion of the site.

The most recent soil and groundwater investigation conducted in September 2005 indicates that dissolved phase petroleum hydrocarbons are present in groundwater in soil boring A-4 at concentrations of up to 120,000 µg/L TPHg, 11,000 µg/L benzene and 39,000 µg/L MtBE. Furthermore, no groundwater sampling was conducted at soil boring A-7 to determine the extent of groundwater contamination to the northeast of the source area. ACEH generally agrees with the scope of work as proposed in the Work Plan provided the following comments discussed below are implemented.

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 steven.plunkett@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Soil Boring Locations.** ACEH generally concurs with the propose location and total depth of 60 feet bgs. for soil boring installation as presented in the Work Plan. The proposed use of a fuel fluorescence detector to determine the vertical extent of contamination is acceptable. During recent site investigations conducted in September 2005, the extent to dissolved phase petroleum hydrocarbon contamination was not adequately defined downgradient of MW-4 and soil boring A-4. Therefore, ACEH requests that one additional soil boring be installed near the northeast corner of the

at this location. Depth discrete groundwater samples are to be collected at first encountered, at 10 feet below the capillary fringe and other discrete water-bearing zones, if other discrete water-bearing zones are encountered. Please present the results of the SWI in the report requested below.

2. **Corrective Action Plan (CAP).** Previous remedial activities at the site included vacuum extraction from onsite monitoring wells, with approximately 10,900 gallons of petroleum hydrocarbon impacted groundwater extracted. Further remedial activities consisted of a dual-phase extraction pilot test that included the removal of an additional 6,500 gallons of impacted groundwater. The CAP evaluated nine remedial alternatives and retained three alternatives as the most viable for the site including; monitored natural attenuation, In-Situ oxidations and DPE. ACEH agrees with the remedial alternative recommended by Broadbent, with implementation of the CAP to follow the completion SWI according to the schedule below.

TECHNICAL REPORT REQUEST

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

- **April 30, 2007** – Soil and Groundwater Investigation
- **June 30, 2007** – CAP Implementation

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

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. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

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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.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

cc: Tom Venus
Broadbent and Associates, Inc.
1324 Mangrove Ave., Suite 212
Chico, Ca 95926

Donna Drogos, Steven Plunkett, File

ALAMEDA COUNTY
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June 2, 2006

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Mr. Jim Givens
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Ms. Diane Clark
Eastmont Town Center CX LLC
7200 Bancroft Avenue
Oakland, CA 94605-2403

Subject: Fuel Leak Case No. RO0000356, BP #11117, 7210 Bancroft Avenue, Oakland, California.

Dear Messrs. Supple and Givens, Mses. Sewell and Clark

Alameda County Environmental Health (ACEH) has reviewed the case file and the recently submitted reports "Soil and Groundwater Investigation (SWI)", dated November 30, 2005 and "First Quarter 2006 Groundwater Monitoring Report" and submitted on your behalf by URS Corporation, Inc. The recent SWI conducted in September 2006 suggest that dissolved phase petroleum hydrocarbons are present in groundwater onsite in maximum concentrations of 510,000 µg/L TPHg, 25,000 µg/L benzene and 39,000 µg/L MtBE. In addition, groundwater samples collected below 35 feet bgs tested 120,000 µg/L TPHg, 11,000 µg/L benzene and 39,000 µg/L MtBE. Suggesting that vertical extent of contamination has not been defined in the southern portion of the site. Furthermore, analytical results from the February 2006 monitoring event tested at maximum concentrations of 970,000 µg/L TPHg, 60,000 µg/L benzene and 38,000 µg/L MtBE.

The level of contamination onsite far exceeds the Environmental Screening Levels for sites with contaminated soil and groundwater as defined by the Regional Water Quality Control Board. Therefore, ACEH requests that you complete the preparation of a Corrective Action Plan (CAP) to address the soil and groundwater contamination issues and remediation goals for the site in accordance with California Code of Regulations 23 CCR, Section 2720 – 2728; State Water Resources Control Board Resolution 92-49, "Policies and Procedures for Investigation, Cleanup and Abatement of Discharges Under Water Code Section 13304"; and with the Regional Water Quality Control Board (Regional Board) Water Quality Control Plan for the basin. Additionally, ACEH requests that a Site Conceptual Model be prepared to help guide the site investigation process. Please include data and information from the most recent SWI when compiling the SCM. Please see the technical comments below regarding the proposed soil and groundwater investigation, SCM and CAP implementation.

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 steven.plunkett@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Phase One – Onsite Source Area Characterization**. URS installed five soil boring onsite to define the lateral and vertical extent on petroleum hydrocarbon contamination in the source area. Proposed soil boring A6 was not completed due to the proximity of underground utilities. Results of the onsite investigation determined that dissolved phase petroleum hydrocarbons are a serious concern on site. In particular, the concentrations of 120,000 µg/L TPHg, 11,000 µg/L benzene and 39,000 µg/L MtBE in grab groundwater samples collected at 35 feet bgs from soil boring A-4, and concentrations of 510,000 TPHg µg/L in soil boring A-2 The SWI completed in September 2005 revealed the need for continued investigation in the south-southeastern portion of the site. Please present a proposal to further define the extent of hydrocarbon contamination in this area in the report requested below.

2. **Phase Two – Offsite Plume Delineation**. URS installed four soil borings offsite to help define the extent of groundwater contamination downgradient of the site. The results of the offsite investigation established that downgradient of the site, toward the northeast, the lateral and vertical extent of contamination apprears to be limited. Indicating that offsite hydrocarbon migration may not currently be a concern. However, contamination plume monitoring should be implemented and discussed during quarterly monitoring for the site. Please see comments below for quarterly groundwater monitoring and reporting.

3. **Project Approach and Investigation Reporting – Site Conceptual Model**

   We anticipate that characterization and remediation work in addition to what is requested in this letter may be necessary at and downgradient from your site. Considerable cost savings can be realized if your consultant focuses on developing and refining a viable Site Conceptual Model (SCM) for the project. A SCM is a set of working hypotheses pertaining to all aspects of the contaminant release, including site geology, hydrogeology, release history, residual and dissolved contamination, attenuation mechanisms, pathways to nearby receptors, and likely magnitude of potential impacts to receptors. The SCM is used to identify data gaps that are subsequently filled as the investigation proceeds. As the data gaps are filled, the working hypotheses are modified, and the overall SCM is refined and strengthened. Subsurface investigations continue until the SCM no longer changes as new data are collected. At this point, the SCM is said to be "validated." The validated SCM then forms the foundation for developing the most cost-effective corrective action plan to protect existing and potential receptors.

   When performed properly, the process of developing, refining and ultimately validating the SCM effectively guides the scope of the entire site investigation. We have identified, based on our review of existing data, some initial key data gaps in this letter and have described several tasks that we believe will provide important new data to refine the SCM. **We request that your consultant develop a SCM for this site, identify data gaps, and propose specific supplemental tasks for future investigations.** There may need to be additional phases of investigations, each building on

the results of the prior work, to validate the SCM. Characterizing the site in this way will improve the efficiency of the work and limit its overall cost.

The SCM approach is endorsed by both industry and the regulatory community. Technical guidance for developing SCMs is presented in API's Publication No. 4699 and EPA's Publication No. EPA 510-B-97-001 both referenced above; and "Guidelines for Investigation and Cleanup of MTBE and Other Ether-Based Oxygenates, Appendix C," prepared by the State Water Resources Control Board, dated March 27, 2000.

The SCM for this project shall incorporate, but not be limited to, the following:

a) A concise narrative discussion of the regional geologic and hydrogeologic setting obtained from your background study. Include a list of technical references you reviewed, and copies (photocopies are sufficient) of regional geologic maps, groundwater contours, cross-sections, etc.

b) A concise discussion of the on-site and off-site geology, hydrogeology, release history, source zone, plume development and migration, attenuation mechanisms, preferential pathways, and potential threat to downgradient and above-ground receptors. Be sure to include the vapor pathway in your analysis. Maximize the use of large-scale graphics (e.g., maps, cross-sections, contour maps, etc.) and conceptual diagrams to illustrate key points. Include structural contour maps (top of unit) and isopach maps to describe the geology at your site. Geologic cross-sections, which include an interpretive drawing of the vertical extent of soil and groundwater contamination (i.e., an interpretive drawing—not a plot of laboratory results). The SCM report requested below is to include one cross section parallel and one cross section perpendicular to the contaminant plume axis. Each cross section should include, but not be restricted to, the following:

    1. Subsurface geologic features, depth to groundwater and man-made conduits.
    2. Surface topography. The cross sections should be extended off-site where necessary to show significant breaks in slope.
    3. Soil descriptions for all borings and wells along the line of section.
    4. Screen and filter pack intervals for each monitoring well.
    5. Sampling locations and results for soil and grab groundwater samples.
    6. Site features such as the tank pit, dispensers, etc. Where appropriate, monitoring well location and soil boring locations will be projected back to the strike of the cross section line.

c) Identification and listing of specific data gaps that require further investigation during subsequent phases of work.

d) Proposed activities to investigate and fill data gaps identified above.

e) The SCM shall include an analysis of the hydraulic flow system at and downgradient from the site. Include rose diagrams for groundwater gradients. The rose diagram shall be plotted on groundwater contour maps and updated in all future reports submitted for your site. Include an analysis of vertical hydraulic gradients. Note that these likely change due to seasonal precipitation and pumping.

f) Temporal changes in the plume location and concentrations are also a key element of the SCM. In addition to providing a measure of the magnitude of the problem, these data are often useful to confirm details of the flow system inferred from the hydraulic head measurements. Include plots of the contaminant plumes on your maps, cross-sections, and diagrams.

g) Several other contaminant release sites exist in the vicinity of your site. Hydrogeologic and contaminant data from those sites may prove helpful in testing certain hypotheses for your SCM. Include a summary of work and technical findings from nearby release sites and incorporate the findings from nearby site investigations into your SCM.

h) Plots of chemical concentrations vs. time and vs. distance from the source. Plots should be shown for each monitoring well, which has had detectable levels of contaminants

i) Summary tables of chemical concentrations in each historically sampled media (including soil, groundwater and soil vapor).

j) Boring and well logs (including construction/screening), and a summary table indicating construction specifications for each monitoring and extraction well.

Report the information discussed above in your initial SCM and present it in the report requested below. Include updates to your SCM in the Soil and Water Investigation (Results of Expedited Site Assessment) Report requested below.

4. **Groundwater Flow Direction and Hydralic Gradient**. The calculated flow direction at the site and the nearby Chevron service station has historically been toward the north-northwest. However, hydraulic gradient is expected to be toward the southwest. Please discuss this apparent inconsistency of the local groundwater flow direction with the estimated regional hydraulic gradient as requested previously by this office in December 2004 and present the results of your research in the SCM requested below. In addition, review of historic groundwater elevation data indicates that monitoring well MW-10 has not been surveyed. Please complete the survey of monitoring well MW-10 and post the survey data to Geotracker as required for compliance.

5. **Quarterly Groundwater Monitoring and Sampling**. Quarterly groundwater monitoring is to be continued for the series of groundwater monitoring wells as recommended by URS. Groundwater samples are to be analyzed for total petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylenes and MTBE,TBA and EtOH using EPA Method 8260B. Please maintain the current reporting schedule for groundwater monitoring at the site.

6. **Corrective Action Plan (CAP)**. As directed previously by ACEH, you are required to prepare a CAP 180 days after the completion of an investigation report. The purpose of the CAP is to use the information obtained during investigation activities to propose cost-effective **final cleanup objectives for the entire contaminant plume and remedial alternatives for soil and groundwater** that will adequately protect human health and safety, the environment, eliminate nuisance conditions, and protect water resources. A CAP for the final cleanup of contamination (MTBE, petroleum products, and associated blending compounds and additives) in soil and groundwater caused by an unauthorized release at your site will be requested upon completion of your Soil and Water

Investigation in accordance with the schedule specified below. The CAP shall detail at least three technically and economically feasible methods to restore and protect beneficial uses of water and to meet the cleanup objectives for each contaminant established in the CAP. The CAP must propose verification sampling and monitoring to confirm completion of corrective actions and evaluate CAP implementation effectiveness.

TECHNICAL REPORT REQUEST

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

- **July 30, 2006** – Work Plan for Onsite Soil and Groundwater Investigation with Initial Site Conceptual Model

- **January 1, 2007** – Corrective Action 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

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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

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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.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

cc: Ms. Lynelle Onishi
URS Corporation Inc.
1333 Broadway, Ste. 800,
Oakland, CA 94612

Mr. Matt Herrick
Broadbent and Associates, Inc.
1324 Mangrove Ave., Suite 212

C:4580

ALAMEDA COUNTY
HEALTH CARE SERVICES AGENCY
Environmental Health Services Administration
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Jim Givens
One Eastmont Malll
Oakland, CA 94605

94605+2425 36

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

May 11, 2005

Kyle Christie
Atlantic Richfield Company
6 Centerpointe Drive, LPR6-161
La Palma, CA 90623-1066

Jim Givens
One Eastmont Mall
Oakland, CA 94605

Liz Sewell
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Subject: Fuel Leak Case No. RO0000356, BP #11117, 7210 Bancroft Avenue, Oakland, California – Workplan Approval

Dear Mssrs. Christie and Givens, and Ms. Sewell:

Alameda County Environmental Health (ACEH) has reviewed your May 9, 2005, *Soil and Groundwater Investigation Workplan Addendum* prepared by URS Corporation, Inc., and the case file for the above-referenced site. We concur with your workplan provided the following conditions are met:

1. If deemed necessary by your geologist or engineer to fully define the vertical and lateral extent of contamination, additional soil or groundwater samples will be collected as part of the current investigation efforts. ACEH will be informed via telephone or email of any additions to the sampling and analysis plan. Any additional work will follow the workplan-specified procedures. Dynamic investigations are consistent with USEPA protocol for expedited site assessments, which are scientifically valid and offer a cost-effective approach to fully define a plume and to help progress a case toward closure.
2. The technical comments listed below will be addressed prior to conducting field work, and documentation will be provided in the report requested below.
3. 72-hr advance written notification (email preferred) will be provided to ACEH prior to field sampling activities.

Please implement the proposed investigation and submit technical reports following the schedule below. In addition, we request that you address the following technical comments in your report.

TECHNICAL COMMENTS

1. Contaminants of Concern

URS proposes sample analysis for TPHg, BTEX, MTBE, TBA, ETBE, TAME, DIPE, 1,2-DCA, EDB and ethanol. Based on our review of the recent groundwater data, contaminants of concern (COCs) at the site include: TPHg, BTEX, MTBE, and TBA, only (TBA is a COC due to its potential occurrence as a MTBE degradation product). Ongoing analysis for TAME, DIPE, ETBE, EDB and 1,2-DCA may not be necessary. Prior to conducting the proposed investigation, we request that you review all historical analytical data for the site in order to 1) confirm compliance with the minimum verification analyses listed in the Tri-Regional Guidelines, and 2)

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 County District Attorney or other appropriate agency, for enforcement. California Health and Safety Code, Section 25299.76 authorizes ACEH enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Please call me at (510) 567-6719 with any questions regarding this case.

Sincerely,

Robert W. Schultz, R.G.
Hazardous Materials Specialist

cc: Diane Clark, Eastmont Town Center, LLC, 7200 Bancroft Ave., Oakland, CA 94605-1907
Lynelle Onishi, URS Corporation, 1333 Broadway, Ste. 800, Oakland, CA 94612-1924
Donna Drogos, ACEH
File

Schultz, Robert, Env. Health

To: Kyle Christie (E-mail)
Cc: Leonard Niles (E-mail)
Subject: [redacted] 7210 Bancroft Ave., Oakland

Kyle:
Your 10/5/04 proposal to reduce the monitoring frequency fowells MW-1, MW-3 and MW-6 to annual is approved.
Sincerely,
Bob Schultz

****

Robert W. Schultz, R.G.
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
510-567-6719 (direct)
510-337-9335 (facsimile)

20356

Atlantic Richfield Company
(a BP affiliated company)

Atlantic Richfield Company
4 Centerpointe Drive, Room 172
La Palma, CA 90623-1066
Phone: (714) 670-5303

August 13, 2004

Mr. Robert Shultz
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

RE: BP Heritage Sites Environmental Project Responsibility

Dear Mr. Shultz:

The purpose of this letter is to inform you of the recent reorganization of Atlantic Richfield Company's (RM) environmental staff that manages retail facility environmental efforts in Northern California. Former BP retail sites 11102, 11104, 11107, 11109, 11117, 11120, 11126, 11132, 11133, 11266 and 11270 will now be managed by myself. Atlantic Richfield Company heritage sites will continue to be managed by Paul Supple. Please direct all correspondence for retail environmental issues regarding these sites to me at the following address:

Kyle Christie
Atlantic Richfield Company
4 Centerpointe Drive, Room 172
La Palma, CA 90623-1066

I look forward to working closely with you on environmental issues affecting these projects and would appreciate meeting with you to discuss any of these projects at your convenience. Please feel free to call me at (714) 670-5303 with any questions. I can also be reached via email at chriska@bp.com.

Sincerely,

Kyle Christie
Environmental Business Manager
Remediation Management

cc: Liz Sewell, ConocoPhilips

URS

November 28, 2003

Alameda County

DEC 0 2 2003

Environmental Health

Mr. Don Hwang
Hazardous Material Specialist
Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

SUBJECT: Soil and Groundwater Investigation Workplan, Underground Storage Tank Removal Report, and Monitoring Well MW-3 Installation Report
Former BP Service Station #11117
7210 Bancroft Avenue, Oakland, California
ACHCS Fuel Leak Case No. RO0000356

Dear Mr. Hwang:

On behalf of the Group Environmental Management Company (an affiliated company of BP), URS Corporation (URS) is submitting the attached *Soil and Groundwater Investigation Workplan* for additional soil and water characterization at the above referenced facility. This workplan was prepared in response to a letter from the Alameda County Health Care Services (ACHCS) to BP dated September 30, 2003. Also attached, as requested in your letter, is the *Underground Storage Tank and Associated Piping and Dispenser Removal* report for the subject site prepared by Environmental Resolutions, Inc. (ERI) for the 1998 underground storage tank removals; and the *Phase II Environmental Audit, Eastmont Mall Property* prepared by Hunter Environmental Services, Inc. in 1989, containing the off-site monitoring well MW-3 installation data. No report or analytical data has been located for the 1984 underground storage tank removals.

We trust that these reports meet your needs. If you have any questions or concerns, please contact Leonard Niles at (510) 874-1720.

Sincerely,

URS CORPORATION

Leonard P. Niles

Leonard P. Niles, R.G. #5774, C.H.G. #357
Project Manager

cc: Mr. Paul Supple, BP, Environmental Resources Management,
(electronic file uploaded to ENFOS)
Ms. Liz Sewell, ConocoPhilips, 75 Broadway, Sacramento, California 95818

URS Corporation
500 12th Street, Suite 200
Oakland, CA 94607-4014
Tel: 510.893.3600
Fax: 510.874.3268

URS

ATTACHMENTS

Hunter Environmental Services, Inc. *Phase II Environmental Audit.* Eastmont Mall Property, Oakland, Alameda County, California. December 20, 1989.

Environmental Resolutions, Inc. *Underground Storage Tank and Associated Piping and Dispenser Removal.* Tosco 76 Service Station 11117, 7210 Bancroft Avenue, Oakland, California. November 20, 1998.

URS Corporation. *Soil and Groundwater Investigation Workplan.* Former BP Service Station No. 11117, 7210 Bancroft Avenue, Oakland, California. November 28, 2003.

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

September 30, 2003

Paul Supple
Atlantic Richfield Co.
(a BP affiliated co.)
PO Box 6549
Moraga, CA 94570

Dear Mr. Supple:

Subject: Fuel Leak Case No. RO0000356, BP Station #11117, 7210 Bancroft Ave., Oakland, CA

Alameda County Environmental Health (ACEH) staff has reviewed the Leaking Underground Storage Tank Oversight Program file including "2nd Quarter 2003 Groundwater Monitoring Report" dated June 20, 2003 by URS Corporation (URS). We request that you address the following technical comments and send us the technical reports requested below.

TECHNICAL COMMENTS

1. Site Characterization - Up to 560,000 micrograms/liter (ug/l) Total Petroleum Hydrocarbons-Gasoline (TPH-G), 32,000 ug/l benzene, and 95,000 ug/l methyl tertiary-butyl ether (MTBE), have been detected in onsite and offsite monitoring wells. The lateral and vertical extent of your dissolved contaminant plume is undefined. Please propose sampling locations to define the plumes associated with your site in the Work Plan requested below. Include geologic cross-sections and show soil and groundwater analytical results, utility conduits, well screens, etc., and explain your rationale for the additional sampling locations. You may want to consider performing an investigation to quickly define the location of the contaminant plume downgradient from the release site prior to installing the permanent monitoring network. That will allow you to optimize the location and depth of the permanent wells, thereby reducing the cost of the monitoring work. Collection of groundwater samples using a one-time direct push water-sampling tool would be appropriate for this investigation.

2. Source Characterization – 6,000 mg/kg TPH-G and 34 mg/kg benzene were detected at MW-4. We request that you use the information from the tank removals to propose additional borings to delineate the lateral and vertical extent of soil contamination in the source area. Please propose boring locations in the Work Plan requested below.

3. Preferential Pathway Survey – An underground utility site survey was described and diagrams provided in a report dated October 19, 2000. However, depths were not indicated. In addition to the map(s) submitted, please use cross-sections showing the location and depth of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s). Evaluate the probability of the contaminant plumes encountering preferential pathways and conduits that could spread the contamination, particularly in the vertical direction to deeper water aquifers. Please submit with the Work Plan requested below.

4. Historical Hydraulic Gradients – Please show using a rose diagram with magnitude and direction; include cumulative groundwater gradients in all future reports submitted for this site.

5. Groundwater Analyses – We request that you include the other fuel oxygenates Tertiary Amyl Methyl Ether (TAME), Ethyl Tertiary Butyl Ether (ETBE), Di-Isopropyl Ether (DIPE), and Tertiary Butyl Alcohol (TBA), Ethanol by EPA Method 8260 and the lead scavengers, Ethylene Dibromide (EDB), Ethylene Dichloride (EDC) for analyses of grab and monitoring well groundwater samples, and for the lead scavengers, EDB and EDC, also perform analyses on soil samples. If any of the latter compounds are detected, and are determined to be of concern (poses a risk to human health, the environment, or water resources) it is to be incorporated into your regular monitoring plan.

6. 1984 Underground Storage Tank Removals - We do not have any reports of this removal. Please provide documents indicating the former locations of the tanks, their condition, whether the excavation had petroleum odors or discoloration indicative of leakage or contained groundwater, sample locations and results.

7. MW-3 Installation - We do not have any reports of this installation. Please provide a boring log and soil sample analyses.

8. 1998 Underground Storage Tank Removals - We do not have any reports of this removal. Please provide documents indicating the former locations of the tanks, their condition, whether the excavation had petroleum odors or discoloration indicative of leakage or contained groundwater, sample locations and analyses, and Oakland Fire Department inspection report.

9. Dual Phase Extraction (DPE) Pilot Test - The report concluded that DPE is feasible for remediation. However, there is no proposal to use DPE. If you plan to use DPE, please indicate in the Work Plan how it will be implemented.

TECHINCAL REPORT REQUEST

Please submit technical reports to the Alameda County Environmental Health (Attention: Don Hwang), according to the following schedule:

October 31, 2003 - Third Quarter 2003 Groundwater Monitoring Report
November 30, 2003 – Workplan
November 30, 2003 - 1984 & 1998 Underground Storage Tank Removal Documentation
November 30, 2003 - MW-3 Installation boring log and soil sample analyses
60 days after Work Plan approval - Soil and Water Investigation Report
January 31, 2004 - Fourth Quarter 2003 Groundwater Monitoring Report
April 30, 2004 – First Quarter 2004 Groundwater Monitoring Report
July 31, 2004 - Second Quarter 2004 Groundwater Monitoring Report

These reports are being requested pursuant to the Regional Water Quality Control Board's (Regional Board) authority under Section 13267 of the California Water Code. If you have any questions, please call me at (510) 567-6746.

Sincerely,

Don Hwang

Don Hwang
Hazardous Materials Specialist
Local Oversight Program

C: √Leonard Niles, URS Corporation, 500-12th St., Suite 200, Oakland, CA 94607-4014
Donna Drogos
File

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

July 25, 2001

Scott Hooton
BP Oil Co.
Midwest Environmental Services
295 SW 41st St., Bldg. 13, Suite N
Renton, WA 98055

Dear Mr. Hooton:

Subject: Former BP Oil Site No. 11117, 7210 Bancroft Ave., Oakland, CA
RO0000356

"1st Quarter 2001 Monitoring..." dated April 25, 2001 prepared by Blaine Tech Services was reviewed. The current round of samples were collected on March 20, 2001 for monitoring wells MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, and MW-10. The sampler indicated that MW-9 couldn't be located. The highest concentrations of analytes sought were found in wells MW-2 and MW-4. The concentrations of Total Petroleum Hydrocarbons-Gasoline (TPH-G), Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), and Methyl Tertiary-Butyl Ether (MTBE), for MW-2 were: 140,000 ug/l, 15,900 ug/l, 24,800 ug/l, 3,700 ug/l, 22,100 ug/l, and 12,900 ug/l, respectively. The concentrations were in the range found during the past couple of years. The concentrations for MW-4 were: 100,000 ug/l, 7,100 ug/l, 4,530 ug/l, 2,540 ug/l, 9,370 ug/l, and 63,100 ug/l, respectively. The MTBE concentration increased to its highest concentration while the concentrations of the other analytes were in the range found during the past couple of years.

MW-1 and MW-3 located on one side of the property, had low and Not Detected (ND) concentrations of BTEX, and MTBE concentrations of 391 ug/l and 398 ug/l, respectively. TPH-G concentrations were 880 ug/l and 1,000 ug/l, respectively. MW-6, MW-7, and MW-10, located downgradient of these two wells, were all ND for BTEX. MW-7's TPH-G was 1,100 ug/l which was a little higher than for MW-1 and MW-3. However, TPH-G and MTBE concentrations for MW-6 and MW-10, and MTBE concentrations for MW-7, were much higher, 3,300 ug/l and 3,760 ug/l, 16,000 ug/l and 11,900 ug/l, and 1,210 ug/l, respectively.

The plume at the site has not been delineated. Therefore, delineation of the plume and a Corrective Action Plan, which includes an assessment of impacts, a feasibility study, and

applicable cleanup levels, are needed. Also, reports have stated that the tank system was replaced in 1998 but our file does not contain a report describing this. Information about this and any other excavation activities are needed. If you have any questions, you may call me at 510/567-6746.

Sincerely,

Don Hwang
Hazardous Materials Specialist

C: David DeWitt, Tosco Marketing Co., 2000 Crow Canyon Pl., Suite 400, San Ramon, CA 94583

file

RO 356
HWANG

State Water Resources Control Board

Division of Clean Water Programs
1001 I Street • Sacramento, California 95814
P.O. Box 944212 • Sacramento, California • 94244-2120
(916) 341-5714 ♦ FAX (916) 341-5806 ♦ www.swrcb.ca.gov/cwphome/ustcf

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at www.swrcb.ca.gov.

APR 26 2001

Scott T. Hooton
Bp Oil Company
295 Sw 41st St
Renton, WA 98055

UNDERGROUND STORAGE TANK CLEANUP FUND (FUND), NOTICE OF ELIGIBILITY DETERMINATION: CLAIM NUMBER 016516; FOR SITE ADDRESS: 7210 BANCROFT AVE, OAKLAND

Your claim has been accepted for placement on the Priority List in Priority Class "D" with a deductible of $10,000.

We have completed our initial review. The next step in the claim review process is to conduct a compliance review.

Compliance Review: Staff reviews, verifies, and processes claims based on the priority and rank within a priority class. After the Board adopts the Priority List, your claim will remain on the Priority List until your Priority Class and rank are reached. At that time, staff will conduct an extensive Compliance Review at the local regulatory agency or Regional Water Quality Control Board. During this Compliance Review, staff may request additional information needed to verify eligibility. Once the Compliance Review is completed, staff will determine if the claim is valid or must be rejected. If the claim is valid, a Letter of Commitment will be issued obligating funds toward the cleanup. If staff determine that you have not complied with regulations governing site cleanup, you have not supplied necessary information or documentation, or your claim application contains a material error, the claim will be rejected. In such event, you will be issued a Notice of Intended Removal from the Priority List, informed of the basis for the proposed removal of your claim, and provided an opportunity to correct the condition that is the basis for the proposed removal. Your claim will be barred from further participation in the Fund, if the claim application contains a material error resulting from fraud or intentional or negligent misrepresentation.

Record keeping: During your cleanup project you should keep complete and well organized records of all corrective action activity and payment transactions. If you are eventually issued a Letter of Commitment, you will be required to submit: (1) copies of detailed invoices for all corrective action activity performed (including subcontractor invoices), (2) copies of canceled checks used to pay for work shown on the invoices, (3) copies of technical documents (bids, narrative work description, reports), and (4) evidence that the claimant paid for the work performed (not paid by another party). These documents are necessary for reimbursement and failure to submit them could impact the amount of reimbursement made by the Fund. ***It is not necessary to submit these documents at this time; however, they will definitely be required prior to reimbursement.***

Compliance with Corrective Action Requirements: In order to be reimbursed for your eligible costs of cleanup incurred after December 2, 1991, you must have complied with corrective action requirements of Article 11, Chapter 16, Division 3, Title 23, California Code of Regulations. Article 11 categorized the

corrective action process into ***phases***. In addition, Article 11 requires the responsible party to submit an ***investigative workplan/Corrective Action Plan*** (CAP) before performing any work. This phasing process and the workplan/CAP requirements were intended to:

1. help the responsible party undertake the necessary corrective action in a cost-effective, efficient and timely manner;

2. enable the regulatory agency to review and approve the proposed cost-effective corrective action alternative before any corrective action work was performed; and

3. ensure the Fund will only reimburse the most cost-effective corrective action alternative required by the regulatory agency to achieve the minimum cleanup necessary to protect human health, safety and the environment.

In some limited situations ***interim cleanup*** will be necessary to mitigate a demonstrated immediate hazard to public health, or the environment. Program regulations allow the responsible party to undertake interim remedial action after: (1) notifying the regulatory agency of the proposed action, and; (2) complying with any requirements that the regulatory agency may set. Interim remedial action should only be proposed when necessary to mitigate an immediate demonstrated hazard. ***Implementing interim remedial action does not eliminate the requirement for a CAP and an evaluation of the most cost-effective corrective action alternative.***

Three bids and Cost Preapproval: Only corrective action costs required by the regulatory agency to protect human health, safety and the environment can be claimed for reimbursement. You must comply with all regulatory agency time schedules and requirements and you must obtain three bids for any required corrective action. Unless waived in writing, you are required to obtain preapproval of costs for all future corrective action work. ***If you do not obtain three bids and cost preapproval, reimbursement is not assured and costs may be rejected as ineligible.***

If you have any questions, please contact me at (916) 341-5714.

Sincerely,

ORIGINAL SIGNED BY

Shari Knieriem
Claims Review Unit
Underground Storage Tank Cleanup Fund

cc: Mr. Steve Morse
RWQCB, Region 2
1515 Clay Street, Ste. 1400
Oakland, CA 94612

Ms. Susan Hugo
Alameda County EHD
1131 Harbor Bay Pkway, 2nd Fl.
Alameda, CA 94502-6577

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

March 14, 2001

Scott Hooton
BP Oil Co.
Midwest Environmental Services
295 SW 41st St.
Bldg. 13, Suite N
Renton, WA 98055

Dear Mr. Hooton:

Subject: Former BP Oil Site No. 11117, 7210 Bancroft Ave., Oakland, CA
StId 3960

"4th Quarter 2000 Monitoring..." dated January 31, 2001 prepared by Blaine Tech Services was reviewed. The current round of sampling was for monitoring wells MW-2 and MW-4. The concentrations of analytes sought for in well MW-2, Total Petroleum Hydrocarbons-Gasoline (TPH-G), Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), and Methyl Tertiary-Butyl Ether (MTBE), 130,000 ug/l, 18,600 ug/l, 30,000 ug/l, 3,250 ug/l, 20,600 ug/l, and 21,700 ug/l, respectively), were in the range found in recent sampling events. The concentrations of analytes sought for in well MW-4 have generally shown a decreasing trend, except for MTBE, where 24,400 ug/l was detected. (MW-4 also contained: 70,000 ug/l TPH-G, 4,580 ug/l, 3,480 ug/l, 2,550 ug/l, 9,220 ug/l BTEX.) The elevated petroleum hydrocarbon concentrations warranted consideration for remediation. Groundwater extraction was used from March 16, 2000 to April 30, 2000. This had little effect on subsequent analyte concentrations. Therefore, a Corrective Action Plan, which includes an assessment of impacts, a feasibility study, and applicable cleanup levels, is needed.

Additionally, a letter from our office dated June 8, 1999 notified you that the frequency for groundwater monitoring for all wells was to be quarterly. Please make this change. If you feel that the frequency should be decreased for any of the wells then you must contact this office to discuss this matter.

If you have any questions, you may call me at 510/567-6746.

Sincerely,

Don Hwang
Hazardous Materials Specialist

C: David DeWitt, Tosco Marketing Co., 2000 Crow Canyon Pl., Suite 400, San Ramon, CA 94583
file

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

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

June 8, 1999

STID 3960

Mr. Scott Hooton
BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, WA 98055-4931

RE: BP Oil Site #11117, 7210 Bancroft Avenue, Oakland – Sampling Schedule

Dear Mr. Hooton:

As we discussed April 14th, the well sampling and monitoring frequencies for this site were modified without seeking approval from this office. Although adjustments in schedules may appear acceptable at certain times in some cases, to implement a change without approval by the local agency is unacceptable.

Nevertheless, I reviewed the "new" schedule for this site, transmitted to me by Blaine Tech Services ("Blaine") at my request (copy attached). Although the changes Blaine has implemented for some of the wells appear to be appropriate, other changes, however, are not.

At this time, please adhere to the following sampling and monitoring schedules:

Well	Sampling	Monitoring
MW-1	Semi-annually (Mar/Sep)	Quarterly
MW-2	Quarterly	"
MW-3	Annually (Mar)	"
MW-4	Quarterly	"
MW-6	Semi-annually (Mar/Sep)	"
MW-7	" " "	"
MW-8	Annually (Mar)	"
MW-9	" "	"
MW-10	Semi-annually (Mar/Sep)	"

In addition, well MW-10 is to be surveyed before the next monitoring event and incorporated into the groundwater gradient calculations.

Please call me at (510) 567-6783 should you have any questions.

Sincerely,

Scott O. Seery, CHMM
Hazardous Materials Specialist

Attachment

cc: Chuck Headlee, RWQCB
Bob Chambers, Alameda County District Attorney's Office
Leroy Griffin, Oakland Fire Department
Francis Thie, Blaine Tech Services, 1680 Rogers Ave., San Jose, CA 95112-1105

SCOPE OF WORK as of 2/1/99

GROUNDWATER MONITORING AT BP

SITE ADDRESS: **7210 BANCROFT** Lab: **SPL**

CITY: **OAKLAND** Phone: (713) 660-0901

COUNTY: **ALAMEDA** S. Order #:

Site #: 11117

Lock/Key: 2357 Engineer: Scott Hooton

Gauge to: **TOC** Phone #: (425) 251-0689

Required regulatory notifications/ cooperative sampling requirements:

NONE

Map Requirements:
GROUNDWATER CONTOUR MAP

Special Reportage:
NONE

Well I.D.	Required Analyses	Sampling Frequency	Sampling Months	Gauging Frequency	Remedial Devices	Notes & Tasks (bail SPH, install skimmer,
MW-1	TPH-G, BTEX, MTBE	ANNUAL	FEB	QTRLY		
MW-2	TPH-G, BTEX, MTBE	QTRLY	B	QTRLY		
MW-3	TPH-G, BTEX, MTBE	ANNUAL	FEB	QTRLY		
MW-4	TPH-G, BTEX, MTBE	QTRLY	B	QTRLY		
* MW-6	NONE	NEVER	NONE	QTRLY		
* MW-7	NONE	NEVER	NONE	QTRLY		
MW-8	NONE	NEVER	NONE	QTRLY		
MW-9	NONE	NEVER	NONE	QTRLY		
MW-10	TPH-G, BTEX, MTBE	ANNUAL	FEB	QTRLY		

high MtBE/ TPH

CHANGES AND SPECIAL INSTRUCTIONS:

BP OIL

BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931
(206) 251-0667
Fax No: (206) 251-0736

May 24, 1999

Alameda County Health Care Services Department
Attention Mr. Scott Seery
1131 Harbor Bay Parkway, Room 250
Alameda, CA 94502-6577

RE: BP Oil Site No. 11117
7210 Bancroft Avenue (at 73rd)
Oakland, CA
STID 3960

Dear Mr. Seery:

Responding to the 7 May 1999 letter from the Alameda County Health Care Services Agency, following is contact information for the current land owner of the referenced location:

Eastmont Towne Center Co., LLC
One Eastmont Town Center
Oakland, CA 94605-1907
Tel. No. 510/632-1131

Please give me a call at (425) 251-0689 if you have any comments or questions.

Sincerely,

Scott Hooton

cc: site file
D. Camille - Tosco
Bancroft Oakland Investment Company, c/o SB Management Corporation, Attention Ms. K. R. Stimson, 422 North Camden Drive, STE#1070, Beverly Hills, CA 90210

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

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

May 7, 1999

STID 3960

Mr. Scott Hooton
BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, WA 98055-4931

RE: BP Oil Site #11117, 7210 Bancroft Avenue, Oakland

LANDOWNER NOTIFICATION AND PARTICIPATION REQUIREMENTS

Dear Mr. Hooton:

This letter is to inform you of new legislative requirements pertaining to cleanup and closure of sites where an unauthorized release of hazardous substance, including petroleum, has occurred from an underground storage tank (UST). Section 25297.15(a) of Ch. 6.7 of the Health & Safety Code requires the primary or active responsible party to notify all current record owners of fee title to the site of: 1) a site cleanup proposal, 2) a site closure proposal, 3) a local agency intention to make a determination that no further action is required, and 4) a local agency intention to issue a closure letter. Section 25297.15(b) requires the local agency to take all reasonable steps to accommodate responsible landowners' participation in the cleanup or site closure process and to consider their input and recommendations.

For purposes of implementing these sections, you have been identified as the primary or active responsible party. Please provide to this agency, within twenty (20) calendar days of receipt of this notice, a complete mailing list of all current record owners of fee title to the site. You may use the enclosed "list of landowners" form (sample letter 2) as a template to comply with this requirement. If the list of current record owners of fee title to the site changes, you must notify the local agency of the change within 20 calendar days from when you are notified of the change.

If you are the sole landowner, please indicate that on the landowner list form. The following notice requirements do not apply to responsible parties who are the sole landowner for the site.

In accordance with Section 25297.15(a) of Ch. 6.7 of the Health & Safety Code, you must certify to the local agency that all current record owners of fee title to the site have been informed of the proposed action before the local agency may do any of the following:

1) consider a cleanup proposal (corrective action plan)

2) consider a site closure proposal

3) make a determination that no further action is required

4) issue a closure letter

You may use the enclosed "notice of proposed action" form (sample letter 3) as a template to comply with this requirement. Before approving a cleanup proposal or site closure proposal, determining that no further action is required, or issuing a closure letter, the local agency will take all reasonable steps necessary to accommodate responsible landowner participation in the cleanup and site closure process and will consider all input and recommendations from any responsible landowner.

Please call me at (510) 567-6783 should you have any questions about the content of this letter.

Sincerely,

Scott O. Seery, CHMM
Hazardous Materials Specialist

Attachments

cc: Chuck Headlee, RWQCB
Leroy Griffin, Oakland Fire Department

SAMPLE LETTER (2): LIST OF LANDOWNERS FORM

Name of local agency
Street address
City

SUBJECT: CERTIFIED LIST OF RECORD FEE TITLE OWNERS FOR (*Site Name and Address*)

(Note: Fill out item 1 if there are multiple site landowners. If you are the sole site landowner, skip item 1 and fill out item 2.)

1. In accordance with section 25297.15(a) of Chapter 6.7 of the Health & Safety Code, I, *(name of primary responsible party)*, certify that the following is a complete list of current record fee title owners and their mailing addresses for the above site:

2. In accordance with section 25297.15(a) of Chapter 6.7 of the Health & Safety Code, I, *(name of primary responsible party)*, certify that I am the sole landowner for the above site.

Sincerely,

Signature of primary responsible party

Name of primary responsible party

SAMPLE LETTER 3: NOTICE OF PROPOSED ACTION SUBMITTED TO LOCAL AGENCY

Name of local agency
Street address
City

SUBJECT: NOTICE OF PROPOSED ACTION SUBMITTED TO LOCAL AGENCY FOR *(Site Name and Address)*

In accordance with section 25297,15(a) of Chapter 6.7 of the Health & Safety Code, I, *(name of primary responsible party)*, certify that I have notified all responsible landowners of the enclosed proposed action. Check space for applicable proposed action(s):

___ cleanup proposal (corrective action plan)

___ site closure proposal

___ local agency intention to make a determination that no further action is required

___ local agency intention to issue a closure letter

Sincerely,

Signature of primary responsible party

Name of primary responsible party

cc: Names and addresses of all record fee title owners

June 13, 1996

Mr. Scott Hooton
BP Oil Company
Environmental Resource Mgmt.
295 Southwest 41st St., Ste N
Renton, WA 98055

STID 3960

Re: Former BP Site No. 11117, located at 7210 Bancroft Ave., Oakland, CA

Dear Mr. Hooton,

This office has reviewed your May 29, 1996 letter which responded to the County's March 20, 1996 letter. The following are additional comments and corrections that the County has in response to your May 29, 1996 letter:

- In the March 20, 1996 letter, the County requested, per the Regional Water Quality Control Board's guidelines, that you mulitiply the benzene concentrations listed in ASTM RBCA's Table X2.1 by a factor of 0.29. Somehow, you came to the assumption that this request was made based on differing MCL values for California as opposed to the Federal Safe Drinking Water Act (SDWA). This office and RWQCB requested that you multiply the benzene concentrations by a factor of 0.29 to account for the toxicity value (a.k.a., cancer potency value) for benzene given by CAL EPA in its California Cancer Potency Value list, which is updated every six months. California has a higher toxicity value of 0.1 for benzene as compared to the USEPA value of 0.029 for benzene. You were correct in stating that the benzene cancer potency values listed in IRIS and HEAST "would not warrant change", however, they both don't address California standards since they are Federal databases.

- The applicable Tier 1 ASTM RBCA exposure pathway scenarios for the site's soil contamination are "Soil Volatilization to Outdoor Air" (S>O) and "Soil Vapor Intrusion from Soil to Buildings"(S>B). The applicable exposure pathway scenarios for the site's groundwater contamination are "Groundwater Volatilization to Outdoor Air" (G>O) and "Groundwater Vapor Intrusion from Groundwater to Buildings" (G>B). Levels of soil and groundwater contamination observed at the site exceed the Tier 1 Risk Based Screening Levels

(RBSL) for benzene for three of these exposure pathways (S>O (1.3ppm), S>B (0.05ppm), and G>B (214ppb)), assuming a 10^{-5} risk. You state that these "RBSL [values] are based on a number of assumptions that are not met at this... site", primarily the "significant discrepancy [in] the depth to groundwater (DTW)". However, the "discrepancy" between the DTW used for the Tier 1 calculations and the DTW at the site may not necessarily be a driving factor in a site-specific RBSL calculation. Ultimately, it appears that the significance of this DTW discrepancy will be determined in your proposed Tier 2 calculations. In conducting the Tier 2 calculations, please be reminded to average the DTWs for the area of concern (e.g., the average DTW for Well MW-4 is 25 feet), and to use the appropriate conversion factors (e.g., in your letter you stated that 3.0 meters is equivalent to 7.6 feet, when in actuality it is equivalent to 9.85 feet, roughly).

This office would like to meet with you to further discuss the site and the Tier 2 assessment for the site. Thankyou for offering us a manual for Groundwater Services, Inc.'s (GSI) Tier 2 RBCA Tool Kit, however, this office is currently considering the purchase of software to assist with overseeing risk assessments, and has already begun looking into GSI's tool kit along with other RBCA software.

Please contact me to schedule a meeting date. If you have any questions, please feel free to contact me at (510) 567-6763.

Sincerely,

Juliet Shin
Senior Hazardous Materials Specialist

cc: Acting Chief-File

BP OIL

BP Oil Company
Environmental Resources Management
Building 13, Suite N
295 SW 41st Street
Renton, Washington 98055-4931
(206) 251-0667
Fax No: (206) 251-0736

ENVIRONMENTAL PROTECTION

May 29, 1996

Alameda County Health Care Services Agency
Attention Ms. Juliet Shin
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

RE: Former BP Site No. 11117
StID 3690
7210 Bancroft Ave
Oakland, CA

Dear Ms. Shin:

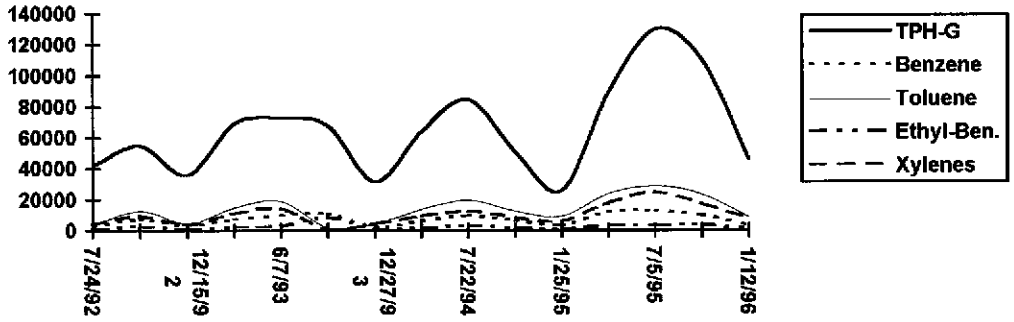
This letter follows-up my letter to you dated May 15, 1996 and responds to a letter from the Alameda County Health Care Services Agency (ACHCSA) dated March 20, 1996. I will respond to the bullet information requests in the order that you raised them.

э My records show that four fiberglass underground storage tanks[1] were installed at this site sometime during 1984. Based upon the files in BP's possession, it appears that BP did not modify the existing UST system after the site was acquired from the Mobil Oil Corporation. Construction drawings indicate that improvements made by BP were essentially cosmetic, and consisted of adding a horizon bullnose to the canopy, installing full monocolumns around the product dispensers, cladding the structure with alucabond material, installing ID letters, lighting and paint. I did not locate information in my files regarding the type or condition of the former tanks.

I agree that fluctuating depth-to-water measurements do not appear to be correlated to the concentrations of petroleum hydrocarbons detected in samples obtained from wells MW-2 , but there may be some seasonal variation in MW-4. For MW-2, one could make the argument that dissolved concentrations have been close to the solubility limit for a weathered gasoline product, and the later appeared in MW-2 after the end of the 1992 drought. Generally, it appears that reported dissolved concentrations have increased in MW-2. MW-4, on the other hand, shows some seasonal variation. Below find a graph of the MW-4 laboratory data. The data seems to reflect seasonal variation, with increasing amplitude over time.

[1] 6,000 gallon diesel, 10,000, 12,000 and 6,000 gallon unleaded gasoline

MW-4 Analytical Data (in ug/L)



BP tested the UST system at the time the facility was sold to the present owner, Tosco. I understand that the UST system passed the required tightness-testing criteria at that time (0.1 gallons per hour (876 gallons per year)). I have not reviewed inventory reconciliation records or tightness testing performed by Tosco since that time. I expect that Tosco can provide them upon request.

э Current concentrations of petroleum hydrocarbons detected in soil and groundwater samples associated with MW-4 exceed the Tier I lookup table in ASTM E 1739-95. I understand that a risk assessment showing a significant threat to human health or the environment, or significantly plume migration, would necessitate mitigation.

Your letter included a reminder that benzene thresholds in ASTM E 1739-95 should be multiplied by a factor of 0.29 to obtain corrected values for California. I am not exactly sure why this would be necessary, but I suspect that it relates to the California benzene MCL of 1 ug/L. As you know, the Federal Safe Drinking Water Act established a benzene Maximum Contaminant Level Goal of 0 ug/L and MCL of 5ug/L. It is my understanding that the discrepancy between the benzene MCL and MCLG stems from the technical and economic feasibility for the reliable quantification of benzene in water at concentrations less than 5 ug/L. Put another way, the SDWA MCL is not higher than the California MCL because the SDWA considers benzene to be a less potent carcinogen than California statutes, only that there are inherent problems in the reliable measurement of benzene at concentrations less than 5 ug/L. While this practical consideration was required under federal statute, it is not required by California law. I believe this explains why the benzene MCL is different in California. I believe that you would find it appropriate to change the Tier I lookup values that are based on Federal MCL's to California MCL's for sites located in Alameda County. On the other hand, Tier I values based on IRIS or HEAST benzene cancer potency values would not warrant change,

presuming that you can agree with the implicit exposure assumptions (body weight, exposure duration, etc.). Please let me know if my analysis or facts are wrong.

With respect to potential risk posed by petroleum hydrocarbons in groundwater, I expect that the pathway of concern is benzene-vapor intrusion from groundwater into buildings and groundwater volatilization to outdoor air. I will not address the groundwater ingestion pathway here because drinking water is provided by a water utility. I will limit this discussion to a commercial/industrial receptor scenario, because this site and adjacent areas are located in a commercially-zoned area.

Comparing the MW-4 benzene concentration reported for a sample obtained on 1/12/96 (3,500 mg/L) and comparing it to Table X2.1 in ASTM E 1739-5 (Example Tier 1 Risk-Based Screening Level (RBSL) Look-up Table), I noted that the following two exposure pathways of potential concern:

1. Commercial/industrial receptor scenario for groundwater-vapor intrusion into buildings at a target risk level of 1E-6 (i.e. 1 additional case of cancer per million people exposed). The benzene Tier I RBSL is 7.39E-02 at a risk level of 1E-06.
Comment: I do not know what risk the ACHCSA views as not significant, but I understand that 1E-5 may be acceptable at this time. At this risk level, a RBSL of 0.739 mg/L would be calculated using the default exposure factors upon which the RBSL in table X2.1 are based.

While it is true that the benzene concentration reported in MW-4 during January 1996 exceeded 0.739 mg/L, it should be noted that the example Tier I lookup table RBSL is based upon a number of assumptions that are not met at this particular site. One significant discrepancy is the depth to groundwater. The RBSL are based upon a depth to water of 3.0 meters (7.6 feet). Groundwater in MW-4 is generally three to four times deeper, so it follows that the Tier I lookup table RBSL does not accurately reflect the risk posed under this receptor scenario.

2. Commercial/industrial receptor scenario for groundwater volatilization to outdoor air at a target risk level of 1E-6 (i.e. 1 additional case of cancer per million people exposed).

Comment: Again, I am not sure what risk the ACHCSA views as not posing a significant risk, but I understand that 1E-5 may be acceptable at this time. At this risk level, a benzene RBSL of 184 mg/L would be calculated using the default exposure factors upon which the RBSL in table X2.1 are based. This value is less than the highest benzene concentration reported for samples obtained from MW-4.

Please note that the example Tier I lookup table RBSL is based upon a number of assumptions that are not met at this particular site. One significant discrepancy is the depth to groundwater. The RBSL are based upon a depth to water of 3.0 meters (~~9.84~~ 9.8 feet). Groundwater in MW-4 is generally three to four times deeper, so it follows that the Tier I lookup table RBSL does not accurately reflect the risk posed under this receptor scenario.

Analysis: Tier I RBSL are not an appropriate basis of comparison at this site because the assumptions upon which the values were calculated do not reflect conditions at this site. More representative RBSL's can be calculated by a Tier II approach.

With respect to the potential risks posed by petroleum hydrocarbons in soil, I understand that the constituent of concern is benzene (34 mg/kg) detected in a sample obtained from MW-4 at a depth of twenty feet. I expect that the following three commercial/industrial pathways of potential concern to exist:

1. Soil volatilization to outdoor air (RBSL@1E-6 Target Level = 0.457 mg/kg)
2. Soil-vapor intrusion from soil to buildings (RBSL@1E-6 Target Level = 0.0109 mg/kg)
3. Surficial soil ingestion/dermal contact/inhalation (RBSL@1E-6 Target Level = 10.0 mg/kg)

Comment: As mentioned , I do not know what risk or range of risks the ACHCSA views as not significant, but I understand that 1E-5 may be acceptable at this time. It should be noted that the example Tier I lookup table RBSL for the above pathways are based upon a number of assumptions that are not met at this particular site. One significant discrepancy is the depth of soil containing constituents of concern. The RBSL are based upon a depth of 1.0 meter (~~2.54 feet~~ 3.28FT). Benzene detected in MW-4 is almost eight times deeper, so it follows that the Tier I lookup table RBSL would not correctly reflect the risk posed under this receptor scenario.

Analysis: Tier I RBSL are not an appropriate basis of comparison at this site because the assumptions upon which the values were calculated do not reflect conditions at this site. More representative RBSL's can be calculated by a Tier II approach.

э Regarding the further assessment of petroleum hydrocarbons in groundwater east of the site, the following points were raised:

- Drillers/consultant intended to install a well during 1992. They reported that groundwater was not encountered, so they did not attempt to install a well.
- Well MW-2 recharges very slowly.

- Hydrocarbons were not detected in a soil sample collected from B-5 at a depth of 30 feet below ground surface. This depth coincides with the groundwater capillary fringe.

Given the generally low permeability of soil at this site, I would not be surprised if there is groundwater at the location of B-5. Given the fine-grained matrix of the material, it is often difficult to discern saturated conditions in the field. I've noted a number of occasions at different sites where drillers/consultants were unable to determine saturation in the uppermost hydrostratigraphic unit, but installed the well anyway. Water levels in the well subsequently equilibrated at the water table. The consultants' erroneously concluded that the groundwater was under confined conditions, when in fact they were simply unable to discern where saturated conditions actually existed.

I can agree to attempt to install another well at this location. One could also argue that the low permeability of soils in this area would retard the migration of hydrocarbons to a greater extent than has occurred across the northwest portion of the site. It seems, however, that the additional assessment data would ultimately have little effect on how we will address this site. I suggest that we hold off on additional assessment pending the results of the pilot vapor extraction feasibility test being performed by Pacific Environmental Group and the performance of a Tier II risk assessment.

- In response to my February 23, 1996 letter, you indicated that a requirement for the installation of a vapor extraction system would depend on the threat to human health or the migration potential of the release. I think you can agree that the monitoring data confirms that the release is not migrating to any significant extent, and that comparison of assessment data to ASTM Tier I SSTL's (and the assumptions implicit in the SSTL's) suggests that the site would likely not be considered a threat to human health. However, a Tier II assessment may still be warranted.

- Please note that a product recovery canister was installed in MW-2, and is currently emptied on a quarterly basis. On April 22, 1996 the well was checked for accumulated product, and a thickness of 0.08 feet was measured (compared to 0.06 feet during January and February). It seems that quarterly servicing of the product recovery canister is adequate, and more frequent bailing/servicing would not result in the removal of significant quantities of product.

- During our telephone conversation last week, you mentioned that Analytical Technologies postulated that an unknown peak in a chromatograph associated with a sample obtained from wells MW-8 and MW-9 were "possibly TCE and PCE". You'll note that these two wells are located upgradient or cross-gradient of the BP site, and BETX constituents have never been detected in samples obtained from these two wells. I

am reluctant to incur additional analytical costs given the location of these wells at this time. I will contact the laboratory and request a written explanation for the basis for Analytical Technologies' speculation. I will provide you with a copy for further discussion.

Finally, as previously noted, Pacific Environmental Group is completing a pilot vapor extraction test at this site. You should be receiving a copy in the near future. I propose that we schedule a meeting to discuss ACHCSA requirements for a Tier II risk assessment after you have received the report. I would like to bring along a copy of Groundwater Services, Inc. Tier 2 RBCA Tool Kit to the meeting[2]. This is an electronic spreadsheet that allows for different exposure assumptions and site specific conditions. Give me a call if you would like to receive a copy of the manual along with the pilot testing report. It seems to me that a meeting with the modeling package would go a long way toward defining how we ought to proceed for Tier 2, and resolve additional assessment requirements.

Please give me a call if you have any questions, comments or concerns regarding this matter. I can be reached at (206) 251-0689.

Sincerely,

Scott Hooton
Environmental Remediation Management

[2] by then, I hope to have a computer fast enough to effectively run the model!