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

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September 19, 2007

Denis Brown
Shell Oil Products US
20945 S. Wilmington Ave.
Carson, CA 90810-1039

Som Gupta
c/o Carmerlengo & Johnson
500 Airport Blvd., Suite 230
Burlingame, CA 94010

Andrew Saberi
Sabek, Inc.
1045 Airport Blvd.
South San Francisco, CA 94080

Subject: Fuel Leak Case No. RO0000433 and Geotracker Global ID T0600101691, Shell/Sabek Inc, 1230 14th Street, Oakland, CA 94607

Dear Mr. Brown, Mr. Gupta, and Mr. Saberi:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site, which includes several recent reports and correspondence regarding proposed remediation at the site. The primary documents that discuss the proposed next phase of remediation are reports entitled, "Dual-Phase Extraction Pilot Test Report and Groundwater Monitoring Report – Fourth Quarter 2006," dated December 27, 2006 (prepared on Shell's behalf by Cambria/Conestoga-Rovers & Associates), "Pangea's Comments on Dual Phase Extraction Pilot Test Report," dated February 16, 2007 (prepared on behalf of Mr. Andy Saberi by Pangea Environmental Services, Inc.), "Response Letter and Revised Remediation Work Plan," dated May 16, 2007 (prepared on Shell's behalf by Conestoga-Rovers & Associates), and "Response Letter," dated August 23, 2007 (prepared on Shell's behalf by Conestoga-Rovers & Associates).

Currently, Shell is proposing a one-day air sparge pilot test to confirm the feasibility of air sparging to be followed by full-scale implementation of a soil vapor extraction/air sparging (SVE/AS) system. In the document entitled, "Pangea's Comments on Dual Phase Extraction Pilot Test Report," dated February 16, 2007, Pangea has proposed on Mr. Saberi's behalf to implement full-scale remediation using a dual-phase extraction/air sparging (DPE/AS) system without pilot testing. The two proposals are generally similar in scope with both proposing air sparging over similar areas of the site. The primary difference in the proposals is the addition of vacuum-enhanced groundwater extraction in the DPE/AS proposal.

We are not concurring with full-scale remediation using either of the proposed technologies. Instead, we are requiring pilot testing of the proposed remedial technology prior to preparation of a Corrective Action Plan (CAP). The final remedial alternative for full-scale implementation will be selected following completion of the pilot testing and CAP. Based on our review of site-specific conditions from previous investigation, remediation, and monitoring activities, we believe that the additional benefit from lowering the water table using vacuum-enhanced groundwater extraction does not justify the implementation of a DPE/AS pilot test versus a SVE/AS pilot test. Therefore, we request that Shell prepare a Pilot Test Work Plan for SVE/AS that addresses the technical

comments below. Following completion of the SVE/AS pilot test, preparation of a Draft CAP that evaluates three active remedial alternatives (in addition to no action or monitored natural attenuation) will be required. We recommend that DPE/AS be one of the three active remedial alternatives evaluated in the Draft CAP. The remedial alternative for the site will be selected following regulatory and public review of the Draft CAP.

We request that Shell address the following technical comments and submit a Work Plan for SVE/AS pilot testing.

TECHNICAL COMMENTS

1. **Benefits of Groundwater Extraction.** We generally concur with the finding in Pangea's comment number 5 in the document entitled "Pangea's Comments on Dual Phase Extraction Pilot Test Report," dated February 16, 2007 that groundwater extraction would be inefficient for this site. This conclusion regarding the effectiveness of groundwater extraction as a long-term remedial measure was also reached in Shell's response dated August 23, 2007. Given the ineffectiveness of groundwater extraction for mass removal, we do not believe that the added benefit of lowering the water table in the area of the extraction wells is sufficient justification to select DPE versus SVE for pilot testing. We note that seasonal fluctuation of the water table is on the order of 3 to 7 feet.

2. **SVE Pilot Testing.** The current design of the SVE system is based on an assumption that the radius of influence for SVE will be greater than the extent of air sparging to allow capture of volatilized hydrocarbons and avoid off-site impacts. Previous pilot testing was not sufficient to estimate the radius of influence for SVE. Therefore, we request that you conduct pilot tests for both SVE and air sparging. Please include sufficient monitoring during the SVE pilot testing to reliably estimate a radius of influence for design of the SVE system.

3. **Length of Air Sparging Pilot Test and Monitoring.** We request that you expand the length of the air sparging pilot test beyond one day to allow improved evaluation of air sparging over a range of flow rates. In addition, please expand the discussion of monitoring during the pilot test. We request that you include these revisions in the SVE/AS Pilot Test Work Plan requested below.

4. **Continuous Sampling.** We request that you propose continuous sampling during installation of the air sparging wells in order to identify any potential finer-grained layers that may affect the performance of the sparging system. Please present these plans in the Work Plan requested below.

5. **Depth of Contamination and Air Sparging Wells.** The screen interval for the two proposed sparge wells is currently planned for depths of 16 to 18 feet bgs. We note that the highest concentrations of fuel hydrocarbons in soil were detected between depths of approximately 9 to 18 feet bgs with elevated concentrations of fuel hydrocarbons frequently detected between 16 and 18 feet bgs. In two soil borings, the highest concentrations of fuel hydrocarbons were detected at a depth of 18 feet bgs (S13 and S-16). Air sparging is typically conducted below the maximum depth of contamination in order to treat all of the

contamination and to allow lateral air movement from the sparge point to affect a larger area within the zone of contamination. Please review the depths of soil contamination targeted and revise the depths of the sparge wells as necessary.

TECHNICAL REPORT REQUEST

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

- **November 5, 2007** – SVE/AS Pilot Test Work Plan
- **Draft Corrective Action Plan** – 90 days after ACEH approval of Work Plan
- **45 days following the end of each quarter** – Quarterly Monitoring Reports

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) 567-6791.

Sincerely,

Jerry Wickham
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Larry Blazer, Alameda County District Attorney's Office, Airport Corporate Center, 7677 Oakport Street, Suite 650, Oakland, CA 94621

Ana Friel, Conestoga-Rovers & Associates, 19449 Riverside Drive, Suite 230, Sonoma, CA 95476

Joan Mack, Caldwell, Leslie, Proctor & Pettit, PC, 1000 Wilshire Blvd., Suite 600, Los Angeles, CA 90017-2463

Robert Clark-Riddell, Pangea, 1710 Franklin Street, Suite 200, Oakland, CA 94612

Ellen Wyrick-Parkinson, 1420 Magnolia Street, Oakland, CA 94607

M. Willingham, 1418-1420 Union Street, Oakland, CA 94607

Donna Drogos, ACEH
Jerry Wickham, ACEH
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