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

SENT
07-03-06

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

June 30, 2006

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

Joseph H. Chan and Ivy T. Wong Trust
21213-B Hawthorne Blvd., #5146
Torrance, CA 94609

Subject: Fuel Leak Case No. RO0000264, Shell, 500 40th Street, Oakland, CA

Dear Denis Brown and Joseph H. Chan and Ivy T. Wong Trust:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the reports entitled, "Site Conceptual Model," dated November 21, 2005, "Site Conceptual Model Addendum," dated May 5, 2006, and "First Quarter 2006 Monitoring Report," dated May 5, 2006. The reports were prepared on Shell's behalf by Cambria Environmental Technology, Inc. The "Site Conceptual Model," dated November 21, 2005, included a request for consideration of site closure.

In correspondence dated December 9, 2005, ACEH requested additional information on several technical issues and one additional groundwater monitoring event in the first quarter of 2006 prior to consideration of site closure. The information provided by Shell in the "Site Conceptual Model Addendum," dated May 5, 2006 adequately addresses the technical comments and request for additional information in our December 9, 2005 correspondence. No further investigation of preferential pathways or volatile organic compounds in groundwater is required at this time.

Groundwater monitoring has been ongoing at this site since 1989 and concentrations have generally progressively decreased over time. As an example, the concentration of total petroleum hydrocarbons as gasoline (TPHg) detected in groundwater from off-site monitoring well OMW-6 decreased from 26,000 micrograms per liter (µg/L) in August 1991 to <50 µg/L in April 2005. However, groundwater monitoring results for the first quarter of 2006 indicate that the concentrations of fuel hydrocarbons increased dramatically in two of the off-site wells directly downgradient from the site. The concentration of total petroleum hydrocarbons as gasoline (TPHg) detected in groundwater from off-site monitoring well OMW-6 increased from 3,600 micrograms per liter (µg/L) in April 2005 to 22,700 µg/L in March 2006. The concentration of TPHg detected in groundwater from off-site well OMW-9 increased from <50 µg/L in April 2005 to 10,500 µg/L in March 2006. We request that semi-annual groundwater monitoring be resumed at the site in order to assess whether the marked increases in TPHg concentrations in the downgradient wells represent a significant, long-term change in site conditions or whether the increases represent an isolated event.

Due to the need to evaluate the recent increases in concentrations of TPHg detected in groundwater from the downgradient wells, case closure cannot be granted at this time. This decision is subject to appeal to the State Water Resources Control Board (SWRCB), pursuant to Section 25296.40 of the Health and Safety Code (Thompson-Richter Underground Storage Tank Reform Act - Senate Bill 562). Please contact the SWRCB Underground Storage Tank Program at (916) 341-5851 for information regarding the appeal process.

Please address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

1. **Groundwater Monitoring.** We request that semiannual groundwater monitoring be resumed at the site. Groundwater samples are to be collected semiannually from wells MW-2, MW-3, MW-8, OMW-6, OMW-9, and OMW-13 and analyzed for TPHg, TPHd, BTEX, and MTBE. Groundwater monitoring results are to be presented in the reports requested below.

TECHNICAL REPORT REQUEST

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

- **November 15, 2006** – Semi-Annual Monitoring Report (Third Quarter 2006)

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

Effective **January 31, 2006**, 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: David Gibbs
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, CA 94608

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

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

SCVT
12-12-05

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

December 9, 2005

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

Joseph H. Chan and Ivy T. Wong Trust
21213-B Hawthorne Blvd., #5146
Torrance, CA 94609

Subject: Fuel Leak Case No. RO0000264, Shell, 500 40th Street, Oakland, CA

Dear Mr. Brown:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site and the document entitled, "Site Conceptual Model," dated November 21, 2005, prepared on Shell's behalf by Cambria Environmental Technology, Inc. The Site Conceptual Model (SCM) is subdivided into the following sections: Hydrocarbon Source, Site Characterization, Remediation Status, Well and Sensitive Receptor Survey, Risk Assessment, and Additional Recommended Data or Tasks. In the recommendations section, the SCM requests consideration of site closure.

Prior to considering case closure, ACEH requests additional information regarding potential preferential pathways at the site as discussed in technical comment 2 below and laboratory analyses for halogenated VOCs and lead scavengers in groundwater as discussed in technical comments 4 and 5. Therefore, we request that you provide the additional information discussed in the technical comments below in a revised SCM and conduct one additional groundwater monitoring event prior to consideration of site closure. Please address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

1. **Chronological Summary from Previous Reports.** A previous report for the site includes a Chronological Summary for the period from 1982 to 1987 (Work Plan for Site Characterization and Remediation, Converse Environmental Consultants, April 14, 1989). Please incorporate information from this Chronological Summary (included as Attachment A) into the revised SCM requested below as appropriate.

2. **Vapors Detected in Storm Water System.** The above referenced Chronological Summary includes a statement that in July 1982, "Combustible vapors were detected in the storm sewer system in the BART station across the street." The source and pathway for the vapors to enter the storm water system are not described. Given this historic detection of vapors at the time of the leak, please evaluate whether the storm sewer system may be an ongoing

receptor for contaminated groundwater from the site. Please present this evaluation in the report requested below.

3. **Second Generation USTs.** The SCM indicates that the underground storage tanks (USTs) were removed in November 1983, following detection of a leak in the piping in 1982. Review of the case file indicates that three fiberglass USTs were apparently installed at the site in October 1984 following removal of the four Shell USTs discussed in the SCM. A sampling report and map showing the location of the three second generation USTs in the southwestern corner of the property are attached (Attachment B). Please include this information in the revised SCM requested below as appropriate.

4. **Volatile Organic Compounds in Groundwater.** Analyses for Volatile Organic Compounds (VOCs) were conducted on groundwater samples collected from monitoring wells at the site on November 18, 1993. Tetrachloroethene (PCE) was detected in groundwater from wells OMW-11 and OMW-12 at concentrations of 380 and 400 µg/L, respectively. PCE was also detected in wells MW-4, MW-5, MW-8, and OWM-10 at concentrations up to 40 µg/L. Trichloroethene, cis-1,2-dichloroethene, chloroform, 1,2-dichloroethane, and 1,1-dicholoroethane were also detected. Please include halogenated VOCs as analytes during the first quarter 2006 groundwater monitoring event and present the results in the monitoring report requested below. Please also include an evaluation of the potential for the halogenated VOCs detected in on-site and off-site monitoring wells to have originated from the site.

5. **Groundwater Monitoring.** Please conduct one additional groundwater monitoring event at the site during the first quarter of 2006 prior to consideration of site closure. ACEH requests that groundwater from all on-site and off-site monitoring wells be analyzed for TPHg, TPHd, BTEX, fuel oxygenates, 1,2-dichloroethane, ethylene dibromide, and halogenated VOCs. Please present these results in the monitoring report requested below. Additional groundwater monitoring events beyond the first quarter 2006 event will not be required until consideration of case closure and further direction from ACEH.

TECHNICAL REPORT REQUEST

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

- **April 14, 2006** – Revised SCM and Quarterly Monitoring Report for the First Quarter 2006

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) now request submission of reports in electronic form. The electronic copy is intended to replace the need for a paper copy and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all reports is required in Geotracker (in PDF format). Please visit the State Water Resources Control Board 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

Attachments: Attachment A – Chronological Summary
Attachment B – Sampling Report, September 26, 1986

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: David Gibbs
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, CA 94608

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

Attachment - A

TABLE 1: Chronological Summary

DATE	DESCRIPTION OF ACTIVITY
7/82	IT installed 8 six inch diameter groundwater monitoring wells to 30 feet bgs. onsite. The wells were screened from 5 to 30 feet bgs. Combustible vapors were detected in the storm sewer system in the BART Station across the street.
7/82	IT Progress Report 1: Well installations and constructions were reported, and free product was noted in wells B-7 and B-8. Groundwater gradient was shown to be westward, towards the BART Station. (See Attachment 1 for well construction diagrams.)
11/82	IT Progress Report 6: Groundwater gradient still towards well B-3. From September 1 to November 19, 1982, IT removed 35 pints of product from B-4. Well TOCs were re-surveyed and groundwater gradient was confirmed toward B-3. Maximum product thickness was in B-4, at several inches.
12/82	IT Progress Report 7: Product thickness increased in B-3 in apparent response to rising water table. Product in B-4 remained at several inches.
1/83	IT Progress Report 8: Product in B-4 had diminished to film thickness.
2/83	IT Progress Report 9: Rainfall records were researched, and the relationship between rainfall, water table and product removed was charted by graph. Amount of product in B-4 appeared to vary inversely with water table; as water table rose with winter rains, the amount product in B-4 dropped. IT proposed that product was displaced downgradient as water table rose.
3/83	IT Progress Report 10: Vapor concentrations of TPH (expressed as percent lower explosive limit) were rising in wells B-1, B-2, B-3 and B-7. No product was measurable in B-4.
6/83	Rapid reappearance of product in well B-4, from negligible in May to 4+ feet by June 30 and 6.34 feet on July 15. Increase was also measured B-3, to a thickness of 0.66 feet in July. IT concluded that a reservoir of product existed in the tank backfill, and that as water table dropped in summer time this reservoir was allowed to escape by way of gravel lenses which were saturated at high water table seasons.
7/83	IT installed 8 inch diameter monitoring wells B-9 and B-10 to 20 feet bgs in native soils next to the tank backfill.
8/83	IT Progress Report 11: IT repeated the concept that product was released in surges through gravel lenses exposed to the water table during summer.
8/83	IT installed groundwater monitoring well B-11 and sand backfill in the southwest corner of the tank bed. No free-flowing product was encountered in this well.
9/83	IT drilled two 18 inch diameter borings to 30 feet bgs and completed same as 12 inch diameter recovery wells with screen intervals from 5 to 30 feet bgs. These wells, R-1 and R-2, were located near wells B-3 and B-4, directly west of the tank backfill.
10/83	IT purged and developed wells R-1 and R-2, holding a strong depression on the water table for 2 hours.
11/83	According to IT reference, the tanks were removed and, as part of this excavation wells R-1 and R-2 were also removed. No information was provided on tank excavation or associated soils/groundwater testing and reporting to regulatory agencies.
1/84	IT Progress Report 13: Wells B-3 and B-4 continued to contain measurable product, to thicknesses of 2 feet. In general, product thicknesses decreased during December and January. Product thicknesses also decreased after tank removal. Groundwater piezometric map showed a west-trending, low area encompassing wells R-1, R-2, B-3 and B-4. This extended offsite, suggesting a paleodrainage which controlled product collection and migration offsite.

TABLE 1

CHRONOLOGICAL SUMMARY

Continued

Date	Description of Activity
5/84	IT Report: The thicknesses of product in B-3 and B-4 measured from several inches to one foot during the period January to May 1984.
7/84	IT Report: Product thicknesses increased starting in mid-May in response to lowering water tables. This pattern was similar to the pattern observed in 1983.
8/84	IT Report: The thickness of product in B-3 remained one foot, while the amount of product in B-4 decreased. IT recommended looking for possible upgradient offsite sources.
9/84	IT Report: The thickness of product in B-4 started to increase (still at less than one inch) while the thickness of product in B-3 decreased (still on the order of one foot).
10/84	IT Report: New construction was noted.
1/85	IT Report: The thickness of product of B-3 had decreased to several inches and B-4 contained negligible measurable product. This pattern of decreasing product in the winter (high water table) months was consistent with that observed in the winters of 1982-83, and 1983-84.
2/85	IT Report: Significant measurable gasoline (1.64 feet) was discovered in B-8. The gasoline appeared degraded and "old". IT concluded that this gasoline could be from the same source as that contributing to observed in wells B-3 and B-4.
6/85	IT Report: Product thicknesses in B-3, B-4 and B-8 decreased from January to mid-May, with a dramatic decrease in B-8. IT repeated its interpretation that product thickness decreased as water tables rose and increased water tables fell. IT further proposed that the product was trapped in permeable lenses, and migrated to different geographic areas as the water tables rose and fell.
12/85	IT Report: The thickness of product in B-3 increased to approximately 2 feet during the summer, showing the seasonal increase of prior years period. Simultaneously, no product was measured in B-8 after June 3, and product reappeared in B-2 in September and October. Product thickness in B-4 fluctuated at less than one foot thick during this period. IT recommended installing a recovery extraction trench along the west boundary of the property.
5/86	IT Quarterly Report: Product thickness decreased in wells B-3 and B-4 in response to seasonal rise in the water table.
6/86	IT requested permission to abandon B-6.
7/86	IT stated that Shell planned to remove the underground storage tanks in the near future.
8/86	IT Quarterly Report: IT noted seasonal decline in water table and negligible measurable product in wells B-2 and B-4, with approximately 2 feet of floating product in B-3.
9/86	A groundwater sample from B-3 contained volatile organics: 0.90 ppm; benzene: 0.32 ppm; toluene: 0.23 ppm; xylene: 0.16 ppm.
1/4/87(?)	A commercial shopping center building was erected on the property, covering wells B-2, B-6, B-7, B-9 and B-10. Wells B-1, B-3, B-4, B-5 and B-8 were covered by site parking and a rear driveway.

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

R0264

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510)567-6700

April 18, 1996

Mr. R Jeff Granberry
Shell Oil Products Company
P.O. Box 4023
Concord, California 94524

RE: Shell Oil Company Sites

Dear Mr. Granberry:

Recently, reports for the Shell Oil Company sites have been submitted to different inspectors / case officers that are not the assigned case workers. I'm currently overseeing the investigation / cleanup of the following Shell Oil Company sites in this department:

	STID#	Site Name	Address
(R0121)	3670	Melina Albany Shell	999 San Pablo Avenue, Albany
(R0254)	814	Bay Super Shell	1800 Powell Street, Emeryville
(R06)	381	Shell Oil Company	3420 San Pablo Ave., Oakland
(R0264)	3613	Former Shell Oil	500 40th Street, Oakland
(R09)	413	Pill Hill Shell	2800 Telegraph Ave., Oakland
(R0303)	3673	Shell Service Station	230 W MacArthur Blvd., Oakland
(R026)	3618	Broadway Shell	5755 Broadway, Oakland

Please inform your consultants that all quarterly monitoring reports and work plans for the above mentioned sites should be submitted to my attention.

If you have any questions concerning this letter, please call me at (510) 567-6780.

Sincerely,

Susan L. Hugo

Susan L. Hugo
Senior Hazardous Materials Specialist

c: Jun Makishima, Interim Director, Environmental Health
Gordon Coleman, Acting Chief, Environmental Protection / files