CONESTOGA-ROVERS
& ASSOCIATES

19449 Riverside Drive, Suite 230, Sonoma, California 95476
Telephone: 707·935·4850 Facsimile: 707·935·6649
www.CRAworld.com

To Whom it May Concern,

We are pleased to announce that effective April 2, 2007, Cambria Environmental Technology, Inc (Cambria) was acquired by Conestoga-Rovers & Associates (CRA) and will be conducting all future work under this new name. Our project managers, business addresses, and telephone contact numbers will remain the same. Our e-mail addresses change to *****@craworld.com. Please contact me if you would like to discuss this transition and CRA.

Sincerely,

Diane M. Lundquist
Vice President

Denis L. Brown

Shell Oil Products US
HSE – Environmental Services
20945 S. Wilmington Ave.
Carson, CA 90810-1039
Tel (707) 865 0251
Fax (707) 865 2542
Email denis.l.brown@shell.com

Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Shell-branded Service Station
1784 150th Avenue
San Leandro, California
SAP Code 136019
Incident No. 98996068
ACHCSA Case No. 0367

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown
Project Manager

CONESTOGA-ROVERS
& ASSOCIATES

19449 Riverside Drive, Suite 230, Sonoma, California 95476
Telephone: 707-935-4850 Facsimile: 707-935-6649
www.CRAworld.com

June 5, 2007

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Site Investigation Work Plan**
Shell-branded Service Station
1784 150th Avenue
San Leandro, California
SAP Code 136019
Incident No. 98996068
ACEH File No. RO0000367

Dear Mr. Wickham:

Conestoga-Rovers & Associates, Inc. (CRA) prepared this work plan on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to further delineate the lateral and vertical extent of groundwater impact, and assess soil vapor impact both on and off the site. The proposed scope of work was proposed in Cambria Environmental Technology, Inc.'s (Cambria) February 14, 2007 *Agency Response with Proposed Future Actions* document, and approved in the Alameda County Health Care Services Agency (ACHCSA) correspondence dated March 30, 2007 (Attachment A).

SITE DESCRIPTION AND HISTORY

The site is an operating Shell-branded service station located at the southern corner of 150th Avenue and Freedom Avenue in San Leandro, California (Figure 1). The area surrounding the site is mixed commercial and residential. The site layout (Figure 2) includes a station building, two dispenser islands, and three fuel underground storage tanks (USTs). One waste oil UST was removed from the site on May 25, 2006.

A summary of previous work performed at the site and additional background information was submitted in the above-referenced document submittal, and is not repeated herein. This information will be updated and included in the subsequent report of findings.

TECHNICAL RATIONALE FOR PROPOSED SCOPE OF WORK

As recommended in the February 17, 2007 *Agency Response with Proposed Future Actions*, discussed with ACHCSA during a meeting on March 29, 2007, and conditionally approved in their March 30, 2007 correspondence, CRA recommends additional investigation on and offsite to further delineate horizontal and vertical petroleum hydrocarbon distribution in groundwater. CRA also recommends additional soil vapor assessment. A summary of the proposed scope of work is listed below and specific tasks to complete the work are summarized under the Work Tasks sections:

- Advance cone penetration testing (CPT) borings CPT-1 through CPT-6, equipped with a membrane interface probe (MIP). CPT provides tip resistance, sleeve friction, dynamic pore pressure, and hydrocarbon measurements electronically recorded on a continuous log from which the subsurface lithology, and stratigraphy is inferred. MIP provides a continuous log of readings from a photo ionization detector (PID), flame ionization detector (FID), and radioactive Beta emitter (ECD) which the petroleum hydrocarbon distribution is inferred. The depth and number of discrete groundwater samples is based on the CPT and MIP data evaluation. Proposed CPT boring locations are presented on Figure 2.

- Install soil vapor probes SVP-1 through SVP-5 along the southwestern property boundary, near the onsite commercial building, and near monitoring well MW-12 to determine the potential vapor intrusion risk to human health on and offsite. Proposed soil vapor probe boring locations are presented on Figure 2.

WORK TASKS

Access Agreement: On behalf of Shell, CRA will obtain an access agreement, or update existing access agreements with the owners of properties where the offsite sample locations are proposed.

Permits: Once the access agreements have been secured, CRA will obtain the required drilling permit from ACHCSA for the boring locations, and if needed a city encroachment permit for locations in the public-right-of-way.

Site Safety Plan: CRA will prepare a comprehensive Site-Specific Safety Plan to protect site workers. The plan will be reviewed and signed by each site worker and kept on the site during field activities.

Utility Clearance: CRA will mark the proposed drilling locations and will clear the locations through Underground Service Alert (USA) prior to drilling. A private utility locating service will be used to verify clearance of subsurface obstructions. Additionally, the first five feet of each boring will be cleared using a hand auger or air-knife equipment, to minimize potential damage to underground structures not identified through USA.

CPT/MIP Borings: CRA will supervise and observe six (6) CPT borings (CPT-1 through CPT-6) at the approximate locations shown on Figure 2. The CPT equipment is combined with MIP screening technology. Prior to advancement of each CPT boring, the MIP membrane interface probe, a 1.75 " diameter down hole tool, is integrated into the CPT tooling. As the CPT tip advances into the subsurface, the MIP heats the soil and groundwater adjacent to the probe to approximately 120 degrees Celsius. The heat increases the volatility and vapor phase compounds are diffused across a membrane into a closed inert gas loop. The loop carries the vapors into a series of detectors, including a photo ionization detector (PID), flame ionization detector (FID), and radioactive Beta emitter (ECD) a continuous log of data is generated.

Each CPT location will consist of at least four CPT borings: one boring to a approximately 75 fbg for the continuous CPT and MIP log; and one boring is necessary for each of three proposed depth discrete groundwater samples. CRA anticipates sampling from a minimum of three water-bearing zones. The actual intervals sampled are determined in the field based on a review of the CPT and MIP logs. No soil samples will be collected from the CPT borings.

Groundwater samples from the CPT borings will be collected using Hydropunch ® or similar sampling equipment and will be contained in appropriate sample containers supplied by the laboratory. Upon their collection, each groundwater sample will be labeled, entered onto a chain-of-custody record, and placed into a cooler with ice for transport to a State of California certified laboratory for analysis. A standard two week turn-around time will be requested for laboratory results.

Soil Vapor Probe Installation: Assuming the absence of subsurface obstructions, CRA will advance 5 soil borings (SVP-1 through SVP-5) using a hand auger in the approximate locations shown on Figure 2. After the borings are advanced, fixed vapor-sampling points will be installed in each boring using ¼-inch diameter Teflon tubing. Each point will use a 3-inch screen interval manufactured by Geoprobe attached to the Teflon tubing. To ensure the tubing does not curl or kink during installation, CRA will first straighten out each length of tubing prior to installation, and then use a small-diameter PVC guide pipe to hold the tubing in place within the boring while packing the annulus with sand. A clean, fine-grained

silica sand filter pack will be installed approximately 3 inches below and above the screened interval, and the guide pipe will be lifted as the sand pack is installed to ensure the pack stabilizes the tubing within each boring. The annulus will then be sealed to the surface using bentonite slurry, set atop a two-inch base of bentonite pellets. Each soil probe will be completed at the surface using a traffic-rated well box at grade. At least two weeks following probe installation, soil vapor samples will be collected from each sampling point in summa canisters according to Shell's vapor sampling protocol. Installation and sampling is effected by rain. It is CRA standard procedure to allow 2 days or more after a heavy rain event prior to collecting soil vapor samples.

Chemical Analyses: Based on the results of previous samples, the groundwater samples will be analyzed for TPHg, BTEX, and MTBE by EPA Method 8260B. The soil gas samples will be analyzed by Modified EPA Methods TO-15 for BTEX, MTBE, TO-3 for TPHg, and leak test compounds isobutene, butane, and propane.

Report Preparation: Following the receipt of analytical results from the laboratory, CRA will prepare a written report which will include a description of the field procedures, a presentation of the analytical results, tabulated data, figures showing sample locations, the complete analytical laboratory reports, CPT electronic logs, boring logs with well construction details, findings and conclusions, and recommendations.

CERTIFICATION

The scope of work described in this work plan will be performed under the supervision of a California Professional Geologist or Engineer.

SCHEDULE

CRA is prepared to begin work upon approval of this work plan by ACHCSA and receipt of executed access agreements and approved drilling and encroachment permit(s). The technical report of findings will be submitted approximately 60 days following receipt of analytical data.

CLOSING

If you have any questions regarding the scope of work outlined in this work plan, please call Ana Friel at (707) 268-3812.

Sincerely,
Conestoga-Rovers & Associates, Inc.

for

Celina Hernandez
Senior Staff Geologist

PROFESSIONAL GEOLOGIST
ANA FRIEL
No. 6452
exp 9/07
STATE OF CALIFORNIA

Ana Friel, PG
Associate Geologist

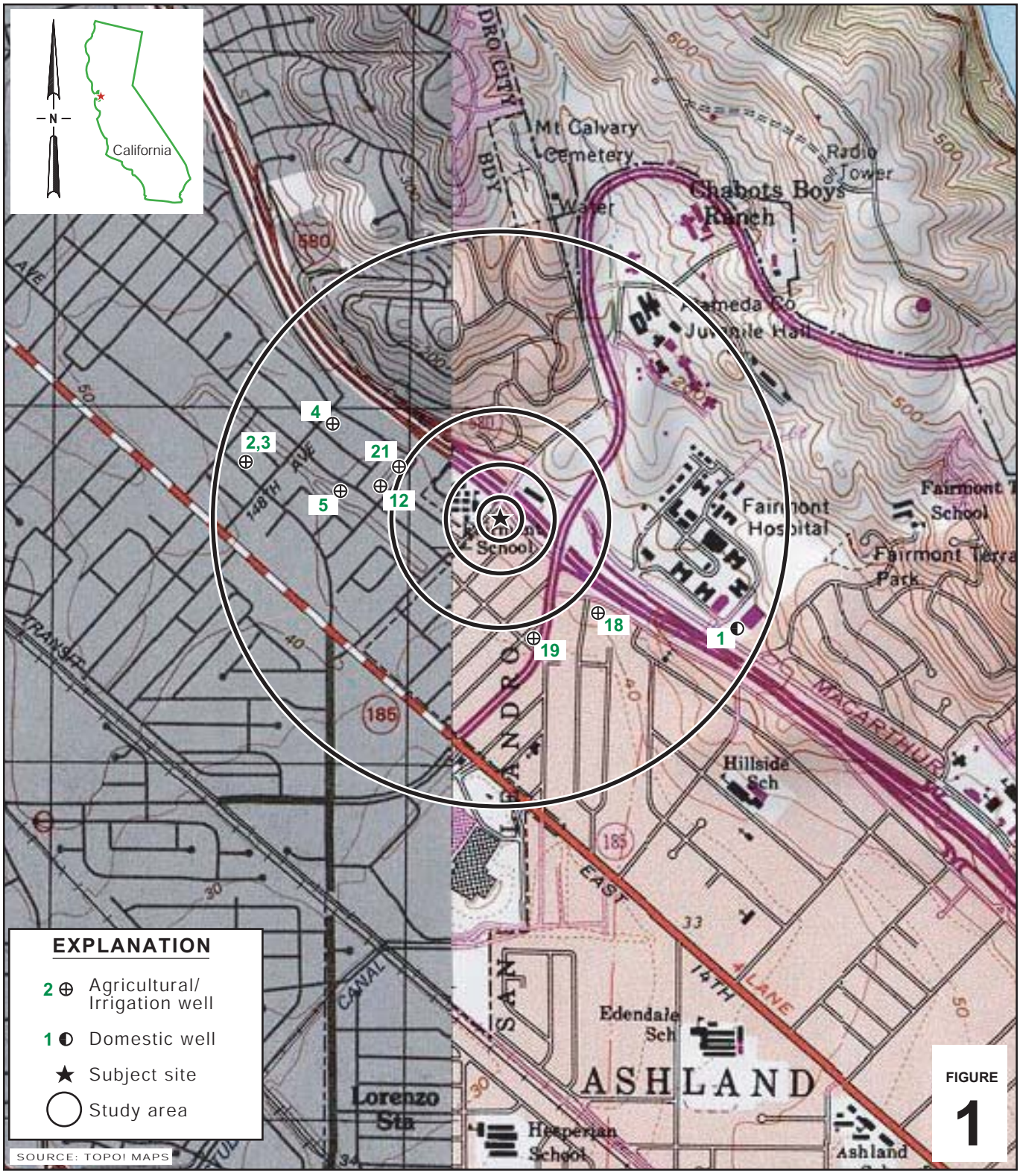
Figure 1. Site Vicinity Map
Figure 2. Proposed Sample Location Map

Attachment A. Regulatory Correspondence

cc: Denis Brown, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810

I:\Sonoma.Shell\San Leandro 1784 150th\REPORTS\2007 June CPT&Vapor Inv WPlan\07 June CPT & Soil Vapor Wkpln.doc

05/17/07



SCALE : 1" = 1/4 MILE

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FIGURE 1

Shell-branded Service Station

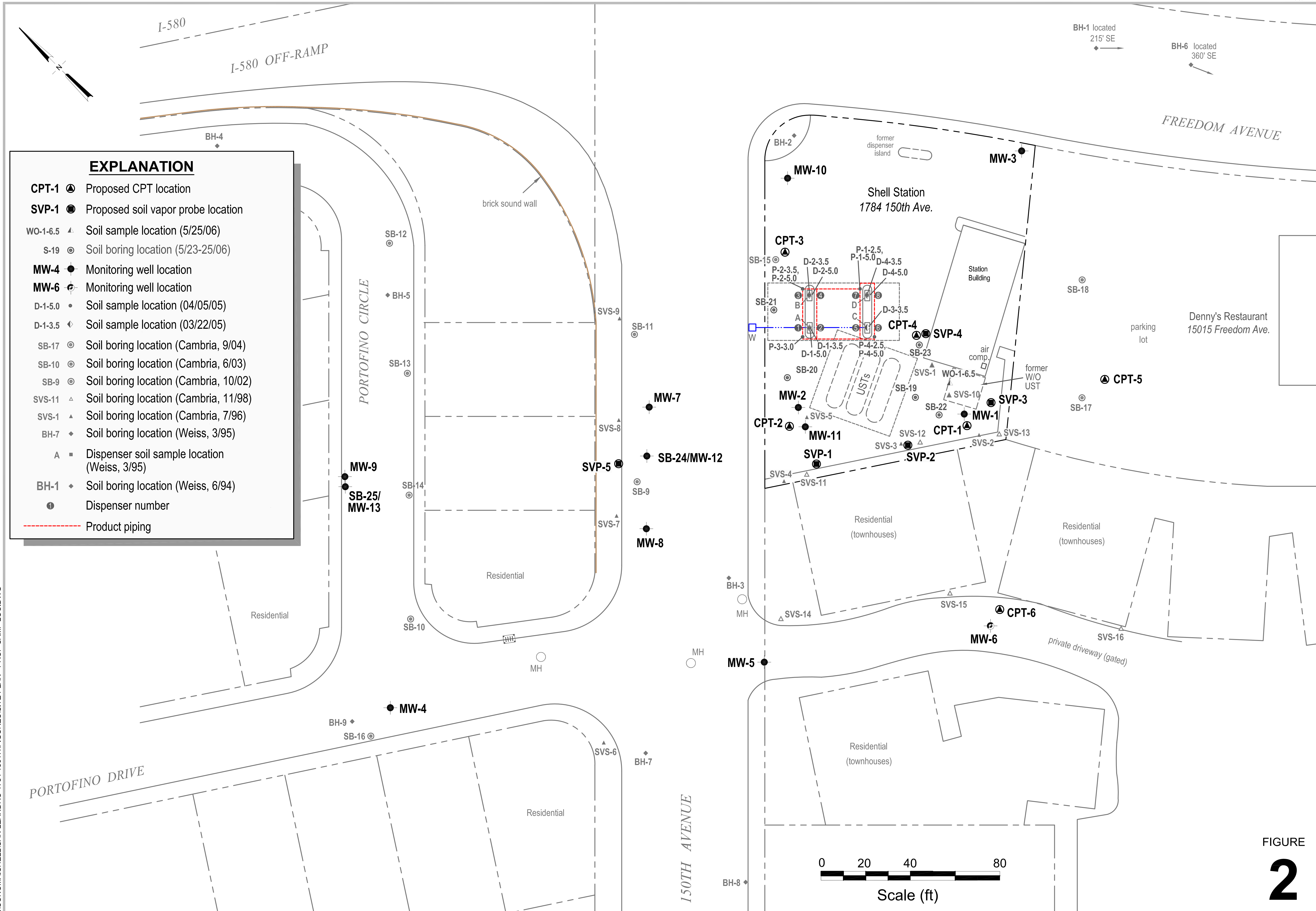
1784 150th Avenue

San Leandro, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

05/17/07



EXPLANATION
CPT-1 Proposed CPT location
SVP-1 Proposed soil vapor probe location
WO-1-6.5 Soil sample location (5/25/06)
S-19 Soil boring location (5/23-25/06)
MW-4 Monitoring well location
MW-6 Monitoring well location
D-1-5.0 Soil sample location (04/05/05)
D-1-3.5 Soil sample location (03/22/05)
SB-17 Soil boring location (Cambria, 9/04)
SB-10 Soil boring location (Cambria, 6/03)
SB-9 Soil boring location (Cambria, 10/02)
SVS-11 Soil boring location (Cambria, 11/98)
SVS-1 Soil boring location (Cambria, 7/96)
BH-7 Soil boring location (Weiss, 3/95)
A Dispenser soil sample location (Weiss, 3/95)
BH-1 Soil boring location (Weiss, 6/94)
Dispenser number
Product piping
I-580
I-580 OFF-RAMP
FREEDOM AVENUE
PORTOFINO CIRCLE
PORTOFINO DRIVE
150TH AVENUE
BH-1 located 215' SE
BH-6 located 360' SE
brick sound wall
Shell Station
1784 150th Ave.
former dispenser island
Station Building
USTs
air comp.
former W/O UST
parking lot
Denny's Restaurant
15015 Freedom Ave.
Residential
Residential (townhouses)
private driveway (gated)
MH
W
BH-2
BH-3
BH-4
BH-5
BH-7
BH-8
BH-9
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
SB-24/MW-12
SB-25/ MW-13
CPT-1
CPT-2
CPT-3
CPT-4
CPT-5
CPT-6
SVP-1
SVP-2
SVP-3
SVP-4
SVP-5
SB-9
SB-10
SB-11
SB-12
SB-13
SB-14
SB-15
SB-16
SB-17
SB-18
SB-19
SB-20
SB-21
SB-22
SB-23
SVS-1
SVS-2
SVS-3
SVS-4
SVS-5
SVS-6
SVS-7
SVS-8
SVS-9
SVS-10
SVS-11
SVS-12
SVS-13
SVS-14
SVS-15
SVS-16
WO-1-6.5
P-1-2.5, P-1-5.0
P-2-3.5, P-2-5.0
P-3-3.0
P-4-2.5, P-4-5.0
D-1-3.5
D-1-5.0
D-2-3.5
D-2-5.0
D-3-3.5
D-4-3.5
D-4-5.0
A
B
C
D
0 20 40 80
Scale (ft)

Proposed Sample Location Map

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Shell-branded Service Station
1784 150th Avenue
San Leandro, California

FIGURE
2

I:\SONOMA.SHELL\SAN LEANDRO 1784 150TH\FIGURES\SITE PLAN - PROP SAMP LOC.DWG

Attachment A

Regulatory Correspondence

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 30, 2007

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

APR 10 2007
RECEIVED

Subject: Fuel Leak Case No. RO0000367 and Geotracker Global ID T0600101230, Shell#13-6017, 1784 150th Avenue, San Leandro, CA 94578

Dear Mr. Brown:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the documents entitled, "Agency Response with Proposed Future Actions," dated February 14, 2007 and "Groundwater Monitoring Report – Third Quarter 2006," dated November 15, 2006. The "Agency Response with Proposed Future Actions," recommends an on-site and off-site CPT investigation, installation and sampling of soil vapor probes, and discontinuation of periodic groundwater extraction from well MW-11. The "Groundwater Monitoring Report – Third Quarter 2006," presents the results of ongoing quarterly groundwater monitoring.

We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

1. **CPT Investigation.** The "Agency Response with Proposed Future Actions," recommends performing an on-site and off-site CPT investigation to complete the horizontal and vertical delineation of contamination. CPT borings are proposed to depths of approximately 75 feet bgs with collection of groundwater samples from first-encountered groundwater and two deeper water-bearing zones. We concur with the proposal to advance CPT borings on-site and off-site and request that you present detailed plans for the borings in the Work Plan requested below. Please consider the use of ultraviolet induced fluorescence (UVIF) or membrane interface probe (MIP) to evaluate the vertical distribution of free-phase product in the area of well MW-1.

2. **Soil Vapor Sampling.** We concur with the proposal to install and sample soil vapor monitoring probes along the southwestern property boundary and near the on-site building. We request that a minimum of one soil vapor monitoring probe be installed on the northwestern side of 150th Avenue in the area of monitoring well MW-12. Please present plans for the soil vapor monitoring probe installation and sampling in the Work Plan requested below.

3. **Periodic Groundwater Extraction.** The "Agency Response with Proposed Future Actions," recommends evaluation of passive free product removal instead of groundwater extraction from well MW-1. If a separate phase product continues to be observed in well MW-1, please present plans for free product removal from well MW-1 following the proposed CPT investigation. The "Agency Response with Proposed Future Actions," also recommends discontinuation of periodic groundwater extraction from monitoring well MW-11 due to a decrease in MTBE concentrations in groundwater from well MW-11. However, the concentration of MTBE in groundwater from well MW-11 during the most recent groundwater sampling event on December 28, 2006 was 2,600 micrograms per liter (µg/L). The concentrations of total petroleum hydrocarbons as gasoline and benzene detected in groundwater from well MW-11 were 76,000 µg/L and 2,700 µg/L, respectively. Therefore, we request that periodic groundwater extraction from well MW-11 be continued.

TECHNICAL REPORT REQUEST

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

- **June 13, 2007** – Work Plan
- **45 days after 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: Ana Friel
Cambria Environmental Technology, Inc.
270 Perkins Street
Sonoma, CA 95476

Donna Drogos, ACEH
Jerry Wickham, ACEH
File