CAMBRIA

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ENVIRONMENTAL PROTECTION
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November 5, 1998

Mr. Scott O. Seery
Alameda County Department of Environmental Health
Hazardous Materials Division
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Subsurface Investigation Work Plan Addendum**
Shell-branded Service Station
1784 150th Avenue
San Leandro, California
WIC #204-6852-1404
Cambria Project #240-612

Dear Mr. Seery:

Cambria Environmental Technology, Inc. (Cambria) is submitting this work plan on behalf of Equilon Enterprises LLC (Equilon) for the site referenced above. This work plan addendum is in response to your request for additional information regarding Cambria's *Subsurface Investigation Work Plan* dated September 30, 1998. Following is a response to issues addressed regarding the proposed soil vapor survey (SVS) and a response to RBCA related topics from Cambria's *Meeting Summary and Work Plan Addendum* dated May 1, 1998.

SOIL VAPOR SURVEY ISSUES

1) Data should be collected near the previous SVS sample locations: SVS-2, SVS-3 and SVS-4 (Figure 1) in an attempt to corroborate the initial SVS conducted by Weiss Associates (WA).

Proposed Boring Locations: Cambria will complete three new borings adjacent to former soil vapor survey sample locations SVS-2, SVS-3 and SVS-4. The proposed on-site boring locations are shown on Figure 1 (SVS-11, SVS-12, AND SVS-13). Soil properties, soil chemical analysis, ground water chemical analysis and soil vapor chemical analysis samples will be collected from these borings locations in addition to proposed borings SVS-14, SVS-15 and SVS-16 (Figure 1).

2) Specify which analytical method will be utilized for vapor analysis and provide explanation why.

Soil Vapor Analyses: In-situ soil vapor samples will be collected from each of the six proposed boring locations in one liter Summa-type canisters at approximately 5 ft intervals or at lithologic

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changes. Samples will be analyzed by Air Toxics LTD of Folsom California for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethyl-benzene and total xylenes (BTEX). Method TO-3 will be utilized for vapor chemical analysis. TO-3 is the appropriate method as the primary compound of concern is benzene. Method TO-3 can achieve a detection limit of .001 parts per million for BTEX compounds. Following is a discussion addressing the difference between methods TO-3 and CARB 410A.

Methods TO-3 and CARB 410A are essentially the same method in that both methods are performed with a gas chromatograph and flame ionization detector (GC/FID). Both methods are designed to search for the specific contaminates of TPHg and BTEX. Both methods have detection limits of .001 parts per million by volume (ppm,v) for BTEX compounds. The primary difference between TO-3 and CARB 410A is that CARB 410A has stricter quality control measures as required by the California Air Resources Board.

In the previous WA soil vapor survey, Method 410A was reported in the analytical report from Air Toxics LTD when in fact Method TO-3 was the method actually performed. WA did not specify to utilize strict quality control protocol (CARB 410A) on the chain of custody, rather the chain of custody requested "BTEX". The fact that WA vapor samples were analyzed by Method TO-3 was confirmed to Cambria in a phone conversation with Air Toxis LTD in November 1998.

3) Provide more specific information regarding the vapor purging protocol for the SVS.

Vapor Purge Protocol: Cambria field personnel will calculate the volume of air within the sample tube with the following calculation:

$$A = (\pi d^2/4)(L) = V$$

Where:

A = Area within sample tube.
d = Inside diameter of sample tube.
L = Length of sample tube.
V = Volume within sample tube.

After the known volume of the sample tube is determined, three tube volumes will be purged from the sample tube by a bladder-air pump equipped with a flow gauge. This protocol for pre-purging the sample tube will be followed for each discrete sample location. Tubing will be replaced between each sample to avoid cross contamination of samples.

4) Provide clarification as to the contingency plan for the installation of the proposed monitoring wells: MW-5, MW-6 and MW-7.

Well MW-5 will be located in the northern corner of the site to provide ground water elevation data and northern plume definition. Well MW-6 will be located northwest of the site to provide ground water elevation data and northwestern plume definition. Well MW-7 will be located south of the site to provide ground water elevation data, southern plume definition, and monitor potential impact to adjacent residential property.

MW-5 and MW-6 will be installed during the first quarter of 1999. Installation of MW-7 will be based on the findings of the SVS and ground water investigation. **If TPHg/BTEX or MTBE are detected in ground water samples collected from borings SVS-14 and SVS-15, then MW-7 will be installed in the first quarter of 1999.** If concentrations are below detection limits, the installation of MW-7 is not warranted.

RBCA RELATED ISSUES

Cambria proposes to conduct another Teir 2 RBCA which will address the RBCA related topics discussed in Cambria's *Meeting Summary and Work Plan Addendum* dated May 1, 1998. After reviewing the previous WA Tier 1 and Tier 2 RBCA's and the subsequent issues resulting, it appears a new Tier 2 RBCA evaluation is the best way to address the questions regarding the WA RBCA's. Cambria will submit the new Tier 2 RBCA during the first quarter of 1999.

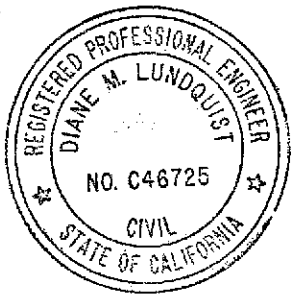
CLOSING

We appreciate your continued assistance with this project. Please contact Darryk Ataide at (510) 420-0700 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.

D. Ataide

Darryk Ataide
Project Environmental Scientist



Diane Lundquist P.E.
Principal Engineer

cc: Karen Petryna, Equiva Services LLC, P.O. Box 6249 Carson, California 90749-6249

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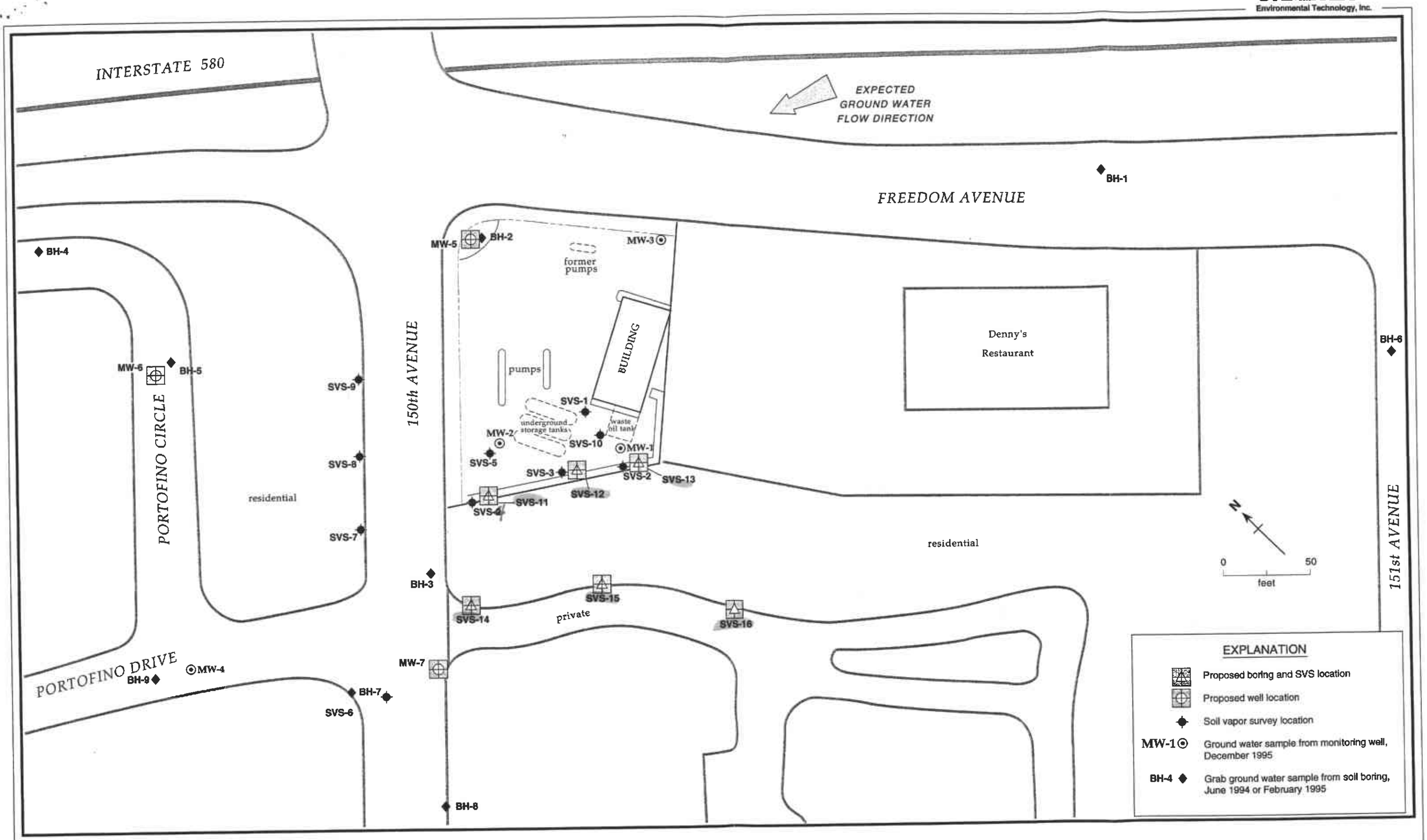

Figure 1. Proposed Monitoring Well and Boring Locations - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

09/16/98

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