

May 2, 2003

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

**Subject: Shell-branded Service Station**  
6039 College Avenue  
Oakland, California

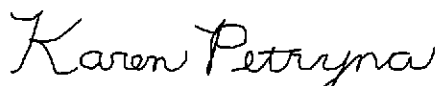
Dear Mr. Hwang:

Attached for your review and comment is a copy of the *Subsurface Investigation Work Plan Amendment* for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

As always, please feel free to contact me directly at (559) 645-9306 with any questions or concerns.

Sincerely,

**Shell Oil Products US**



Karen Petryna  
Sr. Environmental Engineer

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

Re: **Subsurface Investigation Work Plan Amendment**  
Shell-branded Service Station  
6039 College Avenue  
Oakland, California  
Incident # 98995745  
Project # 245-0503



Dear Mr. Hwang:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US, Cambria Environmental Technology, Inc. (Cambria) is submitting this amendment to our January 6, 2003 *Subsurface Investigation Work Plan* as requested in a March 21, 2003 letter from Alameda County Health Care Services Agency (ACHCSA).

As stated in the January 6, 2003 work plan, this investigation's objective is to define the extent of the methyl-tertiary-butyl ether (MTBE) plume southwest of the site and to determine whether offsite utility trenches provide preferential pathways for chemical migration. The original work plan consisted of installing two onsite and three offsite Geoprobe® soil borings, collecting grab groundwater samples from each boring and submitting selected soil samples for chemical analysis. To provide additional plume definition, Cambria has added three offsite soil borings (SB-6, SB-7 and S-9) and one onsite boring (SB-8) to the investigation scope of work.


#### PROPOSED SCOPE OF WORK

To define the vertical and lateral extent of the hydrocarbon and MTBE plume on- and offsite, Cambria will install a total of nine Geoprobe® soil borings. Soil borings SB-1 and SB-2 will be installed onsite, downgradient of the existing pump islands; boring SB-3 will be installed near the southwestern boundary of the site; borings SB-4 and SB-5 will be installed in Claremont Avenue as near as possible to the utility trenches downgradient of the site; SB-9 will be installed in Claremont Avenue as near as possible to the utility trenches near the upgradient boundary of the

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site; SB-6 and SB-7 will be installed on opposite sides of Claremont, downgradient of the site; and, SB-8 will be installed onsite, downgradient of the tank pit, between existing monitoring wells MW-3 and MW-4.



During the investigation, Cambria will log all soil borings continuously for lithologic description, collect one or more grab-groundwater samples from each boring, and select soil samples for chemical analysis based on changes in lithology and areas of obvious contamination as well as depth of soil/groundwater interface. Soil borings SB-1, SB-4, SB-5, SB-6 and SB-9 will be advanced to the current groundwater depth of approximately 15 feet below grade. Soil borings SB-2, SB-3, SB-7, and SB-8 will be advanced to approximately 15 feet below the current water table. Additional borings will be advanced adjacent to SB-2, SB-3, SB-7, and SB-8 to collect depth-discrete groundwater samples only for investigating the vertical distribution of hydrocarbon and MTBE in groundwater. Cambria will determine the depth and number of discrete groundwater samples based on the observed lithology.

Upon approval of this work plan amendment by ACHCSA, Cambria will complete the following tasks:

**Utility Location:** Cambria will notify Underground Service Alert (USA) of our proposed drilling activities. USA will have the utilities in the vicinity identified. Due to the proximity of the proposed borings to underground utilities, a contracted subsurface utility locator will also be used to clear the boring locations prior to drilling.

**Site Health and Safety Plan:** Pursuant to OSHA requirements, Cambria will prepare a comprehensive site safety plan to protect site workers. The plan will be kept onsite during field activities and will be reviewed and signed by each site worker.

**Permits:** Cambria will obtain required permits for well installation from the Alameda County Public Works Agency and an encroachment permit from the City of Oakland.

**Soil Borings:** A total of nine soil borings will be advanced using a limited-access, direct-push (Geoprobe®) drilling rig. Cambria's standard field procedures for Geoprobe® sampling were included with the January 6, 2003 work plan. Upon completion, the borings will be sealed with cement grout to match the existing grade. Selected soil and groundwater samples will be transported to a State-approved analytical laboratory for chemical analysis.

**Depth-Discrete Groundwater Sampling:** Using the lithological information obtained from soil borings SB-2, SB-3, SB-7 and SB-8, Cambria will identify depths for collecting discrete groundwater samples using a Hydropunch® sampling tool. Groundwater samples will be transported to a State-approved analytical laboratory for chemical analysis.

**Laboratory Analyses:** Soil and groundwater samples will be analyzed for total petroleum hydrocarbons as gasoline, benzene, toluene, ethylbenzene, xylenes, and MTBE using EPA Method 8260B. Per ACHCSA's request, grab groundwater samples will be additionally analyzed for tert-amyl methyl ether (TAME), ethyl tert-butyl ether (ETBE), di-isopropyl ether (DIPE), tert-butyl alcohol (TBA), ethanol, ethylene dibromide (EDB) and ethylene dichloride (1,2-DCA).

**Subsurface Investigation Report:** After the analytical results are received, Cambria will prepare a report that, at a minimum, will contain:

- A summary of the site background and history;
- Descriptions of drilling and sampling activities;
- Soil boring logs;
- Tabulated analytical results for groundwater;
- Analytical reports and chain-of-custody forms;
- A discussion of the hydrocarbon and MTBE distribution in the subsurface; and
- Conclusions and recommendations



## SCHEDULE

Upon receiving written approval of this work plan amendment from the ACHCSA, Cambria will apply for the necessary permits and schedule drilling. We will provide you with a 72-hour notice prior to field activities. We anticipate submitting our investigation report within 60 days of completing the fieldwork.

**CLOSING**

Please call Melody Munz at (510) 420-3324 if you have any questions or comments. Thank you for your assistance.

Sincerely,  
**Cambria Environmental Technology, Inc.**



Melody Munz  
Project Engineer

Matthew W. Derby, P.E.  
Senior Project Engineer

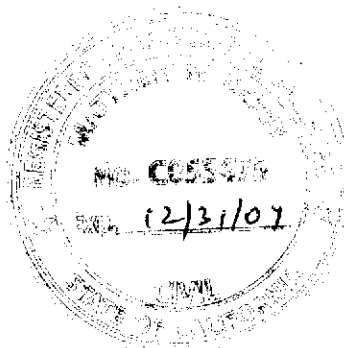


Figure: 1 - Proposed Soil Boring Location Map

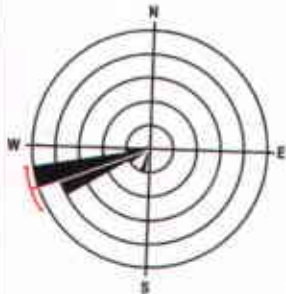
cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869  
Russell J. Bruzzone, Inc. 899 Hope Lane, Lafayette, CA 94549  
Montrose Investment Co., 242 Rivera Circle, Greenbrae Marina, Larkspur, CA 94939,  
Attn: Jim Graham

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### EXPLANATION

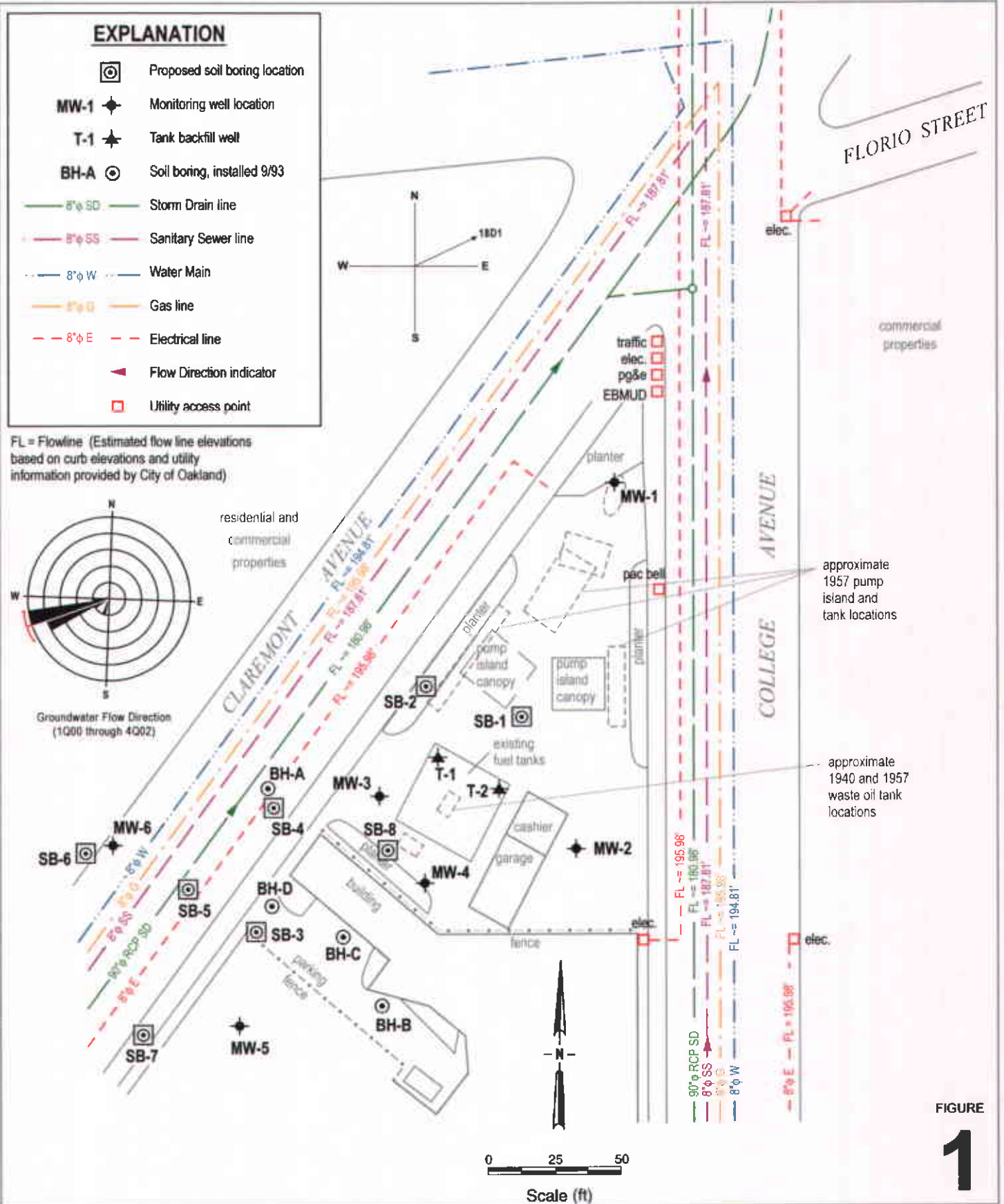
- Proposed soil boring location
- MW-1 Monitoring well location
- T-1 Tank backfill well
- BH-A Soil boring, installed 9/93
- 8" SD Storm Drain line
- 8" SS Sanitary Sewer line
- 8" W Water Main
- Gas line
- 8" E Electrical line
- Flow Direction indicator
- Utility access point

FL = Flowline (Estimated flow line elevations based on curb elevations and utility information provided by City of Oakland)



Groundwater Flow Direction (1Q00 through 4Q02)

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FIGURE

**1**

**Shell-branded Service Station**  
 6039 College Avenue  
 Oakland, California  
 Incident #98995745



**CAMBRIA**

**Proposed Soil Boring  
 Location Map**