



November 30, 2004

Roseanna Garcia-LaGrille
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Alameda County
DEC 06 2004
Environmental Services

Subject: Former Shell Service Station
2160 Otis Drive
Alameda, California

Dear Ms. Garcia-LaGrille:

Attached for your review and comment is a copy of the *Site Investigation Report* 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

A handwritten signature in cursive script that reads "Karen Petryna".

Karen Petryna
Sr. Environmental Engineer

November 30, 2004

Ms. Roseanna Garcia-LaGrille
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Site Investigation Report**
Former Shell Service Station
2160 Otis Drive
Alameda, California



Dear Ms. Garcia-LaGrille:

Cambria Environmental Technology, Inc. (Cambria) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document site investigation activities performed last December at the above-referenced site. The purpose of the investigation was to further assess the lateral extent of impacted soil and groundwater beneath the site. Cambria followed the scope of work presented in our November 15, 2003 *Groundwater Monitoring Report – Third Quarter 2003* which was approved by Alameda County Health Care Services Agency (ACHCSA) in electronic correspondence. The work was performed in accordance with Regional Water Quality Control Board (RWQCB) and Alameda County Public Works Agency (ACPWA) guidelines.

SITE BACKGROUND

The site is located on the west side of intersection of Otis Drive and South Shore Center in a commercial section of Alameda, California (Figure 1). The former station layout included three underground storage tanks (USTs), two fuel dispensers, and a station building (Figure 2). The current site configuration consists of an Office Max business and parking area.

PREVIOUS WORK

Shell discontinued operation of the service station, demolished the aboveground facilities, and removed the underground storage tanks (USTs) and piping in September 1997. Based on the results of more than five years of groundwater monitoring, the ACHCSA granted no further action status on November 14, 1995 for a waste-oil tank release. During the groundwater monitoring that occurred between 1989 and 1995, the depth to groundwater at this site varied between 3 and 5 feet with a flow direction of north-northeast. Based on groundwater samples collected from former wells MW-1 and MW-2 on October 11, 1994, the groundwater contained

**Cambria
Environmental
Technology, Inc.**

270 Perkins Street
P.O. Box 259
Sonoma, CA 95476
Tel (707) 935-4850
Fax (707) 935-6649

over 6,500 milligrams per liter of total dissolved solids, which exceeds state guidelines for use as a drinking water source.

August 1997 Pre-Characterization Sampling: On August 1, 1997, soil samples (SB-A through SB-H) were collected near the gasoline tanks to pre-characterize soils before the tanks were removed. Of the 40 soil samples analyzed, the maximum benzene concentration was 0.15 parts per million (ppm). No benzene was detected in 35 of the soil samples. The maximum total petroleum hydrocarbon as gasoline (TPHg) detected in the soil samples was 46 ppm. No TPHg was detected in 30 of the soil samples.



September 1997 Tank Removal Sampling: On September 4, 1997, Paradiso Mechanical of San Leandro, California removed three 10,000-gallon fiberglass gasoline USTs and one 550-gallon fiberglass waste-oil tank, and the associated gasoline product piping, vent piping, and dispensers. Cambria collected soil samples from near the ends of the former gasoline tanks and the waste-oil tank. Grab groundwater samples were collected from the gasoline tank and the waste-oil tank excavations. Cambria also collected six soil samples from beneath the former dispensers and product piping and one soil sample from beneath each of two former hoists and the former garage oil/water separator. The tank removal and sampling activities were documented in Cambria's October 3, 1997 *Tank Removal and Sampling Report*. Although petroleum hydrocarbons were detected in the grab groundwater samples from both tank pits, no petroleum hydrocarbons were detected in the soil sample from near the waste oil tank pit and only low concentrations of petroleum hydrocarbons (non-detected TPHg, maximum 0.11 ppm benzene, maximum 0.49 ppm methyl tertiary butyl ether [MTBE]) were reported (by EPA Method 8020) in the soil samples collected around the gasoline tank pit. Maximum concentrations of 270 ppm TPHg, 1.7 ppm benzene, and 0.32 ppm MTBE were detected in shallow soil samples collected beneath the former dispensers.

December 1997 Geoprobe® Investigation: On December 17, 1997, Cambria collected soil and/or grab groundwater samples from Geoprobe® borings G-1 through G-7. The complete sampling activities and analytical results are documented in Cambria's January 28, 1998 *Investigation Report*. No TPHg, total extractable petroleum hydrocarbons as diesel, or benzene, toluene, ethylbenzene, or total xylenes (BTEX) were detected in any of the soil samples from near the former gasoline tanks, waste oil tank, or the northern corner of the property. MTBE was reported in one soil sample collected near the former gasoline tank pit at a concentration of 0.28 ppm by EPA Method 8020. No MTBE was detected in any other soil sample collected from any location onsite. Of the four soil samples collected from the former dispenser areas, only one (G-6-3.5') contained detectable concentrations of TPHg (5.2 ppm) or benzene (0.0059 ppm).

No TPHg, BTEX, or MTBE was detected in the grab groundwater sample (G-5) collected from the northern corner of the site. Maximum concentrations of 2,900 parts per billion (ppb) TPHg, 240 ppb benzene, and 920 ppb MTBE (by EPA Method 8020) were detected in the two grab groundwater samples collected directly downgradient of the former dispensers and gasoline tanks.

November 2000 Well Installation: In November 2000, Cambria installed monitoring well MW-3 onsite (Figure 2). No TPHg, BTEX, or MTBE were detected in any of the soil samples collected from well MW-3.



Groundwater Monitoring: Following the installation of MW-3, groundwater monitoring was re-initiated. The monitoring program was suspended after the fourth quarter 2001 event, pending case closure review by the ACHCSA. The maximum detected TPHg, benzene, and MTBE concentrations in well MW-3 were 3,100 ppb, 250 ppb, and 180 ppb, respectively, during the four quarters of monitoring conducted. Depth to groundwater during this period ranged from 5.06 feet below grade (fbg) to 5.93 fbg.

Downgradient Assessment: Based on a series of e-mail correspondences between Cambria, Shell, and the ACHCSA between June and October, 2002, investigation activities were proposed to assist with the agency's evaluation of closure potential. The purpose of these borings was to assess the lateral extent of benzene impact between the site and the nearest receptor (a lagoon located approximately 300 feet northeast/downgradient of the site), and also to assess whether preferential migration of benzene is occurring via the subsurface utility conduits.

The results of this investigation are presented below.

INVESTIGATION RESULTS

Personnel Present: Cambria geologist Scott Lewis directed the field activities, working under the supervision of California Registered Geologist Ana Friel.

Permits: A boring permit was obtained from ACPWA and a Right of Way permit was obtained from the City of Alameda (Appendix A).

C A M B R I A

Drilling Company: Gregg Drilling and Testing, Inc. of Martinez, California (C57 License No. 485165).

Drilling Date: December 9, 2003.

Drilling Method: Air knife and hand-auger.

Number of Borings: Five soil borings (SB-1 through SB-5) were drilled. Boring specifications are described in Table 1 and locations are shown on Figure 2.

Boring Depths: Borings SB-1 through SB-5 were extended to 7 fbg.

Soil Sampling Methods: Soil types were logged using the Unified Soil Classification System and Munsell Soil Color Charts. Encountered soil is described on the exploratory boring logs presented in Appendix B. Soil samples were collected continuously for lithologic description. Soil samples were screened in the field for the presence of organic vapors using a photo-ionization detector (PID). PID readings are recorded on the boring logs. One soil sample was retained from above the soil-water interface for potential chemical analyses. Soil from the desired interval was collected in a brass sample tube and capped with Teflon sheeting and tight-fitting plastic end caps. Each sample tube was labeled, logged onto a chain-of-custody form and placed in a chilled ice chest until delivery to a state-certified laboratory for analyses.

Groundwater Sampling: A grab groundwater sample was obtained from each boring by means of a disposable bailer. Water was transferred from the bailer to laboratory supplied containers. The containers were labeled, logged onto a chain-of-custody form and placed in a chilled ice chest until delivery to a state-certified laboratory for analyses.

Chemical Analyses: Soil and groundwater samples were analyzed for TPHg, BTEX, and MTBE by EPA Method 8260B.



HYDROCARBON DISTRIBUTION IN SOIL

No TPHg, benzene, or MTBE were detected in soil samples from borings SB-1 through SB-5 at five fbg. Only one sample (SB-3 at 5 fbg) contained detectable concentrations of toluene, ethylbenzene, and xylenes at concentrations of 0.062, 0.014, and 0.063 ppm, respectively.

The soil chemical analytical data is summarized on Table 2, the TPHg, benzene, and MTBE concentrations are presented on Figure 2, and the laboratory analytical report is included in Appendix C.



HYDROCARBON DISTRIBUTION IN WATER

TPHg was detected in groundwater samples from borings SB-2 and SB-5 at concentrations of 62 and 57 ppb, respectively. The only other detection was 1.8 ppb xylenes at SB-5. No other constituents were present in any of the groundwater samples at laboratory reporting limits. Benzene and MTBE were not detected in any of the groundwater samples from borings SB-1 through SB-5.

The groundwater chemical analytical data is summarized on Table 3, the TPHg, benzene, and MTBE concentrations are presented on Figure 2, and the laboratory analytical report is included in Appendix C.

DISCUSSION

The purpose of these borings was to assess the lateral extent of benzene impact between the site and the nearest receptor (a lagoon located approximately 300 feet northeast/downgradient of the site), and also to assess whether preferential migration of benzene is occurring via the subsurface utility conduits.

Five soil borings were installed to a depth of 7 fbg for collection of soil and groundwater samples. No TPHg, benzene, or MTBE were detected in soil samples from borings SB-1 through SB-5.

No benzene or MTBE were detected in groundwater samples from borings SB-1 through SB-5. TPHg was detected in groundwater samples from borings SB-2 and SB-5 at low concentrations.

CONCLUSIONS

Based on the results of the investigation reported herein, and previous data for this site, Cambria concludes that the former release of petroleum constituents at the subject site has not migrated significantly downgradient. Further, preferential migration of constituents was not apparent based on the results of this investigation.

Given that the subject site has not been operated as a gasoline service station since 1997, and the documented attenuation of constituents at this site, it is likely that continued degradation of the plume will occur.



Thus, the release of petroleum from the former Shell station does not pose a threat to receptors currently, nor in the foreseeable future.


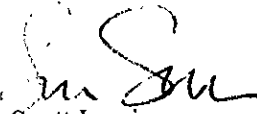
A final groundwater monitoring event will be performed in December 2004. If concentrations in well MW-3 are similar or lower than historical concentrations, recommendations for case closure and destruction of well MW-3 will be included in the fourth quarter monitoring report which will be submitted in February 2005.

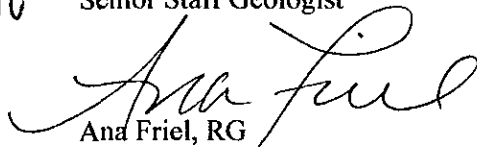
C A M B R I A

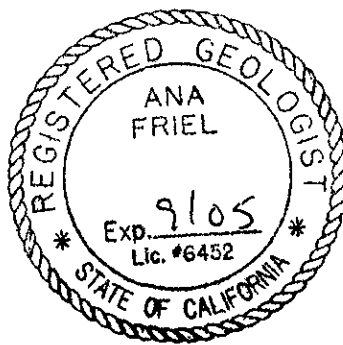
CLOSING

If you have any questions regarding the contents of this document, please call Ana Friel at (707) 442-2700.

Sincerely,
Cambria Environmental Technology, Inc.

 
Scott Lewis
Senior Staff Geologist


Ana Friel, RG
Senior Project Geologist
RG 6452



Attachments:

- | | |
|-------------|---|
| Table 1. | Well/Boring Data |
| Table 2. | Soil Analytical Data |
| Table 3. | Groundwater Analytical Data |
| Figure 1. | Site Vicinity Map |
| Figure 2. | Soil/Groundwater Chemical Concentration Map |
| Appendix A. | Permits |
| Appendix B. | Boring Logs |
| Appendix C. | Certified Analytical Report |

cc: Karen Petryna, Shell
Harsch Investment Group, 523 West Plaza, Alameda, CA 94501

Table 1. Well/Boring Data, Former Shell Service Station, 2160 Otis Drive, Alameda, California

Name	Type	Date Installed	TOC		Soil Sample (ft)		First Encountered GW		Screen Diam. (In)	Screen Depth (ft)		Comments
			Elev (ft msl)	Total Depth (ft)	Incr. or	Depth(s)	Depth (ft)	Elev (ft msl)		Top	Bottom	
MW-1	Well (HSA)	09-Jun-05	5.1	NA	5	-	NA	-	NA	NA	NA	Well destroyed 1995
MW-2	Well (HSA)	02-Apr-90	3.29	NA	5	-	NA	-	2.0	4	17	Well destroyed 1995
MW-3	Well (HSA)	02-Nov-00	9.22	18.5	5	-	15.5	-6.28	2	3.5	18.5	
SB-1	Boring (Hand auger)	9-Dec-03	-	7	C	-	5	-	-	-	-	
SB-2	Boring (Hand auger)	9-Dec-03	-	7	C	-	5	-	-	-	-	
SB-3	Boring (Hand auger)	9-Dec-03	-	7	C	-	5	-	-	-	-	
SB-4	Boring (Hand auger)	9-Dec-03	-	7	C	-	5	-	-	-	-	
SB-5	Boring (Hand auger)	9-Dec-03	-	7	C	-	5	-	-	-	-	

Abbreviations:

C = Continuous

TOC = Top of Casing referenced to mean sea level

HSA = Hollow-stem auger

Table 2. Soil Analytical Data, Former Shell Service Station, 2160 Otis Drive, Alameda, California

Sample ID	Depth (ft)	Date Sampled	TPHg mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl benzene mg/kg	Total xylenes mg/kg	MTBE mg/kg
SB-1-5	5	09-Dec-03	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB-2-5	5	09-Dec-03	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB-3-5	5	09-Dec-03	<1.0	<0.0050	0.062	0.014	0.063	<0.0050
SB-4-5	5	09-Dec-03	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB-5-5	5	09-Dec-03	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Abbreviations:

TPHg = Total petroleum hydrocarbon as gasoline by EPA Method 8260

Benzene, toluene, ethyl benzene, total xylenes by EPA Method 8260

MTBE = Methyl tertiary butyl ether, analyzed by EPA Method 8260

ft = Feet

mg/kg = Milligrams per kilogram

<x = Not detected at detection limit x

Table 3. Groundwater Analytical Data, Former Shell Service Station, 2160 Otis Drive, Alameda, California

Sample ID	Date Sampled	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethyl benzene µg/L	Total xylenes µg/L	MTBE µg/L
SB-1-W	09-Dec-03	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-2-W	09-Dec-03	62	<0.50	<0.50	<0.50	<1.0	<0.50
SB-3-W	09-Dec-03	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-4-W	09-Dec-03	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-5-W	09-Dec-03	57	<0.50	<0.50	<0.50	1.8	<0.50

Abbreviations:

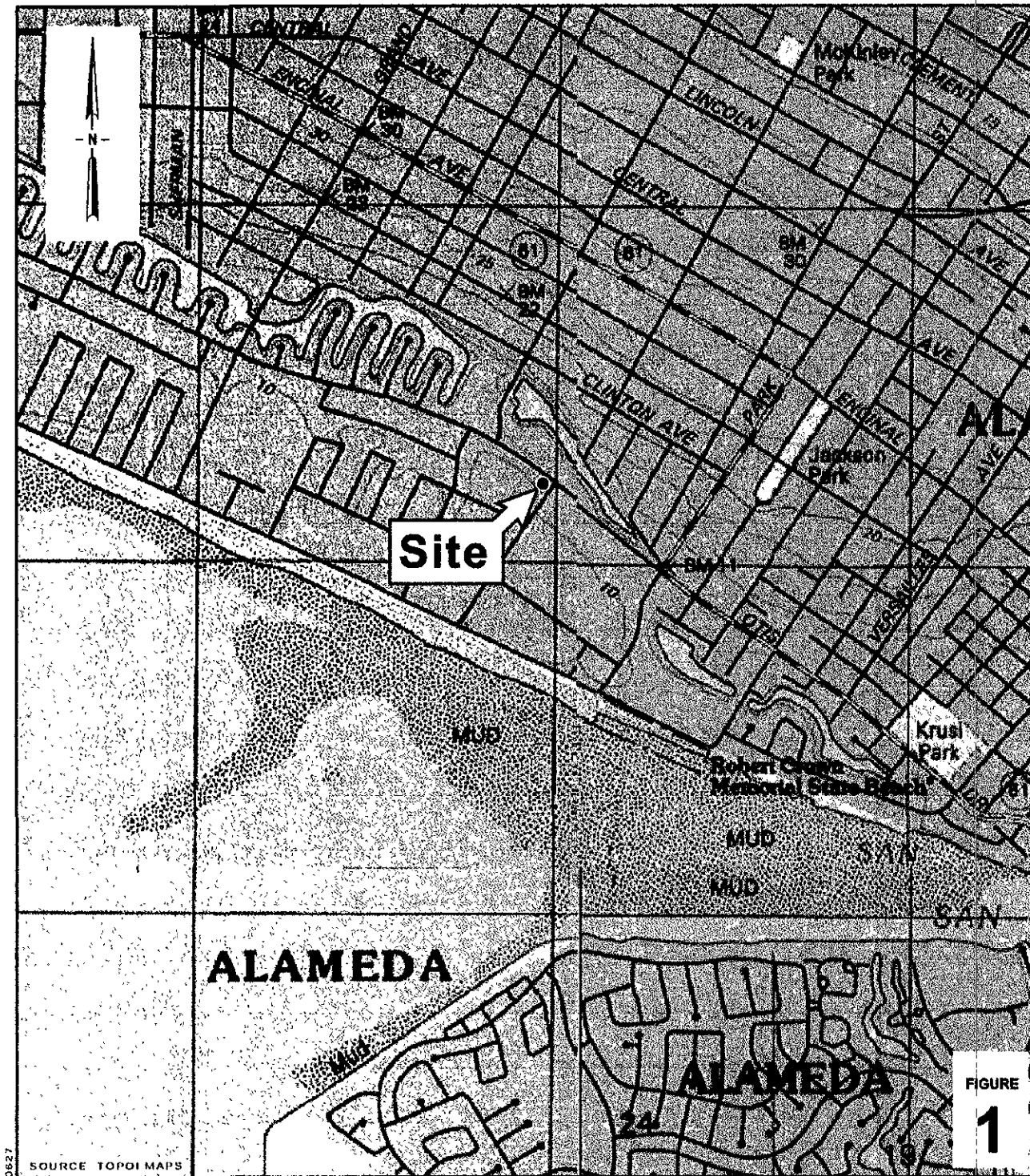
TPHg = Total petroleum hydrocarbon as gasoline by EPA Method 8260

Benzene, toluene, ethyl benzene, total xylenes by EPA Method 8260

MTBE = Methyl tertiary butyl ether, analyzed by EPA Method 8260

µg/L = Micrograms per liter

<x = Not detected at detection limit x

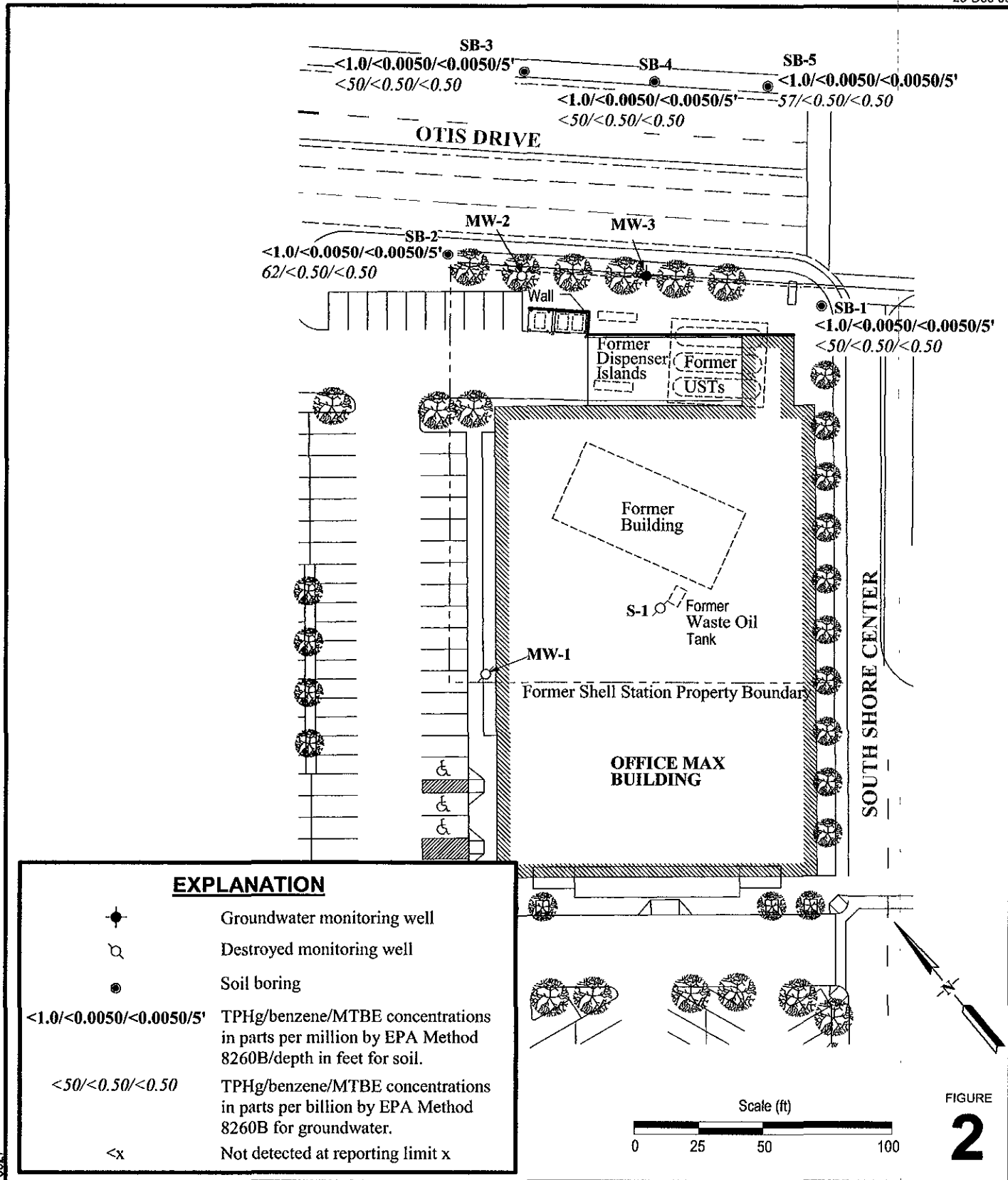


Former Shell Service Station
 2160 Otis Drive
 Alameda, California



Site Vicinity Map

C A M B R I A



0627

Former Shell Service Station
 2160 Otis Drive
 Alameda, California



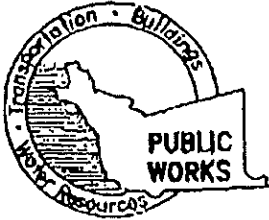
CAMBRIA

Soil/Groundwater Chemical Concentration Map

December 9, 2003

Appendix A

Permits



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-6633 James Yoo
FAX (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT
2160 Otis Drive, Alameda, CA

PERMIT NUMBER W03-1126
WELL NUMBER _____
APN _____

PERMIT CONDITIONS
Circled Permit Requirements Apply

CLIENT
Name Shell Oil Products US
Address P.O. Box 7869 Phone 559-695-9306
City Burbank, CA Zip 9510-7869

A. GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

APPLICANT
Name Scott Lewis - Cambria Environmental Technology Inc
Address 270 Perkins Street Phone 707-933-2369
City Sonoma, CA Zip 95726

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	<input type="checkbox"/>	General	<input checked="" type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input type="checkbox"/>

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

D. GEOTECHNICAL

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted castings.

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Hand Auger	<input checked="" type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

E. CATHODIC

Fill hole anode zone with concrete placed by tremie.

DRILLER'S NAME Gregg Drilling and Testing, Inc.

F. WELL DESTRUCTION

Send a map of work site. A separate permit is required for wells deeper than 45 feet.

DRILLER'S LICENSE NO. 485165

G. SPECIAL CONDITIONS

SC#3 attached

WELL PROJECTS

Drill Hole Diameter	_____ in.	Maximum	_____
Casing Diameter	_____ in.	Depth	_____ ft.
Surface Seal Depth	_____ ft.	Owner's Well Number	_____

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

GEOTECHNICAL PROJECTS

Number of Borings	<u>5</u>	Maximum	_____
Hole Diameter	<u>3-9"</u> in.	Depth	<u>10</u> ft.

STARTING DATE December 9, 2003

COMPLETION DATE December 9, 2003

APPROVED

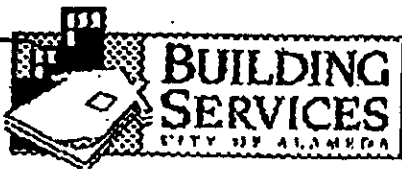
DATE

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Scott Lewis DATE 12-3-03

PLEASE PRINT NAME Scott Lewis Rev. 9-18-02

[Handwritten signature and date 12-8-03]



City of Alameda
2263 Santa Clara Avenue, Room 190
Alameda, CA 94501
(510) 748-4530

Triplicate

Submit in Duplicate

RIGHT-OF-WAY PERMIT APPLICATION

SERVICE NUMBER _____

DATE 11-17-03 ²⁰⁰³₁₉

Application is hereby made to occupy or perform work in the public right-of-way on the Northeast side

of OTIS Drive Ave./St. for 150' feet to the west/northwest
of South Shore Center

House No. 2160 OTIS Owner _____

For the purpose of Taking soil and groundwater samples in the planter area located between the sidewalk and roadway using a hand auger.

Name of Applicant Scott Lewis - Cambria Environmental Technology Inc. Address 270 Perkins Street City/State Sonoma, CA 95476

Contractor's License No. 740582 City Business License No. 26897 Phone Number 707-933-2369

INDICATE LOCATION BELOW OR ATTACH SEPARATE SHEET SHOWING LOCATION

See attached siteplan

FAX: 707-935-6649

PLEASE NOTE THE FOLLOWING:

1. Urban runoff program requires that no contaminants, including dirt, enter the storm drain system. Contractor is required to protect inlets. Failure to comply is subject to \$200/day fine.
2. 48 hour advance notice is required for inspection. Contact: Engineering Division, Construction Inspection office at 749-5840. Required inspections: Trenching, backfill, concrete, traffic/pedestrian detours, urban runoff, final inspection. Failure to obtain inspection prior to work may result in rejection of said work.
3. All striping, painted graphics and pavement markers damaged or destroyed by street excavation work must be restored by the permittee.
4. All construction within the Public Right-of-Way must have barricades with flashers for night time protection.
5. All work involved is to be done in accordance with standard City of Alameda specifications and City of Alameda practices, all to the satisfaction of the City Engineer. Standard details are attached. Inspection charges shall be paid to the City monthly.
6. Processing time for routine permits is 5 days. Permits requiring extensive research may require up to 15 days.
7. **FAILURE TO OBTAIN INSPECTIONS PRIOR TO COMPLETION OF WORK IS SUBJECT TO ADDITIONAL INSPECTION COSTS AT A RATE OF \$32.70 PER HOUR.**

Acceptance of this permit constitutes acceptance of the conditions included.

Scott Lewis Date 11-17-03
APPLICANT SIGNATURE

SPECIAL CONDITIONS

- NO OPEN TRENCH CUTTING
- STATE PERMIT REQUIRED
- ADDITIONAL SETS OF PLANS AND SPECIFICATIONS TO THE ENGINEERING DIVISION PRIOR TO CONSTRUCTION
_____ OF SETS
- OTHER _____

RECEIVED DATE 11/25/2003 SIGNED N. Sully PERMIT NO. EX03-0239

APPROVED DATE 12-4-03 SIGNED [Signature]

ISSUED DATE 12/9/03 SIGNED [Signature]

Appendix B

Boring Logs

Appendix C
Certified Analytical Report

Cambria Environmental Sonoma

December 26, 2003

270 Perkins Street
Sonoma, CA 95476

Attn.: Ana Friel

Project#: 245-0627

Project: 98995140

Site: 2160 Otis Drive, Alameda, CA

Attached is our report for your samples received on 12/10/2003 16:20

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/24/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: vvancil@stl-inc.com

Sincerely,



Vincent Vancil
Project Manager

Severn Trent Laboratories, Inc.

STL San Francisco * 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 * www.stl-inc.com * CA DHS ELAP# 2496

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street

Sonoma, CA 95476

Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 245-0627

98995140

Received: 12/10/2003 16:20

Site: 2160 Otis Drive, Alameda, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SB-1-5	12/09/2003 09:38	Soil	1
SB-2-5	12/09/2003 09:05	Soil	2
SB-3-5	12/09/2003 10:05	Soil	3
SB-4-5	12/09/2003 10:16	Soil	4
SB-5-5	12/09/2003 10:25	Soil	5

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street

Sonoma, CA 95476

Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 245-0627

98995140

Received: 12/10/2003 16:20

Site: 2160 Otis Drive, Alameda, CA

Prep(s)	5080B	Test(s)	8260B
Sample ID	SB-1-5	Lab ID	2003-12-0361-1
Sampled	12/09/2003 09:38	Extracted	12/13/2003 14:00
Matrix	Soil	QC Batch#	2003/12/13-2B-69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/13/2003 14:00	
Benzene	ND	0.0050	mg/Kg	1.00	12/13/2003 14:00	
Toluene	ND	0.0050	mg/Kg	1.00	12/13/2003 14:00	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/13/2003 14:00	
Total xylenes	ND	0.0050	mg/Kg	1.00	12/13/2003 14:00	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	12/13/2003 14:00	
Surrogate(s)						
1,2-Dichloroethane-d4	97.7	70-121	%	1.00	12/13/2003 14:00	
Toluene-d8	83.0	81-117	%	1.00	12/13/2003 14:00	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 245-0627
98995140

Received: 12/10/2003 16:20

Site: 2160 Otis Drive, Alameda, CA

Prep(s):	6040B	Test(s):	8260B
Sample ID:	SB-2-6	Lab ID:	2003-12-0361-2
Sampled:	12/09/2003 09:05	Extracted:	12/13/2003 14:56
Matrix:	Soil	QC Batch#:	2003/12/13-2B-69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/13/2003 14:56	
Benzene	ND	0.0050	mg/Kg	1.00	12/13/2003 14:56	
Toluene	ND	0.0050	mg/Kg	1.00	12/13/2003 14:56	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/13/2003 14:56	
Total xylenes	ND	0.0050	mg/Kg	1.00	12/13/2003 14:56	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	12/13/2003 14:56	
Surrogate(s)						
1,2-Dichloroethane-d4	96.1	70-121	%	1.00	12/13/2003 14:56	
Toluene-d8	90.2	81-117	%	1.00	12/13/2003 14:56	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
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Project: 245-0627
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Site: 2160 Otis Drive, Alameda, CA

Prep(s):	5080B	Test(s):	8260B
Sample ID:	SE-45	Lab ID:	2003-12-0361-3
Sampled:	12/09/2003 10:05	Extracted:	12/13/2003 15:15
Matrix:	Soil	QC Batch#:	2003/12/13-2B169

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/13/2003 15:15	
Benzene	ND	0.0050	mg/Kg	1.00	12/13/2003 15:15	
Toluene	0.062	0.0050	mg/Kg	1.00	12/13/2003 15:15	
Ethyl benzene	0.014	0.0050	mg/Kg	1.00	12/13/2003 15:15	
Total xylenes	0.063	0.0050	mg/Kg	1.00	12/13/2003 15:15	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	12/13/2003 15:15	
Surrogate(s)						
1,2-Dichloroethane-d4	99.5	70-121	%	1.00	12/13/2003 15:15	
Toluene-d8	83.3	81-117	%	1.00	12/13/2003 15:15	

Gas/BTEX/MTBE by 8260B (C6-C12)

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270 Perkins Street

Sonoma, CA 95476

Phone: (707) 442-2700 Fax: (707) 442-2700

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Site: 2160 Otis Drive, Alameda, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-4-5	Lab ID:	2003/12/0361/4
Sampled:	12/09/2003 10:16	Extracted:	12/13/2003 15:34
Matrix:	Soil	QC Batch#:	2003/12/13-2B-69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/13/2003 15:34	
Benzene	ND	0.0050	mg/Kg	1.00	12/13/2003 15:34	
Toluene	ND	0.0050	mg/Kg	1.00	12/13/2003 15:34	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/13/2003 15:34	
Total xylenes	ND	0.0050	mg/Kg	1.00	12/13/2003 15:34	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	12/13/2003 15:34	
Surrogate(s)						
1,2-Dichloroethane-d4	94.4	70-121	%	1.00	12/13/2003 15:34	
Toluene-d8	95.6	81-117	%	1.00	12/13/2003 15:34	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
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Site: 2160 Otis Drive, Alameda, CA

Prep(s)	5030B	Test(s)	8260B
Sample ID	SB-5-5	Lab ID	2003-12-0361-5
Sampled	12/09/2003 10:25	Extracted	12/16/2003 11:30
Matrix	Soil	QC Batch#	2003/12/16-0169

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	12/16/2003 11:30	
Benzene	ND	0.0050	mg/Kg	1.00	12/16/2003 11:30	
Toluene	ND	0.0050	mg/Kg	1.00	12/16/2003 11:30	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/16/2003 11:30	
Total xylenes	ND	0.0050	mg/Kg	1.00	12/16/2003 11:30	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	12/16/2003 11:30	
Surrogate(s)						
1,2-Dichloroethane-d4	82.6	70-121	%	1.00	12/16/2003 11:30	
Toluene-d8	89.2	81-117	%	1.00	12/16/2003 11:30	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Batch QC Report					
Prep(s): 5080B				Test(s): 8260B	
Method: Blank		Soil		QC Batch # 2003/12/13-2B:69	
MB: 2003/12/13-2B:69-007				Date Extracted: 12/13/2003 10:07	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1.000	mg/Kg	12/13/2003 10:07	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	12/13/2003 10:07	
Benzene	ND	0.0050	mg/Kg	12/13/2003 10:07	
Toluene	ND	0.0050	mg/Kg	12/13/2003 10:07	
Ethyl benzene	ND	0.0050	mg/Kg	12/13/2003 10:07	
Total xylenes	ND	0.0050	mg/Kg	12/13/2003 10:07	
Surrogates(s)					
1,2-Dichloroethane-d4	89.8	70-121	%	12/13/2003 10:07	
Toluene-d8	89.8	81-117	%	12/13/2003 10:07	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

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Site: 2160 Otis Drive, Alameda, CA

Batch QC Report					
Prep(s): 5080B				Test(s): 8260B	
Method: Blank		Soil		QC Batch # 2003/12/16-0169	
MB: 2003/12/16-0169-016				Date Extracted: 12/16/2003 10:16	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1.000	mg/Kg	12/16/2003 10:16	
Benzene	ND	0.0050	mg/Kg	12/16/2003 10:16	
Toluene	ND	0.0050	mg/Kg	12/16/2003 10:16	
Ethyl benzene	ND	0.0050	mg/Kg	12/16/2003 10:16	
Total xylenes	ND	0.0050	mg/Kg	12/16/2003 10:16	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	12/16/2003 10:16	
Surrogates(s)					
1,2-Dichloroethane-d4	86.9	70-121	%	12/16/2003 10:16	
Toluene-d8	98.1	81-117	%	12/16/2003 10:16	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Batch QC Report			
Prep(s): 5030B			Tes(s): 8260B
Laboratory Control Spike	Soil		QC Batch # 2003/12/13-2B-69
LCS: 2003/12/13-2B-69-030	Extracted: 12/13/2003		Analyzed: 12/13/2003 09:30
LCSD: 2003/12/13-2B-69-048	Extracted: 12/13/2003		Analyzed: 12/13/2003 09:48

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	0.0444	0.0512	0.05	88.8	102.4	14.2	65-165	20		
Benzene	0.0407	0.0463	0.05	81.4	92.6	12.9	69-129	20		
Toluene	0.0484	0.0564	0.05	96.8	112.8	15.3	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	428	441	500	85.6	88.2		70-121			
Toluene-d8	484	540	500	96.8	108.0		81-117			

Gas/BTEX/MTBE by 8260B (C6-C12)

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Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

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Site: 2160 Otis Drive, Alameda, CA

Batch QC Report			
Prep(s): 5030B			Test(s): 8260B
Laboratory Control Spike	Soil	QC Batch #: 2003/12/16-01 69	
LCS: 2003/12/16-01 69:089	Extracted: 12/16/2003	Analyzed: 12/16/2003 09:39	
LCSD: 2003/12/16-01 69:057	Extracted: 12/16/2003	Analyzed: 12/16/2003 09:57	

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Benzene	43.4	39.8	50.0	86.8	79.6	8.7	69-129	20		
Toluene	54.8	49.6	50.0	109.6	99.2	10.0	70-130	20		
Methyl tert-butyl ether (MTBE)	41.3	43.5	50.0	82.6	87.0	5.2	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	431	449	500	86.2	89.8		70-121			
Toluene-d8	536	483	500	107.2	96.6		81-117			

Gas/BTEX/MTBE by 8260B (C6-C12)

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Sonoma, CA 95476
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Batch QC Report			
Prep(s)	6030E		Test(s) 8260B
Matrix Spike (MS/MSD)		Soil	QC Batch # 2003/12/13-2B-69
SB-1-5	>> MS		Lab ID 2003-12-0361-001
MS	2003/12/13-2B-69-018	Extracted: 12/13/2003	Analyzed: 12/13/2003 14:18
			Dilution: 1.00
MSD	2003/12/13-2B-69-037	Extracted: 12/13/2003	Analyzed: 12/13/2003 14:37
			Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level mg/Kg	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	0.0466	0.0495	ND	0.044326	105.2	110.1	4.6	65-165	20		
Benzene	0.0401	0.0439	ND	0.044326	90.5	97.6	7.5	69-129	20		
Toluene	0.0429	0.0501	ND	0.044326	96.8	111.3	13.9	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	486	507		500	97.2	101.4		70-121			
Toluene-d8	443	510		500	88.6	102.1		81-117			

Gas/BTEX/MTBE by 8260B (C6-C12)

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270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

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Batch QC Report			
Prep(s)	5030B		Test(s) 8260B
Matrix Spike (MS/MSD)		Soil	QC Batch # 2003/12/16-0169
SB-5-5	>> MS		Lab ID: 2003-12-0361-005
MS	2003/12/16-0169-006	Extracted: 12/16/2003	Analyzed: 12/16/2003 12:06
			Dilution: 1:00
MSD	2003/12/16-0169-026	Extracted: 12/16/2003	Analyzed: 12/16/2003 12:26
			Dilution: 1:00

Compound	Conc. mg/Kg			Spk.Level mg/Kg	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	37.1	37.6	0.153	50.0	73.9	76.1	2.9	69-129	20		
Toluene	40.4	42.0	0.299	50.0	80.2	85.0	5.8	70-130	20		
Methyl tert-butyl ether	33.4	38.4	ND	50.0	66.8	77.7	15.1	65-165	20		
Surrogate(s)											
1,2-Dichloroethane-d4	413	417		500	82.6	83.4		70-121			
Toluene-d8	479	466		500	95.8	93.2		81-117			

Gas/BTEX/MTBE by 8260B (C6-C12)

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Attn.: Ana Friel

270 Perkins Street

Sonoma, CA 95476

Phone: (707) 442-2700 Fax: (707) 442-2700

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Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SB-1-W	12/09/2003 12:50	Water	6
SB-2-W	12/09/2003 13:00	Water	7
SB-3-W	12/09/2003 13:10	Water	8
SB-4-W	12/09/2003 13:15	Water	9
SB-5-W	12/09/2003 13:20	Water	10

Gas/BTEX/MTBE by 8260B (C6-C12)

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Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

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Site: 2160 Otis Drive, Alameda, CA

Prep(s)	5030B	Test(s)	8260B
Sample ID	SB-1-W	Lab ID	2003-12-0361 - 6
Sampled	12/09/2003 12:50	Extracted	12/19/2003 14:44
Matrix	Water	QC Batch#	2003/12/19-1C:66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/19/2003 14:44	
Benzene	ND	0.50	ug/L	1.00	12/19/2003 14:44	
Toluene	ND	0.50	ug/L	1.00	12/19/2003 14:44	
Ethylbenzene	ND	0.50	ug/L	1.00	12/19/2003 14:44	
Total xylenes	ND	1.0	ug/L	1.00	12/19/2003 14:44	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	12/19/2003 14:44	
Surrogate(s)						
1,2-Dichloroethane-d4	114.2	76-130	%	1.00	12/19/2003 14:44	
Toluene-d8	100.2	78-115	%	1.00	12/19/2003 14:44	

Gas/BTEX/MTBE by 8260B (C6-C12)

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270 Perkins Street

Sonoma, CA 95476

Phone: (707) 442-2700 Fax: (707) 442-2700

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Site: 2160 Otis Drive, Alameda, CA

Prep(s):	50:50B	Test(s):	8260B
Sample ID:	SB 2-W	Lab ID:	2003-12-0361-7
Sampled:	12/09/2003 13:00	Extracted:	12/19/2003 16:08
Matrix:	Water	QC Batch#:	2003/12/19-10:66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	62	50	ug/L	1.00	12/19/2003 15:08	g
Benzene	ND	0.50	ug/L	1.00	12/19/2003 15:08	
Toluene	ND	0.50	ug/L	1.00	12/19/2003 15:08	
Ethylbenzene	ND	0.50	ug/L	1.00	12/19/2003 15:08	
Total xylenes	ND	1.0	ug/L	1.00	12/19/2003 15:08	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	12/19/2003 15:08	
Surrogate(s)						
1,2-Dichloroethane-d4	109.7	76-130	%	1.00	12/19/2003 15:08	
Toluene-d8	102.3	78-115	%	1.00	12/19/2003 15:08	

Gas/BTEX/MTBE by 8260B (C6-C12)

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270 Perkins Street
Sonoma, CA 95476
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Site: 2160 Otis Drive, Alameda, CA

Prep(s):	8030B	Test(s):	8260B
Sample ID:	SE-3-W	Lab ID:	2003-12-0361-8
Sampled:	12/09/2003 13:10	Extracted:	12/18/2003 19:03
Matrix:	Water	QC Batch#:	2003/12/18-1A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/18/2003 19:03	
Benzene	ND	0.50	ug/L	1.00	12/18/2003 19:03	
Toluene	ND	0.50	ug/L	1.00	12/18/2003 19:03	
Ethylbenzene	ND	0.50	ug/L	1.00	12/18/2003 19:03	
Total xylenes	ND	1.0	ug/L	1.00	12/18/2003 19:03	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	12/18/2003 19:03	
Surrogate(s)						
1,2-Dichloroethane-d4	91.1	76-130	%	1.00	12/18/2003 19:03	
Toluene-d8	92.4	78-115	%	1.00	12/18/2003 19:03	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Sonoma, CA 95476
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Site: 2160 Otis Drive, Alameda, CA

Prep(s)	5030B	Test(s)	8260B
Sample ID	SB4-W	Lab ID	2003-12-0361-9
Sampled	12/09/2003 13:45	Extracted	12/18/2003 19:25
Matrix	Water	QC Batch#	2003/12/18-1A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/18/2003 19:25	
Benzene	ND	0.50	ug/L	1.00	12/18/2003 19:25	
Toluene	ND	0.50	ug/L	1.00	12/18/2003 19:25	
Ethylbenzene	ND	0.50	ug/L	1.00	12/18/2003 19:25	
Total xylenes	ND	1.0	ug/L	1.00	12/18/2003 19:25	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	12/18/2003 19:25	
Surrogate(s)						
1,2-Dichloroethane-d4	88.8	76-130	%	1.00	12/18/2003 19:25	
Toluene-d8	102.6	78-115	%	1.00	12/18/2003 19:25	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Site: 2160 Otis Drive, Alameda, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-5-W	Lab ID:	2003-12-0361-10
Sampled:	12/09/2003 13:20	Extracted:	12/19/2003 15:32
Matrix:	Water	QC Batch#:	2003/12/19-1C 66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	57	50	ug/L	1.00	12/19/2003 15:32	
Benzene	ND	0.50	ug/L	1.00	12/19/2003 15:32	
Toluene	ND	0.50	ug/L	1.00	12/19/2003 15:32	
Ethylbenzene	ND	0.50	ug/L	1.00	12/19/2003 15:32	
Total xylenes	1.8	1.0	ug/L	1.00	12/19/2003 15:32	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	12/19/2003 15:32	
Surrogate(s)						
1,2-Dichloroethane-d4	107.5	76-130	%	1.00	12/19/2003 15:32	
Toluene-d8	97.1	78-115	%	1.00	12/19/2003 15:32	

Gas/BTEX/MTBE by 8260B (C6-C12)

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270 Perkins Street
 Sonoma, CA 95476
 Phone: (707) 442-2700 Fax: (707) 442-2700

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Site: 2160 Otis Drive, Alameda, CA

Batch QC Report	
Prep(s): 5080B	Test(s): 8260B
Method: Blank	Water
MB: 2003/12/18/1A/65-051	QC Batch # 2003/12/18/1A/65
	Date Extracted: 12/18/2003 11:51

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/18/2003 11:51	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	12/18/2003 11:51	
Benzene	ND	0.5	ug/L	12/18/2003 11:51	
Toluene	ND	0.5	ug/L	12/18/2003 11:51	
Ethylbenzene	ND	0.5	ug/L	12/18/2003 11:51	
Total xylenes	ND	1.0	ug/L	12/18/2003 11:51	
Surrogates(s)					
1,2-Dichloroethane-d4	92.2	76-130	%	12/18/2003 11:51	
Toluene-d8	100.0	78-115	%	12/18/2003 11:51	

Gas/BTEX/MTBE by 8260B (C6-C12)

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270 Perkins Street
Sonoma, CA 95476
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Site: 2160 Otis Drive, Alameda, CA

Batch QC Report			
Prep(s): 5030B			Test(s): 8260B
Method: Blank	Water		QC Batch # 2003/12/19-1C.66
MB: 2003/12/19-1C.66-028			Date Extracted: 12/19/2003 10:28

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/19/2003 10:28	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	12/19/2003 10:28	
Benzene	ND	0.5	ug/L	12/19/2003 10:28	
Toluene	ND	0.5	ug/L	12/19/2003 10:28	
Ethylbenzene	ND	0.5	ug/L	12/19/2003 10:28	
Total xylenes	ND	1.0	ug/L	12/19/2003 10:28	
Surrogates(s)					
1,2-Dichloroethane-d4	94.8	76-130	%	12/19/2003 10:28	
Toluene-d8	104.2	78-115	%	12/19/2003 10:28	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 245-0627
98995140

Received: 12/10/2003 16:20

Site: 2160 Otis Drive, Alameda, CA

Batch QC Report			
Prep(s): 5080B			Test(s): 8260B
Laboratory Control Spike	Water	QC Batch # 2003/12/18-1A,65	
LCS: 2003/12/18-1A,65-004	Extracted: 12/18/2003	Analyzed: 12/18/2003 11:04	
LCSD: 2003/12/18-1A,65-029	Extracted: 12/18/2003	Analyzed: 12/18/2003 13:29	

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	24.5	21.0	25	98.0	84.0	15.4	65-165	20		
Benzene	22.7	20.8	25	90.8	83.2	8.7	69-129	20		
Toluene	27.3	23.2	25	109.2	92.8	16.2	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	462	427	500	92.4	85.4		76-130			
Toluene-d8	560	519	500	112.0	103.8		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

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Site: 2160 Otis Drive, Alameda, CA

Batch QC Report			
Prep(s): 6060E			Test(s): 8260B
Laboratory Control Spike	Water	QC Batch # 2003/12/19-1C 66	
LCS: 2003/12/19-1C 66-040	Extracted: 12/19/2003	Analyzed: 12/19/2003 09:40	
LCSD: 2003/12/19-1C 66-004	Extracted: 12/19/2003	Analyzed: 12/19/2003 10:04	

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	21.8	20.0	25	87.2	80.0	8.6	65-165	20		
Benzene	21.2	22.2	25	84.8	88.8	4.6	69-129	20		
Toluene	24.2	23.8	25	96.8	95.2	1.7	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	513	482	500	102.6	96.4		76-130			
Toluene-d8	518	505	500	103.6	101.0		78-115			

Severn Trent Laboratories, Inc.

STL San Francisco * 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 * www.stl-inc.com * CA DHS ELAP# 2496

12/23/2003 17:13

Gas/BTEX/MTBE by 8260B (C6-C12)

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Sonoma, CA 95476

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Legend and Notes

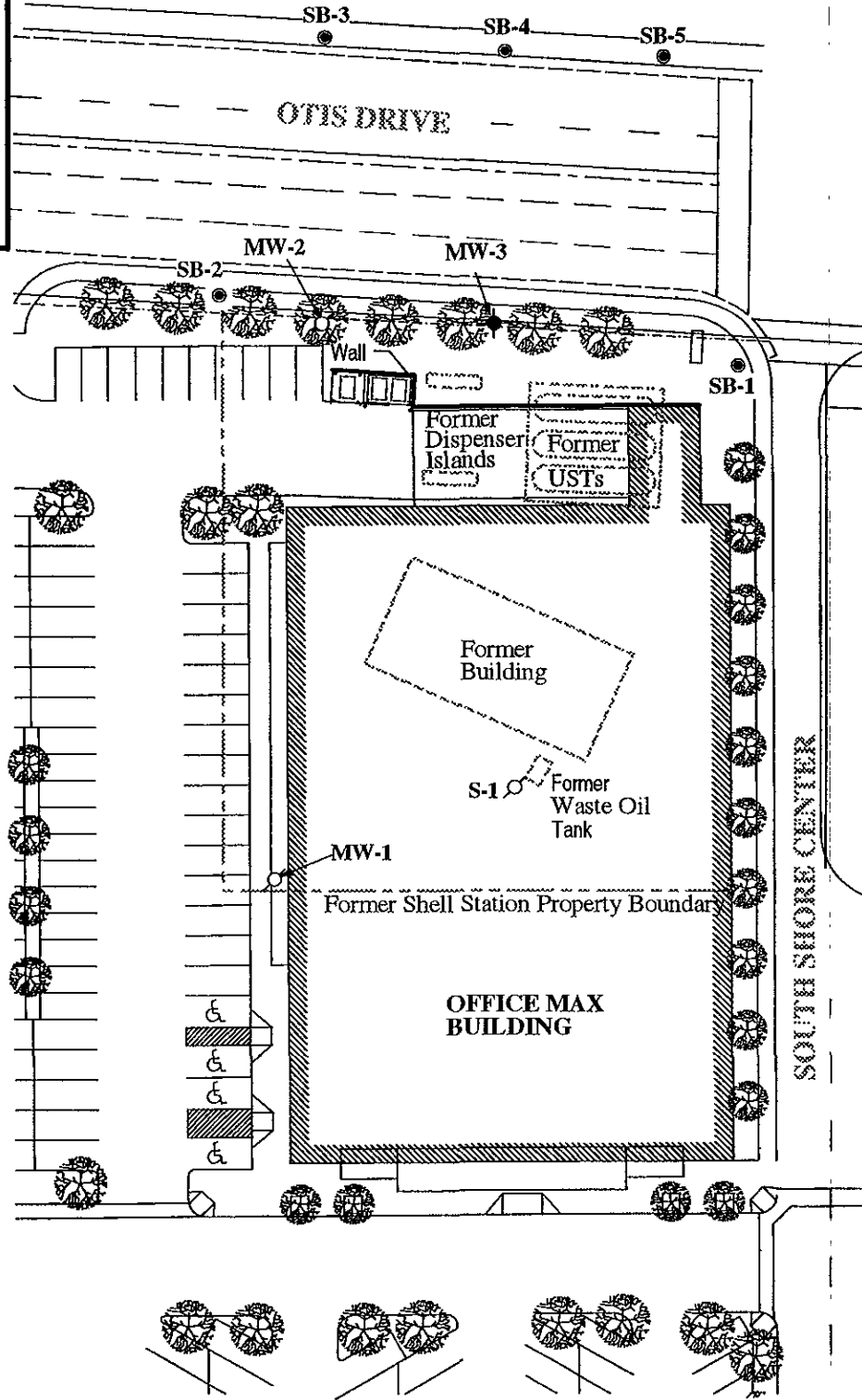
Result Flag

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

EXPLANATION

- ◆ Groundwater monitoring well
- ⊗ Destroyed monitoring well
- Soil boring



FIGURE

2

Shell-branded Service Station
 2160 Otis Drive
 Alameda, California



CAMBRIA

Soil Chemical Concentration Map

December 9, 2003

0627

1220 Quarry Lane
Pleasanton, CA 94566

(925) 484-1919 (925) 484-1096 fax

Shell Project Manager to be Invoiced:

GEOTECHNICAL ENGINEERING
 GEOTECHNICAL SERVICES
 GEOTECHNICAL TESTING

Karen Petryna

98995190
 98995190
 98995190

DATE 12-9-03

PAGE 1 of 1

CLIENT COMPANY: **Cambridge Environmental** LOG DATE: **GETS**
 SITE ADDRESS (Street and City): **2160 OTIS DRIVE, Alameda, CA** GLOBAL ID NO.: **T0600-01935**
 ADDRESS: **270 Perkins Street, Sanoma, CA 95476** EOE DELIVERABLE TO (Preferable Party's Name): **Ann Friel** PHONE NO.: **707-442-7100** EMAIL: **afriela@cambridge-env.com**
 PROJECT CONTACT (Name/Address/Phone): **Ann Friel** SAMPLE NAME(S) FROM: **Scott Lewis**
 TELEPHONE: **707-442-7100** FAX: **707-442-7100** EMAIL: **afriela@cambridge-env.com**

TURNAROUND TIME (BUSINESS DAYS):
 10 DAYS 5 DAYS 72 HOURS 48 HOURS 24 HOURS LESS THAN 24 HOURS
 IA - KNOCK REPORT FORMAT UST AGENCY
 GCMS/MTBE CONFIRMATION: HIGHEST _____ HIGHEST PER BORING _____ ALL _____
 SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EOD IS NOT NEEDED

REQUESTED ANALYSIS

Field Sample Identification	SAMPLING DATE	TIME	MATRIX	NO. OF CONT.	TPH - purgeable	TPH - extractable (sol/sol)	BTEX	MTBE	DBA	5 OXYGENATES	1,2-DICHLOROBENZENE	1,1,1-TCA	PERC	NETHEX	VOCS (C6 & below)	SEMI-VOLATILES BY STRIP	Lead (0.100g @ 100g)	CADMS (0.100g @ 100g)	CMMS (0.100g @ 100g)	Test for Disposal
SB-1-5	12/9	0730	SO	1	X		X	X												
SB-2-5	12/9	0705	SO	1	X		X	X												
SB-3-5	12/9	1005	SO	1	X		X	X												
SB-4-5	12/9	1010	SO	1	X		X	X												
SB-5-5	12/9	1005	SO	1	X		X	X												
SB-1-W	12/9	1250	LW	1	X		X	X												
SB-2-W	12/9	1300	LW	1	X		X	X												
SB-3-V	12/9	1310	LW	1	X		X	X												
SB-4-W	12/9	1320	LW	1	X		X	X												
SB-5-W	12/9	1330	LW	1	X		X	X												

FIELD NOTES
Container/Preservative or PID Readings or Laboratory Notes

3.1°C
TEMPERATURE ON RECEIPT

Received by (Signature): *Scott Lewis* Date: *12-9-03* Time: *1600*
 Received by (Signature): *[Signature]* Date: *12/10/03* Time: *14:00*
 Received by (Signature): *[Signature]* Date: *12-10-03* Time: *1620*



Cambria Environmental Technology, Inc.
 270 Perkins Street
 Sonoma, California 95476
 Telephone: (707) 935-4850
 Fax: (707) 935-6649

BORING/WELL LOG

CLIENT NAME Equilon Enterprises LLC dba Shell Oil Products US BORING/WELL NAME SB-1
 JOB/SITE NAME Former Shell Station DRILLING STARTED 09-Dec-03
 LOCATION 2160 Otis Drive, Alameda, California DRILLING COMPLETED 09-Dec-03
 PROJECT NUMBER 0627 WELL DEVELOPMENT DATE (YIELD) NA
 DRILLER Gregg Drilling GROUND SURFACE ELEVATION Not Surveyed
 DRILLING METHOD Hand auger TOP OF CASING ELEVATION Not Surveyed
 BORING DIAMETER 3" SCREENED INTERVAL NA
 LOGGED BY S. Lewis DEPTH TO WATER (First Encountered) 5.0 ft (09-Dec-03) ▽
 REVIEWED BY A. Friel, RG 6452 DEPTH TO WATER (Static) NA ▾
 REMARKS _____

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ftg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ftg)	WELL DIAGRAM
0		SB-1-5		5	ML SP		<p>SILT (ML) ; yellowish brown (10YR 5/4); dry; 90% silt, 10% fine sand.</p> <p>Gravelly SAND (SP) ; yellowish brown (10YR 5/4); dry; 85% fine sand, 15% fine gravel.</p> <p>@ 1' - SAND (SP) ; light brownish gray (10YR 6/2); dry; 100% fine sand.</p> <p>@ 3' - greenish gray (10Y 5/1); moist.</p> <p>@ 5' - wet</p>	0.5 ▽ 7.0	 Soil Portland Type I/II Bottom of Boring @ 7 ft

WELL LOG (PID) I:\ALAMEDA-2\GINTU0627.GPJ DEFAULT.GDT 12/30/03

